

An Experimental Study on Rigid Pavements by Using Various Waste Materials

Ankita Chakraborty¹, Bharat Nagar²

¹PG Student, M.Tech (Civil), Transportation Engineering, Jagannath University, Jaipur, ankita.chakraborty1988@gmail.com

²HOD, Civil Engineering Department, Jagannath University, Jaipur, bharat.nagar@jagannathuniversity.org

Abstract- In this study, the possibility of using fly ash, copper slag & marble slurry powder in concrete production is examined by studying the effects of blending of fly ash, copper slag & marble slurry powder with partial replacement of natural sand and also the performance of fresh and hardened concrete. This study represented the results of experimental investigation carried out to determine compressive strength and flexural strength of concrete mixes for grade M25 & M30. The cement concrete so investigated could be utilized as the rigid pavements on the low volume roads. It might be a forward step towards sustainable construction of green highways.

Keywords- Fly ash, Copper Slag, Marble Slurry Powder, Concrete, Environment.

1. INTRODUCTION

Green highways may be described as those which are environmental friendly and sustainable in all aspects including design, construction and maintenance. Recycling of waste material is the major environmental sustainability concept and leads to sustainable development especially for huge utilization of waste in highway construction. A rigid pavement, due to its long life is an economic and cost effective pavement solution as compared to flexible pavements. The prime objective of the research is to study the possible application of copper slag, fly ash & marble slurry powder in cement concrete for utilization in various components of low volume road construction. The research has been devoted to analyze the effect of copper slag, fly ash & marble slurry powder on the properties of cement concrete mix. The motive of the research is to achieve the desirable utilization of copper slag, fly ash & marble slurry powder in cement concrete in an environmental friendly manner. The design of two grades of concrete mixes i.e. M-25 and M-30 were carried out as per guidelines of IS: 10262-2009. In this study compressive strength and flexural strength of concrete with different proportion of copper slag, fly ash & marble slurry powder partially replacing natural sand were investigated. The aim of this project was to determine the feasibility of incorporating low carbon copper slag, fly ash and marble powder in concrete. The utilization of copper slag, fly ash and marble powder would also reduce the energy consumption associated with production of natural road aggregates.

2. LITERATURE REVIEW

Waste can be used to produce new products or can be used as admixtures so that natural resources are used more efficiently and the environment is protected from waste deposits. In present time, many researchers have established that the use of waste materials like fly ash, blast furnace slag, copper slag, silica fume, and rice husk, hypo sludge etc. can, not only improve the various properties of concrete -both in its fresh and hardened states, but also can contribute to economy in construction costs. Presently large amounts of fly ash are generated in thermal industries with an important impact on environment and humans. Marble stone industry generates both solid waste and stone slurry. Copper slag is

generated during extraction and refining of copper metal from its concentrate.

The surface of roadway should be stable and non-yielding to allow the heavy wheel loads of road traffic to move with least possible rolling resistance. The pavement carries the wheel loads and transfer the load stresses through a wider area on the soil sub grade below. Flexible pavements are those, which on the whole have low or negligible flexure strength and are rather flexible in their structural action under the loads. The flexible pavement layers transmit the vertical or compressive stresses to the lower layer by grain to grain transfer through the point of contact in the granular structure. The load spreading ability of this layer therefore depends on the type of the materials and the mix design factors. Bituminous concrete is one of the best flexible pavement layer materials. Rigid pavements have sufficient flexural strength to transmit the wheel load stresses over a wider area below. They are made of Portland cement concrete-either plain, reinforced or prestressed concrete. The main point of difference in rigid pavement as compared to the flexible pavement, rigid pavement are placed directly on the prepared sub grade or on a single layer of granular or stabilized material. Any concrete which possesses the requisite compressive strength and flexural strength as per IRC 58: 2002 could be adopted for Rigid pavements. In this study the endeavor was made to prepare green concrete having the concrete characteristics as per IRC 58:2002.

J. Chai & C. Raungrut (2003) reported that bottom ash has a high potential to develop to be a good pozzolanic material. Unal and Uygunoglu, (2003); Alyamac and Ince, (2009); Guneyisi et al., (2009); Corinaldesi et al., (2010); Many studies have been conducted in literature on the performance of the concrete containing waste marble dust or waste marble aggregate, such as its addition into self-compacting concrete as an admixture or sand. Hameed and Sekar (2009) reported that marble dust can be used either to produce new products or as an admixture so that the natural sources are used more efficiently and the environment is saved from dumpsites of marble waste. H.K. Kim and H.K. Lee (2011) detailed experimental investigation carried out to evaluate the effect of fine and coarse bottom ash on the flow characteristics and density of concrete mixture and found that both of fine and



Design and Analysis of Microstrip Rectangular Patch Antenna using Different Permittivity Substrate

Sudarshan Kumar Jain

Assistant Professor, E & C, Jagannath University, Jaipur, India

Abstract: In this paper a microstrip rectangular patch antenna using different permittivity of duroid substrate is designed and analysed. The antenna is designed at a resonant frequency of 5.8 GHz. The dielectric substrate used for antenna designed is duroid having a dielectric constant of 2.2. It is observed that the gain of the designed antenna increases on increasing the relative permittivity of the duroid substrate and decreases on increasing the permittivity of the substrate. The return loss of the designed antenna also decreases on reducing the permittivity of the substrate. Voltage standing wave ratio for the design antenna for different permittivity of the substrate is below 2. The designed antenna is energized using microstrip line feeding technique. The different characteristics of the antenna such as gain, bandwidth, return loss, directivity and VSWR is carried out for different values of the permittivity. The antenna is designed and analysed with the software High Frequency Structure Simulator (HFSS).

Keywords: Microstrip antenna, VSWR, Bandwidth, High Frequency structure simulator.

I. INTRODUCTION

In communication system, Antenna is the main part of wireless communication technology. The antenna is an electrical transducer device that converts the electric current into EM wave while it is used in transmitter and vice versa while used in receiver. Microstrip Patch antennas are attractive due to simple in design, low fabrication cost, light weight and can be used for various applications. A Microstrip Patch antenna consists of a radiating patch on one side of a dielectric substrate which has a ground plane on the other side. [1]

A microstrip antenna is characterized by its length, width, radiation patterns, gain, input impedance. The length of the antenna is half wavelength in the dielectric. Microstrip antenna is energized by different feeding techniques such as microstrip line feeding, coaxial feeding, proximity coupled feeding, and aperture coupled feeding. From these feeding techniques microstrip feeding is mostly used due to its easy design and fabrication. [2]

Various types of feeding techniques are used for energizing the microstrip antenna such as microstrip feeding, coaxial feeding, proximity coupled feeding. Microstrip feeding technique is mostly used for energizing the antenna.

II. ANTENNA DESIGN

The antenna is designed at a resonant frequency of 5.8 GHz having the following specifications-

The height of the duroid substrate is taken as 1.6 mm. The designed antenna is analysed for the different permittivity values of the duroid substrate.

Parameter	Value
Frequency	5.8 GHz
Length of the Patch	16.48 mm
Width of the Patch	20.44 mm
Substrate Size	30mm×30 mm
Substrate	Duroid
Dielectric Constant	2.2
Feeding method	Microstrip Line

Various characteristics of the antenna as voltage standing wave ratio, return loss, radiation pattern, directivity and gain is observed for different values of permittivity. The base permittivity for the duroid is taken as 2.2. This permittivity is varied from 2.0 to 2.4 and observed the various characteristics of the designed antenna.

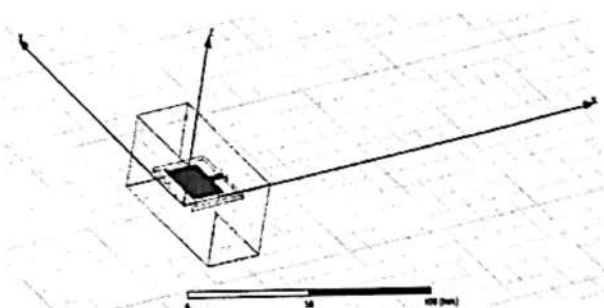


Fig.1 HFSS Design of antenna

III. RESULTS AND DISCUSSION

The designed antenna is simulated for the various values of the dielectric permittivity using software high frequency structure simulator (HFSS).

3

Performance Analysis of Rectangular Patch Antenna using variation in Width of Conducting Patch

Sudarshan Kumar Jain
Assistant Professor, Electronics and Communication,
Jagannath University, Jaipur, India

Abstract

A microstrip rectangular patch antenna using different width of the conducting patch is analysed for the various characteristics of the antenna. The antenna is designed at a resonant frequency of 5 GHz. The dielectric substrate used for designed antenna is duroid having a dielectric permittivity of 2.2. It is observed that the gain of the designed antenna gain is enhanced when the width of the patch is reduced. The return loss of the antenna also changes. VSWR of the designed antenna is below 2. In the designed antenna microstrip feeding is used to energize the antenna. The antenna is observed for the different characteristics such as gain, bandwidth, directivity return loss, and voltage standing wave ratio for different values of the patch width. High Frequency Structure Simulator (HFSS) software is used for the designing and simulation of the antenna.

Keywords - Microstrip antenna, bandwidth, patch size, voltage standing wave ratio, return loss.

I. INTRODUCTION

Microstrip patch antennas are mostly used due to its various advantages such as light weight, less volume, low cost, compatibility with integrated circuits, easy to install on the rigid surface. These antennas are used in different communication devices. [1] Microstrip antenna is energized using various feeding techniques such as coaxial feeding, microstrip feeding, aperture coupled feed and proximity coupled feed. Microstrip feeding is the easiest method for energizing the antenna.

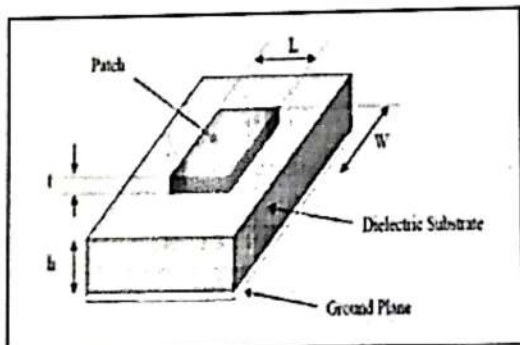


Fig.1 Structure of a Microstrip Patch Antenna

For an efficient patch antenna, practical width that leads to good radiation efficiencies is

$$W = \frac{1}{2f_r \sqrt{\mu_0 \epsilon_0}} \sqrt{\frac{2}{\epsilon_r + 1}}$$

The effective dielectric constant of the microstrip patch antenna is calculated using -

$$\epsilon_{reff} = \frac{\epsilon_r + 1}{2} + \frac{\epsilon_r - 1}{2} \left[1 + 12 \frac{h}{W} \right]^{-2}$$

The effective length of the patch is given by-

$$L_{eff} = \frac{c}{2f_0 \sqrt{\epsilon_{reff}}}$$

Length extension (ΔL) is calculated using following formula -

$$\frac{\Delta L}{h} = 0.412 \frac{(\epsilon_{reff} + 0.3) \left(\frac{W}{h} + 0.264 \right)}{(\epsilon_{reff} - 0.258) \left(\frac{W}{h} + 0.8 \right)}$$

Actual length of the patch is given by-

$$L = L_{eff} - 2\Delta L$$

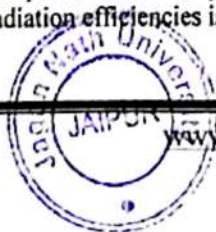
So by using the above formulas the length and width of the rectangular patch is calculated.

II. ANTENNA DESIGN

The antenna is designed at a resonant frequency of 5 GHz having the following specifications-

Parameter	Value
Frequency	5 GHz
Length of the Patch	19.30 mm
Width of the Patch	23.72 mm
Substrate	Duroid
Substrate Size	35mm×35 mm
Dielectric Constant	2.2
Feeding method	Microstrip Line

Certified True Copy



Dual Band Microstrip Antenna for X-Band Applications

Chandravir Singh¹ Sudhanshu Mathur²

¹M.Tech. Scholar ²Assistant Professor

^{1,2}Department of Electronics & Communication Engineering

^{1,2}Jagannath University, Jaipur, India-303901

Abstract— A Rectangular Microstrip patch antenna is designed here for wireless communication systems. The antenna is designed on Rogers RT5880 substrate having $\epsilon=2.2$ and characterized by measuring return loss, gain and radiation pattern. The proposed antenna has low profile, light weight and has successfully demonstrated multiband characteristics which covers WIMAX, WLAN, Bluetooth, X-band and other wireless applications. For designing and simulation of proposed antenna we have used CST Microwave Studio Suite software.

Key words: CST-Computer Simulation Technology, WLAN-Wireless Local Area Network, MSA-Microstrip Antenna

Microwave Studio software. The design of proposed antenna is shown below in Fig. 1.

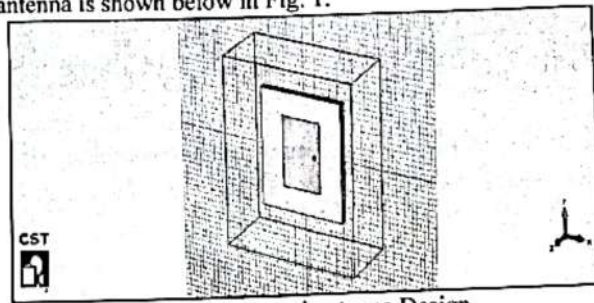


Fig. 1: Proposed antenna Design

I. INTRODUCTION

Antenna plays an important role in wireless communications. For point to point wireless communication and Wi-Fi the antenna should be compact and efficient for convenience. Design of compact multi-band antennas for state-of-art wireless applications like smart-phones and Wi-Fi enabled laptops is one of the challenging problems for microwave engineers. Microstrip antennas are attractive due to their light weight, conformability and low cost. A major contributing factor for recent advances of Microstrip antennas is the current revolution in electronic circuit miniaturization brought about by developments in large scale integration. Microstrip patch antennas are good choice for this purpose due to their low-profile and compatibility with planar monolithic microwave integrated circuit (MMIC) components. However, they suffer from disadvantages like poor scan performance, narrow bandwidth etc. [1].

II. METHODOLOGY

The proposed antenna is designed on Rogers RT 5880 substrate having $\epsilon=2.2$ and is of square geometry. The thickness of substrate is chosen as 1.6mm. However, the patch is of rectangular geometry and has dimensions of length and width is taken as 9.78mm and 12.6mm respectively. Both the patch and the ground plane are made up of perfect electric conductor (PEC). The values of all the parameters taken are tabularised in Table 1 below.

Parameter	Value [mm]
L	21.169
Lp	9.78
Offset	1.5
Radius	0.4
t	1.5
W	12.6

Table 1: Design Parameters

The antenna is fed by coaxial feeding technique. The reference impedance is comes out to be 54Ω. These values lead antenna to have operating frequency in X-band. The design and modelling of antenna is carried out in CST

III. SIMULATION RESULTS

CST Microwave Studio software provides a variety of solvers for simulations. For our design, we have chosen time-domain solver which is suitable for planar antenna applications. Input matching with respect to 50 Ω was carried out and the antenna radiation pattern. Return loss curve gives information about operating frequency. The return loss curve for our antenna is shown in Fig. 2.

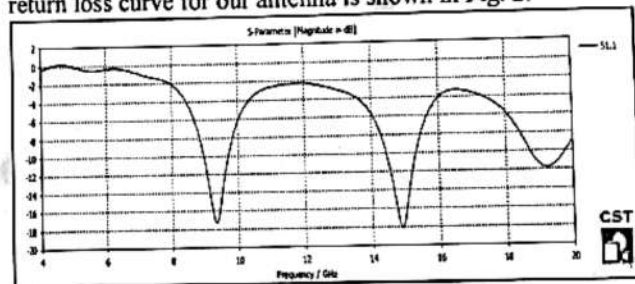


Fig. 2: Return Loss

From above figure, it is clear that we have designed a dual-band antenna operating at frequencies viz. 9.34GHz and 14.88GHz respectively. The return loss at 9.34GHz frequency is -17.28dB and at 14.88GHz is -18.12dB. The VSWR calculated by simulation result is 1.31 for 9.34GHz and 1.28 for 14.88GHz frequency. VSWR values consistently stay below 2 within the frequency band of 9.34 GHz to 14.88 GHz thereby showing stable radiation pattern.

Moreover from the return loss plot a wide bandwidth of 5.54 GHz is obtained between 9.34 GHz and 14.88 GHz. However, the polar plot for designed antenna at 9.32GHz is shown in Fig. 3 below.

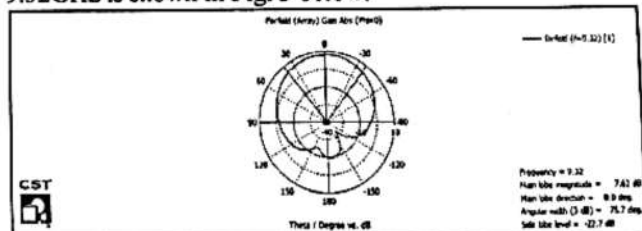


Fig. 3: Polar Plot at 9.32GHz

The polar plot at 14.88GHz frequency is shown in Fig.4 below.



Certified True Copy

Registrar
Jagannath University, Jaipur

Dual Band Microstrip Antenna for X-Band Applications

Chandravir Singh¹ Sudhanshu Mathur²

¹M.Tech. Scholar ²Assistant Professor

^{1,2}Department of Electronics & Communication Engineering

^{1,2}Jagannath University, Jaipur, India-303901

Abstract— A Rectangular Microstrip patch antenna is designed here for wireless communication systems. The antenna is designed on Rogers RT5880 substrate having $\epsilon=2.2$ and characterized by measuring return loss, gain and radiation pattern. The proposed antenna has low profile, light weight and has successfully demonstrated multiband characteristics which covers WIMAX, WLAN, Bluetooth, X-band and other wireless applications. For designing and simulation of proposed antenna we have used CST Microwave Studio Suite software.

Key words: CST-Computer Simulation Technology, WLAN-Wireless Local Area Network, MSA-Microstrip Antenna

Microwave Studio software. The design of proposed antenna is shown below in Fig. 1.

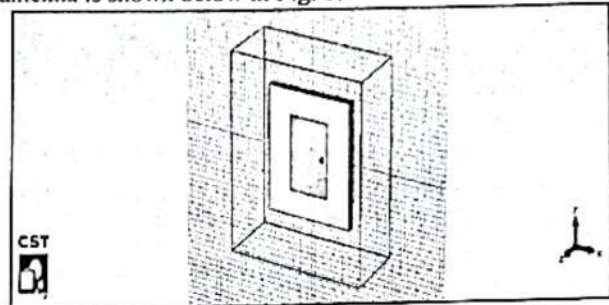


Fig. 1: Proposed antenna Design

I. INTRODUCTION

Antenna plays an important role in wireless communications. For point to point wireless communication and Wi-Fi the antenna should be compact and efficient for convenience. Design of compact multi-band antennas for state-of-art wireless applications like smart-phones and Wi-Fi enabled laptops is one of the challenging problems for microwave engineers. Microstrip antennas are attractive due to their light weight, conformability and low cost. A major contributing factor for recent advances of Microstrip antennas is the current revolution in electronic circuit miniaturization brought about by developments in large scale integration. Microstrip patch antennas are good choice for this purpose due to their low-profile and compatibility with planar monolithic microwave integrated circuit (MMIC) components. However, they suffer from disadvantages like poor scan performance, narrow bandwidth etc. [1].

II. METHODOLOGY

The proposed antenna is designed on Rogers RT 5880 substrate having $\epsilon=2.2$ and is of square geometry. The thickness of substrate is chosen as 1.6mm. However, the patch is of rectangular geometry and has dimensions of length and width is taken as 9.78mm and 12.6mm respectively. Both the patch and the ground plane are made up of perfect electric conductor (PEC). The values of all the parameters taken are tabularised in Table 1 below.

Parameter	Value [mm]
L	21.169
Lp	9.78
Offset	1.5
Radius	0.4
t	1.5
W	12.6

Table 1: Design Parameters

The antenna is fed by coaxial feeding technique. The reference impedance is comes out to be 54Ω. These values lead antenna to have operating frequency in X-band. The design and modelling of antenna is carried out in CST

III. SIMULATION RESULTS

CST Microwave Studio software provides a variety of solvers for simulations. For our design, we have chosen time-domain solver which is suitable for planar antenna applications. Input matching with respect to 50 Ω was carried out and the antenna radiation pattern. Return loss curve gives information about operating frequency. The return loss curve for our antenna is shown in Fig. 2.

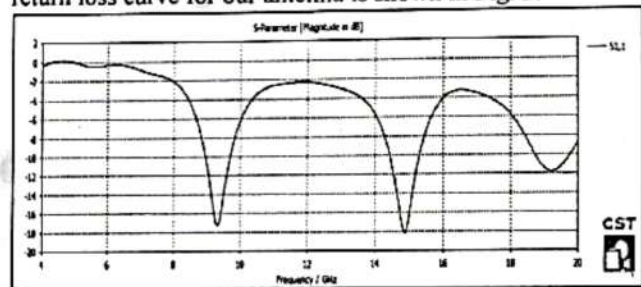


Fig. 2: Return Loss

From above figure, it is clear that we have designed a dual-band antenna operating at frequencies viz. 9.34GHz and 14.88GHz respectively. The return loss at 9.34GHz frequency is -17.28dB and at 14.88GHz is -18.12dB. The VSWR calculated by simulation result is 1.31 for 9.34GHz and 1.28 for 14.88GHz frequency. VSWR values consistently stay below 2 within the frequency band of 9.34 GHz to 14.88 GHz thereby showing stable radiation pattern.

Moreover from the return loss plot a wide bandwidth of 5.54 GHz is obtained between 9.34 GHz and 14.88 GHz. However, the polar plot for designed antenna at 9.32GHz is shown in Fig. 3 below.

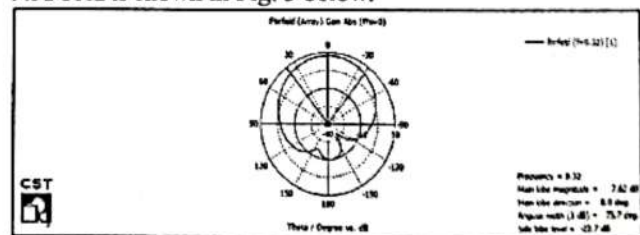


Fig. 3: Polar Plot at 9.32GHz

The polar plot at 14.88GHz frequency is shown in Fig.4 below.



Certified True Copy

[Signature]
Jagan Nath University, Jaipur

**Rectangular Microstrip Patch Antenna Using Rectangular Complementary Split Ring Resonator**Ruchi Vijayvergiya¹, Sudhanshu Mathur²¹Jagannath University, Jaipur

E-Mail: ruchivijayvergia.ec@gmail.com

²Assistant Professor, Jagannath University, Jaipur

E-Mail: sudhansu.mathur@jagannathuniversity.org

Abstract

A novel metamaterial based microstrip patch antenna embedded with two square complementary split ring resonators (CSRR) for operating in C-band (4- 8GHz) is proposed. An effective microstrip patch antenna can be designed by etching two CSRRs in a conventional patch antenna. The proposed antenna operates at 5.4GHz. It is advantageous for designing a microstrip antenna with miniaturized size for satellite applications. At operating frequency, the antenna exhibits better performance. The CSRRs embedded on the patch antenna helps in miniaturization of the patch antenna. CST software is being used to simulate all the plotted geometry. Here VSWR, directivity, gain, axial ratio, radiation pattern of different designed antenna are evaluated. In future other different type of feed techniques can be utilize to evaluate the total performance of the antenna without ignoring the optimized parameters of it in the action. Exclusively and extensively focusing on the area of different design methods which principally intensify the efficiency and impedance bandwidth.

Keywords: Microstrip, Patch, VSWR, CSRR, C-Band.

1. Introduction

Now a day's Space is a more crucial factor in satellites; especially satellite communication and radar applications require more compact antenna. The world moves towards the trend of miniaturization, hence the antenna design focuses on miniaturization. The S-band is mostly used for the applications like WLAN standards, WiMAX, Microwave ovens, cordless phones and Bluetooth. In some countries this band is used for Direct-to-home (DTH) satellite television services also. C-band is used for the applications like Wi-Fi modules, Weather radar systems and Satellite communications. In comparison with the Ku-band (12-18GHz) [11], the C-band performs well at adverse weather conditions. In military applications like surveillance and air defense control these frequency bands are used. An important note is that the government security systems require narrow bandwidth.

In recent days, microstrip patch antennas are receiving considerable attention in satellite and radar applications. Despite the fact, that the microstrip patch antenna has many advantages like being simple, low-profile and versatile, they are quite larger at lower microwave frequencies, so the use of electromagnetic metamaterials like CSRR can minimize the antenna size. The CSRR is first coined by Falcone et al [4].

They showed that CSRR will produce negative permittivity. Even though Victor Veselago first introduced the metamaterials which exhibit negative permittivity and negative permeability theoretically in late 1960s [4], it almost took three decades to first experimental evidence to come up. There is much geometry available in the field of complementary split ring resonators [5]-[9]. Their characters have been analyzed very well. Accompanying with compact structures; presently dual band antennas are receiving considerable attention since such type of antenna design reduces the number of antennas required for the discrete frequencies of operation. In satellite communication systems the multi band antennas are attractive choices because of the reduced size, low profile [11].

This paper presents a compact patch antenna loaded with a square complementary split ring resonator which is intended to operate in the C-band applications. The CSRR embedded in the patch antenna helps in reducing the resonance frequency of the microstrip patch antenna. It couples the field to the patch and makes it radiate. It can be stated that the ring slot in the CSRR provides the capacitive coupling where as the outer split in the CSRR provides the magnetic coupling [8]. A C band operation can be obtained by properly feeding the antenna with coaxial feed.

2. Antenna Design

Fig1 illustrates the proposed geometry of the antenna for C-band application. The proposed geometry is obtained from the basic rectangular patch antenna by embedding the two complementary square split ring resonators. A split ring resonator can be converted into a Complementary Split Ring Resonator by replacing the metal portions of the split ring resonator into the apertures and the apertures into the metal portions. Here the one complementary split ring resonator is facing the



Security Issues in Android Smart Phones

Rama Bhatia(Assistant Professor)¹,
Dr. Renu Bagoria (Associate Professor)², Prof.(Dr.) Barjesh Kochar³

ABSTRACT

The various research work has been done in the field of smart phone and its security issues. In this Paper, we study the research work of security issues in Android done by various author this help us in detecting different malwares already found in smart phones which indicates the security issues in Mobile Applications. Since quantitative measurements are essential in all sciences, there is a continuous effort by computer science practitioners and theoreticians to bring similar approaches to software development this motive us to further assess the efficiency of the Android applications.

KEYWORDS:

Android, Malware, Smart Phones. I.

INTRODUCTION

According[37] to data from the International Data Corporation (IDC) Worldwide Quarterly Mobile Phone Tracker the demand of smart phones increased in 2015, moreover the Andorid dominate iphone and other mobile operating systems. This increases the threats in smart phones. PCs Anti- Virus develop to identify and analyze new, old and unknown Malware. A virus scanner [38] can block viruses, worms, and Trojan horses from infecting the often real time monitored system. Although behavioural detection[11] is mostly included in anti-virus software, most malware is detected by scanning for and finding a certain patterns, also called signatures. Therefore, the malware has to be known by the scanner through a signature database, otherwise it is not able to detect and remove it. For generating these signatures, malware needs to be analysed for identifying significant and meaningful patterns that should be unique to the malware and its relatives But not only signature generation requires analysis; in order to disinfect a system, the behaviour of the malware needs to be understood for being able to undo critical changes. For analyzing softwares sandboxes e.g. CWSandbox [39] or Java sandboxes [40], can be used, which guarantees an almost realistic execution of suspicious binaries in an isolated environment in stationary computers but not

in smartphones. Since smart phone malwares are increasing day by day this raises concerns in smart phone industry[41, 42] and it can be expected that new malware will emerge for popular mobile Operating Systems like iPhone or Android. . In this case, the work of analyzing the software are done by anti-virus only. This would not be that concerning but Oberheide et al. [4] showed that the average time for receiving a signature for a new malware is about 48 days. This in turn means that users with infected system need to wait 48 days until they have a chance to disinfect it, leaving the window of opportunity very wide open for new malware. Moreover With the increasing capabilities of such phones, more and more malicious software (malware) targeting these devices have emerged. In 2004, the first articles about malware for smartphones [1, 2] appeared describing mobile devices as the next generation of targets. Android gained popularity because of [1]- [4], so we need resource limited security mechanism for mobile apps assessment. Therefore, we present an approach to analyze Android-based applications.

RELATED WORK

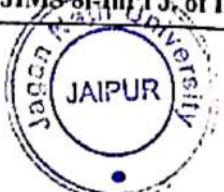
In the following section, we give a short introduction to the field of security issues using malwares found in smart phones.

A. SMARTPHONE AND ITS SECURITY

Need of today's fast life demands mobiles at almost every stage, from last some years we saw a young to old generation people all over the world was connected through phones and then slowly with computers, mobiles and now it's a time of smart phones . Smart phones are mobile phone that performs many of the functions of a computer, typically having a touch screen interface, Internet access, and an operating system capable of running downloaded apps. With smart phones many mobile apps are coming to facilitate the users. Whether its education, health, internet web browsers, online shopping, banking and many more all the things are getting mobile. User is felling benefited by using these mobile apps "Any Where Any Time". This

mailto:rmabhatia@gmail.com, rmabhatia@gmail.com,
mailto:renu.bagoria@jagannathuniversity.org, renu.bagoria@jagannathuniversity.org
barjeshkochar@gmail.com
Copyright ©IJICCT, Vol IV ,Issue I(Jan-Jun 2016):ISSN 2347-7202

This journal is cited as : JIMS 8i-Inf. J. of Inf. Comm. & Computing Technology(IJICCT)



Certified True Copy

Signature and name of Registrar, Jagannath University, Jaipur

7

Article

An analytical approach towards CPU, memory & ul performance assesment of android apps

January 2016

Authors:



Rama Bhatia
PSB Academy



R. Bagoria



A.K. Mohapatra

Request full-text

Download citation

Copy link



To read the full-text of this research, you can request a copy directly from the authors.

References (1)

Abstract

Android based smart phones have emerged as the most popular mobile devices in the present days. Android apps are also playing the major role for the success of any android phones. The Competition among similar kind of apps are increasing day by day. In this paper, we reviewed the research work related to the various performance issues of android apps. The performance of the similar types of apps has been carried out in terms the usage of CPU, usage of Memory and user interface rendering speed. The result shows that some of the apps take more CPU usage while others take less. Memory leakage in most of the apps is a major concern for the android developrs.

Discover the world's research

- 17+ million members
 - 135+ million publications
 - 700k proje
- Join for free

FEATURED VIDEOS

Powered by [prints]

How ResearchGate members help fellow scie..

How ResearchGate members help fellow scientists find the COVID-19 research they need [Read More](#)

No full-text available

Request the article directly from the authors on ResearchGate

Request full-text



Certified True Copy

Professor
Jagan Nath University, Jaipur

Value Stream Mapping as a Tool for Lean Manufacturing Implementation- A Review

Bhanu PS Tomar¹, Avinash Nath Tiwari²

¹M.Tech Research Scholar, ²Assistant Professor

¹Department of production engineering, ²Mechanical Engineering Department

^{1,2}Jagannath University, Jaipur, Rajasthan, India

ABSTRACT: In today's global competitive world, the era of mass production and pull system is over and companies are experiencing a heavy pressure because of globalization. Main objective of any organisation become satisfying customer requirements. Value is now defined by customer point of view as customer willing to pay and what worthiness that product has for them. They will not pay for any waste and companies have to be focused on this. Thus, companies need to implement Value Stream Mapping (VSM) because it has been established as one of the best and most convenient tools of lean manufacturing implementation and to identify and eliminate all kind of wastes. After creation of current value stream map (CVSM) showing all the processes contributing to product manufacturing, Future value stream map (FVSM) helps to identify and reduce NVAs in a process and make a production flow efficient, effective, economic and flexible. This paper discusses comprehensive literature on implementation of lean manufacturing by using value stream mapping as an effective tool. The methodology to implement value stream mapping and its benefits to various production industries as well as in service sectors has also been discussed. The case studies considered in this paper are from various international researches. The paper concludes with highlighting VSM's contribution to delight customers.

Keywords: Lean Manufacturing (LM), VSM (Value stream map), CVSM (Current state value stream map), FVSM (Future state value stream map), VA (Value added activity), NVA (Non-value added activity), Kaizen, WIP, Lead Time.

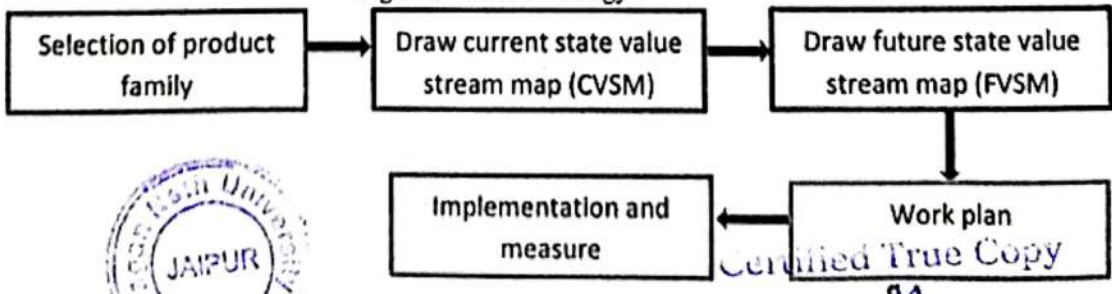
INTRODUCTION

To ensure competitiveness in this high pressured continuous changing and developing market conditions, implementation of lean manufacturing is become necessary for organisations. Lean manufacturing is identified as a comprehensive set of much effective techniques for waste identification and its elimination from processes in order to enhance system flexibility, effectiveness, efficiency and reduce overall production costs. One of the most common and convenient way to implement lean manufacturing is the application of Value Stream Mapping (VSM). Before going to define VSM, we must understand what is value? Value of the product is measured at end users (customers). Value of the product for customer is in terms of money, satisfaction, performance, service or elegance. To serve the best value to the customers company needs a customer requirement data. This data become helpful to make a right product for right customer with right specification at right time with right price. To make this entire system correct VSM is the most common and helpful tool to make entire stream valuable and to eliminate non-value adding activities. Value Stream Mapping (VSM) is a set of methods to visually display the flow of materials and information. Whenever there is a product for a customer, there is a value stream and the change lies in the seeing it. Value Stream map is also known as "Material and information flow mapping" in Toyota. It is developed by a work carried out by Taiichi Ohno at Toyota in the 1960's - 70's. VSM doesn't require a tough and tedious work. It requires just a paper, pencil tool to draw CVSM and FVSM and brainstorming sessions for improvements and comments. In one project there are two value stream maps. A current state map (CVSM) and a future state map (FVSM). A current state value stream map shows what is the actual processing steps are at the beginning of a project. It identifies wastes and NVAs. The future state map shows what the process should look like at the end of the project? And how these processes can be improved? After these improvements as they are suggested changes in current system are made. Now, This FVSM will be the CVSM for next project. And this cycle continuously goes on. We can use VSM as a Lean method to identify the opportunities of improvements for future. VSM method is associated with production as well as with service sectors. It can be used for Reduction in lead and cycle time of various processes, Customer satisfaction and value addition, Managing supply chain activities, Development of efficient production techniques, Improving productivity and profitability, Layout and equipment modification etc.

METHODOLOGY

The methodology for implementation of value stream mapping is essentially having five steps. These all steps are to be performed in a sequential way. The sequence is as follows-

Fig 1- VSM Methodology



Certified True Copy
Jagan Nath Tiwari
Jagannath University, Jaipur

Application of Value Stream Mapping for Productivity Improvement- Case Study of a Foundry Industry

Bhanu PS Tomar¹ Avinash Nath Tiwari²

¹M.Tech Research Scholar ²Assistant Professor

¹Department of Production Engineering ²Department of Mechanical Engineering

^{1,2}Jagannath University, Jaipur, Rajasthan, India

Abstract— The term value stream mapping is defined as a lean manufacturing tool which includes all the actions both value added and non-value added required bringing a product into its finished state. In today's global competitive world, the era of mass production and pull system is over and companies are experiencing a heavy pressure because of globalization. Main objective of any organisation become satisfying customer requirements. Value is now defined by customer point of view as customer willing to pay and what worthiness that product has for them. They will not pay for any waste and companies have to be focused on this. Thus, companies need to implement Value Stream Mapping (VSM) because it has been established as one of the best and most convenient tools of lean manufacturing implementation and to identify and eliminate all kind of wastes. This paper presents a case study of application of value stream mapping in an Indian foundry industry. This industry was manufacturing Crusher Jaw plates. The application of these plates is in stone cutting plants. The case study has been used to show the applicability and importance of VSM in foundry industry. Current state of the jaw plate manufacturing has been developed by using VSM symbols. This current state map was then used to identify areas for improvements. From the findings of CVSM it was observed that lead time was quite high for given demand, Cycle Time was more than Takt time and number of operators could be reduced by combining operations. As a result, including individual improvements in WIP, Labour Utilisation, Cycle Time, Lead Time, Changeover Time, the overall improvement was found near to 22%.

Key words: Lean Manufacturing (LM), VSM (Value stream map), CVSM (Current state value stream map), FVSM (Future state value stream map), VA (Value added activity), NVA (Non-value added activity), Kaizen, WIP, Lead Time

I. INTRODUCTION

To ensure competitiveness in this high pressured continuous changing and developing market conditions, implementation of lean manufacturing is become necessary for organisations. Lean manufacturing is identified as a comprehensive set of much effective techniques for waste identification and its elimination from processes in order to enhance system flexibility, effectiveness, efficiency and reduce overall production costs. One of the most common and convenient way to implement lean manufacturing is the application of Value Stream Mapping (VSM). Before going to define VSM, we must understand what is value? Value of the product is measured at end users (customers). Value of the product for customer is in terms of money, satisfaction, performance, service or elegance. To serve the best value to the customers company needs a customer requirement data. This data become helpful to make a right product for right customer with right specification at right time with right

price. To make this entire system correct VSM is the most common and helpful tool to make entire stream valuable and to eliminate non-value adding activities. Value Stream Mapping (VSM) is a set of methods to visually display the flow of materials and information. Whenever there is a product for a customer, there is a value stream and the change lies in the seeing it. Value Stream map is also known as "Material and information flow mapping" in Toyota. It is developed by a work carried out by Taiichi Ohno at Toyota in the 1960's - 70's. VSM doesn't require a tough and tedious work. It requires just a paper, pencil tool to draw CVSM and FVSM and brainstorming sessions for improvements and comments. In one project there are two value stream maps. A current state map (CVSM) and a future state map (FVSM). A current state value stream map shows what is the actual processing steps are at the beginning of a project. It identifies wastes and NVAs. The future state map shows what the process should look like at the end of the project? And how these processes can be improved? After these improvements as they are suggested changes in current system are made. Now, This FVSM will be the CVSM for next project. And this cycle continuously goes on. We can use VSM as a Lean method to identify the opportunities of improvements for future. VSM method is associated with production as well as with service sectors. It can be used for Reduction in lead and cycle time of various processes, Customer satisfaction and value addition, Managing supply chain activities, Development of efficient production techniques, Improving productivity and profitability, Layout and equipment modification etc.

This paper describes a case study explaining the successful implementation of VSM into a foundry industry. The product being manufactured is crusher jaw plate. Lean manufacturing is a widely accepted and applied technique in manufacturing industries and it has been cumulatively implemented all over the world by many leading organisations. Global competition among the industries is constantly arising and industries are facing very tough to face changes. To sustain changes they need changes and improvements in their system. For this adoption of lean tool is must. Lean Manufacturing is extensive and intelligent set of tools for waste identification and reduction or elimination from manufacturing processes to make them more effective, more flexible, and more efficient and reduce individual as well as overall costs of operations and product being manufactured. One of the most effective and convenient way to achieve all targets is the application of VSM on specified product family.

The VSM process is simple and straight forward. It includes all the areas starting from raw material procurement to the selling of final product into customer hands. Along with processes, it also includes customer



Certified True Copy

Jagan Nath University, Jaipur

Comparison of THD for Passive Filter and Active Filter and Hybrid Filter Technologies Used To Improve The Power Quality

Akshay Sharma, Nitin Sharma, ManMahendra Singh Daksh

Abstract— This paper is about improvement of power quality which suffered from the highly used nonlinear load and measuring and controlling equipment's in the smart grid technologies. As we know that the smart grid technology is the most effective technology for the recent era to have better reliability and quality for the both customers and utilities, so in spite of ignoring this we have to find some solution to eliminate the effects of nonlinear load. some of major effects of nonlinear load are harmonics, distortion of wave shapes, transients, data errors; memory loss; equipment shutdown; flickering lights; motors stalling/stopping Processing errors, computer lock-up; burned circuit boards etc. We will show the comparative effect of passive filter and active hybrid filter by sampling their THD. A Power quality is a common problem for both electric power suppliers and users. The paper is beneficial for both customer and utility as they are suffering from the maintained problems.

Index Terms— power quality, smart grid, nonlinear load, active filter, passive filter, active hybrid filter, THD.

I. POWER QUALITY

Latterly, relieve of the electricity trade has opened a revolutionary and enchanting opportunity for decentralized energy resources to compete a significant role in optimized performance of the overall electric power system network. Additionally decentralized technologies, such as Distributed Energy Generation (DEG) can succeed required electricity demand and implement to generate neat on-site energy that will increase the infallible of the entire system, increase the price adaptable of demand for centralized power and degrade system losses. Furthermore, since most of the DG implementations are sustainable; such as photovoltaic, wind, hydroelectric or geothermal, or persuasive energy sources such as cogeneration or biomass, fuel cells, expressive environmental amenity can be acquired.

Integration of Renewable energy source (RES) at distribution level is termed as Distributed Energy Generation (DEG). The utility is apprehensive due to the acute perception level of occasional RES in distribution level as it may act a part of threat to network in terms of stability criteria, voltage regulation and improved power-quality (PQ) issues. Therefore, the DEG systems are required to abide by with strict regulatory and technical framework to ascertain reliable

and safe effectual operation of overall system. With the furtherance in power electronics and energy generation technologies, the DEG systems can now be vivaciously controlled to amend the system performance with improved PQ at PCC [1].

II. SMART GRID

Smart Grids are expected to accommodate high levels of penetration of Plug-in Electric Vehicles (PEVs) and wind power due to the environmental concerns and incentives from regulators. Integration of PEVs and wind power in the network may cause adverse impacts in the distribution systems because of the increased load from PEV charging, non-linearity of the loads, and the intermittency of wind power. The placement and size of the PEV loads and wind generators (WGs) determine adversity of the impacts on the voltage profile, power loss, power quality, etc., in the distribution grid [2].

III. NON-LINEAR LOAD

Harmonic current starved from a source by the nonlinear load, due to very high usage of semiconductor devices may results in the distortion of source voltage at the point of common coupling (PCC) due to the source side impedance. Both distorted current and voltage may affect the end-user equipment to mis-operate, conductors go to overheat and may reduce the life expectancy and efficiency of the equipment connected at the PCC. Formally, a passive type LC power filters are preferred to eradicate current harmonics when it is connected in shunt with the load. This compensation equipment has some disadvantages, the source impedance is very high compared to filter impedance in order to eliminate source side harmonics, they are not applicable for variable load conditions, and it cannot furnish the complete solution for these problems.

The imbalance condition for unbalanced loads at distribution level, it totally dependence on the how much of current imbalance and the magnitude of the source impedance effects the three-phase voltages should be in deficient in magnitude and phase angle jump, this is mostly presence of a unequal nature of load side impedance. Here we proposed cooperative control of shunt passive type & series active type conditioner based detection of voltages to compensate the harmonics present in the voltage, voltage regulation as well as neutral current eradicating coming from unbalanced load. The importance of cooperative control is based on information transferring among the active filters with automatic gain accommodate, thus consequently damp out the harmonic

Manuscript received June 24, 2016

Akshay Sharma, Research Scholar, Dept. of Electrical Engineering, Jagannath University, Jaipur

Nitin Sharma, Assistant Professor, Dept. of Electrical Engineering, Jagannath University, Jaipur

ManMahendra Singh Daksh, Assistant Professor, Dept. of Electrical Engineering, Anand international college of engineering, Jaipur



Certified True Copy

Jagan Nath University, Jaipur

Placement of Distributed Generation for Improvement of Voltage Profile in Distribution System

Prince Jacob¹, Nitin Sharma²
M. Tech. Scholar¹, Assistant Professor²,
Department of Electrical Engineering,
Jagan Nath University, Jaipur

appu9977@gmail.com¹, nittlnsharma@jagannathuniversity.org²

Abstract- Distributed Generation is an approach that employs small-scale technologies to produce electricity close to the end users of power. When total system load is more than its generation capacity that makes relieving of load on the feeders not possible and hence voltage profile of the system will not be improved to the required level. In order to meet required level of load demand, DG units are integrated in distribution network to improve voltage profile, to provide more reliable and less uninterrupted power supply. Voltage stability is an important problem in the emerging world of technologies and development, the main objectives in operating an electric power system is to maintain a proper voltage level thought DG. Voltage Stability Index method is to be used for determining DG placement candidates. A Voltage Stability Index method is to be executed on the system and the bus with a minimum voltage at the collapse point is defined as the most sensitive bus to voltage collapse. This bus is to be selected as a candidate for DG placement.

Keyword—Distributed generation (DG), distribution system, optimum power flow, voltage profile, voltage stability.

I. INTRODUCTION

The Distributed Generation energy sources can be classified into conventional and non-conventional. The conventional sources include combustion turbines, reciprocating engines, micro turbines and fuel cells. Natural gas and petroleum are used for these forms of distributed generation. However, there is growing trend towards using non-conventional sources. This is evidently, due to the fact that natural gas and petroleum sources are fast depleting and also due to growing environmental concerns. Biomass, solar and wind energy distributed generation systems are being increasingly added to the grids and this trend will increase in future. The non-conventional energy sources have the disadvantage of high investment cost, where a significant part of this investment cost is the cost of power electronics interface. Voltage Stability Index method is to be used for determining DG placement candidates. A Voltage Stability Index method is to be executed on the system and the bus with a minimum voltage at the collapse point is defined as the most sensitive bus to voltage collapse. This bus is to be selected as a candidate for DG placement. The bus, which has the biggest participation factor in each mode, is to be selected as another candidate for DG placement. Thereafter, the DG will be installed at one of the candidates and a continuation power flow method will be carried out on the system with the installed DG to determine the system maximum loading. This procedure is repeated for all

candidates. The bus with highest loading factor is to be selected as the best candidate bus for DG placement

II. METHODOLOGY

An equivalent two-bus system of a distribution network is used for the analysis of voltage stability. The Voltage Stability Index technique is implemented on well-known 33-bus radial distribution network.

A. Load Flow Approach

This is a simple and efficient method for solving radial distribution networks. The proposed method involves only the evaluation of a simple algebraic expression of voltage magnitudes and no trigonometric functions as opposed to the standard load flow case. Thus, computationally the proposed method is very efficient and it requires less computer memory. The proposed method can easily handle different types of load characteristics. [D. Das *et al.*, 1995].

A two bus equivalent of a typical network is shown in Fig.

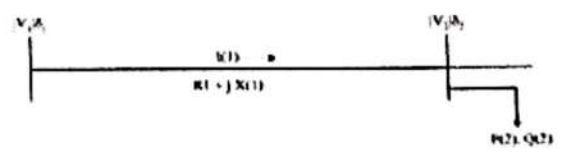


Fig 2. Electrical equivalent



Certified True Copy

Signature
Jagan Nath University, Jaipur

Trends in Electrical Engineering (TEE)

HOME ABOUT LOGIN REGISTER SEARCH CURRENT
 ARCHIVES ANNOUNCEMENTS EDITORIAL TEAM INDEXING
 EDITORIAL GUIDELINES REFERENCING PATTERN COPYRIGHT
 LICENSING FORM PUBLICATION ETHICS AND MALPRACTICE STATEMENT
 OLD ARCHIVE

Home > Vol 6, No 2 (2016) > **saini**

 Open Access  Subscription or Fee Access

Estimation of Power System Stabilizer Parameters Using Swarm Intelligence Techniques to Improve Small Signal Stability of Power System

vikas saini, nitin sharma

Abstract

Interconnection of the power system utilities and grids presents a formidable challenge in front of design engineers. With the interconnections, power system has emerged as a more complex and nonlinear system. In recent years, small signal stability issues have gained much importance along with the conventional transient stability issues. Transient stability of the power system can be achieved with high gain and fast acting automatic voltage regulators (AVRs). However, AVRs introduce negative damping in the system. Propagation of small signals is hazardous for system's health and presents a potential threat to system's oscillatory stability. These small signals have magnitude of 0.2 to 2 Hz. The efficient control methodology to enhance system damping is power system stabilizer (PSS). This paper presents application of swarm intelligence for PSS parameter estimation problem on standard IEEE 10 Generator 39 Bus power network (New England). Realization of the objective function is carried out with the help of interpolation analysis using MATLAB. The system performance is compared with the conventional optimization algorithms like genetic algorithm (GA) and particle swarm optimization (PSO) based PSS controller. The robustness of proposed controller is tested by considering different operating conditions. An Eigen property analysis is carried out on this system i.e. before installing PSS, and after the employment of GA and PSO tuned PSSs. A meaningful comparison is carried out with GA and PSO on the basis of convergence characteristics and dynamic response of speed deviation curves of various generators.

Keywords: Power system stabilizer (PSS), low frequency oscillations, genetic algorithm (GA), particle swarm optimization (PSO), automatic voltage regulators (AVRs)

Full Text:

[PDF](#) 

DOI: <https://doi.org/10.37591/v6i2.3112>

Refbacs

- There are currently no rebfacs.

CURRENT ISSUE

Vol 6, No 2
 2016

OPEN JOURNAL SYSTEMS

Journal Help

SUBSCRIPTION

Login to verify subscription

USER

Username

Password

Remember me

NOTIFICATIONS

- [View](#)
- [Subscribe](#)

JOURNAL CONTENT

Search

Search Scope

All

Browse

- [By Issue](#)
- [By Author](#)
- [By Title](#)
- [Other Journals](#)

FONT SIZE

INFORMATION

- [For Readers](#)
- [For Authors](#)
- [For Librarians](#)

Certified True Copy

Ravi Singh
 Jagan Nath University, Jaipur



Comparison of Duane Growth Model & Crow Amsaa Model

Mr. Vikram Singh¹, Mr. Rakesh Kumar², Dr. Mohammad Israr³

¹ PG Scholar, Production Engg., Jagannath University Jaipur, Rajasthan, India

² Asst. professor, Mechanical Engineering, Jagannath University Jaipur, Rajasthan, India

³ Principal, Mechanical Engineering, Dungarpur college of Engineering & Technology, Rajasthan, India

ABSTRACT

The reliability of the software represents one of the most important attributes of software quality, and the estimation of the reliability of the software is a problem hard to solve with accuracy. Nevertheless, in order to manage the quality of the software and of the standard practices in an organization, it is important to achieve an estimation of the reliability as accurate as possible. In the present work there are described the principles and techniques which underlie the estimation of the reliability of the software, starting from the definition of the concepts which express the attributes of software quality. It is taken into account the issue of the estimation of a software part. The presumed objective of the estimation of the reliability consists in the analysis of the risk and of the reliability of the software-based systems. Supposedly, a documented opinion of the expert exists regarding the reliability of the software and an update of the defined estimation of the reliability is tried with the information contained in the records of the operational data.

Keyword: -Model Formulation, Failure Rate and Failure Intensity, Duane Growth Model & Crow Amsaa Model.

1. Introduction

In general, the first Prototypes produced during the development of a new complex system will contain design, manufacturing and engineering deficiencies. Because of these deficiencies the initial reliability of the prototypes may be below the system's reliability goal or requirement. In order to identify and correct these deficiencies, the prototypes are often subjected to a rigorous testing program. During testing, problem areas are identified and appropriate corrective actions (or redesign) are taken. Reliability growth [1] is the improvement of a product (component, subsystem or system) over a period of time due to changes in the products design and the manufacturing process. A reliability growth program is a well-structured process of finding reliability problems by testing, incorporating corrective actions and monitoring the increase of the products reliability throughout the test phases. The term growth is used since you assume that the reliability of the product will increase over time as design changes and fixes are implemented. However, in Practice no growth or negative growth may occur.

Reliability goals are generally associated with a reliability growth program. A program may have more than one reliability goal. For example, there may be a reliability goal associated with failures resulting in unscheduled maintenance actions and a separate goal associated with those failures causing a mission abort or catastrophic failure. Other reliability goals may be associated with failures modes that are safety related. The monitoring of the increase of the product's reliability through successive phases in a reliability growth analysis (RGA) concerns itself with the quantification and assessment of parameters (or metrics) relating to the products reliability growth over time. Reliability growth management addresses the attainment of the reliability objectives through planning and controlling of the reliability growth process.

Reliability growth Occurs From Corrective and Preventive actions based on experience gained from failures and analysis of the equipment's design, production and operation processes. The reliability growth test analysis and fix concept in design is applied by uncovering weakness during the testing stages and performing appropriate corrective



Jagan Nath University, Jaipur

Comparative Study of Reliability growth Models

Vikram Singh
PG Scholar, Production Engg.,
Jagannath University Jaipur,
Rajasthan, India¹
vikram.singh787@gmail.com

Mr. Rakesh Kumar
Asst. professor, Mechanical Engineering,
Jagannath University Jaipur,
Rajasthan, India²
rakesh.kumar@jagannathuniversity.org

Dr. Mohammad Israr
Principal, Mechanical Engineering,
D.C.E.T Dungarpur
Rajasthan, India³
isainik@gmail.com

Abstract—The development test system design is not usually effective nor efficient to improve reliability based on. Alternative it is essential to design in reliability. The model estimates that the timescale for the detection reliability is essential to the development for the reliability of the design, process is designed to target the objective will be achieved. Various models have been developed for the testing of the reliability test development, but very little attention has been given to the development of design reliability.

Reliability growth model, planning, design and operation of the system are an important consideration. The reliability of modern discipline has its origins in the military and space technology. Again due to the competition in this market, resources and budgets and the increasing complexity of the system is the increased competition. Modern electrical systems and urban transport system failures cost of repair or maintenance or replacement of parts that goes beyond the cost of high impact. Products and services to customers for the inconvenience and lost productivity, crime has decreased, costs are much higher than the cost of urgent repairs. Product reliability at every stage of production should be managed. Research, product design, development, manufacture and marketing at every stage of development model focused on reliability.

Keywords- Software reliability growth model, NHPP, Testing effort, optimal software release policy, mean value function..

I. INTRODUCTION

In general, the first pattern produced during the development of new complex systems design, manufacturing and engineering constraints will include. Because of these shortcomings, an early version of the device achieved initial credibility or reliability of the system could be less than expected. Orders to identify and overcome these short comings, the prototype test program are subject to often difficult. During testing, the problem areas are identified and appropriate corrective actions are taken. The product must pass the test and appropriate corrective action should be implemented in order to reach this goal. "Reliability is increased.". Reliability problems finding and development through successive stages of product reliability as well as increased monitoring of the structured process called due to changes in the design and manufacturing process of a product (component, subsystem or system) over a period of time to improve. A reliability growth program, including testing by reliability problems finding corrective actions and monitor the reliability of the products increased during the test phase of a well-organized process.

Reliability targets generally are associated with a reliability growth program. One goal of the program is more credibility. There's a separate failures and unscheduled maintenance operations, resulting in catastrophic failure due to those failures associated with the mission aborted, or associated with the target could be a reliable target. Other reliability targets that are

related to security may be associated with the failure mode. Reliability growth analysis (RGA) quantification and standards (or matrix) concerns itself with time to assess the reliability of products in development through successive stages of product reliability growth monitoring. Reliability growth management planning reliability and credibility of the realization of the development process is to address through controlling.

System, subsystem or at major unit level can evaluate the reliability of the development taking place. A comprehensive program for the system, subsystem or at major unit level testing can operate two general approaches: an integrated and dedicated. Most development programs for reasons other than the testing that takes place reliability. Integrated reliability using existing test development to highlight the reliability problems and corrective actions to include. The development of a test program for testing the reliability dedicated to highlight the reliability troubles, including corrective action and generally, is focused on the achievement of a reliability goal. The lower level of the test, the primary focus of such an engine, the water pump and the lower level test, which can be dedicated or integrated as a unit to improve the reliability of the system, the design may seem like the place during the early part of the stage. Later dedicated prototype system and subsystem reliability development, testing, integrated reliability growth test or may be subject to both. Credibility to the initial design and development of the latest applications to use the method to



Prof. Dr. Israr
Jagannath University, Jaipur

15



IAEME Publication

SCOPUS Indexed Journals

OPEN ACCESS

Online Paper Submission



Enter Search Keyword

19808 Articles From 91 Journals

CALL FOR PAPER October - October 2020 ISSUE [New] [Submit an Article] [Select Language]

About IAEME | Authors Information | International Journals | Processing Charges | Quality of Journals | Download | Journal Subscription

Links

Journals by Subject

Special Issue

Membership

Publishing Ethics

Careers

Services

FAQ

Editor Section

100% Plagiarism Free



CALL FOR PAPER

CALL FOR PAPER SEPTEMBER - SEPTEMBER 2020 ISSUE Download

CALL FOR PAPER OCTOBER - OCTOBER 2020 ISSUE Download

News

January 16 2016 IAEME Journal Citation December 2015 NEW

January 5 2013 IAEME Journals Fast Publication NEW

More

How to cite this article

Prof. Dr. PANKAJ SHARMA and Dr.M.P.SINGH , 2016. EFFECT OF HAND ARM VIBRATION EXPOSURE IN MANUFACTURING INDUSTRY.International Journal of Mechanical Engineering and Technology (IJMET) - Scope Database Indexed Volume: 7, Issue:3, Pages: 112-118.

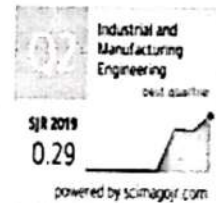
International Journal of Mechanical Engineering and Technology (IJMET) - Scope Database Indexed

ISSN Print : 0976 - 6340 ISSN Online: 0976 - 6359 Volume 7, Issue 3 (2016) Copyright ©IAEME, 2010

Bibliometrics

DownLoad (3 Weeks)	: 145
DownLoad (6 Weeks)	: 327
DownLoad (6 Months)	: 3002
DownLoad (1 Year)	: 3982
Citation Count	:

International Journal of Mechanical Engineering and...



Certified True Copy

Jagan Nath University Jaipur

"Optimization of machining parameters for minimum surface roughness in end milling,"

Rishi Raj Singh¹, Dr. M.P. Singh², Sanjay Singh³

¹ M. Tech. Research Scholar, Jagannath University, Jaipur, Rajasthan, India

² Professor, Jagannath University, Jaipur, Rajasthan, India

³ Assistant Professor, Jagannath University, Jaipur, Rajasthan, India

ARTICLE INFO

Received: 03 April, 2016

Accepted 27 April 2016

Corresponding Author:

Rishi Raj Singh

M. Tech. Research Scholar,
Jagannath University, Jaipur,
Rajasthan, India

ABSTRACT

This paper focuses on determining optimized parameters for minimum surface roughness in CNC end milling. Design of experiments based on response surface methodology with three independent factors (cutting speed, feed rate and depth of cut) and one category factor (nose radius), five level central composite rotatable designs has been used to develop relationships for predicting surface roughness. Model adequacy tests were conducted using ANOVA table and the effects of various parameters were investigated and presented in the form of contour plots and 3D surface graphs. Numerical optimization was carried out considering all the input parameters within range so as to minimize the surface roughness.

©2016, IJICSE, All Right Reserved

INTRODUCTION

Machining parameters such as speed feed, depth of cut and nose radius play a vital role in machining the given work piece to the required shape. These have a major effect on the quantity of production, cost of production and production rate; hence their judicious selection assumes significance. In manufacturing industries, manufacturers focus on both the quality and productivity. To increase the productivity, computer numerically control (CNC) machine tools have been implemented during the past decades. Surface roughness is one of the most important parameters to determine the quality of product. The mechanism behind the formation of surface roughness is very dynamic, complicated, and process dependent. Several factors influence the surface roughness obtained in a CNC milling operation. These can be categorized as controllable factors (spindle speed, feed rate, depth of cut and nose radius) and uncontrollable factors (tool geometry and material properties of both tool and work piece).

As the milling process is the most productive process, the study is expected to be quite beneficial. Here, end milling has been selected for the study to determine the impact of process parameters on the surface quality of the product.

1.1 Milling

Milling is the most common form of machining, a material removal process, which can create a variety of features on a part by cutting away the unwanted

material. By feeding the work piece into the rotating cutter, material is cut away from the work piece in the form of chips to create the desired shape.

1.2 End milling

An end mill makes either peripheral or slot cuts, determined by the step-over distance, across the work piece in order to machine a specified feature, such as a profile, slot, pocket, or even a complex surface contour. The depth of the feature may be machined in a single pass or may be reached by machining at a smaller axial depth of cut and making multiple passes.

1.3 Factors affecting surface roughness:

Whenever two machined surfaces come in contact with one another the quality of the mating parts plays an important role in the performance and wear of the mating parts. The height, shape, arrangement and direction of these surface irregularities on the work piece depend upon a number of factors such as:

A) The machining variables which include

- a) Cutting speed
- b) Feed, and
- c) Depth of cut.

B) The tool geometry

Some geometric factors which affect achieved surface finish include:

- a) Nose radius
- b) Rake angle
- c) Side cutting edge angle, and
- d) Cutting edge.

Certified True Copy

Jagan Nath University, Jaipur



IMPACT OF ADVANCED MACHINING & PROCESS IMPROVEMENT TECHNOLOGIES IN MANUFACTURING INDUSTRIES

Dr. M. P. Singh¹ and Dr. Jinesh kr. Jain²

Associate professor, Jagannath University
Associate professor Govt. Engineering College Ajmer

ABSTRACT: This paper revolves around the impact of Advanced Manufacturing Technologies in Indian Manufacturing industries. The data have been collected from four sectors of manufacturing industries. The majority of respondents are from automobile sectors, followed by process sectors, electrical & electronics sectors and industrial machinery and equipment sectors. Respondents were requested to choose a response on five point likert scale; anchored at one end with 'least important' meriting a score 1 and the other by 'most important' meriting a score of 5. After which the hypotheses testing have been performed by testing the level of conformity between the variables.

KEYWORDS: Amt; Cnc/Dnc; Kaizen; Benchmarking; Recycling

INTRODUCTION

Advanced Manufacturing Technology (AMT) can be defined as any new manufacturing technique, which is likely to cause constructive changes in a firm's manufacturing practices, management systems and its approach for the designing and production of various engineering products. Advanced Manufacturing Technologies are classified into two classes: hardware and software by Small and Yasin (1997).

(I) Pure Technical tools (hardware)

(II) Management tools (manufacturing practice software)

A structured questionnaire has been developed to qualify the presumptions; the questionnaire which is used in this study has been incorporated with inputs from various sources: most of the questions have been adapted from formerly published works and henceforth, the preliminary draft of the questionnaire was discussed with the academic scholars and practitioners.

The study investigates different types of advanced manufacturing technology (AMT), which are commonly used by manufacturing industries. These technologies can be grouped based on their functionalities, into six subgroups:

1. Advanced design and engineering technologies
2. Advanced machining technologies
3. Advanced planning technologies
4. Advanced material handling technologies
5. Advanced management systems
6. Advanced process improvement systems

Industries were asked to indicate the amount of investment in the individual technology, on a five point likert scale of 1 to 5, where 1 indicates no investment and 5 to show heavy

Certified True Copy



A Review on Aerodynamic Behavior of Airfoil when Surface Modified

Amit Kumar Saraf, Dr. Mahendra Pratap Singh, Dr. Tejsingh Chouhan

Abstract— There are limitations of engines of aircraft to decrease drag and increase efficiency. Efficiencies requirement is increasing day to day. Airfoil plays an important role in efficiency of aircraft. Modification in the shape of airfoil is also important in aircraft. General airfoil behavior has been analyzed by many researchers. In this paper airfoil characteristics given by many researchers are studied while surfaces of airfoils were modified. Modification on surface of airfoil gives significant changes in result. Without consuming much amount of fuel in aircraft drag can be decreased with simple modification on airfoil surface.

Index Terms— Airfoil, CFD, Aerodynamic behavior, Coefficient of Lift & Drag, angle of attack, flow separation, Dimple.

1 INTRODUCTION

IN early days with the help of powerful engines effort was made to reduce drag and increase lift and velocity of air-plane. Importance of aerodynamics came in role in the twelfth century. Modification in airfoil shape plays an important role in aerodynamics. Various types of airfoil series were developed. Every series has its own aerodynamics characteristics. Such approach is still used. The flow separation on airfoil increases pressure drag. During flight, increases or decreases in lift will cause incremental starting or stopping vortices, always with the effect of maintaining a smooth parallel flow at the trailing edge. At a low angle of attack, the rear surfaces have an adverse pressure gradient but not enough to cause significant boundary-layer separation. As the angle of attack is increased, the upper-surface adverse gradient becomes stronger, and generally a separation bubble begins to creep forward on the upper surface. At a certain angle $\alpha = 15^\circ$ to 20° , the flow is separated completely from the upper surface.

2 LITERATURE REVIEW

2.1 Review Stage

NACA4315 model was used to analyze the aerodynamic properties. Bumps were used at upper surface on trailing side. The bumps were created 80% from leading edge. Regular and bumped airfoils were compared. It shows that stall angle increased due to controlling on flow separation [13].

Airfoil four digit nomenclatures tell camber and thickness of airfoil. From this, we can find airfoil series. This helps to change the camber of airfoil and location of maximum thick-

ness of airfoil were compared. It was observed that aerodynamic losses were increased at high Reynolds no and losses were decreased at low Reynolds no. in rough airfoil. Separation bubble becomes weak due to roughness of surface at low Reynolds no [3].

NACA00012 airfoil was tested under different turbulent models i.e. [Spalart-Allmaras, Realizable $k-\epsilon$ and $k-\omega$ shear stress transport (SST)]. These turbulent models were compared and validated with experimental data. It was found that $k-\omega$ shear stress transport (SST) gives the best result for given airfoil. 80000 cells were taken for simulation. Air velocity was taken constant. Before solving it the main important work was to find out the transition point. Transition point should be modeled to get more accurate result. Here commercial CFD software was used. According to this if much amount of nodes are used, result will be more accurate, but huge amount of nodes take much time in computation. Here C type grid topology was used and 80000 quadrilateral cells were taken. Transition point was determined by hit and trial method. If the value of simulated C_D is greater than experimental value, it means that transition point chosen is wrong, turbulent region is larger. SO author have to shift it in right side and accordingly he can determine transition point. In result there was a disagreement between the data at near stall. The predicted drag coefficient was higher than experimental data. This is because the actual airfoil has laminar over the half of leading side. Turbulent model consider turbulent boundary layer throughout its length [12].

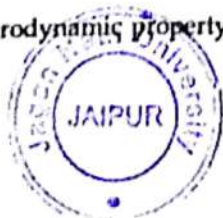
Two row and eight rows dimples on flat surface were investigated and observed that dimples were effective to convert laminar into turbulent at low Reynolds no. Multiple rows increases strength of mixing flows. The analysis was also done on sphere where it was found that drag were decreased in dimpled sphere compared to smooth sphere [4].

There were various experiments going on with various methods to reduce drag and to improve efficiency of wind turbine, airfoil of flight vehicle etc. A detailed study was done on airfoil to reduce drag on the trailing side. Since one of the main reason of drag or pressure drag is the formation of turbulent on the trailing side. Roughness was created in turbulent region of the smooth airfoil. This result in decrease in drag and gives better aerodynamic efficiency. Experimental work

- Amit Kumar Saraf is Phd Scholar in Jagannath University Jaipur, Rajasthan India. (Phone: +919928396705; e-mail: amitsaraf11@rediffmail.com)
- Dr. Mahendra Pratap Singh, is with Jagannath University Jaipur, Rajasthan India. He is now with the Department of Mechanical Engineering (e-mail: mpsingh_76@yahoo.co.in)
- Dr. Tejsingh Chouhan is with the Mechanical Engineering Department, Rajdhani Institute of Technology & Management, Jaipur Rajasthan, India (e-mail: tejsingh7@gmail.com)

ness [2].

At various Reynolds no aerodynamic property of smooth and



USER © 2016
http://www.ijser.org

Certified True Copy

Jagan Nath University, Jaipur

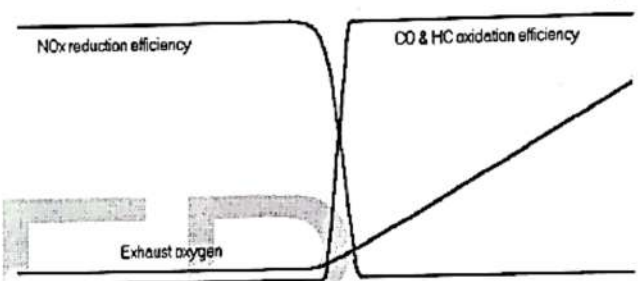
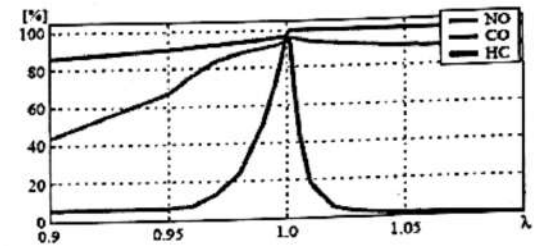
Dr.M.P Singh,Suman Raj

Abstract:-

This paper illustrates the design of pollutant control system that is catalytic converter having dual bed with air injection for application in gasoline engine. High exhaust purification consisting of less harmful gases along with low sound waves moves out of the tail pipe.
Keywords: Catalytic converter, exhaust emission conversion, thermodynamic model

INTRODUCTION

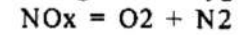
A dual bed catalyst has two separate chambers. Air can be injected in the middle of the catalyst to increase oxygen content in the back half of the converter. The engine can then be run slightly rich to improve NOx reduction in the front half of the converter. The air that is injected allows high efficiency oxidation of CO & HC in the back half of the converter. This type of converter can allow NOx reduction to occur in the front bed at maximum efficiency while CO and HC oxidation are occurring in the rear bed at maximum efficiency. It is the injection of air in front of the rear bed that allows both oxidation and reduction to occur at maximum efficiency. For the dual bed catalyst to operate at maximum efficiency, it must have very low oxygen levels in the exhaust entering the front bed. This only occurs when the engine is running slightly rich with no misfires or deposit problems. It must also have enough air injected in front of the rear bed to allow oxidation of the CO and HC. The front bed of a dual bed catalyst does also oxidize CO and HC. Even a rich mixture will leave some oxygen in the exhaust. The catalyst uses this small amount of oxygen to oxidize CO & HC into CO₂ & H₂O. As NOx is reduced, oxygen from that NOx is freed up. If this extra oxygen was allowed to accumulate it would start to limit NOx reduction. But the oxygen from the NOx is used to oxidize CO and HC. This limits oxygen build-up in the front bed and keeps NOx reduction at maximum efficiency.



A dual bed catalyst depends on air injection to provide the oxygen to clean up CO & HC when the mixture is rich. Air is only injected into the rear bed. Many cars do not have air injection. Without air injection and a slightly rich mixture these cars must depend on something else to manage the oxygen in the catalytic converter.

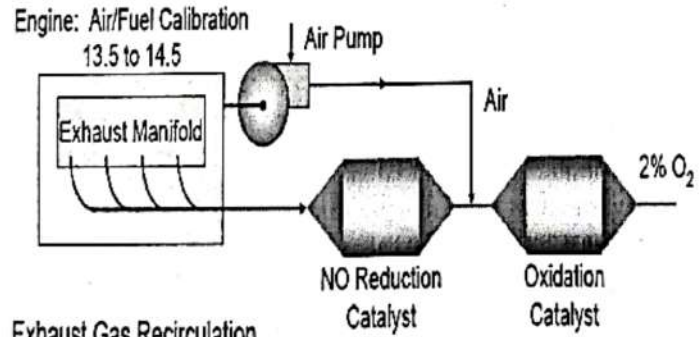
THEORY OF DBAI

Hot exhaust gas along with sound waves generated at the end of exhaust stroke is sent to the exhaust manifold through the exhaust valve. Sound waves and exhaust gas pass from exhaust manifold to Catalytic converter through a pipe. Hot exhaust gases entering inside catalytic converter. Due to partial combustion the gases entering inside the catalytic converter consists of a mixture of carbon Monoxide (CO) Unburned Hydrocarbons (HC) and oxides of Nitrogen (NOx) which are harmful to the environment inside the catalytic converter there consists of two ceramic blocks with micro ducts consisting of platinum and rhodium in one block while platinum and palladium in the other block acting as catalysts. The toxic gas enter into the first ceramic block and heat up simultaneously. This causes the catalyst to react with the toxic gases. As the gas enters inside the nitrogen molecules are the first to react. The catalyst causes the oxides of nitrogen to reform into nitrogen and oxygen respectively.



The gas flows through the micro ducts of the second ceramic block where it react with the platinum and palladium. Inside the micro ducts of the second ceramic

Dual-Bed Catalytic Converter System:



- Exhaust Gas Recirculation
- Could Decrease NOx by About 30%
- Had a Negative Effect on Engine Performance



Analysis of Image Retrieval using Hybrid Texture and Shape based Feature Vectors

Apoorva Mathur

Masters of Technology, Student
MEC, Bikaner
Apoorva.mathur12@gmail.com

Sunita Chaudhary

Department of Computer Science and
Engineering, Guide
Jagannath University, Jaipur
er.sunita03@gmail.com

Dr. Meenu dave

Department of Computer Science and IT
Jagan Nath University, Jaipur
meenu.s.dave@gmail.com

Dr. Amit Sanghi

Department of Computer Science and
Engineering
Marudhar Engineering College, Bikaner
dr.amitsanghi@gmail.com

Abstract- Content based image retrieval system is required so as to improve the retrieval of images from large web based and other various types of databases. With the increased importance of digital data, the production of image and video information has resulted in a large amount of images and videos that needs to be properly indexed for retrieval in the future. Various databases contain a large number of images, videos etc for which Content-Base retrieval systems or applications are greatly needed. To date, a number of methods and algorithms have been proposed by researchers from around the world to meet this challenge. This paper presents a literature review of such researches and discussions of a few existing ones.

I. INTRODUCTION

In last few years, the amount of digital data (audiovisual information) has grown exponentially. Gigabytes of new images, audio and video clips are generated and stored every day, which builds up a huge, distributed and mostly unstructured storage of multimedia information, much of which can be accessed and

retrieved using the internet. Subsequent retrieval of the digital information however, is not as easy and it may need a lot of additional work so as to be effective and efficient.

Mostly we use these three basic ways to retrieve previously stored digital data are Free browsing, Text-based retrieval and Content-based retrieval.



Need and Usage of Traceability Matrix for Managing Requirements

Dr. Mamta Madan¹, Dr. Meenu Dave², Ms. Anisha Tandon³

¹VIPS, Pitampura, ²JaganNath University, Jaipur,

³JIMS Vasant Kunj

mamta.vips@gmail.com, meenu.s.dave@gmail.com, 84.anisha@gmail.com

Abstract: Requirement Traceability Matrix (RTM) keeps track of all user requirements and maps it with test case ids. This document contains the various steps that are used to create a traceability matrix. In this paper, we have discussed template of RTM which contains requirements and its associated test case that is required in any of web based project. We have also discussed benefits of using this matrix.

Keywords:

RTM- Requirement Traceability Matrix

U T- Unit Testing

I T-Integration Testing

S T-System Testing

I Introduction

1.1 What is a Traceability Matrix?

This document is used to track the requirements [1] and check whether all the test cases are covered against the requirement. It checks whether each and every requirement is having a test case. This document is maintained to map test requirements and test cases.

Requirement Traceability Matrix (RTM)

RTM document [2] helps to identify missed requirements which are covered in test cases. It keeps track all requirements and maps it with Test case Ids.

The RTM is used to determine that how many tests are required, what kind of tests are required, tests can be automated or manual; if any existing tests can be re-used. RTM ensures that the resulting tests are most effective [3]. RTM includes the following parameters: Requirement ID, Type, Description, Specification, Unit, Integration, System & User Acceptance test case.

Traceability Matrix Types:

It is of two types: Forward Traceability: Requirements Mapping to Test cases and Backward Traceability: Test Cases Mapping to Requirements [4].

Forward Traceability Backward Traceability

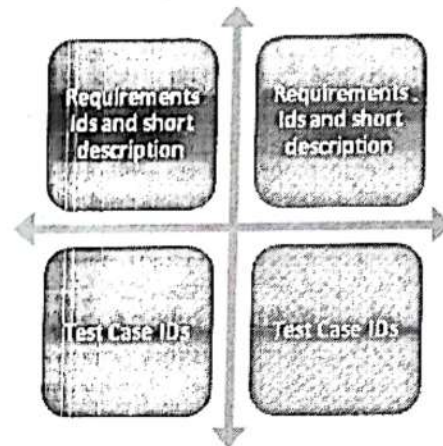


Figure 1: Forward and Backward Traceability

II Benefits of using Traceability Matrix

- It checks software requirements and its associated test case.
- It is used to find out the missing requirements.
- Its helps to find out the test cases against any change requirement[5].

III How to create a traceability matrix

1. Click on All Programs -> Microsoft Office -> Click on Microsoft Excel
2. Describe these columns: Requirement ID, Requirement description and one column for each test case.
3. Identify all the testable requirements.
4. Then identify all test flows and scenarios.
5. Requirement IDs are mapped to the test cases [6].

The following figure shows traceability matrix [7] covers lifecycle of each requirement which is required in each phase of a project.

Table 1: Requirement Attributes (at end)

Above figure includes requirement attributes, requirement version, its unique identifier and name[8].

The following table contains the template of Requirement Traceability Matrix[9].

Quantitative Analysis and Interpretation of Big Data Variables in Crime Using R

Ms. AnupamaJha, Dr. Meenu Dave, Dr. SupriyaMadan

Abstract- The term Big Data is used to describe massive amount of data that are characterized by 5 V's i.e. Volume, Variety, Velocity, Value and Veracity. Big data analysis is currently becoming increasingly important due to the exponentially growth of data generated in various fields such as Health care, Crime analysis, GIS etc. and the use of connected devices like laptops, desktop computer, mobile phones and tablets. The large size and complexity of datasets in Big Data need sophisticated statistical tools for analysis where R System provides multiple dimensions to statistical analysis of dataset. This paper explores the analysis of different kinds of Big data variables such as categorical and quantitative implemented to Big Data in Crime domain using the statistical tool R. To implement statistical analysis, Crime dataset from the Maryland's open data portal for the last 5 years have been downloaded. We explore the statistical analysis using different features of R i.e. from data generation to visualization of the crime dataset. These statistical inferences can be used to analyze and identify the crime patterns to reduce further occurrences of similar type of incidence.

Keywords: Big data, Big Data Analysis, Categorical and Quantitative Variables, R System, Statistical Analysis, Visualization.

I. INTRODUCTION

The size of the data is growing day by day with the exponential growth of the enterprises. For the purpose of decision making in an organization, there is need for processing and analysis of large volume of data. Data is generated from many sources such as social media data, machine generated data, traditional enterprise data etc. in the form of structured, semi structured and unstructured forms [1]. This generated data is so huge that it becomes difficult to process it with the traditional database and software techniques. More data may lead to more accurate analysis that may lead to more complex decision making. Better decisions can make reductions of both cost & risk and increase operational efficiencies. Analyzing big data is one of the challenges for researchers and academicians that need special analyzing tools. Analysis of Big data refers to the process of collecting, organizing and analyzing large datasets i.e. "Big Data" to discover insights and other useful information[2]. It helps us to understand the information contained within the data as well as to identify which data

will be most important for the application and its future decisions. The life cycle of Big Data is shown below in Figure 1 [3]. It involves the input and storing of data, processing and managing the data and the visualization of this data to the user. The 5 big data dimension based on the life cycle is Volume, Variety, Velocity, Value and Veracity[4].

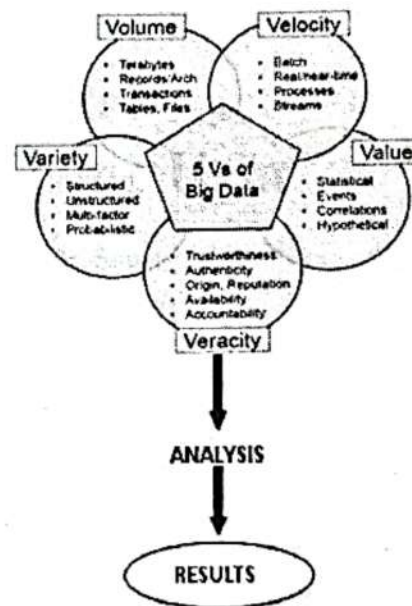


Fig1: Big Data Life Cycle

Study of crime data can help us to analyze crime pattern, inter-related clues and important hidden relations between the crimes. That is why data analysis can be great aid to analyze, visualize and predict crime using crime data set. We group data objects using clustering technique. Here grouping is done according to various types of crimes such as Robbery and Assault by Threat.

There are many tools available for big data analysis such as open source software, professional software and expensive commercial software. R is one such tool that helps in data analytics. It is an open source programming language and software environment which supports statistical computing and visualization [5].



Certified True Copy

Professor
Jagan Nath University, Jaipur

Strategies for Reducing Farmers' Suicide using ICT

*Basu Dev Sharma, ** Mithilesh Dubey

To Cite: Sharma, Basu Dev & Mithilesh Dubey. (2016). Strategies for Reducing Farmers' Suicide using ICT. *BRICS Journal of Educational Research*, 6(4),00-00.

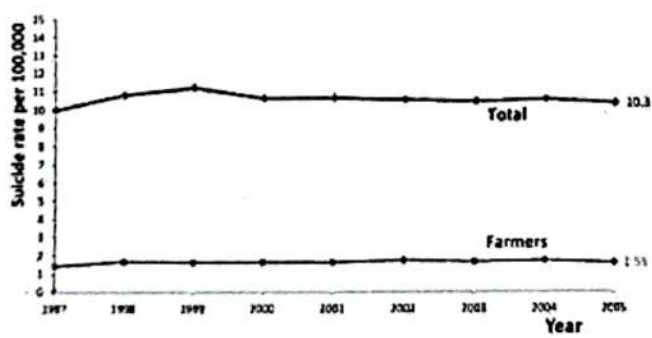
*Research Scholar, Jagannath University, Jaipur.
**Research Supervisor, Jagannath University, Jaipur.

Corresponding author:
Basu Dev Sharma

Abstract

India is an agrarian country with around 60% of its people depending directly or indirectly upon agriculture. Farmer suicides account for 11.2% of all suicides in India. Activists and scholars have offered a number of conflicting reasons for farmer suicides, such as monsoon failure, high debt burdens, government policies, public mental health, personal issues and family problems. Role of ICT using appropriate technology can reduce farmers suicide attempts as well as can increase the GDP of the nation and increase crop productions drastically. Also there is need to improve the strategies at FCI level to increase the life of crops produced and improving the logistics infrastructure and communication system to improve the situation during drought and flood affected regions.

In 2014, the National Crime Records Bureau of India reported 5,650 farmer suicides. The highest number of farmer suicides were recorded in 2004 when 18,241 farmers committed suicide. The farmers suicide rate in India has ranged between 1.4 and 1.8 per 100,000 total population, over a 10-year period from 2005.



scarcer. Agricultural regions that have been affected by droughts have subsequently seen their suicide rates increase.

During 2014, major causes of suicides among male farmers were 'Bankruptcy or Indebtedness' and 'Family Problems', which accounted for 21.5% and 20.0% respectively of total male farmers' suicides. Whereas, in female farmers' suicides, 'Farming Related Issues' followed by 'Family Problems', 'Marriage Related Issues' and 'Bankruptcy or Indebtedness' were major causes of suicides, accounting for 21.4% (101 out of 472 suicides), 20.6% (97 suicides), 12.3% (58 suicides) and 10.8% (51 suicides) respectively during 2014.

Historical records relating to frustration, revolts and high mortality rates among farmers in India, particularly cash crop farmers, date back to the 19th century. The high land taxes of 1870s, payable in cash regardless of the effects of frequent famines on farm output or productivity, combined with colonial protection of usury, money lenders and landowner rights, contributed to widespread penury and frustration among cotton and other farmers, ultimately leading to Deccan Riots of 1875-1877.

Various reasons have been offered to explain why farmers commit suicide in India, including: floods, drought, debt, use of genetically modified seed, public health, usage of lower quantity of pesticides due to less investments produce a decreased yield and also government economic policies. As much as 79.5% of India's farmland relies on flooding during monsoon season, so inadequate rainfall can cause droughts, making crop failure more common. In regions that have experienced droughts, crop yields have declined, and food for cattle has become



In an article in The Indian Express, it is expressed: For over a decade, farmer suicides in India has been a serious public policy concern.... Indebtedness has been highlighted as the prime cause and leading public intellectuals have called for an end to the "debt deaths". The worst cases of farmers committing suicides come from the states of Andhra Pradesh, Karnataka and Maharashtra. What are the grave adversities that drive



Certified True Copy
Jagan Nath University, Jaipur

Gray Scale Image Compression

Mr. Neeraj Manglani¹, Ms. Savita Singh²

Assistant Professor, Department of Computer Science, Jagannath University, Jaipur, India¹

M. Tech Scholar, Department of Computer Science, Jagannath University, Jaipur, India²

Abstract: The process of reducing the size of a data file is referred to as data compression. Compression is useful because it helps in resources usage reduction, such as data storage space or transmission capacity over internet. Image compression is a main technology in transmission and storage of images and scanned documents, because of large amount of data and information is associated with them. This paper proposes a compression technique for scanned documents and images, based compression method using discrete wavelet transformation (DWT), Discrete Cosine Transformation, (DCT) and Code Book Vector. The importance of the DCT in an image compression is that it takes correlated input image and concentrates its energy in just the first few transform coefficients. This feature of DCT makes it useful in data compression. The effectiveness of the algorithm has been justified over some real images and scanned documents. The performance of the proposed algorithm has been compared with other common compression algorithm.

Keywords: Discrete Wavelet Transformation (DWT), Discrete Cosine Transformation (DCT), Code Book Vector, Customized file format, JPEG images.

I. INTRODUCTION

Scanned documents in digital form play an important role in everyday life. It provides an effective way to store historically important books and data. Compression of the compound documents needs more work than the compression of the images because if the compressed image is having some lossy information, also the human visual system can't able to identify the lossy information and it does not affect the whole image content or information. But in the documents, if text having the minor lossy information then it affects the quality of whole document and can be easily identify by a human visual system. It cannot satisfy the users even if the data is compressed by high ratios.

In this paper we used DCT (Discrete Cosine Transform) [11], DWT (Discrete Wavelet Transform) [8] [10] and Code Vector Book to achieve maximum and effective compression ratio for scanned documents and gray scale images with keeping good quality of these images. In 2D-DCT, the image is broken into blocks of $n \times m$ pixels and then 2D-DCT is used to produce a block of $n \times m$ DCT coefficients for each block of pixels, the resultants coefficients are quantized, which must result in lossy but highly efficient compression ratio [11]. The wavelet-based compression scheme contains transformation, quantization, and lossless entropy coding[10].

II. TYPE OF IMAGE COMPRESSION

A. Lossless Compression

Image compression can be lossy or lossless. [1] [2] Lossless compression reduces bits by identifying and eliminating statistical redundancy, where redundancy in information theory is the number of bits used to transmit a message minus the number of bits of actual information in the message. In a lossless compression algorithm, compressed data is used to regenerate the original image again. No information is lost in lossless compression. This

type of compression is includes entropy coding and Bit-plane coding [9]. Lossless compression is useful for exact recreation of original image, but lossless compression generally does not provide sufficiently high compression ratio which is must in image compression.

B. Lossy Compression

Lossy data compression does not allow reconstruction of exact original data from the compressed data. Lossy compression reduces bits by identifying unnecessary information and removing it. A lossy data compression algorithm is one in which compress the data and after decompress that data, the resulting data may be different from the original one. But it is almost similar to original one, in some useful way. The process of reducing the size of a data file is referred to as data compression. Lossy data compression is used frequently on the Internet. Repeatedly compressing and decompressing the file will cause the information (data) to progressively lose its quality.

III. DISCRETE COSINE TRANSFORMATION (DCT)

DCT expresses a finite sequence of data points in term of a sum of cosine functions oscillating at different frequencies. DCT is important to numerous applications in science and for compression of audio-video files and images, where small and high frequency components are discarded. The use of cosine rather than sine function is critical for compression, since it turn out the that fewer functions are needed to approximate a signal, whereas for different equations the cosines express a particular choice of boundary conditions.

DCT takes related input data information and concentrates its energy in just the first few transform coefficients. If the input data consists of correlated quantities, then most of the n transform coefficients produced by the DCT are

Certified True Copy





Corpus ID: 55848710

Share This Paper

Number Plate Processing for implementing Pollution Fine and Vehicle Restriction

Hemant Kumar Prajapati, Dr. Neeraj Manglani ·

Published 2016 · Engineering ·

Imperial journal of interdisciplinary research

The fundamental point of this work is to make the modules for Traffic direction utilizing number plate location framework. This module ought to get a part of the gained picture as the information and is expected to give back the number in editable type of tag. For the most part, the framework is expected to remember a wide range of tags. The assortment of them is gigantic. They are of various shapes and hues, letters can be orchestrated in more than one column. For instance in India tags is... CONTINUE READING

Save to Library Create Alert Cite Launch Research Feed

ABSTRACT

18 REFERENCES

RELATED PAPERS

References

Publications referenced by this paper.

Certified True Copy

Rajeshwar
Jagan Nath University, Jaipur

By clicking accept or continuing to use the site, you agree to the terms outlined in our Privacy Policy, Terms of Service, and Dataset License

ACCEPT & CONTINUE





Corpus ID: 55848710

Share This Paper

Number Plate Processing for implementing Pollution Fine and Vehicle Restriction

Hemant Kumar Prajapati, Dr. Neeraj Manglani ·

Published 2016 · Engineering ·

Imperial journal of interdisciplinary research

The fundamental point of this work is to make the modules for Traffic direction utilizing number plate location framework. This module ought to get a part of the gained picture as the information and is expected to give back the number in editable type of tag. For the most part, the framework is expected to remember a wide range of tags. The assortment of them is gigantic. They are of various shapes and hues, letters can be orchestrated in more than one column. For instance in India tags is... CONTINUE READING

Save to Library Create Alert Cite Launch Research Feed

ABSTRACT

18 REFERENCES

RELATED PAPERS

References

Publications referenced by this paper.

Certified True Copy

Registrar
Jagan Nath University, Jaipur

By clicking accept or continuing to use the site, you agree to the terms outlined in our Privacy Policy, Terms of Service, and Dataset License

ACCEPT & CONTINUE



Investigation of Single Mode Square Lattice Photonic Crystal Fiber with Ultraflattened Dispersion

Lisha Agrawal, Himanshu Joshi, Khushbu Sharma

Abstract— This paper presents a new single mode photonic crystal fiber based on square lattice structure with ultraflattened dispersion and also the two different air-hole diameters in cladding region is proposed. In this article, the dispersion is investigated using a proficient compact two dimensional finite-difference time-domain (2-D FDTD) method and the anisotropic perfectly matched layer (PML) for the boundary treatment. To examine the single properties of PCF like dispersion and other polarizing properties the outcome of variation in wafer dimension of a constant lattice size is analyzed. The elementary characteristics of single mode photonic crystal fibers (SMPCFs) such as chromatic dispersion are numerically investigated and Normalized frequency parameter is also being estimated in this paper. We find that the proposed photonic crystal fibers demonstrate properties of ultraflattened nearly zero dispersion of $0 \pm 0.6 \text{ps}/(\text{km} \cdot \text{nm})$ in wavelength range of 1.3 to 1.6 μm through numerical simulation and optimizing the geometrical parameters.

Index Terms— Chromatic Dispersion, Photonic Crystal Fiber, Single Mode Fiber, Square Lattice, V parameter.

I. INTRODUCTION

In recent years, there has been major interest in Photonic crystal fibers having several advantages such as endlessly single-mode [1] [2] [6] at all wavelength, tailorable effective modal areas, anomalous dispersion [5] at visible and near infrared band and highly birefringent [5] [8] [15] effect [1]. PCF is generally considered by a series of air holes that runs throughout the length of the fiber [4] and also it is based on total internal reflection, has been popular for a long time [16]. Light is guided in PCFs with two types of effects: the first one direct light by total internal reflection between a solid core and a cladding region with multiple air-holes and the second one uses a absolutely periodic structure displaying a photonic band gap [2] effect at the operating wavelength to guide light in a low index core region, which is also called photonic band gap fiber [4] [6]. To attain ultraflattened dispersion in PCFs, several fascinating designs have been proposed [1].

The design of PCFs is very flexible. Various parameters are involved to influence: lattice pitch, air hole shape and

diameter, refractive index of the glass, and type of lattice.

Lisha Agrawal, M.Tech. Scholar, Department of Electronics and Communication, Jagannath University, Jaipur, India

Himanshu Joshi, Assistant Professor, Department of Electronics and Communication, Jagannath University, Jaipur, India

Khushbu Sharma, Assistant Professor, Department of Electronics and Communication, Maharani Girls Engineering College, Jaipur, India



Freedom of design allows one to attain endlessly single mode fibers, which are single mode in all optical range and a cut-off wavelength does not exist [12]. The distance between the holes is known as lattice pitch which is denoted by Λ and the diameter of the air holes is specified by d and is expressed as the structural parameter of the PCF and the ratio d/Λ is called air filling fraction [4].

In PCFs [12] [17], control of dispersion is very important problem for realistic applications [1] [3] [5-11] in both the linear and the nonlinear regimes of optical fiber communications [1] [14] [19]. Various stimulating designs have been proposed to attain ultraflattened dispersion in PCFs [1]. In all cases, almost-flattened fiber-dispersion behavior becomes a critical issue [19]. Due to the effect of the variation in the wafer dimensions, the dispersion shows a randomly behaviour [16]. In order to obtain the ultra-flattened dispersion properties, various designs have been proposed for the PCF [14]. The property of Single mode in PCF is very useful for communication system application [18]. In view of the fact that most of the earlier designs are all based on triangular PCFs, and the depiction on ultraflattened dispersion properties of square-lattice PCFs is very few. Consequently, it is very important to explore ultraflattened dispersion in square-lattice PCFs [1].

The outline of this paper is the following: in the next section, we describe our theoretical part of PCF. In the section III, we have described the structure of our proposed design of square lattice PCF to achieve the desirable characteristics. After that simulation results have been discussed of our proposed structure.

II. THEORITICAL ANALYSIS

In this paper, we suggest a new class of single mode square-lattice photonic crystal fiber with five rings air-holes having inner and outer diameter and of constant pitch whose structure is analogous to that in Ref [1]. In order to avoid the general complications of the fabrication process only two different air-hole diameters are used. A compact two-dimensional (2-D) finite difference frequency domain approach described in Ref [13] with anisotropic perfectly matched layers (PML) absorbing boundary conditions is used. The considered results show that our proposed PCF can concurrently realize ultra-flattened dispersion and Normalized Frequency Parameter i.e., V Parameter in a wide wavelength range [1].

A. Chromatic Dispersion

Certified True Copy

Jagan Nath University, Jaipur

Study and Analysis of Photonic Crystal Fiber in Honey Comb Structure with Ultra-Flattened Dispersion

Ankita Singh, Himanshu Joshi, Khushbu Sharma

Abstract— A new class of Honey Comb Photonic Crystal Fibres (PCFs) structure that has a high-index core surrounded by air holes is proposed. For the proposed design four different air-hole diameters surrounding core region is used. A full vector Finite Difference Time Domain (FDTD) analysis with the Transparent Boundary conditions (TBC) absorbing boundary conditions is effectively applied to investigate the model characteristics of Photonic Crystal Fibres (PCFs) Through the numerical simulation and optimizing the geometrical parameters like changing the pitch (Λ) for photonic crystal fibers in Honey Comb structure, it has been demonstrated that it is possible to obtain ultra flatten dispersion over a wide wavelength range. The designed index-guiding Honey Comb PCFs has a nearly zero ultra-flattened dispersion of $0 \pm 0.11 \text{ps}/(\text{nm.km})$ in a wavelength range of $1.4 \mu\text{m}$ to $1.6 \mu\text{m}$. The proposed structure is designed using seven rings in which circular air holes are used. The background material for the designing purpose is silica with refractive index 1.458. Moreover, a detailed study of PCF with honeycomb lattice has been carried out with the purpose of optimizing the chromatic dispersion.

Index Terms— Chromatic Dispersion, Confinement Loss, Effective Refractive Index (n_{eff}), Honey Comb, Photonic Crystal Fiber (PCF)

I. INTRODUCTION

Photonic crystal fiber (PCF) [1-2] is a particular class of fiber using various new designing application. PCFs are designed for special-purpose applications that do not require large volume of fibers. PCF can be fabricated by the use of Photonic crystals which are composed of periodic dielectric or metal-dielectric nanostructures that influence the propagation of electromagnetic waves (EM). Photonic crystal fibers (PCFs) have attracted much interest in recent time because of their inimitable dispersion properties. Especially, index-guiding PCFs, also called holey fibers (HFs) consists a series of air holes that runs throughout the length of the fiber [3]. Characteristics of PCFs such as, effective index mode confinement loss, dispersion are measured by varying the structural parameters (air hole diameter, lattice pitch) [4].

PCFs, also called endlessly single mode fibers [5] generally classified into two special kinds of fibers by their

light-guiding mechanism [6]. The first experimentally realized-type guides by a modified form of total internal reflection (M-TIR) between a solid core and a cladding region with multiple air-holes and fibers of this type are also known as index-guiding PCFs [2]. On the other hand, the second one uses a enormously periodic structure exhibiting a photonic band gap effect at the operating wavelength that allowing for novel features such as light confinement to a low-index core [2] [6-8] known as photonic band gap fiber and investigated in [9]. The diameter of the air holes is indicated by d which is termed as the structural parameter of the PCF [10]. The lattice pitch (distance between the holes) is denoted by Λ and the ratio d/Λ is called air filling fraction.

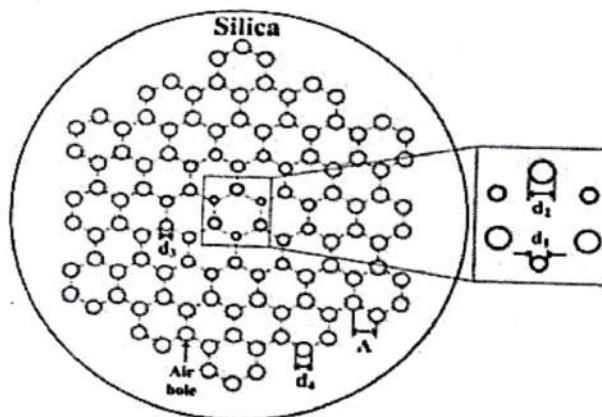


Fig.1 Schematic cross-section of conventional Honey Comb PCFs with seven air hole rings and the geometrical Parameters of the air hole diameter d , pitch Λ

In PCFs, due to presence of finite number of air hole in the cladding, the guided mode becomes intrinsically leaky, so confinement loss exists. In Holey Fibers PCFs, since the periodicity in the cladding region is not essential to confine the guiding light into the core region, so by varying the air hole diameter of each air hole ring, air hole pitch and cladding structure it becomes possible to control both dispersion and confinement loss in wide wavelength range [11]. Because of its capability to confine light in hollow or solid cores, PCF is now finding applications in fiber optic communications, fiber lasers, nonlinear devices, high-power transmission, and highly sensitive gas sensors [4].

Index-Guiding fibers allow an accurate control of the dispersion features that can results in a single mode transmission fiber for enormously wide range of wavelengths, starting from a very short wavelength to some micrometers [1]. It is also observed that, the flattened symmetry can lead to

Certified True Copy

Jagan Nath University, Jaipur

Ankita Singh, M.Tech. Scholar, Department of Electronics and Communication, Jagannath University, Jaipur, India

Himanshu Joshi, Assistant Professor, Department of Electronics and Communication, Jagannath University, Jaipur, India

Khushbu Sharma, Assistant Professor, Department of Electronics and Communication, Maharani Girls Engineering College, Jaipur, India



See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/303758132>

Challenges in Testing of Cloud Based Application

Article · February 2016

CITATIONS

4

READS

913

4 authors, including:



Mamta Madan

Vivekananda Institute Of Professional Studies

28 PUBLICATIONS 33 CITATIONS

SEE PROFILE



Meenu Dave

Jagan Nath University, Jaipur, India

36 PUBLICATIONS 126 CITATIONS

SEE PROFILE



Anisha Tandon

Jagannath International Management School, Vasant Kunj

5 PUBLICATIONS 5 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



optimal cloud traffic delivery View project



Spectrum Sensing View project



Certified True Copy

Professor
Jagan Nath University, Jaipur

Challenges in Testing of Cloud Based Application

Dr. Mamta Madan¹
Professor, VIPS

Dr. Meenu Dave²
Professor, Jagannath University

Ms. Anisha Tandon³
Asst. Prof, JIMS

Abstract- Cloud computing is emerged as new technology in organization and cooperates. To successfully provide cloud services and sharing of resources, the cloud must be tested before came into service. Cloud testing is a form of testing in which web applications uses cloud computing environment and infrastructure to simulate real world user traffic by using cloud technologies and solutions . The Cloud computing gives the way to obtain computing resources, and also provide a new direction to manage and deliver computing solutions, technologies, and services .Every New technology have lots of challenges attached with it . Similarly Cloud-based testing also provides a set of challenges, such as lack of standards and data security, especially in the public cloud model. Cloud computing provides an opportunity to offer testing as a service (TaaS) for clouds and SaaS. Cloud computing also identify new challenges, issues and needs in software testing, generally in cloud-based applications and testing clouds. This paper focuses on testing challenges of the cloud that is being faced by cloud service provider. It also examines the major needs, challenges, and issues in testing cloud-based software applications.

Index Terms- Cloud Computing, Cloud Testing, SaaS, Cloud Service, Service Availability, Cloud Environment, Testing Security, cloud infrastructure

I INTRODUCTION

Cloud computing changes the way of computation and services to customers which received significant attention, For example, it changes the way of managing computing resources, such as databases, CPUs and storage systems. The concept of cloud built upon the three such as Infrastructure, Platform and the Software. The cloud provide the business benefit of "On demand Service" which full fill the demand of chain execution. Cloud also provides "Reliability" and "Scalability" for the applications that are either deployed or running on cloud. Organizations are finding it difficult to execute test cases and monitor performance of a new breed of cloud applications. Leverage cloud testing to augment traditional practices and open the door to a higher level of software testing [1].

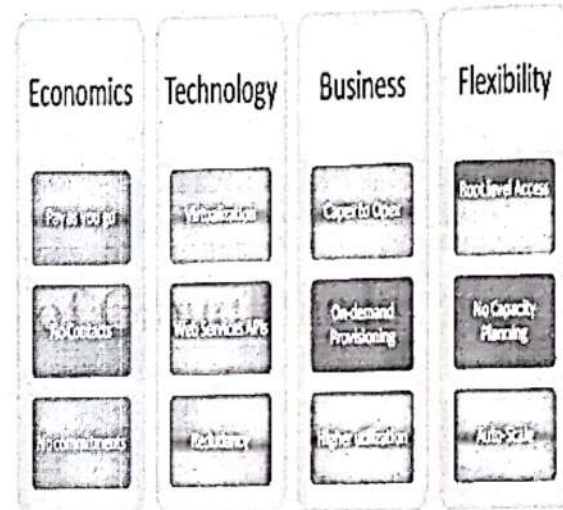


Figure 1 Cloud Computing Environment[1]

II BACKGROUND: SOFTWARE TESTING ON CLOUD

As cloud computing [2] came into the depiction, a new perception of testing on cloud has evolved, though not many companies have flung into it. Software testing is an indispensable and significant stage of the software development process because testing Software is just more than debugging a Software. The vital purpose of testing any software can be quality declaration, verification and validation, or trustworthiness evaluation. Thus, cloud computing is a model or platform on which testing must be conceded out just like any other service.

Testing necessitate exclusive dedicated infrastructure [3] and possessions that were only used intermittently which carefully examine the application's performance, dependability, swiftness, security and functionality. In view of the fact that, business applications are rising day by day in complexity, so it is a tedious job for an Organizations to put up and maintain in-house testing amenities that imitate real-time environments.



All Rights Reserved © 2016 IJARCSEE

Certified True Copy
28
Jagan Nath University, Jaipur

A Review on the Study and Analysis of Big Data using Data Mining Techniques

Anupama Jha
*Assistant Professor, VIPS, GGSIPU
New Delhi, India*

Dr. Meenu Dave
*Professor, Jagannath University
Jaipur, India*

Dr. Supriya Madan
*Professor, VIPS, GGSIPU
New Delhi, India*

Abstract– Big Data is an emerging concept that describes innovative techniques and technologies to analyze large volume of complex datasets that are exponentially generated from various sources and with various rates. Data mining techniques are providing great aid in the area of Big Data analytics, since dealing with Big Data are big challenges for the applications. Big Data analytics is the ability of extracting useful information from such huge datasets. This paper presents a literature review that include the importance, challenges and applications of Big Data in various fields and the different approaches used for Big Data Analysis using Data Mining techniques. The findings of this review give relevant information to the researchers about the main trends in research and analysis of Big Data using different analysis domains.

Keywords– Big Data, Big Data Analytics, Big Data Application, Data Mining,

I. INTRODUCTION

In this digital era, analysts have enormous amounts of data available on hand. Big Data is the term for a collection of unstructured, semi-structured and structured datasets whose volume, complexity and rate of growth make them difficult to be captured, managed, processed or analyzed by using the typical database software tools and technologies. Different varieties are in the form of text, video, image, audio, webpage log files, blogs, tweets, location information, sensor data etc. . Discovering useful insight from such huge datasets requires smart and scalable analytics services, programming tools and applications [1].

Data mining is also known as Knowledge Discovery in Database (KDD) is an analytical process used in different disciplines to search for significant relationships among variables in large data sets. Analyzing fast and massive stream data may lead to new valuable knowledge and theoretical concepts. Big data has potential to help organizations to improve operations and make faster & more intelligent decisions.

II. BIG DATA

Big Data means not only an enormous volume of data but also other features that differentiate it from the concepts of "very large data" and "massive data". In fact several definitions for Big Data are found in the literature.

International Data Corporation (IDC) defines Big Data as: "Big Data technologies describe new generation of technologies and architectures designed to economically extract value from very large volumes of a wide variety of data, by enabling high-velocity capture, discovery and/or analysis"[2].

McKinsey Report defines Big Data as "data sets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze"[3].

Big Data is also defined in terms of 3 Vs i. e Volume, Variety, and Velocity. Volume represents the size of the data. Velocity refers to the speed of both data generation and data delivery of real-time data. Variety makes the data too big as data comes from the various sources shown in Table I.



An Approach for Preventing Accidents and Traffic Load Detection on Highways using V2V Communication in VANET

Prashant Panse¹, Dr. Tarun Shrimali², Dr. Meenu Dave³

ABSTRACT

Street security has turned into a fundamental issue for governments and vehicle producers in the most recent a quarter century. The aggregate number of vehicles on the world has encountered an astounding development, expanding activity thickness and bringing on more mishaps. In this paper we emphasized on the problems with traffic load detection on highways and proposed a system to detect and prevent accidents on highway using vehicular ad hoc network. For this, we are implementing a vehicle 2 vehicle communication scenario with weighted cluster algorithm (WCA) and computing the performance on different parameters of network. Day to day population increase in India, leading to massive increase in road traffic. The improvement of new vehicular advancements has moved organizations, specialists and foundations to center their endeavors on enhancing street security and it is of prime need now a days.

KEYWORDS

VANET, Ad Hoc Network, D2ITS, ITS, DBCV algorithm.

INTRODUCTION

Amid the most recent decades, the advancement in radio advances has permitted specialists to outline correspondence frameworks where vehicles take part in the communication systems. Along these lines systems, for example, Vehicular Ad-hoc Networks are made to encourage communication between vehicles themselves and in the middle of vehicles and infrastructure. Vehicular ad hoc network is a new type of network in which nodes (i.e. vehicles) communicate with each other and possibly with a roadside infrastructure [1]. The aim/goal of VANET includes auto crash prevention, more secure streets and clog decrease etc. The improvement of an effective system in vehicular network has numerous important advantages, from road operators as well as drivers point of view. Efficient Effective movement alarms and overhauled data about traffic incidents will diminish car influxes, expand street wellbeing and enhance the sheltered driving on the Highways. Vehicular ad hoc networks are getting consideration because of the various important applications related to street safety and movement control. Our proposed work includes the concept for detection of congestion and provides information to driver regarding the same and communicating these to other vehicles. We are using a remote server to take a decision for the same. Additionally, to increase the decision performance of the

remote server, this is connected in RSU (Road Side Unit) device as intermediate communicating device; these devices are fully functional devices and able to work as sender, receiver and route device. The server is implemented to make rule based decision and broad cast a message as alert to all the car drivers. The proposed work provides the efficient and effective architecture for complete alert process.

RELATED STUDY

The related research in VANET focuses on simulating vehicular traffic [2, 3, 4, 5, 6, 7] and multi-hop routing [8, 9, 10, 11] A few researches have considered the issue of utilizing VANETs to find and disperse traffic congestion data [12, 13, 14]. Using vehicle based GPS systems we can create an ad-hoc wireless network that can find and disseminate traffic congestion information. Collision avoidance systems [15, 16] are designed to detect a traffic incident in real-time and rapidly relay this information to nearby vehicles to prevent a collision. These systems are very different from traffic congestion systems, in the former, information should be transferred quick over short separations and should be to a great degree solid as it has an immediate impact on life-and-demise circumstances, while in the latter data remains current for a more extended time, should be dispersed over long separations and is used for congestion amelioration.

Fukumoto et al. [17] proposed a system that uses vehicle based GPS systems to discover and disseminate traffic congestion information, the system is called COC for VANET. This system maintains and disseminates three types of information: Raw Information (level 1), density information (level 2) and congestion areas information (level 3).

Donrbush et al. [18] from the University of Maryland proposed a novel system for congestion detection in VANET: Street smart that uses grouping as an information total method to consolidate related recordings of abnormally slow speed. Street-smart uses clustering algorithms that work over a distributed network where each node analyzes the collected statistics eliminating the need for a central entity.

Yoon et al. [19] proposed a system for traffic estimation that is based on road segmentation and focuses on complex inner-city traffic scenarios. Some of these systems rely, either explicitly or implicitly, on having the location for all vehicles in the congestion available in order to make the determination that congestion exists and where it is located. When congestion sizes exceed transmission ranges, common in freeway scenarios

¹ Ph.D. Scholar, JaganNath University, Jaipur
Email: prashantpanse@gmail.com

² Prinicipal, Sunrise Group of Institution, Udaipur
Email: shrimalitarun@gmail.com

³ Professor, CS/IT Department, JaganNath University, Jaipur
Email: meenu.s.dave@gmail.com



Prashant Panse
Jagan Nath University, Jaipur

Design and Simulation of Single Band Rectangular Microstrip Patch Antenna for WLAN Application

Yuganand, Himanshu Joshi

Abstract— A micro strip patch antenna for WLAN is designed. The antenna has a frequency bandwidth of 5GHz – 5.5GHz. The micro strip patch antenna consists from a ground, a substrate, a patch and a feed line. The basic theory and design are analyzed, and simulation done by using HFSS to optimize the antenna's properties. Results show that the designed antenna has promising characteristics for WLAN application at 5.25 GHz frequency.

Index Terms— Micro strip Antenna, WLAN Communication Standard, HFSS, Micro strip line feed, single frequency.

I. INTRODUCTION

In recent years demand of microstrip antennas are increased due to its use in high frequency, high speed data communication applications [1]. Printed antennas are economical and The key features of a Micro strip antenna [2-5] are relative ease of construction, light weight, low cost and either conformability to the mounting surface Microstrip antennas are best form of antennas because they are light weight, low profile, low cost, ease to analyze, fabricate and are compatible with the integrated circuits but one of the serious limitations of these antennas have narrow bandwidth characteristics as it limits the frequency ranges over which the antenna can perform satisfactorily [6-9]. These features are major design considerations for practical applications of microstrip antennas [10]. Recent development of technologies enables wireless communication devices to become smaller in size physically.

Antenna size is a major factor that limits miniaturization. With the rapid development of the wireless communication technology, the future technologies need antenna have a very small size. Wireless local area network (WLAN) technology increased the freedom and Flexibility and mobility of users. For the homes and small area locations users [3] [9] [11], WLAN has become suitable due to easy installation. This being the case, portable antenna technology has grown along with mobile and cellular technologies. It is important for proper antenna for a device .The proper miniaturized antenna will improve transmission and reception, reduce power consumption [1].

In this paper, a single band microstrip patch antenna for WLAN application is designed and simulated using HFSS. The proposed patch antenna resonates at 5.25 GHz frequency.

Manuscript received.
Yuganand, M.Tech Scholar, Department of ECE, JaganNath University, Jaipur (e-mail: yuganand@gmail.com).

Himanshu Joshi, Assistant Professor, Department of ECE, JaganNath University, Jaipur (e-mail: Himanshu.joshi@jagananthuniversity.org).

II. DESIGN OF MICROSTRIP PATCH ANTENNA

In this design the substrate has a thickness $h=1.6$ mm and a relative permittivity $\epsilon_r = 4.4$. The length of patch is $L=12.636$ mm and width of patch is $W=25.8$ mm .The length of ground are $L_g=22.83$ mm and width of ground is $W_g=27.154$ mm .In this work, used microstrip feed line (50 ohm). Antenna is designed for a resonating frequency of 5.25 GHz and is analyzed using of HFSS Software. For the designing of rectangular microstrip patch antenna, the following mathematical calculations are used to calculate the dimensions of rectangular microstrip patch antenna [3]. The expression for ϵ_{reff} is given:

$$\epsilon_{reff} = \frac{\epsilon_r + 1}{2} + \frac{\epsilon_r - 1}{2} \left[1 + 12 \frac{h}{W} \right]^{-1} \tag{1}$$

Where, ϵ_{reff} = Effective dielectric constant, ϵ_r = Dielectric constant of substrate, h = Height of dielectric substrate, W = Width of the patch,

A practical approximation relation for the normalized extension of the patch length is

$$\frac{\Delta L}{h} = 0.412 \frac{(\epsilon_{reff} + 0.3) \left(\frac{W}{h} + 0.264 \right)}{(\epsilon_{reff} - 0.258) \left(\frac{W}{h} + 0.8 \right)} \tag{2}$$

and the effective length (L_{eff})_c

$$L_{eff} = \frac{L}{\sqrt{\epsilon_{reff}}} \tag{3}$$

So the actual length of patch is

$$L = L_{eff} - 2\Delta L \tag{4}$$

For designing of microstrip patch antenna use actual length L. Width of the patch is

$$W = \frac{c}{2f_0 \sqrt{\frac{\epsilon_r + 1}{2}}} \tag{5}$$

The ground plane dimensions would be given as:

$$L_g = 6h + L \tag{6}$$

$$W_g = 6h + W \tag{7}$$

where, L = length of patch, L_{eff} = effective length, c = speed of light f_0 = resonant frequency, L_g = Length of ground plane, W_g = Width of ground plane.

III. DESIGN OF MICROSTRIP PATCH ANTENNA

Figure 1 and 2 show the front view geometry and the structure designed on HFSS software of proposed microstrip line fed patch antenna with single band for WLAN application. The dimensions and feed point location for proposed antenna have been optimized so as to get the best possible impedance match to the antenna. The following parameters are used for design of proposed antenna.

Certified True Copy


Jagan Nath University, Jaipur



Investigation of Single mode highly Birefringence Photonic Crystal Fiber for Wide Wavelength Range

Chandan Kumar, Himanshu Joshi, Khushbu Sharma

Abstract— A new design of polarization maintaining index guiding photonic crystal fiber (PCF) was investigated. The proposed PCF is composed of a solid silica core, two large elliptical air holes near core region, two big circular air holes near the core region as well as cladding region with circular air holes. Full vector finite difference time domain (FDTD) method was used for the investigation purpose. Numerous important fiber parameters such as birefringence, dispersion and V parameter have been investigated numerically. The numerical result shows that very high birefringence with magnitude of order of 1.7×10^{-2} has been achieved. The proposed PCF also shows endlessly single mode operation over wide wavelength range.

Index Terms—Birefringence, photonic crystal fiber (PCF), polarization, V parameter, single mode fiber, Total dispersion.

I. INTRODUCTION

As a result of the excellent propagation properties, photonic crystal fibers (PCFs) have created a center of attention from the time when their first fabrication as held in 1996 [1]. All over the world, several research groups are doing their constant effort to set up the advantage of PCFs as compare to conventional fibers. PCFs have numerous novel optical characteristics like highly birefringence [1-7], flexible chromatic dispersion [3] [6] [8], endlessly single mode guiding [9] for large wavelength range, controllable nonlinearity [3], low confinement loss [4] [10] and effective area [3] [11]. In general, PCFs can be categories into two different kinds through their light guiding method. First index guiding PCFs in which light is directed through total internal reflection (TIR) and second one, photonic bandgap fibers in which light is guided through the effect of bandgap [2-3] [5]. Birefringence is generally an unwanted property in the field of fiber optics but on the other hand, highly birefringent photonic crystal fibers (HBFs) are also required [1-7].

The large birefringence fibers have been extensively employed for the polarization control in sensor for fiber optic, accuracy optical instruments as well as for optical communication systems [1-8]. This property can easily realized in photonic crystal fiber because of the refractive

index difference among the core region as well as the cladding region is higher as compared to refractive index contrast of the conventional fibers. To realize highly birefringence, there is need to destroy symmetry of the fiber structure as well as increase effective index dissimilarity among two orthogonal polarization modes [1] [7]. Highly birefringence can be achieved through modifying the air hole sizes near the core area [2-5], or through deforming the shape of the air holes for the outer rings [3] [5]. Highly Birefringence can also realize through commencing noncircular defect core or containing a middle elliptical air hole.

In addition to other properties, PCFs also have dispersion properties considerably dissimilar from conventional fibers due to its novel cladding structure which have an array of micrometer diameter air holes that permits to design flexible tailoring of dispersion. Dispersion controlling is very important issue for practical application of optical fiber communications [3], dispersion compensation [3] and nonlinear optics. To realize suitable chromatic dispersion, the parameters in of the PCF require being well premeditated. A number of index guiding PCFs with extraordinary dispersion have been accounted in [1-3] [5-8]. For the numerous applications it is necessary to propose PCFs that show high birefringence, low effective area, endlessly single mode fiber and flattened chromatic dispersion for wide wavelength range.

PCFs that show such properties are not exist. According to Reference [4] [6] [10], highly birefringent PCFs with small confinement loss as well as ultraflatten chromatic dispersion [3] [6] [8] for wide wavelength range were proposed. In Reference [3], flatten dispersion PCFs with low effective mode area were proposed. One Reference [1] also reported anomalous dispersion with highly birefringence. In numerous published papers, merely one of the above properties is showed. Consequently in this paper, a single mode endlessly fiber with highly birefringent and flatten dispersion is offered through commencing two large elliptical air holes and two big circular air hole near core region for deforming the shape of the air holes in the inner ring.

II. THEORETICAL ANALYSIS

To investigate birefringence, chromatic dispersion and endlessly single mode fiber of the proposed highly birefringent photonic crystal fiber, a full-vector finite difference time domain technique [13-14] which is extremely appropriate for the examination of periodic structure is applied which is supported on direct discretization of Maxwell's equations. To absorb out going waves without reflection, special environment are necessitated on the boundaries of the computational domain. To absorb out going

Manuscript received.

Chandan Kumar, M.Tech. Scholar, Department of Electronics and Communication, Jagannath University, Jaipur, India, (e-mail: Ckchandchandan896@gmail.com).

Himanshu Joshi, Assistant Professor, Department of Electronics and Communication, Jagannath University, Jaipur, India, (e-mail: Himanshu.joshi@jagannathuniversity.org).

Khushbu Sharma, Assistant Professor, Department of Electronics and Communication, Maharani Girls Engineering College, Jaipur, India, (e-mail: khush281285@gmail.com).



Certified True Copy

Jagan Nath University, Jaipur

RESEARCH ARTICLE

OPEN

Design and Performance Analysis of Convolutional Encoder and Viterbi Decoder for Various Generator Polynomials

Deepa Kumari*, Madan Lal Saini**

*M. Tech. Scholar, Dept of CS/IT, Jagannath University Jaipur, Rajasthan, India

**Asst. Prof., Dept. of CS/IT, Jagannath University Jaipur, Rajasthan, India

ABSTRACT

In digital communication forward error correction methods have a great practical importance when channel is noisy. Convolutional error correction code can correct both type of errors random and burst. Convolution encoding has been used in digital communication systems including deep space communication and wireless communication. The error correction capability of convolutional code depends on code rate and constraint length. The low code rate and high constraint length has more error correction capabilities but that also introduce large overhead. This paper introduces convolutional encoders for various constraint lengths. By increasing the constraint length the error correction capability can be increased. The performance and error correction also depends on the selection of generator polynomial. This paper also introduces a good generator polynomial which has high performance and error correction capabilities.

Keywords : Convolutional Encoder, Code Rate, Constraint Length (CL), Generator Polynomials (GP), Viterbi Decoder.

I. INTRODUCTION

The error correction codes are used in digital communication and encoding and decoding task are performed by channel encoder/ decoder. Convolutional codes are used in digital communication system like GSM and are implemented by channel encoder. A Convolution Encoder accepts an input stream of message and generates encoded output streams to be transmitted. In this process for one input bit the encoder generates more than one output bits and these redundant symbols in output bit pattern makes the transmitted data more immune to the noise in the channel. The redundant bits help to decide and correct the errors in received pattern. Convolutional codes basically used in space communication or in very noisy channel. It can correct burst error as well as random errors.

In this paper we introduce a strategy to present convolutional code such that they can correct maximum number of errors. This strategy is the selection of generator polynomial and code rate, the selection of generator polynomial is performed in MATLAB. Second section describe convolutional encoder parameters, viterbi decoder and generator polynomials. Third section introduces selection of generator polynomial and code rate, and fourth section gives performance analysis.

II. CONVOLUTIONAL ENCODER

A convolutional encoder can be described by these following parameters (N, K, M) as summarized:

N: Number of output symbols.

K: Number of input symbols.

M: Length of the shift registers stage in the encoder or number of shift register.

Constraint Length (L) = (M+1) or M: This number represents the number of input bits required to generate a unique output pattern in the encoder. A constraint length of L=3 means that each output symbol depends on the current input symbol and the two previous input symbols. The constraint lengths of the encoder form a vector whose length is the number of inputs in the encoder diagram. The elements of this vector indicate the number of bits stored in each shift register, including the current input bits. In the figure-1 given below, the constraint length is three. It is a scalar because the encoder has one input stream, and its value is number of shift registers for that input.[1]

Number of States = $2^{(L-1)}$: Defines the maximum number of states that is possible to be mapped by the combinations of the L number of input bits for the convolution encoder.

Convolution Code Rate R: Number of input bits to create a symbol at the output (k)/ Number of output bits in a symbol at the output (n). For example, 1/2 code rate means each bit entering the encoder results in 2 bits leaving the encoder.[2]



Sustainable Urban Landscape Practices: A New Concept to Reduce Ecological Degradation.

Prof. Manjari Rai

Abstract - Urbanization is an inevitable process of development of human society and an outcome of economic development and scientific and technological progress. While urbanization process in promoting the development of human civilization, also no doubt, urban landscape has been a corresponding impact. Urban environment has suffered unprecedented damage majorly due to the increase in urban population density and heavy migration rate, traffic congestion and environmental pollution. All this have however led to a major ecological degradation and imbalance. As lands are used for the rapid and unplanned urbanization, the green lands are diminished and severe pollution is created by waste products. Plastic, the most alarming waste at landfill sites, is yet uncontrolled. Therefore, initiatives must be taken to reduce plastic mediated pollution and increase green application. However, increasing green land is not possible due to the landfill by urban structures.

In order to create a harmonious environment, sustainable development in the urban landscape becomes a matter of prime focus. This paper thus discusses the concept of ecological design combined with the urban landscape design, green landscape design on urban structures and sustainable development through the use of recyclable waste materials which is also a low costing approach of urban landscape design.

Index Terms— sustainable, urban, landscape, ecological balance.

1. INTRODUCTION

Landscape embodies human outlook, values, ethics and moral and reflects peoples love and hate, desire and dreams in the land. Today, landscape has become an indispensable part of contemporary urban life. From the perspective of modern people, we are supposed to protect environment in accordance with the laws of ecology in order to ensure sustainable development.

With the rapid development of mankind and urbanization, landscape structures of cities have been affected accordingly. City environment suffers unprecedented hazards, such as air pollution, shortage of water resources, high population density, urban traffic congestion, shortage of resources and so on.

Architecture is always in a dilemma when it tries to achieve the double objectives of creating its own value and manifesting the harmonious with the city as well. Nowadays, in the face of problems caused by the process of urbanism, such as destruction of ecology, loss of cultural characteristics, fragmentation of urban tissue, contemporary architecture has been strongly influenced by the concepts and methods of landscape, which give another possibility beyond the dualism



FIG1. DEGRADATION IN THE NATURAL URBAN LANDSCAPE DUE TO POLLUTION.

Contact Author: Manjari Rai, Professor, IIA, COA, Faculty of Architecture and Planning, Jagannath University, Jaipur, Rajasthan, India
Tel 91-9829723923 Fax: 0141-4071567
e-mail: ar.manjari.ra@gmail.com

relation between architecture and urban, man and nature.

2.0 THE RELATED CONCEPTS



IJSER © 2016
<http://www.ijser.org>

Certified True Copy

Registrar
Jagan Nath University, Jaipur

Legal Aspects for Expanding An Entrepreneurship Globally

*Abhishek Baplawat

is one who always searches for change, responds to it and exploits it as an innovation is the basic tool of entrepreneurs, the means by which they exploit opportunity for different business of service.

has been a country of the self-employed and not of employees. Even with the corporate organisations into the economy, the bulk of the income generation in the is centred on small and medium business owners. These businesses are the largest national income & employment, and have increasingly been courted by financial policy makers.

are the backbone of the nation. From the corner tea shop, mom-and-pop shop and the internet start-up, all these entrepreneurs need encouragement and compete in the global economy, and the Government of India has been at the private entrepreneurship by providing the right socio-economic ecosystem development.

economic integration and entrepreneurship with the rest of the world was very economic policy and the liberalisation measures so introduced made way for of Indian entrepreneurship. Earlier, exports were a predominant way of abroad and hence the emphasis was on export promotion strategies with outflows so as to conserve our foreign exchange reserves. But over the years, at for expansion and growth of Indian companies, it is necessary that they in the world market not only by exporting their products but also by acquiring establishing their presence abroad.

successfully expand and grow its business abroad by taking into account the of the home country as well as of the particular foreign country. It is abide by such laws and regulations in order to ensure efficient and healthy anisation and face the various challenges that he may encounter abroad. In irtant law which regulates all foreign exchange transactions including

Legal Aspects for Expanding An Entrepreneurship Globally

*Abhishek Baplawat

23-1

investments abroad is the Foreign Exchange Management Act (FEMA), 1999. Under the Act, Reserve Bank of India (RBI) has been authorised to frame various rules, regulations and norms pertaining to overseas investments in consultation with the Central Government. Disputes resolving between Indian entrepreneur and foreign party for smooth conduction of expansion there is a law of Mediation, Arbitration and Conciliation.

In this research paper the emphasize will be given on legal aspects of following challenges which is often faced by an entrepreneurs who indulge in foreign trade and transects in Abroad with foreign Companies. These aspects are following.

- Legal aspects relating to Dispute Resolution
- Legal aspects relating to Finance
- Legal aspects relating to Risk Cover (Insurance)

In order to encourage capital inflows and provide safe business environment for all investments abroad, many countries have entered into bilateral investment treaties or agreements. Arbitration and Condition Act, 1996 is another law which provides solution to business legal disputes for an entrepreneur. Arbitration is an alternative dispute resolution mechanism in which the parties get their disputes settled through the intervention of a third person and without having recourse to the court of law.

Legal Aspect relating to Dispute Resolution

According to William Sheffield "Disputes among business entrepreneurs should be mediated or arbitrated, not litigated" Litigation is always grossly expensive, requires huge commitments of time, saps vital corporate energy which can be much better used elsewhere. Litigation is a divorce which forever ends the relationship the disputing entrepreneurs may have had in the future. Surely there must be a better, more wholesome, more positive way of resolving disputes.

Enterprises, the word over, now conduct business on a dramatically more on international scale. The growth of the world economies is directly connected with the millions of commercial contracts, which are becoming more international in character owing to global integration. Centuries ago international traders learned that business disputes were inevitable. Disputes arose over failure to ship or deliver goods, over the quality of merchandise, over interpretations of terms of agreement which set forth the risks of seller and buyer etc., The scientific and technical

Emerging Legal Aspects for Expanding An Entrepreneurship Globally

*Abhishek Baplawat

23-2

From The World Bank: Platforms for Growth of India

*Mr. Tarun Bhatra **Mr. Shyamalendu Das

Bank for Reconstruction and Development was created in 1944 to help Europe War II. Today, IBRD provides loans and other assistance primarily to middle IBRD is the original World Bank institution. It works closely with the rest of the to help developing countries reduce poverty, promote economic growth, and e IBRD was established in 1954 and has 188 member countries. This paper w IBRD is influencing the economic development of India by contributing a structural development i.e. transport, manufacturing, urbanization, Rural ities, agriculture, Health, Child nutrition, water and sanitation, Education, apart from its borrowing activity IBRD is also playing a important role of ssing every aspects of human growth by touching the economic and social this paper also emphasized the importance of IBRD, how this institution is wth and development of various policies of the government of India. In the figures available about the assistance made by IBRD a conclusion is also

LECTION, CAPITAL, MEMBERS, BOARD OF GOVERNORS, GOAL AND WORLD

Bank for Reconstruction and Development was created in 1944 to help Europe War II. Today, IBRD provides loans and other assistance primarily to middle IBRD is the original World Bank institution. It works closely with the rest of the help developing countries reduce poverty, promote economic growth, and e IBRD was established in 1954 and has 188 member countries. It Aims to middle-income countries and creditworthy poorer countries by promoting ment, through loans, guarantees, and non-lending services, which include ny services. Middle and some creditworthy Lower Income countries qualify

From The World Bank: Platforms for Growth of India

*Mr. Tarun Bhatra *Mr. Shyamalendu Das

22.1

for IBRD Loans. Countries are classified based on their previous years Gross National Product into middle income-upper and lower, and Lower Income economies.

India was the 4th largest borrower from IBRD in the World Bank Fiscal Year (FY) 2012 with respect to the Share of Total Loans Outstanding with IBRD. Top 10 member countries of IBRD are the United States of America, Japan, Germany, United Kingdom, France, China, Canada, India, Italy and Saudi Arabia.

In total borrowings, India is the third largest IBRD borrower at \$47.9 billion, behind Mexico (\$52.5 billion) and Brazil (\$51 billion). India is the 8th Largest Shareholder, Effective January 11, 2013, India holds 56,739 shares. With an increase in Shareholding Capacity, India now holds a Voting Power of 3.04%. As a constituency (comprising of four countries - India, Bangladesh, Sri Lanka and Bhutan), India's voting power has increased to 3.62% (rounded off).

IBRD's Services

The World Bank Group works with middle income countries simultaneously as clients, shareholders, and global actors. As this partnership evolves, IBRD is providing innovative financial solutions, including financial products (loans, guarantees, and risk management products) and knowledge and advisory services (including on a reimbursable basis) to governments at both the national and sub national levels. IBRD finances projects across all sectors and provides technical support and expertise at various stages of a project.

IBRD's financial products and services help countries build resilience to shocks by facilitating access to products that mitigate the negative impact of currency, interest rate, and commodity price volatility, natural disasters and extreme weather.

Unlike commercial lending, IBRD's financing not only supplies borrowing countries with needed financing, but also serves as a vehicle for global knowledge transfer and technical assistance. IBRD supports government efforts to strengthen not only public financial management, but to also improve the investment climate, address service delivery bottlenecks, and other policy and institutional actions.

How IBRD is Financed

IBRD raises most of its funds in the world's financial markets. In fact, in these markets, IBRD is

Assistance From The World Bank: Platforms for Growth of India

*Mr. Tarun Bhatra *Mr. Shyamalendu Das

22.2



INDIAN IPR POLICIES IN GLOBAL SCENARIO: A BREIF REVIEW

Veena Sharma¹, G.S. Rajpurohit², Shatruhan Sharma^{2*}, Aastha Agarwal¹

¹Department of Bioscience & Biotechnology, Banasthali University (Rajasthan), CPGLS (JNU), Jaipur-1.

^{2*}Rajasthan High Court, Jaipur-1.

Article Received on
11 August 2016,
Revised on 31 August 2016,
Accepted on 20 Sept. 2016
DOI: 10.20959/wjpr201610-6883

Corresponding Author
Shatruhan Sharma
Rajasthan High Court,
Jaipur-302001.

ABSTRACT

Biotechnology is a boon to the mankind. Biotechnology involves application of technology on biological forms and processes for the human wellbeing. Research and development growth in this sector contributes a new count to Intellectual Property Rights system. The standard tests of patent law are an impediment for grant of patents to the biotech innovations. Failure in granting a patent hearten uncontrolled piracy of new inventions and the imaginative proprietors go through with great economic or financial losses because of low

returns on their huge investments in the research. This review focuses on the current scenario of patenting in Biotechnology and pharmaceutical sectors worldwide and also about the Indian patenting laws and regulations and their contribution in global economy.

KEYWORDS: Patents, Intellectual Property Rights, TRIPs, Biotechnology.

INTRODUCTION

India is one of the world's leading and major economies. The globally growing market of biotechnology and pharmaceutical industries play a major role in this economical development. TRIPs regulate the intellectual property rights issues of the discoveries and inventions from these industries. This always been a matter of concern between countries to follow these rules with mutual agreement. Many times, patenting cause controversies among countries and industries due to the specific rules and regulations of the nations (jurisnotes.com). Patenting is an important standard for measuring innovations and development in technology and research especially in biotechnology where exciting and important inventions have been made in recent years. Understanding Intellectual Property



Certified True Copy

Jagan Nath

From The World Bank: Platforms for Growth of India

*Mr. Tarun Bhatra **Mr. Shyamalendu Das

Bank for Reconstruction and Development was created in 1944 to help Europe War II. Today, IBRD provides loans and other assistance primarily to middle IBRD is the original World Bank institution. It works closely with the rest of the o help developing countries reduce poverty, promote economic growth, and the IBRD was established in 1954 and has 188 member countries. This paper w IBRD is influencing the economic development of India by contributing structural development i.e. transport, manufacturing, urbanization, Rural nities, agriculture, Health, Child nutrition, water and sanitation, Education, Apart from its borrowing activity IBRD is also playing a important role of ssing every aspects of human growth by touching the economic and social this paper also emphasized the importance of IBRD, how this institution is owth and development of various policies of the government of India. In the f figures available about the assistance made by IBRD a conclusion is also

SECTION, CAPITAL, MEMBERS, BOARD OF GOVERNORS, GOAL AND WORLD

Bank for Reconstruction and Development was created in 1944 to help Europe War II. Today, IBRD provides loans and other assistance primarily to middle IBRD is the original World Bank institution. It works closely with the rest of the o help developing countries reduce poverty, promote economic growth, and e IBRD was established in 1954 and has 188 member countries. It Aims to middle-income countries and creditworthy poorer countries by promoting ment, through loans, guarantees, and non-lending services, which include ary services. Middle and some creditworthy Lower Income countries qualify

From The World Bank: Platforms for Growth of India

*Mr. Tarun Bhatra *Mr. Shyamalendu Das

for IBRD Loans. Countries are classified based on their previous years Gross National Product into middle income -upper and lower, and Lower Income economies.

India was the 4th largest borrower from IBRD in the World Bank Fiscal Year (FY) 2012 with respect to the Share of Total Loans Outstanding with IBRD. Top 10 member countries of IBRD are the United States of America, Japan, Germany, United Kingdom, France, China, Canada, India, Italy and Saudi Arabia.

In total borrowings, India is the third largest IBRD borrower at \$47.9 billion, behind Mexico (\$52.5 billion) and Brazil (\$51 billion). India is the 8th Largest Shareholder, Effective January 11, 2013, India holds 56,739 shares. With an increase in Shareholding Capacity, India now holds a Voting Power of 3.04%. As a constituency (comprising of four countries - India, Bangladesh, Sri Lanka and Bhutan), India's voting power has increased to 3.62% (rounded off).

IBRD's Services

The World Bank Group works with middle income countries simultaneously as clients, shareholders, and global actors. As this partnership evolves, IBRD is providing innovative financial solutions, including financial products (loans, guarantees, and risk management products) and knowledge and advisory services (including on a reimbursable basis) to governments at both the national and sub national levels. IBRD finances projects across all sectors and provides technical support and expertise at various stages of a project.

IBRD's financial products and services help countries build resilience to shocks by facilitating access to products that mitigate the negative impact of currency, interest rate, and commodity price volatility, natural disasters and extreme weather.

Unlike commercial lending, IBRD's financing not only supplies borrowing countries with needed financing, but also serves as a vehicle for global knowledge transfer and technical assistance. IBRD supports government efforts to strengthen not only public financial management, but to also improve the investment climate, address service delivery bottlenecks, and other policy and institutional actions.

How IBRD is Financed

IBRD raises most of its funds in the world's financial markets. In fact, in these markets, IBRD is

Assistance From The World Bank: Platforms for Growth of India

*Mr. Tarun Bhatra *Mr. Shyamalendu Das

38

38

A STUDY ON ROLE OF HUMAN RESOURCE POST ACQUISITION: A CASE STUDY OF SUN PHARMACEUTICALS AND RANBAXY LABORATORIES

DR. VAISHALI SHARMA
PROFESSOR
FACULTY OF MANAGEMENT
JAGANNATH UNIVERSITY
JAIPUR

NEHA MAREJA
RESEARCH SCHOLAR
FACULTY OF MANAGEMENT
JAGANNATH UNIVERSITY
JAIPUR

ABSTRACT

To keep head high in globalized economy one has to follow the path of growth and merger and acquisition is the primary growth and expansion strategy of present corporate world. But whenever a merger or any acquisition is announced in any sector of economy the first question comes to mind- is how much is the financial gain. There is no or little argument on the impact on the employees and relevant human resources related practices and issues. Companies do pay considerable attention to financial and strategic issues during merger and acquisition, but they frequently neglect human resource issues. In this study we have taken pharmaceutical sector of economy in which we consider a case of sun pharmaceuticals industries limited and Ranbaxy laboratories. In this case the role of HR* is not favorable for Ranbaxy employees. The role of HR professionals is very important from the day one of merger and acquisition announced, but organizations had not given a seat to HR professionals on the table of merger process. Because of that 65% mergers and acquisitions are failed. It was therefore concluded that an organization must involve HR professionals in all phases of merger and acquisition. This research is a brief attempt to analyze the role of human resource in post-acquisition phase. This study is descriptive in nature. Secondary source of data and information has been used in this study. The scope of study is limited because study is based on secondary data. As per the requirement of the research data are taken from websites of companies, literature reviews, online documents and from journals. This research paper will be helpful for employers, employees, HR people, researchers and scholars.

KEYWORDS

mergers and acquisitions, human resource, pharmaceutical sector, role of human resource.

INTRODUCTION

Today's business world is just like a global village, therefore external changes are the main requirement to maintain and improve the position of the business and it can be possible through mergers, acquisitions, amalgamations and takeovers activities. During the last decade, acquisitions have an increasing trend in pharmaceutical companies mainly due to high competition in this sector. Acquisition had four phases i.e. Pre-merger and acquisition phase, due diligence, integration and post-merger and acquisition phase. In this article we consider the post-acquisition phase which is the final and most crucial part of merger and acquisition. It can take months or sometimes even years based on organization size, geographical locations and the complexity in the agreement. There are large number of companies worldwide that believe in the philosophy of "growing through acquiring" but the success rate of these M & As* is estimated to be mere 30-40%. Companies do announce that their mergers have been successful but they also accept they have not been able to earn expected benefits. Statistics shows that one of the major reasons behind failure of Merger & Acquisition is the human resource aspect. People issue is one of the most sensitive but often ignored issue in M & A scenario. When a decision is taken to merge or acquire, a company analyses the feasibility on the business, financial and legal fronts but fails to realize the importance attached to the human resources of the firms involved. Organizations fail to realize that people have the capability to make or break the alliance. Therefore, it is important for organizations on the verge of integration to analyze the feasibility of the integration on the human resource front. This is the responsibility of HR department to take care of the human resources in the merged entity in the post-acquisition phase.
*M&As- Merger and Acquisitions

CONCEPTUAL FRAMEWORK OF ACQUISITION

Acquisition in general sense is acquiring ownership in the property. It is the purchase by one company of controlling interest in share capital of another existing company. There are two types of acquisition i.e. friendly and hostile. In friendly acquisition the targeted firms want to be acquired willingly by another company and in hostile acquisition it allows bidder to take over the target company whose management is unwilling to agree to an acquisition

COMPANY PROFILE AND ACQUISITION MOVEMENTS

In this study we consider a case of Sun Pharmaceutical and Ranbaxy Laboratories which is hostile acquisition. Sun Pharmaceutical was established by Mr. Dilip Shanghvi in 1983 in VAPI. It is a multinational pharmaceutical company headquartered in Mumbai (Maharashtra, India). Sun Pharma had made nearly 20 acquisitions since its inception in 1983. It is a Pharma research company and drug discover company. Sun pharma has its own research center which is named as Sun Pharma Advanced Research Company Limited (SPARCL). It is formed in 2007 for research and innovation. Sun pharma mainly focus on research and development to enhance the productivity of new generic and differentiated drugs for global market. Ranbaxy was started by Ranbir Singh and Gurbax Singh in 1937 as a distributor for a Japanese company Shinogl. The name Ranbaxy is a portmanteau of the names of its first owners Ranbir and Gurbax. It is a multinational pharmaceutical company that was incorporated in India in 1961. The company went to public in 1973 but its big moment came in 1998 when it enters the united states the world's largest pharmaceutical market. Ranbaxy was the first foreign generic manufacturer to sell drugs in the US. In 2008 Daiichi Sankyo takeover the company from the Singh family by acquiring 63.92% stake in Ranbaxy in a deal worth \$4.6 billion. In 2011 when Ranbaxy was struggling to improve its financial position then Daiichi Sankyo decided to sale the company because it had incurred a net loss and suffered a decline in net worth. It results in diminution in its value of its investments. On April 7, 2014 Sun pharmaceuticals and Daiichi Sankyo jointly announced the sale of entire 63.4 % share to Sun pharma in a \$4 billion all share deal. In this deal Sun pharma agreed to pay their assuming \$800 million debt which include in sale amount i.e. \$3.2 billion in stock and \$800 million debt. The swap ratio of the deal is 8:10 i.e. every shareholder of Ranbaxy to get eight shares of Sun Pharma in against ten shares of Ranbaxy.



Certified True Copy

Jagan Nath University, Jaipur

Vol. V Annual Issue 2016 (September)

1531241540333

Prabandhyan

International Journal of Management

CO Module of ERP System – An Enabler of MIS-Some Empirical Evidence from Indian Manufacturing Firms <i>Dr. Leena V Painter</i>	1
Socio-Economic Status of Rajasthan: An Analysis with Major Indian States <i>Ms. Vijay Laxmi Gupta</i>	8
Health and Right based Approach to Development – Kerala Scenario <i>Thushara Roy, Dr. Ankur Roy</i>	19
Interdisciplinarity: Synthesis in Education & Research <i>Dr. Shilpi Khandelwal</i>	31
Consumer Segmentation Matrix and Variables for the Explanation of Binary Purchasing Criteria: Prices Vs. Product Differentiation <i>César Francisco Cárdenas-Dávila, Julio Cesar Centceros-Angulo, José G. Vargas-Hernandez</i>	44
Analyzing Consumer Buying Behavior with Reference to Online Shopping in India <i>Khushboo Jain, Dr. Kapil Khattar, Dr. Jitendra Rathore</i>	56
Teaching <i>Joel Gehrig</i>	66

jims

Jagan Institute of Management Studies, Jaipur



Registrar
Jagan Nath University, Jaipur (13)

Prabandhgyan

International Journal of Management

Vol. V Annual Issue 2016 (September)

ISSN 2319 - 6351

CO Module of ERP System – An Enabler of MIS-Some Empirical Evidence from Indian Manufacturing Firms <i>Dr. Leena V Painter</i>	1
Socio-Economic Status of Rajasthan: An Analysis with Major Indian States <i>Ms. Vijay Laxmi Gupta</i>	8
Health and Right based Approach to Development – Kerala Scenario <i>Thushara Roy, Dr. Ankur Roy</i>	19
Interdisciplinarity: Synthesis in Education & Research <i>Dr. Shilpi Khandelwal</i>	31
Consumer Segmentation Matrix and Variables for the Explanation of Binary Purchasing Criteria: Prices Vs. Product Differentiation <i>César Francisco Cardenas-Dávila, Julio Cesar Cenicerias-Angulo, José G. Vargas Hernandez</i>	44
Analyzing Consumer Buying Behavior with Reference to Online Shopping in India <i>Khushboo Jain, Dr. Kapil Khattar, Dr. Jitendra Rathore</i>	56
Teaching <i>Joel Gehrig</i>	66

Jagan Institute of Management Studies, Plot No. IP 2 & 3, Phase IV,
 Sitapura Industrial Area, Jaipur – 302022 (Rajasthan)
www.jimsjaipur.org



Certified True Copy
 Jagan Nath ... Jaipur

INTERDISCIPLINARITY: SYNTHESIS IN EDUCATION & RESEARCH

Dr. Shilpi Khandelwal

Associate Professor, Faculty of Management,
Jagannath University, Jaipur
Email: shilpi.khandelwal@jagannathuniversity.org

Abstract: *Interdisciplinary practices have come to occupy a significant place in academic education & research but there appears to be little conceptual of definitional clarity in the concept of interdisciplinarity. Interdisciplinarity is best understood not as one thing but as a variety of different ways of examining and perhaps confronting the establishment, content, parameters and powers of disciplines and the prevailing approaches to research they engender. In this context, interdisciplinarity means taking issues with the registers of one or more disciplines and with whatever is implied in the development, substance and maintenance of these registers. In today's universities, knowledge is typically extracted from an integrated whole by study units, called departments, where that knowledge is disintegrated and disaggregated in a process famous for its turf battles and jurisdictional disputes. The interdisciplinary programs propose an attempt to reintegrate this acquisition of knowledge, both its discovery and its dissemination. If such a reintegration of the knowledge process can be accomplished, then the interdisciplinary programs will made great strides in redefining the character of the research oriented universities and in preparing our nation to make scientific and technological contributions to solving ever more complex societal problems. The frequently-encountered wholesale dismissal of either interdisciplinary knowledge or research reflects a profound misunderstanding of their vital contributions to scholarship, society, and individuals. This paper presents the self-contained, comprehensive defence of interdisciplinary knowledge and research, arguing that they are important. The paper will reflect many of the dominant issues and themes in the current debates about interdisciplinarity in the education & research. It also tries to highlight the contrast between interdisciplinary and disciplinary approach. This paper helps in understanding how interdisciplinarity is received, and how it is conceived, depends on an understanding of the nature of academic disciplines and their influence on faculty life in colleges and universities.*

Key Words: Education, research, teaching, learning, academic, etc.

INTRODUCTION

Whilst interdisciplinary study is much talked about, its rationale is often assumed rather than rigorously recognized. The scope of and methodologies for interdisciplinary work are poorly understood. Interdisciplinary programs sometimes arise from a shared conviction that the traditional disciplines are unable or unwilling to address an important problem. For example,



Certified True Copy
Registrar
Jagan Nath University, Jaipur

Impact of Negative Working Capital on Profitability with Reference To India Cement Limited

*Nidhi Kalra Malhotra
**Dr. Kapil Khattar

Abstract

In every business an optimum level of Working Capital is to be maintained for the purpose of day to day remittances. Any Business cannot grow in absence of satisfactory working capital level. In case of shortage of working capital the business may suffer scarcity of resources. But it should also be kept in mind that even working capital in excessive quantity, possibly will result into superfluous cost. Therefore, the management of business firm should goal an optimal level of working capital. Working capital should be ample enough to carry out the current liabilities but should not be much more than the genuine requirement. Taking into consideration this perspective, the study has been undertaken to analyze the impact of negative working capital on the companies facing such scenario which is India cement in the present study.

Company Profile

India cements Ltd was founded in the year 1946 by two men, Shri S N Sankaralinga Iyer and Sri T S Narayanaswami. They had the vision to inspire dreams for an industrial India, the ability to translate those dreams into reality and the ability to building enduring relationships and the future. Sri T S Narayanaswami, the banker turned industrialist, was the catalyst who saw the project cross through numerous hurdles and emerge as a viable and marketable proposition. He looked beyond cement and ventured into aluminum, chemicals and plastics and shipping. A pioneer industrialist and visionary, Sri T S Narayanaswami played a dynamic role in the resurgence of industrialization in free India.

From a two plant company having a capacity of just 1.3 million tons in 1989, the company has robustly grown in the last two decades to a total capacity of 15.5 million tons per annum. It has 7 integrated cement plants in Tamil Nadu, Telangana and Andhra Pradesh, one in Rajasthan (through its subsidiary, Trinetra Cement Ltd) and two grinding units, one each in Tamil Nadu and Maharashtra.

While retaining cement over the years as its mainstay, India Cements Ltd has ventured into related fields like shipping, captive power and coal mining that has purposeful synergy with its core business.

Introduction

One of the most crucial tasks in the day to day management of the business firm is the management of working capital. Working capital refers to the funds invested in the current assets.

Impact of Negative Working Capital on Profitability with Reference To India Cement Limited

Nidhi Kalra Malhotra, Dr. Kapil Khattar

A Study of Cost Analysis Among ACC Cement, Shree Cement and JK Cement Ltd.

*Shweta Pradip Bhatia
**Prof. Dr. Kapil Khatter

Abstract:

Constructions have always played a great role in the development of any nation in any culture. Be it the age old Harappa civilization or the wonders of the world, the world still identifies a civilization with its constructions. One of the core element of any such construction is 'Cement'. The role of cement in the field of construction or real estate is essentially important. It is a mixture of compounds and acts as a binding agent which adds to the strength of any construction. All construction works such as building of houses, shopping malls, places of great social, political or economic importance, etc. all need cement as an important ingredient. However, we have seen in the recent times that the fluctuations in the rate of cement has direct effect on the cost of the construction. Controlled cement prices, will not only help industries but also individuals, as it will lead to cheaper constructions. This is especially of great value in countries where affordable housing is still a matter of concern. Cement prices, if controlled, will help greatly in achieving targets of affordable housing. However, in the modern scenario, maximization of profit is not the only objective of any business but also survival and growth in this cutthroat competition has also become equally challenging. These goals can be achieved only by satisfying the customers through supply of better quality goods and services at lower and competitive prices. For this, a company needs to develop an effective control over its activities through an efficient mechanism of cost control. The purpose of this research is to identify the reasons which are responsible for inflated cement costs. The paper tries to focus on the different elements of cost, especially factory overheads, which according to research, play an essential role in the high cement costs.

Keywords Cement, Cement Industry, Cost, Factory Overheads, Administrative overheads, Selling and Distribution Overheads.

Introduction

Cost, in an absolute sense, is a meaningless concept unless it is analyzed and compared with the cost figure of same concern or with the other concerns period to period. The cost controls and cost reduction are known as the main objectives of cost accounting and cost ascertainment is only the first step in achieving the goal of profit maximization and survival in business. This draws the attention of the management to specific areas, where corrective actions are required. To survive and grow, a business has to develop its specific ways for controlling and reducing its cost of

A Study of Cost Analysis Among ACC Cement, Shree Cement and JK Cement Ltd.

Shweta Pradip Bhatia, Prof. Dr. Kapil Khatter

25.1



Certified True Copy
Registrar
Jagan Nath University, Jaipur

ASCENT INTERNATIONAL JOURNAL FOR RESEARCH ANALYSIS

(A Bi-Lingual Multi-Disciplinary Peer Reviewed International Quarterly Journal)
 July-Sep. 2016 Vol. I ISSUE III, Impact Factor (PIF) 1.675, Indexed in I2OR, Rigisterd & Listed by UGC 63514

CONTENTS

S.No	Topic-Name of Author	Subject	Page No
1.	गौधी दर्शन के सामाजिक सरोकार डॉ. अल्पना सक्सेना	Hindi	1.1-1.4
2.	Seven Heavens: The Divine Number of Jaipur- Dr. Veenu Pant	History	2.1-2.5
3.	Issues in the Corporate, Government and Academia Interface - Dr. Nandini Sharma, Dr. Aperia mall	Commerce & HRM	3.1-3.8
4.	राजस्थान के पर्यटन उद्योग में निजी संस्थाओं की भूमिका - डॉ. ऋचा चौहान	Commerce	4.1-4.5
5.	स्वयं सहायता समूहों में संचार माध्यमों की भूमिका - डॉ. रंजीता सिंह	Sociology	5.1-5.3
6.	A Study on the Vital Reasons for Alcohol Consumption in the State of Rajasthan - Prof. (Dr.) Kapil Khatter & Jasneet Soni	Management	6.1-6.6
7.	Class Conflict in Untouchable by Mulkraj Anand Dr. Geeta Garwa	English	7.1-7.5
8.	Environment Management and Administration (A Study of Jaipur and Alwar Districts of Rajasthan State) - Dr. Madhuri Gupta	Political Science	8.1-8.5
9.	समाज में महिला हिंसा का स्वरूप - डॉ. अजुंवाला शर्मा	Sociology	9.1-9.8
10.	सामाजिक-सांस्कृतिक परिवर्तन में मीडिया की भूमिका सार - डॉ. पूनम जोशी	Sociology	10.1-10.5
11.	श्रम कल्याण-विकास के विभिन्न स्वरूप - पुष्पा तातेड़ (जैन)	Sociology	11.1-11.3
12.	Micro Finance in India : Issues and Challenges - Dr. Sudhansu Sekhar Nayak & Dr. Anil Kumar Sahu	Management	12.1-12.15
13.	मृच्छकटिकम् में वर्णित स्त्रियों की स्थिति डॉ. सुमन यादव	History	13.1-13.5
14.	Problems and The Limiting Factors of Cost, Propriety and Efficiency Audit - Dr. Vinita Shekhawat	ABST	14.1-14.4
15.	Indian Banking : Challenges And Opportunities - Hetram	ABST	15.1-15.9



Certified True Copy

 Registrar
 Jagan Nath University, Jaipur

A Study on the Vital Reasons for Alcohol Consumption in the State of Rajasthan

Prof. (Dr.) Kapil Khatter
Jasneet Soni

Abstract

Alcoholism is considered as a chronic disorder accompanied with excessive and generally an irresistible urge to consume alcohol that leads to psychological and physical vulnerability or addiction to alcohol. The consumption of alcoholic beverages is generally accredited due to discrete reasons by divergent consumers throughout the country. 400 cases of drinkers in the seven divisions of the state of Rajasthan are examined in the study. This study attempts to analyze the causes and grounds of alcohol consumption and their opinions and perspective about alcohol addiction. The present study strives to escalate an awareness of the effects of alcohol consumption along with assisting the concerned authorities to devise steps to curtail, control and manoeuvre the alcohol consumption of the state. The paper also attempts to uncover the major causes of alcohol consumption along with the chief reasons behind those reasons. The analysis puts forward the reasons for alcohol consumption and the psychological aspects associated with these reasons.

Keywords: Alcoholism; Liquor; Vulnerability; Alcoholic; Excise.

Introduction

The dependence on alcohol is very prominent in the state of Rajasthan. Alcohol consumption or alcoholism is also considered to be a chronic disease carried on by its consumers since a long time. The consumer of alcohol develops a physical and emotional dependence on alcohol irrespective of health issues. One of the major reasons for the continuous increase in the consumption level of alcohol in the present day society is that alcohol is considered as a social lubricant by its consumers. Alcohol drinkers also consider it as a relaxant, it reduces social anxiety and many people are found to be alcoholics and they indicate it helps them to forget their problems and reduce their sorrows. Lot of times it is seen that people start drinking under peer pressure or by observing the adults of the family doing the same. Alcohol consumption temporarily makes the memory and the brain go fuzzy and this makes the alcoholics high and happy.

Objectives of The Study

- To acknowledge the causes responsible for alcohol consumption in the state of Rajasthan.
- To diagnose the sanity behind starting alcohol consumption by the consumers in the state of Rajasthan.

A Study on the Vital Reasons for Alcohol Consumption in the State of Rajasthan
Prof. (Dr.) Kapil Khatter & Jasneet Soni

6.1



Certified True Copy
Registrar
Jagan Nath University, Jaipur

INTERNATIONAL JOURNAL OF MANAGEMENT STUDIES

Prabandhgyan

International Journal of Management

(41)

CO Module of ERP System – An Enabler of MIS-Based Empirical Evidence from Indian Manufacturing Firms
Dr. Leena V. Painter

1

Socio-Economic Status of Rajasthan: An Analysis with Major Indian States
Ms. Vijay Laxmi Gupta

2

Health and Right based Approach to Development – Kerala Scenario
Thushara Roy, Dr. Ankur Roy

19

Interdisciplinarity: Synthesis in Education & Research
Dr. Shilpi Khandelwal

31

Consumer Segmentation Matrix and Variables for the Explanation of Binary Purchasing Criteria: Prices Vs. Product Differentiation
César Francisco Cárdenas-Dávila, Julio Cesar Centeceros-Angulo, José G. Vargas-Hernandez

44

Analyzing Consumer Buying Behavior with Reference to Online Shopping in India
Khushboo Jain, Dr. Kapil Khattar, Dr. Jitendra Rathore

56

Teaching
Joel Gehrig



Certified True Copy
Jagan Nath

jims

Jawahar Institute of Management Studies, Jaipur

www.jimsjapoor.com

13

Prabandhgyan

International Journal of Management

Vol. V Annual Issue 2016 (September)

ISSN 2319 - 6351

CO Module of ERP System – An Enabler of MIS-Some Empirical Evidence from Indian Manufacturing Firms <i>Dr. Leena V Painter</i>	1
Socio-Economic Status of Rajasthan: An Analysis with Major Indian States <i>Ms. Vijay Laxmi Gupta</i>	8
Health and Right based Approach to Development – Kerala Scenario <i>Thushara Roy, Dr. Ankur Roy</i>	19
Interdisciplinarity: Synthesis in Education & Research <i>Dr. Shilpi Khandelwal</i>	31
Consumer Segmentation Matrix and Variables for the Explanation of Binary Purchasing Criteria: Prices Vs. Product Differentiation <i>Francisco Cárdenas-Dávila, Julio Cesar Cenicerros-Angulo, José G. Vargas-Hernandez</i>	44
Analyzing Consumer Buying Behavior with Reference to Online Shopping in India <i>Khushboo Jain, Dr. Kapil Khattar, Dr. Jitendra Rathore</i>	56
Teaching <i>Joel Gehrig</i>	66



Jagan Institute of Management Studies, Plot No. IP 2 & 3, Phase IV,
Sitapura Industrial Area, Jaipur – 302022 (Rajasthan)
www.jimsjaipur.org

Certified True Copy
Registrar
Jagan Nath University, Jaipur

ANALYZING CONSUMER BUYING BEHAVIOR WITH REFERENCE TO ONLINE SHOPPING IN INDIA

Khushboo Jain

Research Scholar

Email: jkhush1984@gmail.com

Dr. Kapil Khattar

Research Supervisor, Jagannath University, Jaipur

Email: kapil.khattar@jagannathuniversity.org

Dr. Jitendra Rathore

Associate Professor, JIMS, Jaipur

Email: jitendra.rathore@jimsjaipur.org

Abstract: *E-commerce is a big business and getting bigger every day. Along with World Wide Web and Internet, online shopping and purchasing is becoming a regular habit in today's society. Online shopping has been embraced by Indians with close to 8-10 million adults making a purchase via internet in the year 2015.*

This paper attempts to understand and analyze the consumer buying behavior of online shoppers. The inferences derived and presented in this paper are largely obtained through review of research from books, papers, articles & from array of national, international journals, reports and web based research related to consumer buying behavior, online shopping etc.

Based on this study, it was found that as the broadband usage expands in India, convenience will be the main driver for online consumers in the coming times, as opposed to pricing being the main issue today, and eventually help e-commerce firms make money. Also, the other major pronouncements made are that there are lot many challenges being faced by the customers which need to be looked upon by the companies in order to penetrate throughout India like: product quality, free door to door shipping in any place across India, cash on delivery that should be applicable for all areas not only metros, quick service incase of electronic goods, reliability as to whether the product displayed will be same or not, purchase return option if the good is not as per the standard etc.

INTRODUCTION

The essence of e-retailing is in its ability to transcend physical boundaries and reach customers in a manner different from the traditional brick-and-mortar stores, to their very doorstep. It is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the internet using a web browser. The ecommerce landscape in India is perhaps the most dynamic in the world. It is a convenient method of shopping and allows for a vast array of products (from clothes to cars and so on) being at our fingertips. It offers fast, easy money saving and interesting shopping experience.



The Effect of Educational Qualification on The Level of Job Satisfaction of Employees Working in SBI and ICICI

Prof. (Dr.) Kapil Khatter
Jasneet Soni

Abstract

Job Satisfaction is not a destination but a journey. It is one such topic that has gained continuous importance in the managerial context since a long time. It is not only an important aspect for employees, workers, staff and management but also for students, researchers, academicians and policy makers too. Customer satisfaction was considered to be utmost important for an organization to be successful in earlier times. But now the organizations know it very well that satisfaction of its employees has more to do with its prosperity..

Lois Moncrieff rightly said, "Employees need to understand how what they do fits into the 'Big Picture'. This will help them have a good reason for being motivated when they understand what they do matters and has impact."

Even the banking sector has not remained untouched with this philosophy of job satisfaction. Undoubtedly banks play a very crucial and a vital role in our economy. The role of banks has shifted from accepting deposits and lending loans to mobilizing savings for capital formation, acting as a financier to industry, trade, agriculture, consumer activities, generation of employment etc. Banks also help in framing the monetary policy of the country.

The present research paper is an effort to make a comparative study to analyze the job satisfaction level of the operational level employees working in a public (SBI) and a private (ICICI) bank with respect to their educational qualifications. As a study of job satisfaction level of employees of both the banks for a period of two years, i.e., from January 2014 to January 2016 is made.

Key Words : Job Satisfaction, operational level, public sector, private sector, economy,

Introduction

The Indian culture and the mindset of the people residing in this culture is a low risk taking type. In such a scenario, banks act as an important financial institution catering to the needs for the entire society/nation. Unlike the ancient times, where people used to be dependent upon money lenders now the banks act as government regulated institutions, that ensures development. A lot of valuable services are provided by the modern banks. A sound and developed financial system supports the economy to a great extent.

In order to operate smoothly, prosper, offer valuable knowledge and become successful, even the banking sector needs motivated, loyal and committed employees. It has been proven that if the employees are happy and satisfied, the quality of services they offer increases and it has a positive effect on the overall performance of the bank. Although satisfying and motivating employees is a

The Effect of Educational Qualification on The Level of Job Satisfaction of Employees Working in SBI and ICICI
Prof. (Dr.) Kapil Khatter & Jasneet Soni



Certified True Copy
Registrar
Jagan Nath University, Jaipur

46

ISSN No. 2455-5967

www.ijcms2015.co

October-December 2016

Vol. -1- Issue IV

ASCENT INTERNATIONAL JOURNAL FOR RESEARCH ANALYSIS

(A Bi-lingual Multi-Disciplinary Peer Reviewed International Quarterly Journal)



NAVBHARAT MEMORIAL FOUNDATION

(A tribute to Late Shri Narendra Singh Kothari)



Certified True Copy

Registrar
Jagan Nath University, Jaipur

18

A Study of Cost Analysis Among ACC Cement, Shree Cement and JK Cement Ltd.

*Shweta Pradip Bhatla
**Prof. Dr. Kapil Khatter

Abstract:

Constructions have always played a great role in the development of any nation in any culture. Be it the age old Harappa civilization or the wonders of the world, the world still identifies a civilization with its constructions. One of the core element of any such construction is 'Cement'. The role of cement in the field of construction or real estate is essentially important. It is a mixture of compounds and acts as a binding agent which adds to the strength of any construction. All construction works such as building of houses, shopping malls, places of great social, political or economic importance, etc. all need cement as an important ingredient. However, we have seen in the recent times that the fluctuations in the rate of cement has direct effect on the cost of the construction. Controlled cement prices, will not only help industries but also individuals, as it will lead to cheaper constructions. This is especially of great value in countries where affordable housing is still a matter of concern. Cement prices, if controlled, will help greatly in achieving targets of affordable housing. However, in the modern scenario, maximization of profit is not the only objective of any business but also survival and growth in this cutthroat competition has also become equally challenging. These goals can be achieved only by satisfying the customers through supply of better quality goods and services at lower and competitive prices. For this, a company needs to develop an effective control over its activities through an efficient mechanism of cost control. The purpose of this research is to identify the reasons which are responsible for inflated cement costs. The paper tries to focus on the different elements of cost, especially factory overheads, which according to research, play an essential role in the high cement costs.

Keywords Cement, Cement Industry, Cost, Factory Overheads, Administrative overheads, Selling and Distribution Overheads.

Introduction

Cost, in an absolute sense, is a meaningless concept unless it is analyzed and compared with the cost figure of same concern or with the other concerns period to period. The cost controls and cost reduction are known as the main objectives of cost accounting and cost ascertainment is only the first step in achieving the goal of profit maximization and survival in business. This draws the attention of the management to specific areas, where corrective actions are required. To survive and grow, a business has to develop its specific ways for controlling and reducing its cost of

A Study of Cost Analysis Among ACC Cement, Shree Cement and JK Cement Ltd.

Shweta Pradip Bhatla, Prof. Dr. Kapil Khatter

25.1



Certified True Copy
Registrar
Jagan Nath University, Jaipur

Preliminary Pharmacognostic and Phytochemical Investigation of *Blepharis sindica*-T. Anders Seeds

Abstract

Background: *Blepharis sindica* - T. Anders of family Acanthaceae is an important medicinal plant which is mainly used as an invigorating tonic, given to cattle to increase milk production and its roots are used for urinary discharge and dysmenorrhea. It is commonly known as "Bhangāri". It is extensively used traditionally as *Vājīkāraka* and *Vṛṣya* (Aphrodisiac) by *vaidyas* of Rajasthan and Gujarat. The seeds of *Blepharis sindica* T. Anders are the parts of the plant valued for their medicinal value. **Aims:** The present investigation deals with the pharmacognostic studies of the root, stem, seed and seed powder. **Materials and Methods:** The study includes macroscopy, microscopy, preliminary phytochemical analysis and physicochemical evaluation using methods given in Indian Ayurvedic Pharmacopoeia. **Results:** Physicochemical parameters such as total ash value, acid insoluble ash value and water soluble ash value were determined to be $21.449 \pm 2.629\%$ w/w, 0.986% w/w, 18.746% w/w respectively. Preliminary phytochemical analysis of extracts were carried out. Different extracts contain carbohydrate, protein, alkaloids, phenols, saponins and steroids prominently. Calcium, zinc, potassium and iron were also present. These secondary metabolites are the active constituents and may be responsible for *B. sindica*'s pharmacological activities. Chief characters of transverse section of stem include ringed vascular bundles, radial striped pith rays and parenchymal pith. Seed shows presence of scalariform tracheids and lignified walls. **Conclusions:** The result of the present study can be useful for the identification and preparation of a monograph of the plant.

Keywords: *Bhangari*, *Blepharis sindica*, Pharmacognostic studies, preliminary phytochemical

Introduction

Blepharis sindica - T. Anders; commonly known as *Bhangāri*; is an endangered species whose natural population is decreasing due to unscientific exploitation and habitat destruction.^[1] It is mainly distributed in South Western India, Indus delta region of India and Southern Pakistan.^[2] It is a small, dichotomously branched, woody annual. Stem is short, sometimes almost zero, branches ash colored, slender, terete, clothed with very short hairs. Leaves are sessile in a whorl of 4, unequal, $2.5-6 \times 0.2-0.4$ mm, linear, acute, usually with a few small spinous teeth near the base, finely apiculate, rough with short stiff hairs, margins recurved, midrib prominent strong beneath. Flowers are in strobilate sub sessile hairy spikes 2.5-7.5 cm long, in the forks of the branches, solitary or few (5-7) on the top of very short stout woody peduncle, usually numerous in the lowest fork, solitary in the upper. Flowers are blue or pinkish in

color. Calyx is divided almost to base, softly hairy on both surfaces. Corolla is 8-13 mm long one lipped, the lip 3 lobed; mid lobe quadrate, slightly larger than the lateral lobes which are rounded at apex, tube 4 mm long, brown, constricted below the limb; 4 didynamous stamens. Fruits are capsules 8×5 mm, ellipsoid, compressed, narrowed at both ends glabrous and shining brown. Seeds are 4 mm. long, compressed, densely clothed with thick hygroscopic hairs which are longer than the nucleus. Flowering and fruiting period is from August to January. Seed and whole plant is used for its medicinal properties.^[3] The seeds are boiled in milk and taken as tonic. It is also given to cattle to increase milk production.^[4] Compressed seeds with densely clothed hygroscopic hairs are used in the preparation of herbal medicines and it is used as aphrodisiac.^[5] A decoction is used to wash wounds and powder of dried plant material is applied locally on infections.^[6] The powder of seeds is also

Apurva Priyadarshi,
Rajesh Kumari¹,
Anil Kumar
Sharma²,
Mohal Lal Jaiswal³

From the Department of Dravya Guna Vigyan, Sharme Gausia Minority Ayurvedic and Unani Medical College, Ghazipur, Uttar Pradesh, ¹Department of Dravyaguna Vigyan, Shiv Shakti Ayurvedic College, Bhikhi, Mansa, Punjab, ²Department of Chemistry, Jagannath University, ³Department of Dravyaguna Vigyan, National Institute of Ayurveda, Jaipur, Rajasthan, India

Address for correspondence:
Dr. Rajesh Kumari, Shiv Shakti
Ayurvedic College, Bhikhi,
Mansa, Punjab, India.
E-mail: dr.rajeshwari.singh@gmail.com

Access this article online

Website:
www.ancientscienceoflife.org

DOI: 10.4103/asl.ASL_29_16

Quick Response Code:



This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Priyadarshi A, Kumari R, Sharma AK, Jaiswal ML. Preliminary pharmacognostic and phytochemical investigation of *Blepharis sindica*-T. anders seeds. *Ancient Sci Life* 2016;36:78-83.

Received: February, 2016. Accepted: February, 2017.



Effect of Suction and Injection on Magnetohydrodynamic Three Dimensional Couette Flow And Heat Transfer between Two Infinite Horizontal Moving Parallel Porous Plates

Divya Saxena, Vivek Kumar Sharma

Jagan Nath University, Jaipur, Rajasthan, India

Abstract: The object of the following paper is to investigate the effect of constant suction and injection on three dimensional Couette flow of a viscous incompressible electrically conducting fluid through a porous medium between two infinite horizontal parallel porous moving flat plates in presence of a transverse magnetic field. Both the plates are in uniform motion, subjected to a transverse sinusoidal injection and uniform suction of the fluid. Due to sinusoidal type of injection, the flow becomes three dimensional. The governing equations of the flow field are solved analytically and the expressions for the velocity field, the temperature field, skin friction and the rate of heat transfer in terms of Nusselt number are obtained and analyzed with the help of figures and tables. It is observed that the retardation occurs in the main flow velocity (u) due to increased magnetic parameter (M) and it accelerates the cross flow velocity (w). Also increased permeability parameter (K_p) and suction / injection parameter (Re) reverses the effect. Prandtl number and the suction / injection parameter have retarding effect on the temperature field. The increasing suction / injection parameter decreased both the components of skin friction at the wall while the permeability parameter increases the x -component and reduces the z -component of the skin friction at the wall. The effect of increasing permeability parameter is to increase the magnitude of rate of heat transfer at the wall while a growing Prandtl number (Pr) reverses the effect.

Keywords: MHD, couette flow, heat transfer, suction, sinusoidal injection, porous medium

I. Introduction

The phenomena of MHD Couette flow and heat transfer through moving plates play an important role in science and technology. Channel flows through porous media could be very practicable in many engineering and geophysical applications in the field of chemical engineering for filtration and purification processes, in agricultural engineering to study the underground water resources, in petroleum industry to study the movement of natural gas, oil and water through the oil channels and reservoirs.

In recent years several authors have studied the free convection and mass transfer flow of a viscous fluid through porous medium. Here are the some series of investigations have been made by different scholars where the porous medium is either bounded by horizontal or vertical surfaces. Singh and Verma (1995) investigated the three dimensional oscillatory flow through a porous medium with periodic permeability. Attia and Kotb (1996) discussed the MHD flow between two parallel plates with heat transfer. Chamkha (1996) analyzed the unsteady hydromagnetic natural convection in a fluid saturated porous channel.

Three dimensional free convective flows through a porous medium in presence of heat transfer was studied by Ahamed and Sharma (1997). Attia (1997) discussed the transient MHD flow and heat transfer between two parallel plates with temperature dependent viscosity. Krishna *et al.* (2004) presented the hydromagnetic oscillatory flow of a second order Rivlin-Ericksen fluid in a channel. Sharma and Yadav (2005) analyzed the heat transfer through three dimensional Couette flow between a stationary porous plate bounded by porous medium and a moving porous plate. Sharma *et al.* (2005) explained the steady laminar flow and heat transfer of a non-Newtonian fluid through a straight horizontal porous channel in the presence of heat source. Vershney and Singh (2005) presented the effect of periodic permeability on three dimensional free convective flows with heat and mass transfer through a porous medium. Jain *et al.* (2006) investigated the three dimensional couette flows with transpiration cooling through a porous medium in the slip flow regime. Recently, Das *et al.* (2008) analyzed the three dimensional couette flow and heat transfer in presence of a transverse magnetic field and Das *et al.* (2009) discussed the effect of suction and injection on MHD three dimensional couette flow and heat transfer through a porous medium.

Our present paper is devoted to study the of constant suction and sinusoidal injection on three dimensional couette flow of a viscous incompressible electrically conducting fluid through a porous medium between two infinite horizontal parallel porous flat plates in presence of a transverse magnetic field. The plates in uniform motion are, respectively, subjected to a transverse sinusoidal injection and uniform suction of the fluid. This type of injection velocity distribution the flow becomes three dimensional and the governing equations of the flow field are solved by analytically using series expansion method and the expressions for the



50



Magnetohydrodynamic Flow of Viscous Incompressible Fluid Surrounded by a Porous Media Between Two Non-Coincident Rotating Disks

Research Article

Divya Saxena^{1*} and V.K.Sharma¹

¹ Department of Mathematics, Jagannath University, Jaipur, India.

Abstract: Analytical investigations of the Navier-Stokes Equations examine the magnetohydrodynamic flow of a viscous incompressible fluid between two non-coincident disks rotating with the same angular velocity Ω . The governing equation of motions are coupled non linear partial differential equations together with the boundary conditions, are reformed into the linear ordinary differential equations that has been studied with the assumptions. The results have been obtained for the velocities, shearing stress and torque for several values of rotational parameter, magnetic parameter and porosity parameter. The effects of the several parameters on the flow field are presented and explained graphically.

Keywords: Magnetohydrodynamic Flow, Non-Coincident Disk, Porous Medium, Magnetic Parameter, Rotation Parameter.

© JS Publication.

1. Introduction

Magnetohydrodynamic flow of viscous incompressible fluid has attracted the attention of various researchers due to its large applications in the field of engineering, geophysical applications, petroleum technology, chemical engineering, agriculture engineering etc. MHD flow of viscous incompressible fluid due to rotation of non-coincident disks and the fluid at infinity has been analyses and studied by many researchers. MHD flow of an oldroyd-B fluid between eccentric rotating disks was studied by Ersoy [1], Flow of viscoelastic fluids between rotating disks was studied by Rajagopal [2]. Hydromagnetic flow between two rotating disks with non-coincident parallel axes of rotation was studied by Mohanty [3]. Kanch and Jana [4] have insvestigate the Hall Effects on hydromagnetic flow between two disks with non-coincident parallel axes of rotation. Maji, Ghara, Jana and Das have investigated the Unsteady MHD flow between two eccentric rotating disks in [5]. Magnetohydrodynamic flow with reference to non-coaxial rotation of a porous disk and a fluid at infinity was studied by Guria, Das, Jana and Ghosh [6]. Das, Maji, Guria and Jana [7] have study the Hall Effects on unsteady MHD flow between two disks with non-coincident parallel axes of rotation. Jana and Ghosh have investigate the Hydrodynamic flow between two non coincident rotating disks embedded in porous media in [8].

The present research deals with the magnetohydrodynamic flow of viscous incompressible fluid embedded in porous medium between two non-coincident rotating disks. This paper is the study of combined effect of rotation, magnetic field and porosity on the fluid. Here the disks at l distance apart are rotating with the same angular velocity. The present problem attentively states that the motion in the mid plane appears as symmetric between the two disks.

* E-mail: divyasaxena0516@gmail.com



Certified True Copy

[Signature]
Jagan Nath University, Jaipur

51



(/jor.aspx)

Users online: (onlineuserinfo.aspx) 2172

(/jor.aspx)

- Home (/jor.aspx)
- About us (/jor.aspx?target=about_us)
- My Profile (/jor.aspx?target=users_zone)
- Registration (/jor.aspx?target=register)
- Products
- Article Submission (/jor.aspx?target=manuscript_submission)
- Usage Statistics (https://www.mpsinsight.com/ijc)
- Price List 2021 (.../JournalsPriceList.aspx)
- Contact Us (/jor.aspx?target=contact_us)
- Tutorial
- Login/Register (/jor_homemenucontrol/#)
- Email Id

INTERNATIONAL JOURNAL OF INFORMATION COMMUNICATION & COMPUTING TECHNOLOGY

JIMSBI - International Journal of Information Communication and Computing Technology
 Year : 2016, Volume : 4, Issue : 1
 First page : (187) Last page : (193)
 Online ISSN : 2347-7202.

- Journal Home (?target=ijor:jimsbi&type=home)
- Current Issue (?target=ijor:jimsbi&type=current_issue)
- Archive / Issues (?target=ijor:jimsbi&type=archive)
- TOC (?target=ijor:jimsbi&volume=4&issue=1&type=toc)
- Prev Article (?target=ijor:jimsbi&volume=4&issue=1&article=001)
- Next Article (?target=ijor:jimsbi&volume=4&issue=1&article=003)
- Registration (?target=register)
- Subscribe (?target=ijor:jimsbi&type=subscribe)
- Editorial Board (?target=ijor:jimsbi&volume=4&issue=1&type=eboard)
- Aims & Scope (?target=ijor:jimsbi&type=aimscope)
- Author Guidelines (?target=ijor:jimsbi&volume=4&issue=1&type=for_authors)
- News & Events (?target=ijor:jimsbi&type=newsevents)
- Subscribe TOC Alerts (?target=ijor:jimsbi&type=toc_alerts)
- Article Submission (FREE) (target=ijor:jimsbi&type=onlinesubmission)
- Sample Issue (?target=ijor:jimsbi&type=sample_issue)
- Trial Access (?target=ijor:jimsbi&type=trialaccess_issue)

Effects of code rate and constraint length on performance of convolutional code

Saini Madan Lal¹, Dr. Sharma Vivek Kumar²
¹Research Scholar, Jagannath University, Jaipur, Email: misaini@gmail.com (<mailto:misaini@gmail.com>)
gsbehal@indianjournals.com

²Professor, Jagannath University, Jaipur, Email: vivek.sharma@jagannathuniversity.org (<mailto:vivek.sharma@jagannathuniversity.org?cc=gsbehal@indianjournals.com>)

Online published on 22 June, 2017.

Abstract

Error detection and correction have a great practical importance in digital communication when channel is noisy. Convolutional encoding is one of the forward error correction (FEC) schemes which can correct both random and burst errors. The low code rate increases the error correction capability but also increases overhead. This paper focuses on the performance study of convolutional code by varying parameters like code rate, generating polynomials and constraint length. A Viterbi decoder is used for decoding a bit stream that has been encoded by convolutional encoder. The code rate 1/2, 1/3 and 1/4 are considered for constraint length 3 and 4.

Keywords

Code Rate, Viterbi Decoder, Constraint Length, Generator Polynomial.

[Buy Now](#) [PDF](#)
 (target=ijor:jimsbi&volume=4&issue=1&article=002&type=subscribearticle) (target=ijor:jimsbi&volume=4&issue=1&article=002&type=pr)



Certified True Copy
 Professor
 Jagannath University, Jaipur

Signal Power Consumption in Digital Communication using Convolutional Code with Compared to Un-Coded System

Madan Lal Saini^{#1}, Dr. Vivek Kumar Sharma^{#2}

^{#1}Ph. D. Scholar, Jagannath University, Jaipur

^{#2}Professor, Jagannath University, Jaipur

ABSTRACT- In digital communication system error correction codes are used when channel is noisy. An error correction code removes errors induced in communication and make possible error free transmission. By use of such error correction code we can send signal at lower transmit power as compared to un-coded system. Convolutional code corrects both type of errors random and burst and used in deep space and wireless communication. This paper introduces convolutional encoders for various code rates and generator polynomials and calculates BER performance for coded and un-coded system. Generator polynomials were selected for code rate 1/2, 1/3, and 1/4 on the basis of BER performance. This paper presents the signal power gain achieved by convolutional code as compared to un-coded system.

Keywords - Convolutional Encoder, Code Rate, Generator Polynomials (GP), EbN0, BER, Viterbi Decoder.

I. INTRODUCTION

Convolutional codes are one of the powerful, effective and widely used error correcting codes in many applications. When a trivial corrupted data may become harmful or not used, then convolutional encoding can be implemented and transmitted data obtained with high accuracy. Convolutional codes are used in satellite communication, space communications, voice band modems, speech transmission, and as a constituent code in other error correcting codes [1]. Convolutional code can also be used in concatenated form in which these codes are used as inner and turbo codes as outer [2]. These codes can be implemented by various ways because redundant bits are inserted in message bits. According to the application, error correction capabilities can be increased or decreased by decreasing or increasing code rate [3]. The error correction capability depends on constraints length, code rate, and generator polynomials. In this paper, in first section it is illustrated that how generator polynomial affects the performance of code. In later section signal power gain was calculated by convolutional code over un-coded system.

II. CONVOLUTIONAL ENCODER PARAMETERS

A convolutional encoder convolutes the binary data by adding more bits. The convolutional encoder takes k bit at a time from incoming sequence of bit stream and computes n -bit output sequence ($n > k$). The computation is performed by modulo 2 addition operations on the current input k -bit symbol and the contents of the shift registers. After performing one operation the contents of shift registers are shifted by one bit right. At the initial all shift registers are set by zeros [4]. A convolutional encoder is specified by three parameters (n, k, m) where

n = number of output bits.

k = number of input bits.

m = number of memory registers.

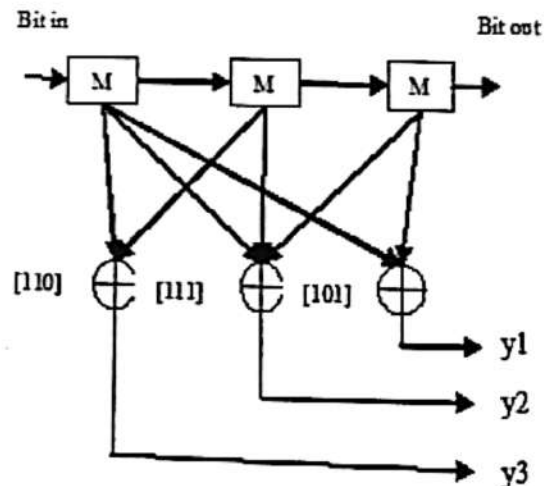


Fig. 1 A Convolutional (3, 1, 3) Encoder

The above convolutional encoder in figure 1 has constraint length $L=3$, input bits $k=1$, output bits $n=3$ and shift register $m=3$. The generator polynomial (110), (111), and (101) represents the register connection to modulo two adder y_1 , y_2 , and y_3 respectively. The generator polynomials are represented by octal numbers 6, 7, and 5. Conversion in octal number is simple, group of 3-3 bits are formed from right side of generator polynomial and then convert into octal. If bits are not multiple of threes



Article

A Reliable Algorithm for a Local Fractional Tricomi Equation Arising in Fractal Transonic Flow

Jagdev Singh ^{1,*}, Devendra Kumar ² and Juan J. Nieto ^{3,4}

¹ Department of Mathematics, Jagan Nath University, Jaipur 303901, India

² Department of Mathematics, JECRC University, Jaipur 303905, India; devendra.maths@gmail.com

³ Departamento de Análise Matemática, Faculdade de Matemáticas, Universidade de Santiago de Compostela, Santiago de Compostela 15782, Spain; juanjose.nieto.roig@usc.es

⁴ Faculty of Science, King Abdulaziz University, P.O. Box 80203, Jeddah 21589, Saudi Arabia

* Correspondence: jagdevsinghrathore@gmail.com; Tel.: +91-946-090-5224

Academic Editor: Carlo Cattani

Received: 13 April 2016; Accepted: 23 May 2016; Published: 25 May 2016

Abstract: The pivotal proposal of this work is to present a reliable algorithm based on the local fractional homotopy perturbation Sumudu transform technique for solving a local fractional Tricomi equation occurring in fractal transonic flow. The proposed technique provides the results without any transformation of the equation into discrete counterparts or imposing restrictive assumptions and is completely free of round-off errors. The results of the scheme show that the approach is straightforward to apply and computationally very user-friendly and accurate.

Keywords: Tricomi equation; fractal transonic flow; local fractional derivative; homotopy perturbation method; local fractional Sumudu transform method

1. Introduction

Partial differential equations of mixed type with boundary conditions have played an important role in describing real world problems such as in elementary research conducted by Tricomi [1]. Mixed type partial differential equations [2,3] are used to investigate transonic flow and they produce special boundary value problems, known as Tricomi and Frankl problems [1,4]. Transonic flows include a change from the subsonic to the hypersonic region [4,5] via the sonic curve. Consequently, transonic flows are very attractive phenomena occurring in aeronautics and hydraulics. The familiar mixed type partial differential equation is known as a Tricomi equation, $y u_{xx} + u_{yy} = 0$, because of Tricomi, who found this mathematical model, for the function $u = u(x, y)$ of two variables x and y . It acts as a basis for the mathematical modelling of the transonic flows, since it is of elliptic and hyperbolic type, where the coefficient y of the second order partial differential coefficient of the required function $u = u(x, y)$ with respect to x changes sign. This mathematical equation is also parabolic at the points where y vanishes.

The Tricomi equation [1] is a mixed type of linear partial differential equation of the second order, which has been used to narrate the theory of plane transonic flow [6–9]. The Tricomi equation was used to recount differentiable problems for the theory of plane transonic flow. However, for the fractal theory of plane transonic flow with non-differentiable expressions, the Tricomi equation is not registered to report them. Recently, local fractional calculus [10] was tried for non-differentiable problems, for instance fractal heat conduction [10,11], damped and dissipative wave equations in fractal strings [12], local fractional Laplace equations [13], the Helmholtz equation associated with local fractional derivatives [14], the wave equation on Cantor sets [15], Navier–Stokes equations on Cantor sets [16], local fractional Schrödinger equations [17], Korteweg–de Vries equations involving



HOSTED BY



Alexandria University
Alexandria Engineering Journal

www.elsevier.com/locate/aej
www.sciencedirect.com



ORIGINAL ARTICLE

Numerical solution of time- and space-fractional coupled Burgers' equations via homotopy algorithm

Jagdev Singh^a, Devendra Kumar^b, Ram Swroop^{c,*}

^a Department of Mathematics, Jagan Nath University, Jaipur 303901, Rajasthan, India
^b Department of Mathematics, JECRC University, Jaipur 303905, Rajasthan, India
^c Department of Mathematics, Arya Institute of Engineering & Technology, Jaipur 303101, Rajasthan, India

Received 5 August 2015; revised 17 March 2016; accepted 21 March 2016
Available online 8 April 2016

KEYWORDS

Laplace transform method;
q-Homotopy analysis transform method;
Fractional coupled Burgers' equations;
 \hbar and n -curves

Abstract In this paper, we constitute a homotopy algorithm basically extension of homotopy analysis method with Laplace transform, namely q-homotopy analysis transform method to solve time- and space-fractional coupled Burgers' equations. The suggested technique produces many more opportunities by appropriate selection of auxiliary parameters \hbar and n ($n \geq 1$) to solve strongly nonlinear differential equations. The proposed technique provides \hbar and n -curves, which describe that the convergence range is not a local point effects and finds elucidated series solution that makes it superior than HAM and other analytical techniques.

© 2016 Faculty of Engineering, Alexandria University. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Fractional calculus was utilized as an excellent instrument to discover the hidden aspects of various material and physical processes that deal with derivatives and integrals of arbitrary orders [1–5]. The theory of fractional differential equations translates the reality of nature excellently in a better and systematic manner [6–11]. In recent years, many authors have investigated partial differential equations of fractional order by various techniques such as homotopy analysis technique

[12–14], operational matrix based method [15], and tau method [16].

This article considers the efficiency of q-homotopy analysis transform method (q-HATM) to solve time- and space- fractional coupled Burgers' equations. The q-HATM is a graceful coupling of two powerful techniques namely q-HAM and Laplace transform algorithms and gives more refined convergent series solution. The q-HAM was initially introduced and nurtured by El-Tavil and Huseen [17,18]. The q-HAM is an extension of the embedding parameter $q \in [0, 1]$ arising in the study by Liao HAM [19–21] to $q \in [0, \frac{1}{n}]$ that appears in q-HAM. The homotopy analysis method (HAM) is based on homotopy, a rudimentary concept in topology and differential geometry that has been notably applied for solving nonlinear problems occurring in different directions of scientific fields [22–28]. The HAM has also been united with Laplace transform to bring out highly effective technique to investigate nonlinear problems of physical importance [29–31]. It is

* Corresponding author. Tel.: +91 9460254205.
E-mail addresses: jagdevsinghrathore@gmail.com (J. Singh), devendra.maths@gmail.com (D. Kumar), mathsramp9@gmail.com (R. Swroop).
Peer review under responsibility of Faculty of Engineering, Alexandria University.



Certified True Copy
Jagan Nath University, Jaipur

Article Navigation

RESEARCH-ARTICLE

Numerical Computation of a Fractional Model of Differential-Difference Equation

Devendra Kumar, Jagdev Singh, Dumitru Baleanu

Check for updates

+ Author and Article Information

J. Comput. Nonlinear Dynam. Nov 2016, 11(6): 061004 (6 pages)

Paper No: CND-16-1066 <https://doi.org/10.1115/1.4033899>

Published Online: July 8, 2016

Article history

In the present article, we apply a numerical scheme, namely, homotopy analysis Sumudu transform algorithm, to derive the analytical and numerical solutions of a nonlinear fractional differential-difference problem occurring in nanohydrodynamics, heat conduction in nanoscale, and electronic current that flows through carbon nanotubes. The homotopy analysis Sumudu transform method (HASTM) is an inventive coupling of Sumudu transform algorithm and homotopy analysis technique that makes the calculation very easy. The fractional model is also handled with the aid of Adomian decomposition method (ADM). The numerical results derived with the help of HASTM and ADM are approximately same, so this scheme may be considered an alternative and well-organized technique for attaining analytical and numerical solutions of fractional model of discontinued problems. The analytical and numerical results derived by the application of the proposed technique reveal that the scheme is very effective, accurate, flexible, easy to apply, and computationally very appropriate for



Jagan Puri University, Jaipur

HOSTED BY



Alexandria University
 Alexandria Engineering Journal

www.elsevier.com/locate/aej
 www.sciencedirect.com



ORIGINAL ARTICLE

Numerical simulation of a fractional model of temperature distribution and heat flux in the semi infinite solid



Anupama Choudhary ^{a,*}, Devendra Kumar ^b, Jagdev Singh ^a

^a Department of Mathematics, Jagan Nath University, Jaipur 303901, Rajasthan, India

^b Department of Mathematics, JECRC University, Jaipur 303905, Rajasthan, India

Received 4 December 2014; revised 3 January 2016; accepted 16 January 2016
 Available online 12 February 2016

KEYWORDS

Fractional differential equation;
 Caputo derivative;
 Wright function;
 Mittag-Leffler function;
 Integral transforms;
 Heat flux

Abstract In this paper, a fractional model for the computation of temperature and heat flux distribution in a semi-infinite solid is discussed which is subjected to spatially decomposing, time-dependent laser source. The apt dimensionless parameters are identified and the reduced temperature and heat flux as a function of these parameters are presented in a numerical form. Some special cases of practical interest are also discussed. The solution is derived by the application of the Laplace transform, the Fourier sine transform and their derivatives. Also, we developed an alternative solution of it by using the Sumudu transform, the Fourier transform and their derivatives. These results are received in compact and graceful forms in terms of the generalized Mittag-Leffler function, which are suitable for numerical computation.

© 2016 Faculty of Engineering, Alexandria University. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

In the modeling of many physical and chemical processes and engineering systems fractional differentiation has been widely used. The instances are electrochemistry and electromagnetic waves, diffusion waves, fractal electrical networks, electrical machines, nanotechnology, viscoelastic supplies and systems, quantum evolution of complex systems [1], and heat conduc-

tion [2]. Automatic control is also a field in which many applications of fractional differentiations have been anticipated. Recently, it is demonstrated that the real state of a fractional order system is not exactly observable [3]. However, the authors have also demonstrated that the pseudo state vector of the pseudo state space description can be estimated using a Luenberger like observer. As fractional order derivatives and integrals explain the memory and genetic properties of different substances, the above mentioned new models are more sufficient than the earlier used integer order models [4]. This is the biggest advantage of the fractional order models in comparison with integer order models in which such effects are neglected. A semi-infinite solid is an idealized body that has a single plane surface and extends to infinity in all directions. This idealized body is used to specify that the temperature

* Corresponding author.

E-mail addresses: choudhary.anupama9@gmail.com (A. Choudhary), devendra.maths@gmail.com (D. Kumar), jagdevsinghrathore@gmail.com (J. Singh).

Peer review under responsibility of Faculty of Engineering, Alexandria University.

<http://dx.doi.org/10.1016/j.aej.2016.01.007>

1110-0168 © 2016 Faculty of Engineering, Alexandria University. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



Certified True Copy

Jagan Nath University, Jaipur

Amit Goswami*, Jagdev Singh, and Devendra Kumar

A reliable algorithm for KdV equations arising in warm plasma

DOI 10.1515/nleng-2015-0024

Received September 18, 2015; revised November 6, 2015; accepted December 1, 2015.

Abstract: The aim of the present work is to propose a simple and reliable algorithm namely homotopy perturbation transform method (HPTM) for KdV equations in warm plasma. The homotopy perturbation transform method is a combined form of the Laplace transform method with the homotopy perturbation method. In this method, the solution is calculated in the form of a convergent series with an easily computable compact. To illustrate the simplicity and reliability of the method, several examples are provided. In this paper, the homotopy perturbation transform method has been applied to obtain the solution of the KdV, mKdV, K(2, 2) and K(3, 3) equations. We compared our solutions with the exact solutions. Results illustrate the applicability, efficiency and accuracy of HPTM to solve nonlinear equations despite needlessness to any linearization or perturbation. It is predicted that the proposed algorithm can be widely applied to other nonlinear problems in science and engineering.

Keywords: Laplace transform method, Homotopy perturbation method, KdV, mKdV, K(2, 2) and K(3, 3) equations, He's Polynomials

1 Introduction

The study of nonlinear problems is very important in all the area of mathematics and physics. Most of the important phenomena of physical systems are hidden in their nonlinear behavior. These phenomena can only be studied with the appropriate methods to solve these nonlin-

ear problems [1]. KdV equation is a mathematical model of waves on shallow water surfaces. It is a nonlinear, dispersive partial differential equation whose solutions can be exactly and precisely specified. The KdV equation was first introduced by Boussinesq in 1877. In 1895, the Kortweg and De-Vries develop KdV equation to model Russell's phenomena of solitons [2] such as shallow water waves with small and finite amplitudes [3].

The KdV equation is the generic model for the study of nonlinear waves in fluid dynamics, plasma physics, elastic media and nonlinear optics. These equations have been used to explain different physical phenomena such as ion acoustic waves in collisionless plasma, magneto hydrodynamics waves in warm plasma, magnetoacoustic waves in plasma, Alfvén waves in plasma, dust acoustic waves in plasma, soliton waves in plasma, shallow-water gravity waves, internal waves in the atmosphere and ocean, waves in bubbly fluids, acoustic waves in an inharmonic crystal etc [4]. The KdV type equations have significant roles in engineering and sciences. This broad range of applicability is explained by the fact that the KdV equation describes a combined effect of the lowest-order, quadratic nonlinearity and the simplest long-wave dispersion.

Consider the following equations as:

$$(a) \quad u_t - 3(u^2)_x + u_{3x} = 0, \quad -\infty < x < \infty \quad (1)$$

with initial condition $u(x, 0) = 6x$

$$(b) \quad u_t + \frac{1}{2}(u^2)_x - u_{2x} = 0, \quad x \in R, t > 0 \quad (2)$$

with initial condition $u(x, 0) = x$

$$(c) \quad u_t + (u^2)_x + (u^2)_{3x} = 0, \quad x \in R, t > 0 \quad (3)$$

with initial condition $u(x, 0) = x$

$$(d) \quad u_t - (u^2)_x - (u^2)_{3x} = 0$$

with initial condition

$$u(x, 0) = \frac{4}{3}k \sin^2\left(\frac{x}{4}\right) \quad (4)$$

$$(e) \quad u_t - (u^3)_x - (u^3)_{3x} = 0$$

with initial condition

$$u(x, 0) = \frac{\sqrt{6k}}{2} \sin\left(\frac{x}{3}\right) \quad (5)$$

Equation (1) called KdV equation and equation (2) called mKdV equation and equation (3) & (4) called K(2, 2)

*Corresponding Author: Amit Goswami: Department of Physics, Jagan Nath University, Jaipur-303901, Rajasthan, India, E-mail: optoamit@gmail.com, Tel. +91-9509095042

Jagdev Singh: Department of Mathematics, Jagan Nath University, Jaipur-303901, Rajasthan, India, E-mail: jagdevsinghrathore@gmail.com

Devendra Kumar: Department of Mathematics, JECRC University, Jaipur-303905, Rajasthan, India, E-mail: devendra.maths@gmail.com



Certified True Copy

Jagan Nath University, Jaipur

Amit Goswami*, Jagdev Singh, and Devendra Kumar

A reliable algorithm for KdV equations arising in warm plasma

DOI 10.1515/nleng-2015-0024

Received September 18, 2015; revised November 6, 2015; accepted December 1, 2015.

Abstract: The aim of the present work is to propose a simple and reliable algorithm namely homotopy perturbation transform method (HPTM) for KdV equations in warm plasma. The homotopy perturbation transform method is a combined form of the Laplace transform method with the homotopy perturbation method. In this method, the solution is calculated in the form of a convergent series with an easily computable compact. To illustrate the simplicity and reliability of the method, several examples are provided. In this paper, the homotopy perturbation transform method has been applied to obtain the solution of the KdV, mKdV, K(2, 2) and K(3, 3) equations. We compared our solutions with the exact solutions. Results illustrate the applicability, efficiency and accuracy of HPTM to solve nonlinear equations despite needlessness to any linearization or perturbation. It is predicted that the proposed algorithm can be widely applied to other nonlinear problems in science and engineering.

Keywords: Laplace transform method, Homotopy perturbation method, KdV, mKdV, K(2, 2) and K(3, 3) equations, He's Polynomials

1 Introduction

The study of nonlinear problems is very important in all the area of mathematics and physics. Most of the important phenomena of physical systems are hidden in their nonlinear behavior. These phenomena can only be studied with the appropriate methods to solve these nonlin-

ear problems [1]. KdV equation is a mathematical model of waves on shallow water surfaces. It is a nonlinear, dispersive partial differential equation whose solutions can be exactly and precisely specified. The KdV equation was first introduced by Boussinesq in 1877. In 1895, the Kortweg and De-Vries develop KdV equation to model Russell's phenomena of solitons [2] such as shallow water waves with small and finite amplitudes [3].

The KdV equation is the generic model for the study of nonlinear waves in fluid dynamics, plasma physics, elastic media and nonlinear optics. These equations have been used to explain different physical phenomena such as ion acoustic waves in collisionless plasma, magneto hydrodynamics waves in warm plasma, magnetoacoustic waves in plasma, Alfvén waves in plasma, dust acoustic waves in plasma, soliton waves in plasma, shallow-water gravity waves, internal waves in the atmosphere and ocean, waves in bubbly fluids, acoustic waves in an inharmonic crystal etc [4]. The KdV type equations have significant roles in engineering and sciences. This broad range of applicability is explained by the fact that the KdV equation describes a combined effect of the lowest-order, quadratic nonlinearity and the simplest long-wave dispersion.

Consider the following equations as:

$$(a) u_t - 3(u^2)_x + u_{3x} = 0, -\infty < x < \infty \tag{1}$$

with initial condition $u(x, 0) = 6x$

$$(b) u_t + \frac{1}{2}(u^2)_x - u_{2x} = 0, x \in R, t > 0 \tag{2}$$

with initial condition $u(x, 0) = x$

$$(c) u_t + (u^2)_x + (u^2)_{3x} = 0, x \in R, t > 0 \tag{3}$$

with initial condition $u(x, 0) = x$

$$(d) u_t - (u^2)_x - (u^2)_{3x} = 0$$

with initial condition

$$u(x, 0) = \frac{4}{3}k \sin^2\left(\frac{x}{4}\right) \tag{4}$$

$$(e) u_t - (u^3)_x - (u^3)_{3x} = 0$$

with initial condition

$$u(x, 0) = \frac{\sqrt{6k}}{2} \sin\left(\frac{x}{3}\right) \tag{5}$$

Equation (1) called KdV equation and equation (2) called mKdV equation and equation (3) & (4) called K(2, 2)

*Corresponding Author: Amit Goswami: Department of Physics, Jagan Nath University, Jaipur-303901, Rajasthan, India. E-mail: optoamit@gmail.com, Tel. +91-9509095042

Jagdev Singh: Department of Mathematics, Jagan Nath University, Jaipur-303901, Rajasthan, India, E-mail: jagdevsinghrathore@gmail.com

Devendra Kumar: Department of Mathematics, JECRC University, Jaipur-303905, Rajasthan, India, E-mail: devendra.maths@gmail.com



Certified True Copy

[Signature]
Jagan Nath University, Jaipur

Research Article

Sunil Kumar*, Devendra Kumar and Jagdev Singh

Fractional modelling arising in unidirectional propagation of long waves in dispersive media

DOI: 10.1515/anona-2013-0033

Received November 29, 2013; revised November 15, 2014; accepted January 2, 2015

Abstract: The purpose of this paper is to propose a modified and simple algorithm for fractional modelling arising in unidirectional propagation of long wave in dispersive media by using the fractional homotopy analysis transform method (FHATM). This modified method is an innovative adjustment in the Laplace transform algorithm (LTA) and makes the calculation much simpler. The proposed technique solves the nonlinear problems without using Adomian polynomials and He's polynomials which can be considered as a clear advantage of this new algorithm over decomposition and the homotopy perturbation transform method. This modified method yields an analytical and approximate solution in terms of a rapidly convergent series with easily computable terms. The numerical solutions obtained by the proposed algorithm indicate that the approach is easy to implement and computationally very attractive. Comparing our solution with the existing ones, we note an excellent agreement.

Keywords: Laplace transform method, fractional order Burgers–Poisson equation, hybrid algorithm, approximate solution, absolute error, homotopy analysis transform method (HATM)

MSC 2010: 35A20, 26A33, 34A08

1 Introduction

The theory of derivatives and integrals of non-integer order goes back to Leibniz, Liouville, Grunewald, Letnikov and Riemann. Many important phenomena are well described by fractional differential equations in electromagnetics, acoustics, viscoelasticity, electro chemistry and material science. Fractional derivatives provide an excellent instrument for the description of memory and hereditary properties of various materials and processes. Fractional derivatives provide an excellent instrument for the description of memory and hereditary properties of various materials and processes. Half-order derivatives and integrals proved to be more useful for the formulation of certain electrochemical problems than the classical models [5–7, 26–28].

In this paper, the homotopy analysis transform method (HATM) illustrates how the Laplace transform can be used to find approximate and analytical solutions of the fractional order Burgers–Poisson equation by manipulating the homotopy analysis method. The proposed method couples the homotopy analysis method and the Laplace transform method. The main advantage of the proposed method is its capability of obtaining a rapid convergent series for the Berger's Poisson equation of fractional order. The homotopy analysis method (HAM) was first proposed and applied by Liao [21–24] to nonlinear differential equations. The HAM is based

*Corresponding author: Sunil Kumar: Department of Mathematics, National Institute of Technology, Jamshedpur 831014, Jharkhand, India, e-mail: skumar.math@nitjsr.ac.in

Devendra Kumar: Department of Mathematics, Jagan Nath Gupta Institute of Engineering and Technology, Jaipur 302022, Rajasthan, India, e-mail: devendra.maths@gmail.com

Jagdev Singh: Department of Mathematics, Jagan Nath University, Village-Rampura, Tehsil-Chaksu, Jaipur 303901, Rajasthan, India, e-mail: jagdevsinghrathore@gmail.com



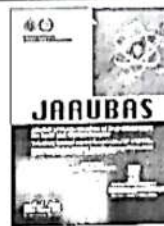
Certified True Copy

Jagan Nath University, Jaipur



University of Bahrain
Journal of the Association of Arab Universities for
Basic and Applied Sciences

www.elsevier.com/locate/jaubas
www.sciencedirect.com



ORIGINAL ARTICLE

A fractional model of fluid flow through porous media with mean capillary pressure

Anupama Choudhary ^{a,*}, Devendra Kumar ^b, Jagdev Singh ^c

^a Department of Mathematics, Arya College of Engineering & Research Centre, Jaipur 302028, Rajasthan, India

^b Department of Mathematics, JECRC University, Jaipur 303905, Rajasthan, India

^c Department of Mathematics, Jagan Nath University, Jaipur 303901, Rajasthan, India

Received 16 June 2014; revised 29 December 2014; accepted 22 January 2015

KEYWORDS

Fluid flow through porous media;
Capillary pressure;
Generalized fractional derivative;
Sumudu transform;
Fourier sine transform;
Mittag-Leffler function

Abstract In this paper, we discuss a fractional model arising in flow of two incompatible liquids through homogenous porous media with mean capillary pressure. The solution is derived by the application of the Sumudu transform and the Fourier sine transform. The results are received in compact and graceful forms in terms of the generalized Mittag-Leffler function, which are suitable for numerical computation. The mathematical formulation leads to generalized fractional derivative which has been solved by using a numerical technique by employing the iterative process with the help of appropriate boundary conditions. This problem has great importance in petroleum technology.

© 2015 Production and hosting by Elsevier B.V. on behalf of University of Bahrain. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

A porous medium is a material containing pores (voids). Voids are usually filled with a fluid as liquid gas. A porous medium is most often characterized by its porosity. The skeletal portion of the material is often called the matrix or frame. Other properties of the medium such as permeability, electrical conductivity and tensile strength can also be consequent for the respective properties of its constituents (solid matrix and fluid) and the media porosity and pore structure, but these are generally complex. For a poroelastic medium the concept of porosity is usually uncomplicated. This concept of porous media is

used in many areas of applied science and engineering. The oil-water movement in a porous medium is an important problem of petroleum technology and water hydrology (Scheidegger, 1966). Here we consider the injection of water into an oil formation in porous medium providing a two phase liquid-liquid flow problem. Such a problem is generally encountered in secondary recovery process. A number of research workers have also studied phenomenon of flow of two incompatible liquids through homogenous porous media with mean capillary pressure by using different mathematical resources (Bravo and Araujo, 2008; Brooks and Corey, 1964; Corey, 1954; Scheidegger, 1960; Scheidegger and Johnson, 1961). The fractional calculus has gained importance and popularity during the recent years or so, mainly due to its demonstrated applications in science and engineering. For example, these equations are increasingly used to model problems in fluid flow, theology, diffusion, relaxation, oscillation, anomalous diffusion, reaction-diffusion, turbulence, diffusive transport akin to

* Corresponding author.

E-mail addresses: choudhary.anupama9@gmail.com (A. Choudhary), devendra.maths@gmail.com (D. Kumar), jagdevsinghrathore@gmail.com (J. Singh).

Peer review under responsibility of University of Bahrain.

<http://dx.doi.org/10.1016/j.jaubas.2015.01.002>

1815-3852 © 2015 Production and hosting by Elsevier B.V. on behalf of University of Bahrain.

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Please cite this article in press as: Choudhary, A. et al., A fractional model of fluid flow through porous media with mean capillary pressure. Journal of the Association of Arab Universities for Basic and Applied Sciences (2015), <http://dx.doi.org/10.1016/j.jaubas.2015.01.002>.



Jagan Nath University, Jaipur

IMPROVEMENT IN PROCESS INDUSTRIES BY USING WORK STUDY METHODS: A CASE STUDY

Dr. M. P. Singh

Professor, Jagannath University, Rajasthan, India

Hemant Yadav

PG Student, Jagannath University, Rajasthan, India

ABSTRACT

The globalization of the Indian economy has faced a great challenge to the Indian small industries in respect of productivity, quality, cost, delivery etc. TO achieve success in the global market it is required fundamental improvement in the way of production in small process industries. The internal manufacturing process and supporting infrastructure should be such that it can complete successful global market with better flexibility and delivery.

In this paper a case study of a small process industry, some changes in the process has been suggested using time study method which lead to reduction in process time, labour cost and production cost.

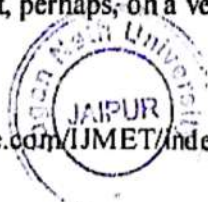
Key words: Indian Battery Industry, Work Study, Time Study, Plant Layout

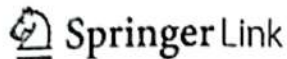
Cite this Article: Dr. M. P. Singh and Hemant Yadav, Improvement In Process Industries by Using Work Study Methods: A Case Study. *International Journal of Mechanical Engineering and Technology*, 7(3), 2016, pp. 426-436.

<http://www.iaeme.com/currentissue.asp?JType=IJMET&VType=7&IType=3>

INTRODUCTION

The great deal of effort is required in industry for effective production that includes less production time and higher efficiency. Work study is a generic term for those techniques, particularly method study and work measurement, which are used in the examination of human work in all its contexts, and which lead systematically to the investigation of all the factors which affect the efficiency and economy of the situation being reviewed, in order to effect improvement. Work study is thus especially concerned with productivity. It is most frequently used to increase the amount produced from a given quantity of resources without further capital investment except, perhaps, on a very small scale.





Mutation Testing and Test Data Generation Approaches: A Review

International Conference on Smart Trends for Information Technology and Computer Communications

SmartCom 2016: Smart Trends in Information Technology and Computer Communications pp 373-382 | Cite as

- Meenu Dave (1)
- Rashmi Agrawal (1) Email author (guptarashmi1979@gmail.com)

1. Computer Science Department, Jagan Nath University, , Jaipur, India

Conference paper

First Online: 27 December 2016

- [4 Citations](#)
- 1.8k Downloads

Part of the [Communications in Computer and Information Science](#) book series (CCIS, volume 628)

Abstract

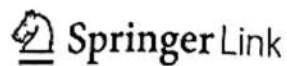
Software advancement has increased the complexities many fold and to meet the quality standards, a lot of research is being done in designing new testing methodologies and tools. Mutation testing is a proven effective technique but the high cost attached with it averts it from establishing it as an industrial tool. The review is an extension of the previous work where a review was done on search based test data generation and mutation testing. The objective is to study the remaining techniques/approaches and summaries the discussion of both the reviews. The application of mutation testing with various techniques at various phases of software development along with various languages/tools show that it is a versatile, adaptable and efficient, which is motivating the researchers to explore the new areas.

Keywords

Mutation testing Evolutionary algorithms Constraint based Mutation analysis
Test data generation

[Download](#) conference paper PDF





Software Testing and Information Theory

International Conference on Smart Trends for Information Technology and Computer Communications

SmartCom 2016: Smart Trends in Information Technology and Computer Communications pp 323-330 | Cite as

- Meenu Dave (1)
- Rashmi Agrawal (1) Email author (guptarashmi1979@gmail.com)

1. Computer Science Department, Jagan Nath University, , Jaipur, India

Conference paper

First Online: 27 December 2016

- 1.8k Downloads

Part of the Communications in Computer and Information Science book series (CCIS, volume 628)

Abstract

An adequacy criterion in software testing are the rules or guidelines for quantitative analysis of any test cases and sets the target to be achieved as to stop the testing process or test data generation. Search based test data generation is the application of the Evolutionary Algorithms to achieve an optimized test suit which is tested against the fitness function to check its distance from the target. The Entropy of Information Theory can be defined and the measure of "uncertainty". The paper is the study of the relation between the entropy, Information Gain and the uncertainty regarding the random generation of test data.

Keywords

Information theory Entropy Fitness function Evolutionary Algorithms Adequacy criteria

This is a preview of subscription content, [log in](#) to check access.

References

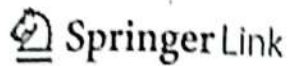
https://link.springer.com/chapter/10.1007/978-981-10-3433-6_39



Certified True Copy

1/4

[Signature]
Jagan Nath University, Jaipur



Performance Evaluation of Vehicular Ad Hoc Network Using SUMO and NS2

Proceedings of the International Congress on Information and Communication Technology pp 127-135 | Cite as

- Prashant Panse (1) Email author (prashantpanse@gmail.com)
- Tarun Shrimali (2)
- Meenu Dave (1)

1. JaganNath University, , Jaipur, India
2. Career Point Technical Campus, , Rajsamand, India

Conference paper

First Online: 05 June 2016

- 914 Downloads

Part of the Advances in Intelligent Systems and Computing book series (AISC, volume 438)

Abstract

In current scenario each and every person is anxious about security and privacy. Vehicular correspondences frameworks have ways to deal with give well-being measures and solace to drivers. Vehicular communication is based on wireless short-range technology that enables impulsive information interchange among vehicles and with roadside stations. A new type of network called vehicular ad hoc network (VANET) is available for providing alerts to the vehicles on highways. VANET is vehicular ad hoc network, in which mobile nodes are replaced by vehicles. Vehicular network is used to alert a driver so that accidents can be reduced and also avoid congestion on highways. This can be used for postaccident investigation as well. Frequently changing environment of VANET leads to various challenges. In this paper, the performance of vehicular ad hoc network is evaluated by focusing several key factors and reactive routing strategy.

Keywords

VANET Ad hoc network D2ITS ITS AODV Ultrasonic sensor Roadside unit SUMO NS2

This is a preview of subscription content, [log in](#) to check access.



Certified True Copy

Regd. Officer
Jagan Nath University, Jaipur

10% Discount on All E-Books through IGI Global's Online Bookstore Extended

(10% discount on all e-books cannot be combined with most offers. Discount is valid on purchases made directly through IGI Global Online Bookstore (www.igi-global.com) (<https://www.igi-global.com/>) and may not be utilized by booksellers and distributors. Offer does not apply to e-Collections and exclusions of select titles may apply. Offer expires June 30, 2022.)

[Browse Titles \(https://www.igi-global.com/search/?p=&ctid=1\)](https://www.igi-global.com/search/?p=&ctid=1)



Creating Collaborative and Convenient Learning Environment Using Cloud-Based Moodle LMS: An Instructor and Administrator Perspective

Vikas Kumar (School of Business Studies, Sharda University, Greater Noida, India) and Deepika Sharma (Jagannath University, Jaipur, India)

Source Title: International Journal of Web-Based Learning and Teaching Technologies (IJWLTT) (/journal/international-journal-web-based-learning/1081) 11(1)

Copyright: © 2016

Pages: 16

DOI: 10.4018/IJWLTT.2016010103

OnDemand PDF Download: <input checked="" type="radio"/> Available	\$37.50
Current Special Offers	

Abstract

Students in the digital era are habitual of using digital devices not only for playing and interacting with their friends and peers, but also as a tool for education and learning. These digital natives are highly obsessed with the internet driven portable devices and always demand for a multimedia rich content. This specific demand needs to be addressed by college teachers in the teaching-learning pedagogy design and implementation. The integration of pervasive computing in traditional classroom pedagogy can boost new learning experience for cyber savvy students in higher education. Learning Management System (LMS) as a pervasive computing can be embedded in classroom pedagogy to support learning inside and outside the classroom. LMS can play a supportive role to teachers and administrators in higher education to facilitate them in their work. This becomes more significant to the teachers and administrators, when the LMS is based upon the cloud computing platform. This paper explores the significance of various components of cloud-based open source Moodle Learning Management System with a specific focus on teachers and administrators in higher education. A learning theory approach has been followed to map the requirements of the teachers and the administrators and specific cases and examples have been presented.

Article Preview

<https://www.igi-global.com/article/creating-collaborative-and-convenient-learning-environment-using-cloud-based-moodle-lms/145215>



Certified True Copy 1/3
Jagannath University, Jaipur

10% Discount on All E-Books through IGI Global's Online Bookstore Extended

(10% discount on all e-books cannot be combined with most offers. Discount is valid on purchases made directly through IGI Global Online Bookstore (www.igi-global.com / <https://www.igi-global.com/>) and may not be utilized by booksellers and distributors. Offer does not apply to e-Collections and exclusions of select titles may apply. X Offer expires June 30, 2022.)

[Browse Titles \(https://www.igi-global.com/search/?p=&ctid=1\)](https://www.igi-global.com/search/?p=&ctid=1)



Creating Collaborative and Convenient Learning Environment Using Cloud-Based Moodle LMS: An Instructor and Administrator Perspective

Vikas Kumar (School of Business Studies, Sharda University, Greater Noida, India) and Deepika Sharma (Jagannath University, Jaipur, India)

Source Title: International Journal of Web-Based Learning and Teaching Technologies (IJWLTT) (/journal/international-journal-web-based-learning/1081) 11(1)

Copyright © 2016

Pages: 16

DOI: 10.4018/IJWLTT.2016010103

OnDemand PDF

Download:

\$37.50

Available

[Current Special Offers](#)

Abstract

Students in the digital era are habitual of using digital devices not only for playing and interacting with their friends and peers, but also as a tool for education and learning. These digital natives are highly obsessed with the internet driven portable devices and always demand for a multimedia rich content. This specific demand needs to be addressed by college teachers in the teaching-learning pedagogy design and implementation. The integration of pervasive computing in traditional classroom pedagogy can boost new learning experience for cyber savvy students in higher education. Learning Management System (LMS) as a pervasive computing can be embedded in classroom pedagogy to support learning inside and outside the classroom. LMS can play a supportive role to teachers and administrators in higher education to facilitate them in their work. This becomes more significant to the teachers and administrators, when the LMS is based upon the cloud computing platform. This paper explores the significance of various components of cloud-based open source Moodle Learning Management System with a specific focus on teachers and administrators in higher education. A learning theory approach has been followed to map the requirements of the teachers and the administrators and specific cases and examples have been presented.

Article Preview

<https://www.igi-global.com/article/creating-collaborative-and-convenient-learning-environment-using-cloud-based-moodle-lms/145215>



Certified True Copy 1/3
Jagannath University, Jaipur

Security Enhanced Image Watermarking using Mid-Band DCT Coefficient in YCbCr Space

Rekha Chaturvedi* Abhay Sharma** Umesh Dwivedi**** Sandeep Kumar**** Archek Praveen Kumar*****

Abstract : In the current scenario excessive use of digital media attracted the attention of hackers, attackers and malicious users. In digital media certain types of vulnerabilities are always available, attackers use these vulnerabilities to attack on confidentiality, security, authenticity of digital media. In this paper we have introduced a novel watermarking method based on the properties of Discrete Cosine Transform (DCT) and Permuted Box (P-Box). Using P-Box security of watermark is enhanced up to a great level making it more robust against different image processing attacks. We have used YCbCr color space for watermarking because of its popularity and use in digital photography and video. In the proposed method DCT transform is applied on Cr component of YCbCr and a binary secret image is embedded to middle frequency DCT coefficients of cover image. This proposed method is compared with various previous methods and result shows the effectiveness of the method in terms of robustness, capacity and watermarking attacks.

Keywords : Digital Image Watermarking, DCT, P-Box, YCbCr, PSNR, SM and Normalized Correlation.

1. INTRODUCTION

Today, people are interested more in using digital devices which produce bulk amount of digital data. Now It is easy for people to communicated digital data between one another using computer networks and Internet. But it is also increasing the problem of illegal copying, modification of content, false ownership, unauthorized replication. Some solutions were proposed against problem related to digital media. Watermarking is the method of providing security for copyright protection of digital media. Crucial information can be hidden using some cover object like image, audio and video [1]. When it is associated with image termed as digital image watermarking. The process of watermarking contains a secret data like company logo, company information, a cover object like image, audio and video, embedding method and extraction method. For digital image watermarking a secret image and a cover image is presented to embedding process and after applying embedding algorithm a watermarked image is generated. Similarly, for the copyright verification watermarked image is presented to extraction process and after applying extraction algorithm it should generate original watermark. Digital image watermarking techniques can be categorized

- * Department of Computer Science and Engineering Amity University Rajasthan, Jaipur, Rajasthan, India Email- rchaturvedi@jpr.amity.edu
- ** Department of Computer Science and Engineering Amity University Rajasthan, Jaipur, Rajasthan, India Email- asharma2@jpr.amity.edu
- *** Department of Applied Sciences and Engineering Amity University Rajasthan, Jaipur, Rajasthan, India Email- ukdwivedi@jpr.amity.edu
- **** Department of Computer Science and Engineering Jagannath University, Jaipur, Rajasthan, India Email- sandeep.kumar@jagannathuniversity.org
- ***** Department of Electronics and Communication Engineering Amity University Rajasthan, Jaipur, Rajasthan, India Email- apkumar@jpr.amity.edu



Certified True Copy
Jagan Nath University, Jaipur



STUDY OF DIELECTRIC PROPERTIES ON BaCO₃/ POLYMER NANOCOMPOSITES

VINOD KUMAR^a, BALRAM TRIPATHI^a, G. TRIPATHI^b,
K. B. SHARMA^a and Y. S. SHISHODIYA

Department of Physics, Jagannath University Chaksu, JAIPUR – 303901 (Raj.) INDIA

^aDepartment of Physics S. S. Jain Subodh P.G. College JAIPUR – 302004 (Raj.) INDIA

^bDepartment of Chemistry, S. G. N. Khalsa (P.G.) College, SRI GANGANAGAR – 335001 (Raj.) INDIA

ABSTRACT

Nanodielectric composites have been developed in recent years attempting to improve the dielectric properties such as dielectric constant, dielectric strength and voltage endurance. Conventional dielectric material development followed the paths of organic polymers, inorganic ceramics and thin films separately, due to type of capacitors, manufactured, polymeric film and multilayer ceramic capacitors, polymer dielectrics show very high dielectric strength (> 300 kv/mm), lower dielectric losses (< 0.01) and adequate mechanical flexibility in processing, which is important in thin film capacitors. However they have low relative dielectric permittivity or constant (< 4) and low operating temperature (< 200°C) compared to ceramic materials. Ceramic dielectrics tend to have very high dielectric permittivity (> 100) but relative low dielectric strength (< 50 kv/mm) or may be piezoelectric associated with the structure of ceramic. Nanodielectric composites belong to a new type of materials, engineered for improved specific functionality such as better performance in electrical insulation. In the present study, BaCO₃ as a filler has been dispersed in polycarbonate in various concentration, Dielectric constant and loss has been measured as a function of frequency.

Key words: Nanocomposites, Polymer, Dielectric constant.

INTRODUCTION

Barium carbonate is an important raw material, which is widely used in electronics, ceramics and glasses industry. For instance, from the combination of different fibers or fillers with polymer matrices one can produce polymer-matrix composites, a material important to the electronic industry for its dielectric properties in the use of capacitors¹⁻³. The particular focus is on materials: polymers serving as the matrix, inorganic fillers

^aAuthor for correspondence; E-mail: chaharagra.v@gmail.com



Certified True Copy

For Author
Jagannath University, Jaipur

IMPROVEMENT IN PROCESS INDUSTRIES BY USING WORK STUDY METHODS: A CASE STUDY

Dr. M. P. Singh

Professor, Jagannath University, Rajasthan, India

Hemant Yadav

PG Student, Jagannath University, Rajasthan, India

ABSTRACT

The globalization of the Indian economy has faced a great challenge to the Indian small industries in respect of productivity, quality, cost, delivery etc. TO achieve success in the global market it is required fundamental improvement in the way of production in small process industries. The internal manufacturing process and supporting infrastructure should be such that it can complete successful global market with better flexibility and delivery.

In this paper a case study of a small process industry, some changes in the process has been suggested using time study method which lead to reduction in process time, labour cost and production cost.

Key words: Indian Battery Industry, Work Study, Time Study, Plant Layout

Cite this Article: Dr. M. P. Singh and Hemant Yadav, Improvement In Process Industries by Using Work Study Methods: A Case Study. *International Journal of Mechanical Engineering and Technology*, 7(3), 2016, pp. 426-436.

<http://www.iaeme.com/currentissue.asp?JType=IJMET&VType=7&IType=3>

INTRODUCTION

The great deal of effort is required in industry for effective production that includes less production time and higher efficiency. Work study is a generic term for those techniques, particularly method study and work measurement, which are used in the examination of human work in all its contexts, and which lead systematically to the investigation of all the factors which affect the efficiency and economy of the situation being reviewed, in order to effect improvement. Work study is thus especially concerned with productivity. It is most frequently used to increase the amount produced from a given quantity of resources without further capital investment except, perhaps, on a very small scale.



(/jor.aspx)

Users online: (onlineusersinfo.aspx) 1773



(/jor.aspx)

- Home (/jor.aspx)
- About us (/jor.aspx?target=about_us)
- My Profile (/jor.aspx?target=users_zone)
- Registration (/jor.aspx?target=register)
- Products
- Article Submission (/jor.aspx?target=manuscript_submission)
- Usage Statistics (https://c3live.mpsinsight.com/ljc/login)
- Price List 2022 (/JournalsPriceList.aspx)
- Contact Us (/jor.aspx?target=contact_us)
- Tutorial
- Login/Register (/jor_homemenucontrol/#)
- Email id

- International Journal of Engineering and Management Research (IJEMR)
- Journal Home (/?target=/jor:/ijemr&type=home)
- Current Issue (/?target=/jor:/ijemr&type=current_issue)
- Archive / Issues (/?target=/jor:/ijemr&type=archive)
- TOC (/?target=/jor:/ijemr&volume=6&issue=3&type=toc)
- Prev Article (/?target=/jor:/ijemr&volume=6&issue=3&article=041)
- Next Article (/?target=/jor:/ijemr&volume=6&issue=3&article=043)
- Registration (/?target=register)
- Subscribe (/?target=/jor:/ijemr&type=subscribe)
- Editorial Board (/?target=/jor:/ijemr&volume=6&issue=3&type=board)
- Aims & Scope (/?target=/jor:/ijemr&type=aimscope)
- Author Guidelines (/?target=/jor:/ijemr&volume=6&issue=3&type=for_authors)
- Ethics & Malpractice (/?target=/jor:/ijemr&type=pubethics)
- News & Events (/?target=/jor:/ijemr&type=newsevents)
- Subscribe TOC Alerts (/?target=/jor:/ijemr&type=toc_alerts)
- Article Submission (/?target=/jor:/ijemr&type=onlinesubmission)
- FREE
- Sample Issue (/?target=/jor:/ijemr&type=sample_issue)

International Journal of Engineering and Management Research (IJEMR)
 Year : 2016, Volume : 6, Issue : 3
 First page : (241) Last page : (247)
 Print ISSN : 2394-6962. Online ISSN : 2250-0758.

FINO Pay Tech — A Path towards Financial Inclusion

Chhabra Bharti, Jain Neha
 Department of Management, JIMS, India
 Online published on 24 October, 2017.

Abstract

The Indian growth story has been showing tremendous change with Financial Inclusion, providing financial services and facilities to low income group and unbanked section of the society. With the help of business Correspondents like FINO Pay Tech, armed with latest technology, provide convenience and affordability of banking services to the door step of rural households. The period in between 2006 to 2016 led many developments in the financial inclusion with FINO as business correspondent. The most considerable achievement is to change the mindset of rural people. It is because of the latest technologies and business models, the economic system is gradually undergoing a change and FINO is at the cusp of this paradigm shift. From a biometric smart card based technology player to a mobile first-based model, FINO would be transforming itself to meet and fulfill the financial services needs of its customers. This paper is a study on FINO Paytech Ltd. It tries to throw some light on the business model of FINO and its contribution towards financial inclusion.

Keywords

Business Correspondent, Financial Inclusion, FINO, Rural financial literacy.

Trial Access (/?target=/jor:/ijemr&type=trialaccess_issue) Buy Now (/?target=/jor:/ijemr&volume=6&issue=3&article=042&type=subscribearticle) PDF (/?target=/jor:/ijemr&volume=6&issue=3&article=042&type=pdf)

We recommend

- FINO Pay Tech — A Path towards Financial Inclusion
Chhabra Bharti et al., International Journal Of Engineering And Management Research, 2016
- Financial Inclusion through Business Correspondents (BCS) Model in India: A Case Study of the Indian Overseas Bank
Mr. Kamatchi P. et al., Asian Journal of Research in Banking and Finance, 2013
- Impact of E-Banking on Rural India-A Bird's Eyeview
Gowda M. Puitaswamy et al., Asian Journal of Management, 2018
- A re-look at contribution and linkages between technological innovations, financial inclusion of the poor and performance of m-pesa in Kenya
Prof. Nyamache Tom Mokweri et al., Asian Journal of Research in Social Sciences and Humanities, 2011
- Apathy of business correspondents of banks- a study in Dakshina Kannada, Karnataka
Prabhu B. Raghavendra et al., EXCEL International Journal of Multidisciplinary Management Studies, 2013

- An analysis of financial inclusion Initiatives at Odisha Gramya Bank
Dhananjay Bapat et al., Emerald Emerging Markets Case Studies, 2016
- Business Value Modelling
Philip K. MPherson, Aslib Proceedings, 1998
- Business Value Modelling
Philip K. MPherson, Aslib Journal of Information Management, 2013
- Book Review. The new rules of technology
Tom P. Abeles, On the Horizon, 2012
- Is Microfinance the Adequate Tool to Finance Agriculture?
World Scientific Book

Powered by TREND MD

Site map (/jor.aspx?target=site_map) Privacy Policy (/jor.aspx?target=privacy_policy) Copyright (/jor.aspx?target=copyright_disclaimer) Terms & Conditions (/jor.aspx?target=terms) Page Rank 5

(http://www.prcchecker.info/)

536,183,072 visitor(s) since 30th May, 2005.

All rights reserved. Site designed and maintained by DIVA ENTERPRISES PVT. LTD. (http://www.diva.in).

Note: Please use Internet Explorer (6.0 or above). Some functionalities may not work in other browsers.



Certified True Copy
 Jagan Nath University, Jaipur

A Review on the Study and Analysis of Big Data using Data Mining Techniques

Anupama Jha
*Assistant Professor, VIPS, GGSIPU
New Delhi, India*

Dr. Meenu Dave
*Professor, Jagannath University
Jaipur, India*

Dr. Supriya Madan
*Professor, VIPS, GGSIPU
New Delhi, India*

Abstract– Big Data is an emerging concept that describes innovative techniques and technologies to analyze large volume of complex datasets that are exponentially generated from various sources and with various rates. Data mining techniques are providing great aid in the area of Big Data analytics, since dealing with Big Data are big challenges for the applications. Big Data analytics is the ability of extracting useful information from such huge datasets. This paper presents a literature review that include the importance, challenges and applications of Big Data in various fields and the different approaches used for Big Data Analysis using Data Mining techniques. The findings of this review give relevant information to the researchers about the main trends in research and analysis of Big Data using different analysis domains.

Keywords– Big Data, Big Data Analytics, Big Data Application, Data Mining,

I. INTRODUCTION

In this digital era, analysts have enormous amounts of data available on hand. Big Data is the term for a collection of unstructured, semi-structured and structured datasets whose volume, complexity and rate of growth make them difficult to be captured, managed, processed or analyzed by using the typical database software tools and technologies. Different varieties are in the form of text, video, image, audio, webpage log files, blogs, tweets, location information, sensor data etc. . Discovering useful insight from such huge datasets requires smart and scalable analytics services, programming tools and applications [1].

Data mining is also known as Knowledge Discovery in Database (KDD) is an analytical process used in different disciplines to search for significant relationships among variables in large data sets. Analyzing fast and massive stream data may lead to new valuable knowledge and theoretical concepts. Big data has potential to help organizations to improve operations and make faster & more intelligent decisions.

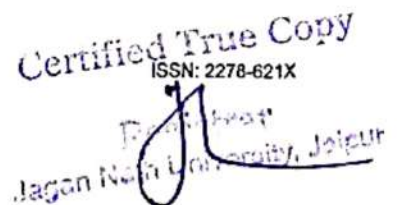
II. BIG DATA

Big Data means not only an enormous volume of data but also other features that differentiate it from the concepts of “very large data” and “massive data”. In fact several definitions for Big Data are found in the literature.

International Data Corporation (IDC) defines Big Data as: “Big Data technologies describe new generation of technologies and architectures designed to economically extract value from very large volumes of a wide variety of data, by enabling high-velocity capture, discovery and/or analysis”[2].

McKinsey Report defines Big Data as “data sets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze”[3].

Big Data is also defined in terms of 3 Vs i. e Volume, Variety, and Velocity. Volume represents the size of the data. Velocity refers to the speed of both data generation and data delivery of real-time data. Variety makes the data too big as data comes from the various sources shown in Table I.



A STUDY ON ROLE OF HUMAN RESOURCE POST ACQUISITION: A CASE STUDY OF SUN PHARMACEUTICALS AND RANBAXY LABORATORIES.

- **Source:** CLEAR International Journal of Research in Commerce & Management . Sep2016, Vol. 7 Issue 9, p62-64. 3p.
- **Author(s):** SHARMA, VAISHALI; MAREJA, NEHA
- **Abstract:** To keep head high in globalized economy one has to follow the path of growth and merger and acquisition is the primary growth and expansion strategy of present corporate world. But whenever a merger or any acquisition is announced in any sector of economy the first question comes to mind- is how much is the financial gain. There is no or little argument on the impact on the employees and relevant human resources related practices and issues. Companies do pay considerable attention to financial and strategic issues during merger and acquisition, but they frequently neglect human resource issues. In this study we have taken pharmaceutical sector of economy in which we consider a case of sun pharmaceuticals industries limited and Ranbaxy laboratories. In this case the role of HR* is not favorable for Ranbaxy employees. The role of HR professionals is very important from the day one of merger and acquisition announced, but organizations had not given a seat to HR professionals on the table of merger process. Because of that 65% mergers and acquisitions are failed. It was therefore concluded that an organization must involve HR professionals in all phases of merger and acquisition. This research is a brief attempt to analyze the role of human resource in post-acquisition phase. This study is descriptive in nature. Secondary source of data and information has been used in this study. The scope of study is limited because study is based on secondary data. As per the requirement of the research data are taken from websites of companies, literature reviews, online documents and from journals. This research paper will be helpful for employers, employees, HR people, researchers and scholars.
- *Copyright of CLEAR International Journal of Research in Commerce & Management is the property of Chinniah Lakshmiammal Educational Academy & Research (CLEAR) Foundation and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract.*

For access to this entire article and additional high quality information, please check with your college/university library, local public library, or affiliated institution.



Important User Information: Remote access to EBSCO's databases is permitted to patrons of subscribing institutions accessing from remote locations for personal, non-commercial use. However, remote access to EBSCO's databases from non-subscribing institutions is not allowed if the purpose of the use is for commercial gain through cost reduction or avoidance for a non-subscribing institution.

[Privacy Policy](#) [A/B Testing](#) [Terms of Use](#) [Copyright](#) [Cookie Policy](#)

© 2022 EBSCO Industries, Inc. All rights reserved.

Certified True Copy

Prof. Dr. Jagan Nath University, Jaipur



Better Code by Making Bugs: SWOT Analysis of Mutation Testing

Dr. Mamta Madan¹, Dr.Kavita², Radhika Thapar³

¹(Professor computer science, VIPS, Delhi, Supervisor Jagannath university, Jaipur)

²(Co-Supervisor Jagannath university, Jaipur)

³ (Radhika Thapar Research Scholar, Department of Computer Science, Jagannath university, Jaipur)

Email: ¹mamta.vips@gmail.com, ²kavita@jagannathuniversity.org

³radhika.thapar@rdias.ac.in

ABSTRACT: In today's world, quality is an important factor for customer satisfaction. Quality assurance and testing are one of the important dimensions. But how can we test? If one does not find a bug, then does that really mean that there aren't any? Have any one wondered, what happens to the guards who are actually guarding us, who is the one who guard the guard's? From this analogy, question arises how to deliver higher quality software by increasing the efficiency and effectiveness of our testing processes. Solution is that we need extensive type of testing to evaluate the quality of test cases how fault resistant are they? And how much code has been covered by them. Mutation testing is the possible solution which is basically based on this. Mutation testing purposely makes fluctuations in a program's code, then re-run a suite of valid unit tests against the mutated program. This paper presents brief description about mutation testing, its process along with the SWOT analysis of mutation testing; it is evaluated on the bases of its strength, weakness, opportunities and threats. This analysis may help in highlighting and addressing issues in order to adopt mutation testing as an efficient testing technique or not and help in answering the questions like: Whether mutation testing is a worth technique for improving our tests? Do mutation testing really tests the test? What can be possible deficiencies found if one uses this technique? Is there anything stored for research community to identify the issues and opportunities in mutation testing.

Keywords -Testing, Mutants, SWOT, Equivalent mutants, Mutation

I. INTRODUCTION

Testing is one of the important part of any software development process. It is also a very vast field consisting of many techniques with their own pros and cons. Mutation testing is a very powerful tool to detect testing inadequacies or to check coverage on testing software. Software testers have known this method for many years. However, not many of them are using it for various reasons. There are several reasons that holds back software industry from using this testing. However, this testing has its own share of advantages and disadvantages. It has a potential to be a very cost effective form of testing. Mutation testing is a fault-based testing technique to assess and improve the quality of a test suite. [1]. Mutation testing provides a repeatable process for measuring the effectiveness of test cases and identifying disparities in the test set [2].

II. OVERVIEW OF MUTATION TESTING

The goal of mutation testing is to assess the quality of tests and use these assessments to help construct more adequate test and thus produce a suite of valid tests which can be used on real programs [3].

Mutation testing can be used to detect bugs in earlier stages of development where fixing bugs cost much less. Three important check points in testing process which needs focus are: test data generation, test execution, test checking. There is always a need for improving the quality of test methods. We are never at a position to say that a particular method is capable of determining all sorts of errors, bugs, failures. In mutation testing, mutations are created by so called mutation operators that mimic typical program errors. Mutation testing works in conjunction with the conventional testing techniques.





ISSN: 0975-833X

Available online at <http://www.journalcra.com>

INTERNATIONAL JOURNAL
OF CURRENT RESEARCH

International Journal of Current Research
Vol. 8, Issue, 07, pp.34525-34527, July, 2016

RESEARCH ARTICLE

SOFTWARE METRICS & THEIR INFLUENCE ON SOFTWARE QUALITY

*^{1,2}Anupama Munshi

¹Research Scholar Ph.D. Department of Computer Sciences, Jagannath University Jaipur

²Asst.Prof Jagannath International Management School (JIMS), Kalkaji New Delhi

ARTICLE INFO

Article History:

Received 24th April, 2016
Received in revised form
20th May, 2016
Accepted 06th June, 2016
Published online 16th July, 2016

Key words:

Software Metrics, Software Quality,
Project, Process.

Copyright©2016, Anupama Munshi. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Anupama Munshi, 2016. "Software metrics & their influence on software quality", International Journal of Current Research, 8, (07), 34525-34527.

ABSTRACT

Software Metrics are instrumental in improving the quality of the Software. The sustainability of any software depends on the quality of that particular software. In this technical era where there is no dearth of software's, we need to find out various factors that affect the quality of the software, and an important one of them being the Software Metrics. This paper attempts to define the various software metrics available for the measurement of software and lays stress on the relationship between the software metrics and the quality of the software. Since the basic objective of software development is to provide high quality software, this paper provides an insight into the need of good software metrics which can help in the improvement of the quality of the software product. Also the paper lays emphasis on the impact of Metrics on the quality of the Software.

INTRODUCTION

The continuous improvement is an important requirement for any organization in general and Software Industry in particular. A Continuous Improvement Process (CIP) is a continual effort to improvise on the processes, products, services or projects. Software metric is technically defined as the standard of measurement by which the efficiency, progress, performance, productivity and the quality of a deliverable process, project or product can be assessed. Software metrics are very important in building the predictability and improving the quality of a software project. It has been rightly said that "If you don't measure something, you can't manage it". Software metrics are instrumental in improving the quality of software. Therefore it can be said that Software metrics can be considered as the means of measuring software qualities which in turn are required for quantitative comparison, cost estimation and quality evaluations. The efforts done in CIP can seek "incremental" improvement over time or "breakthrough" improvement all at once. Evaluating whether there is an incremental improvement and setting up procedures to track and measure these improvements is the tricky part and this is where Metrics play a significant role. Hence Software metrics enable Project managers to:

- Assess status of ongoing project in terms of schedule, cost and profitability.
- Foresee any potential risks.
- Nail down the problems much before they become severe.
- Keep a check on project profitability.
- Assess productivity of team.
- Assess quality of work products to be delivered.

The Software Metrics Cycle can be therefore shown as:

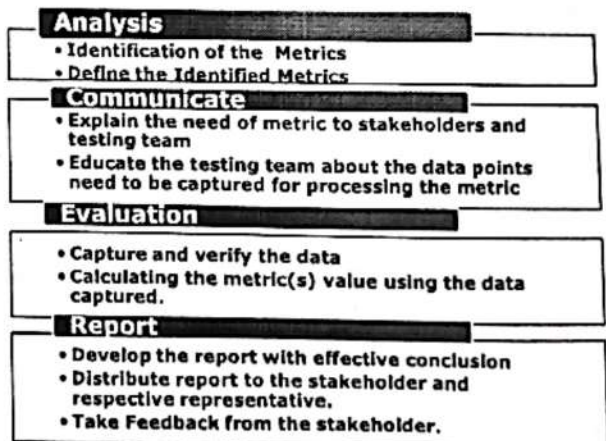


Fig. The Metrics Cycle. Copy

Jagan Nath University, Jaipur

*Corresponding author: ^{1,2}Anupama Munshi,
¹Research Scholar Ph.D. Department of Computer Sciences, Jagannath University Jaipur
²Asst.Prof Jagannath International Management School (JIMS), Kalkaji New Delhi



INDIAN E-GOVERNANCE LANDSCAPE: CHANGES REQUIRED FOR SUCCESS

Abstract—

E governance is the new "Holy Grail" of the world. The Indian population also has caught the buzz with the government and private sector all gunning to turn the conventional pen and paper system into this one stop shop for all. It truly has the potential to benefit Indian citizens exponentially and has a very high role for the government. With the advent of various upcoming ambitious e-governance projects including the apple of everyone's eye - implementation of Digital India. This turn around to E-governance will provide us Indians a citizen centric, transparent, accountable, and simple and fast governing through easy interaction with the authorities with information technology becoming the back bone of all aspects of governance.

This paper evaluates the potential benefits of e-governance, analysis the status of implementation of E-governance projects with respect to the rest of the world and lays more emphasis on the challenges and deterrents that are in the way of implementing e governance practically in a diverse country like India. This paper further focuses on the various measures that can be taken to improvise the implementation of e-governance, and reduce the failure rate of these projects and also looks at key determinants for improving governance through e-Governance in India. It seeks to analyze limiting factors and impediments in the way of proliferating e-Governance in India. IT initiatives in the government in India have largely been on a piecemeal basis characterized by a lack of vision that has limited the resultant benefits ,but with the ambitious Digital India Project at its inception things have started moving in a positive direction and that too at a fast pace. This paper suggests adopting a holistic approach based on innovative partnership models, improving the policy framework and break the barriers that exist in implementation of E-Governance.

Keywords—E-governance, digital, ICT, Challenges,



Certified True Copy

Registered
Jagan Nath University, Jaipur



FINO Pay Tech — A Path towards Financial Inclusion



Financial Information Network & Operations Ltd.

Bharti Chhabra (Rana)¹, Neha Jain²
^{1,2}Department of Management, JIMS, INDIA

ABSTRACT

The Indian growth story has been showing tremendous change with Financial Inclusion, providing financial services and facilities to low income group and unbanked section of the society. With the help of business Correspondents like FINO Pay Tech, armed with latest technology, provide convenience and affordability of banking services to the door step of rural households. The period in between 2006 to 2016 led many developments in the financial inclusion with FINO as business correspondent. The most considerable achievement is to change the mindset of rural people. It is because of the latest technologies and business models, the economic system is gradually undergoing a change and FINO is at the cusp of this paradigm shift. From a biometric smart card based technology player to a mobile first-based model, FINO would be transforming itself to meet and fulfill the financial services needs of its customers. This paper is a study on FINO Paytech Ltd. It tries to throw some light on the business model of FINO and its contribution towards financial inclusion.

Keywords— Business Correspondent, Financial Inclusion, FINO, Rural financial literacy

weaker section of society in a transparent manner by finance leading institutes of the country. According to the Committee for Financial Inclusion, India (2008) "Financial Inclusion is the process of ensuring access to financial services and timely, adequate credit where needed, to vulnerable groups such as weaker sections and low income groups, at an affordable cost". Financial Inclusion is the result of Khan Committee 2004 and its recommendations were incorporated from 2005-2006. RBI also ordered banks to make available 'no frills account' either with no balance or negligible balance. The main aim of financial inclusion is to develop the quality and accessibility of financial services and products to the unbanked, under-banked and financially excluded.

According to Jonathan (2007), rural requirements are very different due to small and uneducated population as compared to urban economic system. A mechanism is needed to provide basic information about financial and other services to rural public. Therefore, Financial Inclusion is getting importance, mainly because of three basic reasons.

Firstly, the low income group and financially illiterates are usually dependent on informal channels of credit like moneylenders, who usually charge high rate of interest for a short span of time. Financial Inclusion makes the availability of adequate credit with reasonable rate of interest through formal banking channels which will also enhance the entrepreneurial spirit.

Secondly, the bureaucrats and corrupted politicians are having control over subsidies or any kind of welfare programmes, consequently, the money meant for poor people does not reach them. Therefore, Government is planning direct bank transfers to these intended parties through bank accounts. Lastly, it will also inculcate the habit to save money in poor people who are always under

I. INTRODUCTION

Even after 60 years of Independence, people living in rural areas are deprived and destitute to get necessary financial services. This melancholy has created financial instability and dissatisfaction among a large section of Indian population who are still unbanked. To overcome these tribulations, Financial Inclusion comes into the picture.

Financial Inclusion is the process to deliver an extensive range of affordable financial products and services at reasonable costs to various unprivileged and



Certified True Copy

Jagan Nath University, Jaipur

Quantitative Analysis of Dairy Product Packaging with the Application of Data Mining Techniques

Ankita Chopra*, Yukti Ahuja#, Mahima Gupta#

*Assistant Professor, JIMS-IT Department, IP University
3, Institutional Area, Rohini sec-5, New Delhi-110085, India

#Assistant Professor, JIMS-Management Department, IP University
3, Institutional Area, Rohini sec-5, New-Delhi-110085, India

Abstract— Consumers make choices about where to shop based on their preferences for a shopping environment and experience as well as the selection of products at a particular store. This study illustrates how dairy firms and marketing analysts can utilize data mining techniques to better understand customer profiles and behaviour.

A survey is done on blind dairy product packaging and its competitors. Primary data is collected based on the package design rating of dairy products. The customers are evaluated on the attributes like gender, education, occupation and a quantitative analysis is done with the application of data mining technique like classification on the data set.

The paper presents how data mining discovers and extracts useful patterns from this large data to find observable patterns. The paper demonstrates activity of data mining in improving the quality of decision making process in dairy industry.

Keywords— Data Mining, Classification, Data mining Application, Knowledge discovery database.

I. INTRODUCTION

We are in an age often referred to as the information age. In this information age, because we believe that information leads to power and success, and thanks to sophisticated technologies such as computers, satellites, etc. We have been collecting tremendous amount of information.

With the enormous amount of data stored in files, databases, and other repositories, it is increasingly important, if not necessary, to develop powerful means for analysis and perhaps interpretation of such data for the extraction of interesting knowledge that could help in decision making.

Data Mining, also popularly known as knowledge discovery in databases (KDD), refers to the nontrivial extraction of implicit, previously unknown and potentially useful information from data in databases. While data mining and knowledge discovery (or KDD) are frequently treated as synonyms, data mining is actually part of the knowledge discovery process. The following (figure 1.1) shows data mining as a step in an iterative knowledge discovery process.

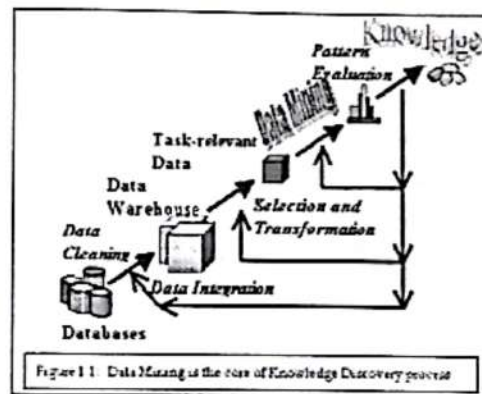


Figure 1.1 Data Mining in the case of Knowledge Discovery process

The knowledge discovery in databases process comprises of a few steps leading from raw data collections to some form of new knowledge. The iterative process consists of following steps.

- **Data Cleaning:** Also known as data cleaning, it is a phase in which noise data and irrelevant data are removed from the collection.
- **Data Integration:** At this stage, multiple data sources, often heterogeneous, may be combined in a common source.
- **Data Selection:** At this step, the data relevant to the analysis is decided on and retrieved from the data collection.
- **Data Transformation:** Also known as data consolidation, it is a phase in which the selected data is transformed into forms appropriate for the mining procedure.
- **Data Mining:** It is the crucial step in which clever techniques are applied to extract patterns potentially useful.
- **Pattern Evaluation:** In this step, strictly interesting patterns representing knowledge are identified based on given measures.
- **Knowledge Representation:** Is the final phase in which the discovered knowledge is visually represented to the user. This essential step uses visualization techniques to help users understand & interpret the data mining results.





Application of Educational Data mining Techniques in E-Learning Systems with its Security Issues: A Case Study

Ms. Ankita Chopra¹, Ms. Aakanksha Chopra²

Assistant Professor, IT, Jagan Institute of Management Studies, Delhi, India^{1,2}

Abstract: Recently, Educational Data Mining has become an emerging research field used to extract knowledge and discover patterns from E-Learning systems. This work is a survey of the specific application of data mining in learning management systems and a case study with university database. E-learning systems is an information superhighway where large scale communication network is provided with variety of interactive services are provided as text database, e-mail, audio, video etc. Cyberspace is the indefinite area famously known as Internet. Cyber security is the frame of protocols framed in one place for safeguarding this cyberspace. This paper explains how data mining tasks like clustering can be applied to the data taken from an e-learning system and also deals with E-threats and E-risks associated with it. This paper will also focus upon ubiquity of internal cyber-attack as well as lack of proper IT policies and procedures in e-Learning systems. The performance of students on online course in digital electronics is taken for the analysis and results are achieved with WEKA tool.

Keywords: EDM, Classification, Clustering, WEKA, E- Threats and E-Risk.

I. INTRODUCTION

Across a wide variety of fields data are being collected and accumulated at dramatic pace. There is an urgent need for a new generation of computational theories and tools to assist humans in extracting useful information (knowledge) from the rapidly growing volumes of digital data. These theories and tools are subject for the merging field of knowledge discovery in databases (KDD).

KDD refers to the overall process of discovery useful knowledge from data, and data mining refers to a particular step in this process. Data Mining is the application of specific algorithms for extracting patterns from data. The widespread application areas of data mining include bio-informatics, ecommerce, fraud detection and now in the field of education as well. The data mining in the field of educational research is known as Educational Data Mining (EDM). EDM tries to simulate a student model which may be used for the improvement of students by predicting the future trends.

The sharing of information, collaboration and interconnectivity are the core elements of any e-learning system. Since e-learning system is open, distributed and interconnected then, the security becomes an important challenge in order to ensure that interested and authorised actors only have access to the right information at the appropriate time [1].

Protection against data manipulation, fraudulent user authentication and compromises in confidentiality are important security issues in e-learning. E-risk involve the risk at the time of electronic transaction, whereas threat means an anticipated danger [2]. But in order to have a secure transmission of the information being exchanged over internet, one needs the concept of Network Security,

which needs to take punitive action to Ease of Use protect from different types of attackers like- hackers, interested computer neophytes, deceitful vendors or disenchanted employees of an organization [3]. Common threats for computers are viruses, network penetrations, theft and unauthorised modification of data, eavesdropping and non-availability of servers and personal computers [4].

The challenge is how to elicitate, manage and organize this big data. The actual thing is to find out which data is important, what to keep and what to discard [5].

This paper explains the methods of EDM through an example data taken from an e-learning platform and also deals with its security threats and risks. This paper is organized as: EDM and its important methods like classification, clustering. It also explains how WEKA tool is used to analyse the student data in online digital electronics course taken from university database. What are the various security threats and risks associated with E-Learning systems?

II. EDUCATIONAL DATA MINING

Education is increasingly occurring online or in educational software, resulting in an explosion of data that can be used to improve educational effectiveness and support basic research on learning.

E-Learning can be defined as, the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance. E-learning is based on three fundamental criteria's they are

- Networked for instant updating distribution, storage/retrieval and sharing of information



Certified True Copy
1025
Jagan Nath University Jaipur



GREEN HRM: A Requirement for 21st Century

Dr. Swaty¹, Silky Madan²

¹Associate Professor, Jagan Institute of Management Studies, New Delhi, INDIA

²Assistant Professor, Jagan Institute of Management Studies, New Delhi, INDIA

ABSTRACT

These days there has been an increased awareness across the global business community regarding the significance of going green and implementing various environmental management systems. There has been a growing concern regarding sustainable development everywhere.

These days, the human resource department plays a very significant role in making Green HRM a key business strategy for any firm. This paper aims at focusing on a few fundamental aspects related to Green HRM such as : the meaning and importance of Green HRM, reasons for adopting green HRM, prerequisites for green HRM, barriers in the implementation of green HRM , green HR initiatives adopted by companies and how employees can contribute in this regard.

Keywords— Green HRM, Sustainable Development, Environmental Management, HRM

I. INTRODUCTION

Go Green has become the buzzword for the 21st century due to an increased environmental concern all around the globe in all the fields be it business or non business. This has majorly occurred due to some specific treaties to combat climate change. In the present scenario the organizations are supposed to find out ways and techniques to deal with reduction in carbon footprints apart from tackling the economic issues. The business community is supposed to earn profits but not at the cost of environment. In order to attain success it is required that the corporate play a significant role in sustainable development so that a balance can be maintained among social, economic and environmental factors.

It is required that all the departments in an organization be it HR, Marketing, IT, Finance, and so on, work together in a joint effort to contribute towards the implementation of any corporate environmental program.

Of these we can say that HR is the most important contributor because ultimately it is the peoples' effort that can bring about any significant change to the working of an organization. This implies that Green Human Resource Management is the most significant element of sustainability. HR function can be renamed as "People and Society" function which is responsible for creating a green world where consumers and employees are equal contributors to environment sustainability. In this paper, we are going to focus on the exclusively focus on the topic Green Human Resource Management (GHRM) where the Human Resource Management (HRM) is engaged in managing the environment within an organization

Objectives

The main purpose of this study is:

1. To develop a basic understanding of the meaning and importance of Green HRM.
2. To find out the reasons why we need to adopt Green HRM.
3. To identify the prerequisites for implementation of Green HRM.
4. To determine the limitations or barriers to its successful implementation.
5. To suggest some possible Green initiatives by the HR department.

Research Methodology

The study is primarily based upon the secondary data. The data relevant to the topic was collected from different databases, websites and other available sources.

Green HRM defined

Green HRM has become the buzz word in the business field today and that is the main reason why it has become popular with researchers.

It has been defined by various authors like Marhatta & Adhikari, 2013, p. 2) who says Green HRM is the use of HRM policies to promote the sustainable use of resources within organizations and, more generally promotes the causes of environment sustainability.



Certified True Copy
Jagan Nath University, Jaipur

ISSN: 2454-3659 (P), 2454-3861(E)

Volume II, Issue 3 March 2016

International Journal of Multidisciplinary Research Centre
Research Article / Survey Paper / Case Study**DIGITAL TRANSFORMATION IN HR: UNLEASHING ITS TRUE POTENTIAL****Authors Details**Name: Dr. Swaty Wadhwa
Affiliation: Jagan Institute of
Management Studies, Rohini, Delhi
Country: India**Authors Details**Name: Mrs. Silky Madan
Affiliation: Jagan Institute of
Management Studies, Rohini, Delhi
Country: India**ABSTRACT**

Digital Technology is radically changing the way how business and governments operate in today's scenario. From how businesses and governments interact with customers, citizens and suppliers, to how they manage their employees; digitization has entered almost every aspect of our lives. The field of HR is also one of the areas where digital technology has found its way. Human resource management is now evolving into a more technology-based profession. Gone are the days when HR function shouldered the responsibility for managing people in their old traditional ways. Transformation of HR through digital technology has become call of the day. In the light of this rapidly changing scenario where digitization is evolving at a breakneck speed; HR departments that choose to ignore this transformation could face obsolescence. This research paper talks about the probable reasons why transformation in the field of HR is required and what will be its impact on the business performance. This is because many organizations may undertake this activity just for the sake of it. It is quite possible that a transformation will make a little impact on the organization. The paper also focuses on the benefits and hindrances of digital technology in the area HR and the future trends that can be seen in this field so that the companies can make the best advantage of this transformation.

Keywords: Digitization, E-HR, Business Intelligence, HRIS, HR Transformation

INTRODUCTION

The world has evolved drastically from a time when technological advancements used to mark the day to day operations of the companies to the time where the technology conditions the business models of the new age companies and at the same time influences the ways in which they relate to their clients and providers. In this scenario when all the areas of businesses are being progressively moving towards transforming through technological advancements; HRM can no longer be an exception to this evolution.

Digital technology has become a new game-changer which is radically impacting the manner in which employees and prospects connect and communicate with the organizations. The practice of HR has dramatically changed because nowadays almost all the companies are providing universal access to HR services by means of technology and web based applications.

Recent researches have also shown that; companies that successfully adopt sophisticated HR technology tools outperform those that do not. Digital HR requires that HR professionals must not only master traditional HR skills and roles but should also have the ability to apply their skill and knowledge through technology.



Transforming HR : The Digital Way



Dr. Swaty Wadhwa *

Ms. Silky Madan **

ABSTRACT

Digital Technology is radically changing the way how business and governments operate in today's scenario. From how businesses and governments interact with customers, citizens and suppliers, to how they manage their employees; digitization has entered almost every aspect of our lives. The field of HR is also one of the areas where digital technology has found its way. Human resource management is now evolving into a more technology-based profession. Gone are the days when HR function shouldered the responsibility for managing people in their old traditional ways. Transformation of HR through digital technology has become call of the day. In the light of this rapidly changing scenario where digitization is evolving at a breakneck speed; HR departments that choose to ignore this transformation could face obsolescence. This research paper talks about the probable reasons why transformation in the field of HR is required and what will be its impact on the business performance. This is because many organizations may undertake this activity just for the sake of it. It is quite possible that a transformation will make a little impact on the organization. The paper also focuses on the benefits and hindrances of digital technology in the area HR and the future trends that can be seen in this field so that the companies can make the best advantage of this transformation.

KEYWORDS : Digitization, E-HR, Business Intelligence, HRIS, HR Transformation

INTRODUCTION

The world has evolved drastically from a time when technological advancements used to mark the day to day operations of the companies to the time where the technology conditions the business models of the new age companies and at the same time influences the ways in which they relate to their clients and providers. In this scenario when all the areas of businesses are being progressively moving towards transforming through technological advancements; HRM can no longer be an exception to this evolution.

Digital technology has become a new game-changer which is radically impacting the manner in which employees and prospects connect and communicate with the organizations. The practice of HR has dramatically changed because nowadays almost all the companies are providing universal access to HR services by means of technology and web based applications.

Recent researches have also shown that; companies that successfully adopt sophisticated HR technology tools outperform those that do not. Digital HR requires that HR professionals must not only master traditional HR skills and roles but should also have the ability to apply their skill and knowledge through technology.

HR professionals need to equip their operations, and themselves, to function in a rapidly changing global environment. HR transformation has to initiate at the root level to include core processes like recruitment, succession planning, performance management, training etc. so that HR can become a valuable business partner.

At the same time another aspect that needs to be taken into consideration is that why at all an organization needs to transform HR process and how is it going to positively affect the business of the organization. This is because HR transformation is just a means to better support the organization by addressing the business challenges and taking advantage of the opportunities. So organizations must focus on the real issues and the prospective areas where digitization can affect the bottom line of the company before implementing digital technology in the area of HR.

Conceptualization : Digital transformation is defined as the method in which organizations transform and create new business models and culture with digital technologies. It brings some changes in all aspects of human society. The main aim is to improve the performance of enterprises.

Transformation requires the acquisition of new skills and changes in work practices and organizational thinking." What differentiates a digital transformation, from that which we often think of as a more conventional transformation process, is the ability to respond or commit to continuous change.

Now-a-days, the use of digital advances like mobility, social media and smart embedded devices along with the use of traditional technologies such as ERP to change customer relationships, internal processes and value propositions are in demand. This digital mindset starts by thinking not only outside the box, but by looking at how other industries and other models can be applied to one's own space. We have to become innovative while applying the models thus taking best advantage of the digital world. For this, an attitude has to be developed and our mindset has to be changed accordingly. HR managers will need to balance out right brain and left brain which means they have to make a balance between the big thinkers and the doers.

All this will lead to organizational transformation which helps to develop new experiences and outcomes. Digital technologies provide rich data sets which help to improve the relationships, business process and other operations in the organization for outstanding experiences and outcomes.

Objectives of research:

- To discuss the importance of digitization in the field of HR.
- To identify how digital technology is of help to the organizations.
- To find the possible challenges in the implementation of digital HR.

* Associate Professor, Jagan Institute of Management Studies

** Assistant Professor; Jagan Institute of Management Studies

Trinity Journal of Management, IT & Media



ISSN 2320 - 6470

December, 2016 / Page - 6

Certified True Copy

Jagan Nath
Jagan Institute of Management Studies



**INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH
TECHNOLOGY**

EXPERIMENTAL STUDY ON EFFECTS OF SLUDGE WASTE IN CONCRETE

Bharat Nagar*, Prof V. P. Bhargava

*Asst. Professor, Department of Civil Engineering, Jagannath University, Jaipur (Raj.)
Professor, Department of Civil Engineering, Jagannath University, Jaipur (Raj.)

DOI: 10.5281/zenodo.159284

ABSTRACT

To evaluate the effect of dry sludge on concrete performance, its physical and mechanical properties were studied. In this research an attempt is taken to bring into play the sludge waste in various proportions so that the final product property of concrete mixture is same as the control mix. Waste sludge material was replace with fine and coarse aggregate in various percentages such as 50%, 45%, 40% ,35%,30%, 25%,20%,15%, 10%, 5%, 4% and 3%. Reference concrete mix is also made for comparative reasons.

KEYWORDS: concrete, Reference concrete mix, Waste water treatment plants.

INTRODUCTION

Disposal of human sewage has become a necessity for societies, today. The construction of treatment plants has caused problems with huge contents of dry sludge. The production of sewage sludge from waste water treatment plants are increasing all over the world. This kind of sludge includes the solid material left from sewage treatment processes. Specific sludge production in wastewater treatment varies widely from 35 to 85 gm dry solids per population equivalent per day.

The dry sludge used in this studied was brought (free of cost) from Delawas, Jaipur, Rajasthan, India. The sewerage treatment plant is connected by mostly residential and commercial areas; hence, the sludge collected is categorized as domestic waste sludge. At the sewerage treatment plant, the sewage sludge was sun dried in the sludge bed. This waste is collected in plastic bags and bought to my research area, where it is spread on land for making it in the direct contact to sun and air.

LITRETURE RIVIEW

Several experiments using alum sludge in brick making had been reported in many countries. Patricia et al. conducted ceramic brick manufacturing from drinking water treatment plants. They carried out experiments to get a sand replacement by 10% of sludge and this percentage is considered appropriate for ceramic brick. It indicated an interesting potential for reuse alum sludge as construction material. Elangovan and Subramanian produced a publication that deals with reuse of alum sludge in clay brick manufacturing. Alum sludge with commercial local clay were blended in various proportions and sintered at different temperature to produce clay-sludge brick. Their result indicated that alum sludge could be used as partial substitute in commercial clay bricks to maximum of 20% without compromising the strength of brick. Dunster and Wilson conducted experiments on water treatment residues as a clay replacement and colorant in facing bricks. They also found that the results from laboratory trials demonstrated that water treatment residue could be used as a colorant and partial clay replacement in brick. Badr El-Din et al. presented some results from brick manufacturing by mixing water treatment sludge with rice husk ash. They were able to measure the optimum sludge addition to produce brick from sludge which was 75%. Their results based on the experimental program and the produced brick obeyed the required values of compressive strength, water absorption and efflorescence assigned by the standard specifications. Chiang et al. investigated experimentally light weight bricks manufactured from water treatment plant sludge and evaluated the environmental safety of sintered leaching produce concentration. Mohammed et al. indicated that sludge could be mix as partial substitute for clay in brick manufacturing and they also found the best of replacement proportion of sludge from clay is 50% to produce sludge brick-mixture. Babatunde and Zhao produced a publication that deals with a comprehensive review of available literature on attempts at beneficial reuses of water treatment plants. The



Verified True Copy
Jaganath University, Jaipur

Effect of Glass Powder on Various Properties of Concrete

¹Bharat Nagar, ²Prof V. P. Bhargava

Abstract

Concrete is used as the major material in construction industries. As the population of world increase rapidly, worlds faces the problem for habitation and waste by- product. As the waste is proportional to the population and there are restriction of natural resources used in concrete , this construction industry need some attention to used some other material so that they can be mix in concrete to get the new product which physical properties are same as the conventional one.

Every year there is several tons of glasses created all over the world. Glass can be re-used as a fine raw material and it presents an option to save natural and non-renewable materials. The use of glass powder in concrete production can make the construction industry more ecological.

In this research an attempt is taken to bring into play the waste glass in various proportions so that the final product property of concrete mixture is same as the control mix. Waste glass powder was replace with fine aggregate in various percentages such as 5%, 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45% and 50%. Reference concrete mix is also made for comparative reasons.

Keywords: Concrete, non-renewable, Waste glass powder

Introduction

Waste glass is one of the main causes of environmental pollution as it cannot be used as land filling in low lying areas. Recycling is one of the main solutions to use such type of waste so that it is safely converted and we can save our motherland. Fine aggregate is mainly finding from river and now a day's become highly expensive. In this investigation fine aggregate is replaced with the waste glass powder in certain known quantity and compare the results with the standard known control mix. This waste glass is collected from local market and dumped sites of Chaksu, Jaipur city, Rajasthan. The waste glass is crushed in Los Angles machine in concrete laboratory of jagannath University campus. The waste glass powder was replace with fine aggregate in various percentages such as 5%,10%,15%,20%,25%,30%,35%,40%,45%, and 50%. Reference concrete mix is also made for comparative reasons

Experimental Investigation

As concrete is weak in tension stresses, the present experiments are done to check the performance of concrete in flexural and split tensile strength. Experiments are done with reference to the IS 2386-1963, IS 516-1959 and IS 5819-1999 to check the performance with the control mix. In present study nominal mix taken is m20 and glass powder is replced with 5, 10, 15, 20, 25, 30,35,40,45 and 50% with the fine aggregate.

Material Used

Cement

Ordinary portland cement,43 grade specified as per the is 8112-2003 was used for casting the different grade of concrete. Potable water with pH value 7the water cement ratio w/c is fixed to 0.45 and to maintain the slump **master Glenium admixture is used 3% by weight of cement.**

The initial and final setting time was observed by Vicate apparatus and it was found 32 and 590



A Review on Aerodynamic Behavior of Airfoil when Surface Modified

Amit Kumar Saraf, Dr. Mahendra Pratap Singh, Dr. Tejsingh Chouhan

Abstract— There are limitations of engines of aircraft to decrease drag and increase efficiency. Efficiencies requirement is increasing day to day. Airfoil plays an important role in efficiency of aircraft. Modification in the shape of airfoil is also important in aircraft. General airfoil behavior has been analyzed by many researchers. In this paper airfoil characteristics given by many researchers are studied while surfaces of airfoils were modified. Modification on surface of airfoil gives significant changes in result. Without consuming much amount of fuel in aircraft drag can be decreased with simple modification on airfoil surface.

Index Terms— Airfoil, CFD, Aerodynamic behavior, Coefficient of Lift & Drag, angle of attack, flow separation, Dimple.

1 INTRODUCTION

IN early days with the help of powerful engines effort was made to reduce drag and increase lift and velocity of airplane. Importance of aerodynamics came in role in the twelfth century. Modification in airfoil shape plays an important role in aerodynamics. Various types of airfoil series were developed. Every series has its own aerodynamics characteristics. Such approach is still used. The flow separation on airfoil increases pressure drag. During flight, increases or decreases in lift will cause incremental starting or stopping vortices, always with the effect of maintaining a smooth parallel flow at the trailing edge. At a low angle of attack, the rear surfaces have an adverse pressure gradient but not enough to cause significant boundary-layer separation. As the angle of attack is increased, the upper-surface adverse gradient becomes stronger, and generally a separation bubble begins to creep forward on the upper surface. At a certain angle $\alpha = 15^\circ$ to 20° , the flow is separated completely from the upper surface.

2 LITERATURE REVIEW

2.1 Review Stage

NACA4315 model was used to analyze the aerodynamic properties. Bumps were used at upper surface on trailing side. The bumps were created 80% from leading edge. Regular and bumped airfoils were compared. It shows that stall angle increased due to controlling on flow separation [13].

Airfoil four digit nomenclatures tell camber and thickness of airfoil. From this, we can find airfoil series. This helps to change the camber of airfoil and location of maximum thick-

ness of airfoil were compared. It was observed that aerodynamic losses were increased at high Reynolds no and losses were decreased at low Reynolds no. in rough airfoil. Separation bubble becomes weak due to roughness of surface at low Reynolds no [3].

NACA00012 airfoil was tested under different turbulent models i.e. [Spalart-Allmaras, Realizable $k-\epsilon$ and $k-\omega$ shear stress transport (SST)]. These turbulent models were compared and validated with experimental data. It was found that $k-\omega$ shear stress transport (SST) gives the best result for given airfoil. 80000 cells were taken for simulation. Air velocity was taken constant. Before solving it the main important work was to find out the transition point. Transition point should be modeled to get more accurate result. Here commercial CFD software was used. According to this if much amount of nodes are used, result will be more accurate, but huge amount of nodes take much time in computation. Here C type grid topology was used and 80000 quadrilateral cells were taken. Transition point was determined by hit and trial method. If the value of simulated C_D is greater than experimental value, it means that transition point chosen is wrong, turbulent region is larger. SO author have to shift it in right side and accordingly he can determine transition point. In result there was a disagreement between the data at near stall. The predicted drag coefficient was higher than experimental data. This is because the actual airfoil has laminar over the half of leading side. Turbulent model consider turbulent boundary layer throughout its length [12].

Two row and eight rows dimples on flat surface were investigated and observed that dimples were effective to convert laminar into turbulent at low Reynolds no. Multiple rows increases strength of mixing flows. The analysis was also done on sphere where it was found that drag were decreased in dimpled sphere compared to smooth sphere [4].

There were various experiments going on with various methods to reduce drag and to improve efficiency of wind turbine, airfoil of flight vehicle etc. A detailed study was done on airfoil to reduce drag on the trailing side. Since one of the main reason of drag or pressure drag is the formation of turbulent on the trailing side. Roughness was created in turbulent region of the smooth airfoil. This result in decrease in drag and gives better aerodynamic efficiency. Experimental work

- Amit Kumar Saraf is Phd Scholar in Jagannath University Jaipur, Rajasthan India.-(Phone: +919928396705; e-mail: amitsaraf11@rediffmail.com)
- Dr.Mahendra Pratap Singh, is with Jagannath University Jaipur, Rajasthan India. He is now with the Department of Mechanical Engineering (e-mail: mpsingh_76@yahoo.co.in)
- Dr. Tejsingh Chouhan is with the Mechanical Engineering Department, Rajdhani Institute of Technology & Management, Jaipur Rajasthan, India (e-mail: tejsingh7@gmail.com)

ness [2].

At various Reynolds no aerodynamic property of smooth and

USER © 2016
<http://www.ijser.org>



Certified True Copy

Prof. Dr. Tejsingh Chouhan
Jagan Nath University, Jaipur

Software Quality Prediction using different Software Metrics

Asli Ali

Dr. Kavita Choudhary

Dr. Ashwin Sharma

ABSTRACT

This paper provides mathematical implications of software quality prediction using different software metrics. We have considered object-oriented module as the dataset. The data used for the experimentation have class, object, inheritance and dynamic behavior. The data modularity considered for this work is M . The software quality predictions are applied after the chi-square test. If the modules qualify the chi-square test then these modules are selected for software metric analysis. This testing is based on the object-oriented parameters like inheritance, class, reference and run-time binding. It will provide as the probability distribution values. Then F -measure (FM), Power (P) and Chi-Square (CR) are applied for the quality analysis based on the metrics passed. We have presented mathematical implications with all the steps for the calculation and determine the modularity with the help of above software metrics.

KEYWORDS

Software quality, Clustering, Chi-Square Test, FM , P , CR

INTRODUCTION

The discovering the product particularity is the greatest challenge in today's situation. There are a few examination introductions in this course. Notwithstanding the measure of exertion spent in the configuration and utilization of flow expectation models, programming deficiency forecast research region still surpasses incredible difficulties. Lamentably, none of the strategies which are made in couple of years prior fulfills the relevance in the product business because of a few reasons including the absence of programming devices to reduce this expectation prepare, the unwillingness to gather the deficiency information, and the other down to earth issues [1]-[4]. The customary way which is utilized from the earlier using so as to start point is to gauge programming quality programming measurements and shortcoming information gathered from past framework discharges or comparative undertakings to develop a quality-expectation or quality-order model. At that point designers utilize this model to foresee the issue inclination of programming segments being developed. Past exploration [5] has demonstrated that product quality models in view of programming measurements can yield expectations with helpful exactness. Such models can be used to anticipate the response variable that can either be the class of a portion or a

quality component for a fragment. The past is normally suggested as gathering models [2] while the later is for the most part implied as desire models [3]. The focal point of this paper is on the past, i.e., request models. Often, predicting the amount of imperfections is excessive. It is the entire all the all the more confounding subsequent to, as De Waan and Sand [4] stated, 61-65% of the effort of data examination is making use for the cleaning. The scope of examination like information structures and data mining the impact of poor data has been seen as an issue which ought to be tended to by database originators and data customers alike. Reisman [5] for instance communicated that poor data quality is an issue which consequences for all pieces of the economy: associations, governments, and the insightful world and their customers, and Wand and Wang [6] forewarned of the great impact of poor data quality on the amplex of an affiliation. Information Clustering and Classification are examined in [7][8][9][10]. At that point we apply the testing on article arranged property taking into account chi square test.

LITERATURE SURVEY

In [1-5] authors have depicted an exploratory examination strategy that addresses two difficulties and that is constructed with bunching and the assistance of a product building master. It is an unsupervised technique since named preparing information is not needed to foresee the deficiency inclination of programming modules. In [6] authors examined about several programming grouping calculations. Most of these calculations have been connected to specific programming frameworks with significant achievement. On the other hand, the topic of how to choose a product bunching calculation that is most appropriate for a particular programming framework stays unanswered. In [7] authors presented a novel correlation technique for programming deteriorations that can be connected to both settled and level disintegrations. The advantages of using this system are exhibited in both exploratory and exploratory design. We likewise connect with the END structure, the main other existing system for settled decay examination. In [8] authors have utilized subtractive grouping based fuzzy surmising framework approach which is utilized for right on time recognition of flaws in the capacity arranged programming frameworks. The execution of the proposed methodology is better if there should be an occurrence of Joined Model. In [9] authors have presented and evaluate

¹ Research Scholar, Department of Computer Science & Engineering, Jagannath University, Jaipur, Rajasthan
Email: asli@jaguniversity.ac.in

² Associate Professor, Department of Computer Science & Engineering, Jagannath University, Jaipur, Rajasthan
Email: kavita@jagannathuniversity.ac.in

³ Asst. Professor, Department of Computer Science & Engineering, CEC Jalowar (Raj.), India
Email: ashwin_sharma_m@gmail.com



Certified True Copy

Signature
Date: _____
Page: _____


[Download full issue](#)

Alexandria Engineering Journal
Volume 55, Issue 1, March 2016, Pages 87-91

Original Article

Numerical simulation of a fractional model of temperature distribution and heat flux in the semi infinite solid

Anupama Choudhary ^a , Devendra Kumar ^b , Jagdev Singh ^a

[Show more](#)

Outline
 Share
 Cite

<https://doi.org/10.1016/j.aej.2016.01.007>

Under a Creative Commons license

Get rights and content
open access

Abstract

In this paper, a fractional model for the computation of temperature and heat flux distribution in a semi-infinite solid is discussed which is subjected to spatially decomposing, time-dependent laser source. The apt dimensionless parameters are identified and the reduced temperature and heat flux as a function of these parameters are presented in a numerical form. Some special cases of practical interest are also discussed. The solution is derived by the application of the Laplace transform, the Fourier sine transform and their derivatives. Also, we developed an alternative solution of it by using the Sumudu transform, the Fourier transform and their derivatives. These results are received in compact and graceful forms in terms of the generalized Mittag-Leffler function, which are suitable for numerical computation.

[Previous](#)

Processing math: 100%

[Next](#)

Certified True Copy





COMPULSORY LICENSING OF PHARMACEUTICAL PATENTS IN INDIA: A RESEARCH STUDY

Vipin Mathur^{1*}, Dr. B. P. Nagori² and Dr. Mahendra Tiwari³

¹PhD Scholar, Jagannath University, Jaipur; and Assistant Professor, Pharmacy Wing, Lachoo Memorial College of Science & Technology (Autonomous), Jodhpur, Rajasthan, India.

²Professor & Director, Pharmacy Wing, Lachoo Memorial College of Science & Technology (Autonomous), Jodhpur, Rajasthan, India.

³Dean & HoD, Dept. of Law, Jagannath University, Jaipur, Rajasthan, India.

*Correspondence for Author: Vipin Mathur
Vipin Mathur, PhD Scholar, Jagannath University, Jaipur, and Assistant Professor, Pharmacy Wing, Lachoo Memorial College of Science & Technology (Autonomous), Jodhpur, Rajasthan, India.

Article Received on 17/01/2016

Article Revised on 08/02/2016

Article Accepted on 29/02/2016

ABSTRACT

Patents provide monopoly rights for the patent owners over their new, inventive and innovations. Patents are granted with an expectation that the patent owners would work the patented inventions without undue delay on the commercial scale to the fullest extent as practically possible. But in some cases the patent rights may be subject to abuse by the patent owner. To prevent such abuse provisions of compulsory license are provided under the patent law. However, compulsory licensing provisions in India have been under criticism particularly at the international front. This paper examines and compares provisions for compulsory licensing in India with the relevant provision in U.S., Europe and China. The paper also takes into account important case laws, and empirical data collected on the issue through a questionnaire based survey. The paper concludes by proposing measures to strengthen the compulsory licensing provisions in India.

KEY WORDS: Patent, Patents Act, patent abuse, compulsory license.

INTRODUCTION

Patent is an exclusive right granted to a person who invents a new and useful product or process. Patent provides a monopoly right for 20 years to the patent holder to prevent others from exploiting the invention. Patents reward the inventors for their skills, efforts and resources to encourage innovation.^[1] Patent is granted from the government in lieu of full disclosure of the invention by the inventor. Without the presence of a patent system the inventor will not be encouraged to disclose his invention and may prefer to keep it as a trade secret, which may lead to sluggishness in the research and development of new technologies.^[2]

Research in the field of drugs & pharmaceutical is very expensive, time consuming and unpredictable in nature. Innovator pharmaceutical companies therefore try to get their research patented in order to prevent market entry of their competitor generic drug companies. However, sometimes patent rights may be subject to abuse by the patent holder.^[3] Pharmaceutical company holding the patent right may not commercialize the patented drug in the country, or may not provide the drug in sufficient quantity to meet the requirements of the public, or may price the drug exorbitantly high. As drugs are an essential commodity, such abusive or monopolistic

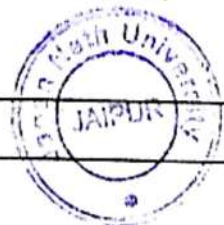
practice by the companies can severely aggravate the sufferings of the patients, especially of the poor ones.

To prevent such abuse of the patent rights, provisions of compulsory license are included in the patent laws. Compulsory licensing is defined by the World Trade Organization (WTO) as a practice in which the government allows someone else to produce the patented product or use the patented process without the consent of the patent owner. It is one of the flexibilities on patent protection included in the TRIPS (Trade Related Aspects of Intellectual Property Rights) Agreement.^[4]

Compulsory licence is an involuntary contract between a willing buyer and an unwilling seller imposed or enforced by the law.^[5] Compulsory licence authorizes a third party to make, use, or sell a patented invention without the consent of the patent holder. In India grant of patent rights and compulsory license are governed by the Patents Act, 1970.

RELEVANCE AND OBJECTIVES OF THE STUDY

In 2012, India issued its first compulsory license for patents. The compulsory license was issued to Natco Pharma Ltd. in patent number 215758 granted to M/s Bayer Corporation. This decision of the Indian government provoked intense debate at the international



The Mesoscopic Structural Analysis of Communities within Facebook Higher Education Online Groups

Dr. Mamta Madan¹, Dr. Meenu Dave², Ms. Meenu Chopra³

ABSTRACT

To understand the social dynamics of the online generation, for example interactions, sharing and their social ties are a crucial and challenging task in the field of computer science. Mainly, due to the unprecedented growth of Online Social Media Networks (OSMNs). In this paper, we talk about community identification and its analysis of aggregation patterns and social dynamics which occurs among the members of the most popular social networking site, Facebook. The life cycle to detect and analyse the online communities formed in these networks, begins with the acquiring of data sets from Facebook Higher Education (HE) social networks, which has been studied only on synthetic networks but not on real-world networks. We discuss in detail various mesoscopic features of community structure of these HE networks for this only we acquired the real-world HE networks by using different network analysis software applications (NASA). These networks contain hundreds of users and their social relationships; after that we discovered the communities represents the clusters or aggregated units among the members of the networks. Lastly, we analysed the communities statistical properties, finding and characterizing some specific motifs, followed by HE network's members. This research paper provides some clues of the user's tendency to gain social interactions in OSMNs that eventually helps in constructing a well-organised and

connected social structure and further opens space for the social network analysis.

KEYWORDS

Higher Education (HE), Network Analysis Software Applications (NASA), Online Social Media Networks (OSMNs).

INTRODUCTION

To find communities in real world graph data analytics is a challenging task. Informally, a community is a densely connected group of nodes that is sparsely connected to the rest of the network. In particular, finding communities in large, complex real world networks are a major and common problem in many scientific and computing fields. In this paper, we analysed communities in our fetched real world datasets networks with known ground-truth communities. By using NASA [24], we empirically analysed and measured the mesoscopic structural properties of the identified communities.

Mining and analysing the most popular social networking site (SNS) i.e. Facebook is the challenging task [1].

Professor, Department of IT, VIPS, Guru Gobind Singh Indraprastha University, Delhi.

Email: mamta.vips@gmail.com

Professor, Department of Computer Science, Jagannath University, Rajasthan.

Email: meenu.s.dave@gmail.com

Assistant Professor, Department of IT, VIPS, Guru Gobind Singh Indraprastha University, Delhi.

Email: meenu.mehta.20@gmail.com

Copyright ©IJICCT, Vol V, Issue I (Jan-Jun 2017); ISSN 2347-7202

This journal is cited as : JIMS 8i-Int'l J. of Inf. Comm. & Computing Technology(IJICCT)



Certified True Copy
Jagan Nath University, Jaipur

Review of Linguistic Text Steganographic Methods

Sunita Chaudhary
Dept. of CS & IT
Jagannath University, Jaipur
er.sunita03@gmail.com

Dr. Meenu Dave
Dept. of CS & IT
Jagannath University, Jaipur
meenu.s.dave@gmail.com

Dr. Amit Sanghi
Dept. of CSE
MEC, Bikaner
dr.amitsanghi@gmail.com

Abstract:- Steganography is a method of concealing confidential data in a cover file such that attacker cannot predict about clandestine data. Steganography exploit cover message, for example content, picture, sound, video record and so forth to conceal a mystery or secret message. Text Steganography is one of a procedure to conceal the one kind (text) of content data inside same type of content messages. Linguistic steganography is the language based steganographic scheme which proposes more advanced methods to hide the secret messages in text. Initially linguistic text steganographic techniques are developed only for the English language. But now days different regional languages are also used to hide the information like Hindi. This paper reviews the different linguistic text steganographic methods of hindi and English language.

Keywords:- Linguistic, Steganography, Text, Random, conceal.

I. Introduction:- Steganography word is a combination of two technical terms. These are Greek words "stegno" and "graphy". The later word means concealing under a cover and former word means art, style of writing etc. or we can say Greek state is the place where Steganography word originates from Greek phrasing and that denote "secured composing or writing". Steganography is the act of concealing a classified message in a different non-mystery message into a harmless digital media with the end goal that it hides correspondence or Steganography is a method of concealing confidential data in a cover file such that attacker cannot predict about clandestine data. Steganography incorporates multiple different strategies for concealing a message in a range of media.

II. Cataloging of Steganography in Different Perspective

1. Classification of Steganography:- Figure 1 elaborates the classification of steganographic approach. Steganography is subdivided into two categories, one is technical steganography and another is linguistic steganography.

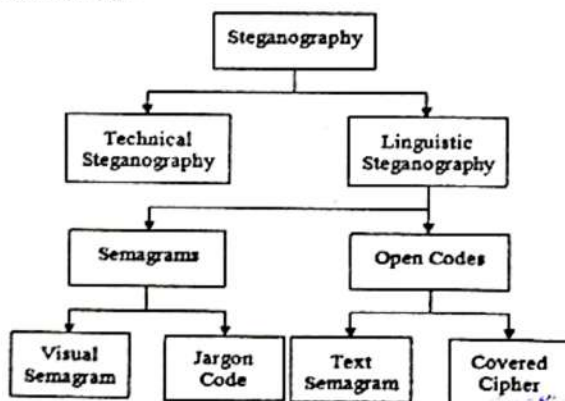


Figure 1. Cataloging of Steganography [1].

Technical steganography deals with the scientific methods like invisible ink and other materialized and size reduction approaches. On the other hand linguistic steganography hide the message by using some non obvious or nontechnical methods. It further can be sub grouped in semagrams and open codes methods. As the name referred semagrams use different symbol and sign of the particular language to hide the message. Visual semagrams generally use the visual effects which attract the innocent people most like; doodles etc. Text semagrams performs changes in the looking of the cover text to hide the message like it make changes in the font size, color, height and width of letters, add extra space, add extra letter etc.[1].

To hide the secret message, open codes use carrier message in such a way that it is not commonly visible to the innocent persons. Open code is categorized in two ways; jargon codes and covered cipher. Jargon code use properties of the particular language to hide the message, so that it can be understood only by the people who are familiar with that particular language. In covered cipher secret message is openly embedded into the carrier message, so it can be recovered by any person who is aware about the method of embedding.[1].

2. Classification of Steganography according to key:- In steganographic system use of key is optional. In the earlier techniques keys are not used, but in current techniques keys are used due to increase in security. As use of key take the security at one level up. So, according to the use of key steganographic system can be categorized in three types as shown in figure 2.

Certified True Copy
Dr. Meenu Dave
Jagannath University, Jaipur

An Approach for Preventing Accidents and Traffic Load Detection on Highways using V2V Communication in VANET

Prashant Panse¹, Dr. Tarun Shrimali², Dr. Meenu Dave³

ABSTRACT

Street security has turned into a fundamental issue for governments and vehicle producers in the most recent a quarter century. The aggregate number of vehicles on the world has encountered an astounding development, expanding activity thickness and bringing on more mishaps. In this paper we emphasized on the problems with traffic load detection on highways and proposed a system to detect and prevent accidents on highway using vehicular ad hoc network. For this, we are implementing a vehicle 2 vehicle communication scenario with weighted cluster algorithm (WCA) and computing the performance on different parameters of network. Day to day population increase in India, leading to massive increase in road traffic. The improvement of new vehicular advancements has moved organizations, specialists and foundations to center their endeavors on enhancing street security and it is of prime need now a days.

KEYWORDS

VANET, Ad Hoc Network, D2ITS, ITS, DBCV algorithm.

INTRODUCTION

Amid the most recent decades, the advancement in radio advances has permitted specialists to outline correspondence frameworks where vehicles take part in the communication systems. Along these lines systems, for example, Vehicular Ad-hoc Networks are made to encourage communication between vehicles themselves and in the middle of vehicles and infrastructure. Vehicular ad hoc network is a new type of network in which nodes (i.e. vehicles) communicate with each other and possibly with a roadside infrastructure [1]. The aim/goal of VANET includes auto crash prevention, more secure streets and clog decrease etc. The improvement of an effective system in vehicular network has numerous important advantages, from road operators as well as drivers point of view. Efficient Effective movement alarms and overhauled data about traffic incidents will diminish car influxes, expand street wellbeing and enhance the sheltered driving on the Highways. Vehicular ad hoc networks are getting consideration because of the various important applications related to street safety and movement control. Our proposed work includes the concept for detection of congestion and provides information to driver regarding the same and communicating these to other vehicles. We are using a remote server to take a decision for the same. Additionally, to increase the decision performance of the

remote server, this is connected in RSU (Road Side Unit) device as intermediate communicating device; these devices are fully functional devices and able to work as sender, receiver and route device. The server is implemented to make rule based decision and broad cast a message as alert to all the car drivers. The proposed work provides the efficient and effective architecture for complete alert process.

RELATED STUDY

The related research in VANET focuses on simulating vehicular traffic [2, 3, 4, 5, 6, 7] and multi-hop routing [8, 9, 10, 11] A few researches have considered the issue of utilizing VANETs to find and disperse traffic congestion data [12, 13, 14]. Using vehicle based GPS systems we can create an ad-hoc wireless network that can find and disseminate traffic congestion information. Collision avoidance systems [15, 16] are designed to detect a traffic incident in real-time and rapidly relay this information to nearby vehicles to prevent a collision. These systems are very different from traffic congestion systems, in the former, information should be transferred quick over short separations and should be to a great degree solid as it has an immediate impact on life-and-demise circumstances, while in the latter data remains current for a more extended time, should be dispersed over long separations and is used for congestion amelioration.

Fukumoto et al. [17] proposed a system that uses vehicle based GPS systems to discover and disseminate traffic congestion information, the system is called COC for VANET. This system maintains and disseminates three types of information: Raw Information (level 1), density information (level 2) and congestion areas information (level 3).

Donrbush et al. [18] from the University of Maryland proposed a novel system for congestion detection in VANET: Street smart that uses grouping as an information total method to consolidate related recordings of abnormally slow speed. Street-smart uses clustering algorithms that work over a distributed network where each node analyzes the collected statistics eliminating the need for a central entity.

Yoon et al. [19] proposed a system for traffic estimation that is based on road segmentation and focuses on complex inner-city traffic scenarios. Some of these systems rely, either explicitly or implicitly, on having the location for all vehicles in the congestion available in order to make the determination that congestion exists and where it is located. When congestion sizes exceed transmission ranges, common in freeway scenarios

¹ Ph.D. Scholar, JaganNath University, Jaipur

Email: ¹prashantpanse@gmail.com

² Principal, Sunrise Group of Institution, Udaipur

Email: ²shrimalitarun@gmail.com

³ Professor, CS/IT Department, JaganNath University, Jaipur

Email: ³meenu.s.dave@gmail.com







Certified True Copy

Jagan Nath University, Jaipur

30

Corpus ID: 3857052

Share This Paper    

Energy Efficient Query Optimization in WSN using ThreeLevel Modelling





SEMANTIC SCHOLAR

Search 204,844,578 papers from all fields of science

Search 

 Research 

 Account 

different types of applications such as health care monitoring, fire detection etc. In these applications, large amount of data generated by the sensors are communicated to the base station, which will provide final result for the query. Since the sensor nodes are energy constraint devices, energy efficient query methods and storage of the data is required. Clustering is playing an important role in enhancement of the energy level of the sensor and scalability of the network. Since communication depletes the energy level of the sensor, further selection of cluster head is important for reducing the communication cost. In this paper, we are introducing the model along with algorithm for the cluster head selection and efficient query processing in WSN. Collapse

[iosrjournals.org](https://www.iosrjournals.org)

 Save

 Alert

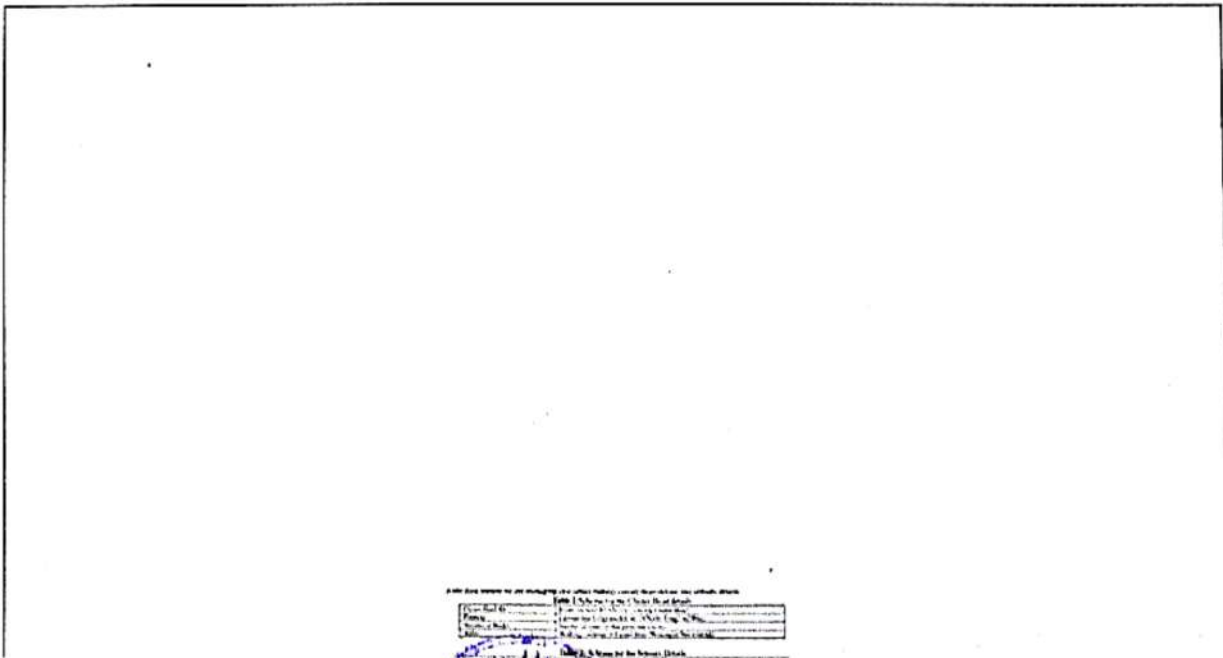
Abstract

Tables

11 References

Related Papers

Tables from this paper




Jagan Nath University, Jaipur

Data Mining Techniques for Software Defect Prediction

Ms. Tripti Lamba
 Research Scholar
 JaganNath University, Jaipur

Dr. Kavita
 Associate Professor
 JaganNath University, Jaipur

Dr A.K.Mishra
 Sr. Scientist AKMU, IARI
 Pusa Campus, New Delhi

Abstract- Quality and reliability are the major challenges faced in a secure software development process. There are major software cost overruns when a software product with bugs in its various components is deployed at client's side. The software warehouse is commonly used as record keeping repository which is mostly required while adding new features or fixing bugs. Software bugs lead to inaccurate and different results. As an outcome, the software projects run late, are cancelled or becomes unreliable after deployment This paper entails a detailed literature review on the existence of software failures in the recent past, while briefly discussing about the severe repercussions of these failures. In order to identify these bugs timely, different data mining techniques have been discussed, and used by the researchers profusely, simultaneously with the bug tracking systems to locate the occurrence of the bugs precisely. Bug tracking system plays a vital role in software project as poorly designed bug tracking system are partly to be blame for the delay to resolve problem. Many researchers have suggested different ways to improve the bug tracking system. Bug repositories are major source of database which keeps the history of success and failure. This paper also discusses the interesting approaches to convert software repositories to active repositories and also discuss how systematic mining uncovers which modules are most prone to defects and failures. Diverse social and technical issues are associated with software failure and software defects are the major causes for the degradation of quality of product. In software engineering, most active research is software defect prediction. Bug fix time prediction model like pre-release, post-release defect and different metrics to predict failures is been discuss in this paper.

Keywords: Software repository, bug tracking system, software defect prediction model, software metrics.

Software engineering data contains a massive amount of information for the development and progress of any software project. Hassan et.al. [12] investigated that stored software evolution supports various aspects of software development within industrial software development process. To produce high quality software systems, researchers are using data mining techniques to explore the valuable data to better manage the projects and develop within time and budget. Data mining techniques such as clustering, classification and association rules and various statistical techniques are involved to extract actionable information from data sets. Data mining is not only applicable to marketing data, drug designing, weather forecasting etc. but also has been used by the software development industries to manage their software development processes. As shown in the figure 1. to expand a better understanding of software defects, to analyze software defects patterns and to predict them in future software development and testing processes data mining techniques has been applied to software development depository. A number of data mining techniques have been developed for bug detection, prediction and

prevention. To accomplish the data mining job various software tools are available to analyze large quantities of data and apply different data mining techniques [27].

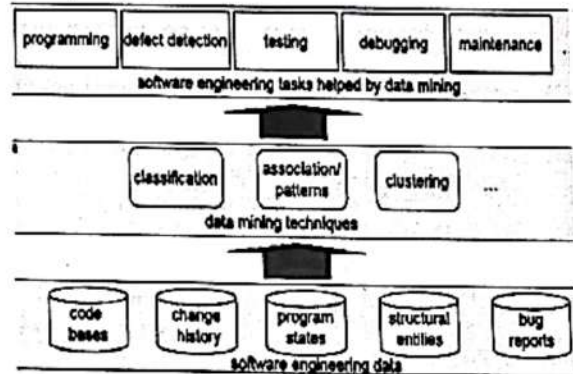


Figure 1: Mining SE Data[2]

The mining of software repository is among the upcoming research areas and have many research challenges to be addressed. Various business intelligence techniques used in another area of decision support system can be applied by the name of software intelligence for mining software repositories, for extracting predictive information regarding software bugs at development phase so



Security Issues in Android Smart Phones

Rama Bhatia (Assistant Professor)¹,
Dr. Renu Bagoria (Associate Professor)², Prof. (Dr.) Barjesh Kochar³

ABSTRACT

The various research work has been done in the field of smart phone and its security issues. In this Paper, we study the research work of security issues in Android done by various author this help us in detecting different malwares already found in smart phones which indicates the security issues in Mobile Applications. Since quantitative measurements are essential in all sciences, there is a continuous effort by computer science practitioners and theoreticians to bring similar approaches to software development this motive us to further assess the efficiency of the Android applications.

KEYWORDS:

Android, Malware, Smart
Phones. I.

INTRODUCTION

According[37] to data from the International Data Corporation (IDC) Worldwide Quarterly Mobile Phone Tracker the demand of smart phones increased in 2015, moreover the Andorid dominate iphone and other mobile operating systems. This increases the threats in smart phones. PCs Anti- Virus develop to identify and analyze new, old and unknown Malware. A virus scanner [38] can block viruses, worms, and Trojan horses from infecting the often real time monitored system. Although behavioural detection[11] is mostly included in anti-virus software, most malware is detected by scanning for and finding a certain patterns, also called signatures. Therefore, the malware has to be known by the scanner through a signature database, otherwise it is not able to detect and remove it. For generating these signatures, malware needs to be analysed for identifying significant and meaningful patterns that should be unique to the malware and its relatives But not only signature generation requires analysis; in order to disinfect a system, the behaviour of the malware needs to be understood for being able to undo critical changes. For analyzing softwares sandboxes e.g. CWSandbox [39] or Java sandboxes [40], can be used, which guarantees an almost realistic execution of suspicious binaries in an isolated environment in stationary computers but not

in smartphones. Since smart phone malwares are increasing day by day this raises concerns in smart phone industry[41, 42] and it can be expected that new malware will emerge for popular mobile Operating Systems like iPhone or Android. . In this case, the work of analyzing the software are done by anti-virus only. This would not be that concerning but Oberheide et al. [4] showed that the average time for receiving a signature for a new malware is about 48 days. This in turn means that users with infected system need to wait 48 days until they have a chance to disinfect it, leaving the window of opportunity very wide open for new malware. Moreover With the increasing capabilities of such phones, more and more malicious software (malware) targeting these devices have emerged. In 2004, the first articles about malware for smartphones [1, 2] appeared describing mobile devices as the next generation of targets. Android gained popularity because of [1]-[4], so we need resource limited security mechanism for mobile apps assessment. Therefore, we present an approach to analyze Android-based applications.

RELATED WORK

In the following section, we give a short introduction to the field of security issues using malwares found in smart phones.

A. SMARTPHONE AND ITS SECURITY

Need of today's fast life demands mobiles at almost every stage, from last some years we saw a young to old generation people all over the world was connected through phones and then slowly with computers, mobiles and now it's a time of smart phones . Smart phones are mobile phone that performs many of the functions of a computer, typically having a touch screen interface, Internet access, and an operating system capable of running downloaded apps. With smart phones many mobile apps are coming to facilitate the users. Whether its education, health, internet web browsers, online shopping, banking and many more all the things are getting mobile. User is felling benefited by using these mobile apps "Any Where Any Time". This

<mailto:rmabhatia@gmail.com>¹ rmabhatia@gmail.com

<mailto:renu.bagoria@jagannathuniversity.org>² renu.bagoria@jagannathuniversity.org

barjeshkochar@gmail.com³

Copyright ©IJICCT, Vol IV , Issue I (Jan-Jun 2016):ISSN 2347-7202

This journal is cited as : JIMS 81-Int'l J. of Inf. Comm. & Computing Technology(IJICCT)



Certified True Copy
Jagan Nath University, Jaipur

93

608

Article

An analytical approach towards CPU, memory & ui performance assessment of android apps

January 2016

Authors:



Rama Dhatia
PSB Academy



R. Bagoria



A.K. Mohapatra

Request full text

Download citation

Copy link



To read the full-text of this research, you can request a copy directly from the authors.

References (1)

Abstract

Android based smart phones have emerged as the most popular mobile devices in the present days. Android apps are also playing the major role for the success of any android phones. The Competition among similar kind of apps are increasing day by day. In this paper, we reviewed the research work related to the various performance issues of android apps. The performance of the similar types of apps has been carried out in terms the usage of CPU, usage of Memory and user interface rendering speed. The result shows that some of the apps take more CPU usage while others take less. Memory leakage in most of the apps is a major concern for the android developers.

Welcome back, Vjay



Login to request the full text — ResearchGate members are on average over 4 times more likely to get full texts.

Log in This isn't me

No full-text available

To read the full-text of this research, you can request a copy directly from the authors.

Request full text PDF

Citations (0)

References (1)

A performative perspective on UX

Article Full-text available

Apr 2012



Certified True Copy

Jagan Narayan University, Jaipur

Intelligence based Outlier Disclosure for UDBMS at Sensor: Wireless Body Sensor Network

Chetna Laroia¹, Dr. V. B. Aggarwal²

¹(Computer Science Department, Jaagn Institute of Management Studies affiliated to GGSIPU

²(Dean Computer Science Department, Jagan Institute of Management Studies affiliated to GGSIPU, India

ABSTRACT: Life style always has great impact on everyone's health. Today's time demands for the use of wireless sensor technology to assist in patient monitoring at home or at hospital. Sensors are working in constraint environment majorly with respect to energy. Major research area for wireless sensor networks are energy consumption at sensor for computation or transmission, energy efficient communication protocol, complex operation (outlier detection / data mining) algorithm, complex operation technology (web services or middleware) and place to support complex operations (at different locations i.e. sensor/PDA/server). UDBMS architecture for complex operations (at sensor / PDA/ server). This paper views current implementation of complex operations at sensor data for UHealthCare domain. Our focus is on the implementation of outlier detection technique at sensor device for regular monitoring of sugar and BP level in the body to know whether the combination of the two leads to critical condition which could be notified as an alert. As per our finding UDBMS has been developed for deployment at the sensor to dynamically create and store databases at sensor and also to execute ad-hoc query at sensor itself. Work has to be done to ensure the viability of implementation of complex operation at sensor node.

Keywords: WBSN, Joint probability, Middleware, Web Services, UDBMS, Tight-coupling, Loose-coupling

I. INTRODUCTION

Any Wireless Sensor Network (WSN) is a collection of nodes and gateway each one equipped with radio transmitter, (radio module) processor (microprocessor module), sensors (sensor module) and memory (memory module) which is deployed for various applications i.e. in geographical monitoring (seismic activity), habitat monitoring (tracking of animal herds), transportation (traffic monitoring), medical diagnosis [4].

Introduction of technology in healthcare domain leads to ease in our life style in terms of self monitoring of physiological parameters of our body along with remote monitoring by the medical experts. One may get advice from experts anywhere on the physiological imbalance of one's body.

With the introduction of sensors in healthcare, a new term WBAN has come to existence which consists of a no of sensors working on RF technology with in a range of approximately two meter as per the chosen WBAN technologies. A PDA with in 10m - 100m range of sensors works as router to connect WBAN to WMAN through WPAN.

1.1 Some working models under Ubiquitous HealthCare Monitoring

Panasonic and Jewish home life care launch Telemedicine Pilot Program that use televisions as an interactive portal to connect patient and hospital staff for healthcare monitoring.

Patient's real time data stream is analysed at the remote end. Infosys has a Service-Oriented Architecture (SOA) platform-based disease management and lifestyle management portal solution, Affordable Care Act ("The Affordable Care Act" or ACA). Amedisys (Bringing home the continuum of care) an American organization working under Affordable Care Act ("The Affordable Care Act" or ACA) to improve the quality of healthcare at home.

1.2 Placeholders of Complex Operations

Complex operations are possible in following ways (i) distributed processing of sensor data, (ii) centralized processing of data from sensor, (iii) Hybrid approach. [7]

Certified True Copy



Handwritten signature and scribbles

Applications of Big Data in the Digital India: Opportunities and Challenges

¹ **Vinay Kumar**

Professor, Vivekananda School of IT, VIPS,
GGSIU, New Delhi 110 088, India.

² **Arpana Chaturvedi**

Asst. Professor, Jagannath International Management School,
JIMS, GGSIPU, New Delhi 110070, India.

³ **Poonam Verma**

Asst. Professor, Jagannath International Management School,
JIMS, GGSIPU, New Delhi 110070, India.

DOI: <http://dx.doi.org/10.21013/jte.v3.n3.p7>

How to cite this paper:

Kumar, V., & Chaturvedi, A. (2016). Applications of Big Data in the Digital India: Opportunities and Challenges. *IRA-International Journal of Technology & Engineering* (ISSN 2455-4480), 3(3). doi:<http://dx.doi.org/10.21013/jte.v3.n3.p7>

© Institute of Research Advances



This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License subject to proper citation to the publication source of the work.

Disclaimer: The scholarly papers as reviewed and published by the Institute of Research Advances (IRA) are the views and opinions of their respective authors and are not the views or opinions of the IRA. The IRA disclaims of any harm or loss caused due to the published content to any party.



Certified True Copy

[Signature]
Jagan Nath University, Jaipur

164



International Journal of Current Research and Academic Review

ISSN: 2347-3215 Volume 4 Number 12 (December-2016) pp. 135-149

Journal home page: <http://www.ijcrar.com>

doi: <http://dx.doi.org/10.20546/ijcrar.2016.412.013>



A Study of the Female Buying Behaviour of Handbags Shopping in South Delhi Malls, India

Tanvi Gupta*

Jagannath International Management School, Kalkaji, New Delhi-110019, India

*Corresponding author

KEYWORDS

Economic liberty, sales promotion, female buying behavior, handbag shopping.

ABSTRACT

Female buying behavior has been a popular topic of research in the recent past due to the changing roles of women in the society in terms of economic liberty, psychological-behavioral changes, up rise of working women culture, increased market awareness, independent decision making and many more. This study is an initiative in the same direction concentrating on the female buying behavior for handbag shopping in selected malls in South Delhi. It has been undertaken to find the impact of age, income and marital status on their purchase behavior. Another objective of the study is to find whether sales promotion impacts handbags sale positively. The sample size constitutes 100 female shoppers, visiting the handbag stores in the malls of South Delhi. Sampling method chosen was simple random sampling. The sample is heterogeneous in nature as it includes females from different economic status, age groups and marital status. Primary data has been collected through getting the questionnaires filled in person which is further analysed statistically. The result shows that economically independent women buyers in the age group of 25-45 tend to spend more on handbag shopping. Also, married women are influenced by their spouse in the buying decision in comparison to the unmarried ones. Almost, 86% of the women preferred to buy handbags under the influence of sales promotion strategies. Hence, this study is useful for the marketers to appropriately implement the promotion mix in order to gain higher revenues.

Introduction

Products communicate differently to different people .The difference in value perception of a product is based on different factors in which demographical and

economic differences play a major role. Also, with cut throat competition in every industry, marketers have realized the potential of innovative promotional tools



Certified True Copy

Jagannath University, Jaipur



Published by: South Asian Academic Research Journals

SAJMMR:

**South Asian Journal of
Marketing & Management
Research**

(A Double Blind Refereed & Reviewed International Journal)



DOI NUMBER: 10.5958/2249-877X.2016.00041.2

A STUDY OF THE FEMALE BUYING BEHAVIOUR OF HANDBAGS SHOPPING IN WEST DELHI MALLS

Dr. J.K. Batra, *; Ms. Tanvi Gupta **

*Director,
Jagannath International Management School,
New Delhi, India.
**Assistant professor,
Jagannath International Management School,
Kalkaji, New Delhi

ABSTRACT

In the present era, studying female buying behavior has become a matter of great prominence due to the level of changes in female behavioural patterns and the overall advancements in the societal outlook towards women. They are no more bound to the four walls of the house. Women of today has come out of the traditional shackles posed on them by the Indian society and have established their individual identities. Therefore, it is quite relevant to study the behavior of the modern women in regard to the various product segments. This study aims at finding the relationship impact of age, gender and marital status of women on handbags shopping from malls in West Delhi. Also, the other objective is to analyse the impact of promotion strategies on the female while buying handbags from malls. Malls these days serve as a popular outlet for shopping of different products under one roof and Delhi, being a metropolitan city has got a number of huge malls serving the consumers. This is an empirical research with a sample size of 100 females found shopping handbags in the malls of West Delhi. The questionnaires used were got filled in person with the female buyers. It was revealed that economically independent women buyers in the age group of 20-40 tend to spend more on handbag shopping. Also, married women are influenced by their spouse in the buying decision in comparison to the unmarried ones. More than 80% of the women preferred to buy handbags under the influence of sales promotion strategies. Hence, this study is useful for the marketers to emphasize the appropriate promotion strategies to gain higher revenues.

South Asian Academic Research Journals
<http://www.saarj.com>



Certified True Copy

Dr. J.K. Batra
Jagannath University, Jaipur

Strategies for Reducing Farmers' Suicide using ICT

*Basu Dev Sharma, ** Mithilesh Dubey

To Cite: Sharma, Basu Dev & Mithilesh Dubey. (2016). Strategies for Reducing Farmers' Suicide using ICT. *BRICS Journal of Educational Research*, 6(4),00-00.

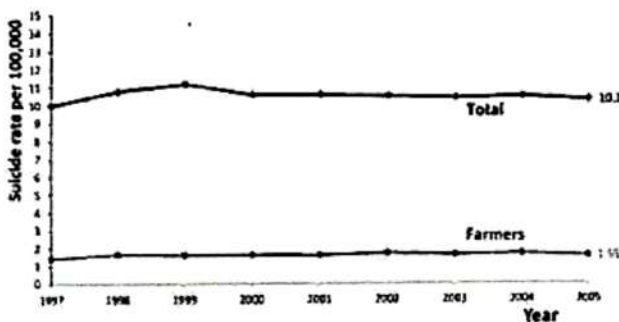
*Research Scholar, Jagannath University, Jaipur.
**Research Supervisor, Jagannath University, Jaipur.

Corresponding author:
Basu Dev Sharma

Abstract

India is an agrarian country with around 60% of its people depending directly or indirectly upon agriculture. Farmer suicides account for 11.2% of all suicides in India. Activists and scholars have offered a number of conflicting reasons for farmer suicides, such as monsoon failure, high debt burdens, government policies, public mental health, personal issues and family problems. Role of ICT using appropriate technology can reduce farmers suicide attempts as well as can increase the GDP of the nation and increase crop productions drastically. Also there is need to improve the strategies at FCI level to increase the life of crops produced and improving the logistics infrastructure and communication system to improve the situation during drought and flood affected regions.

In 2014, the National Crime Records Bureau of India reported 5,650 farmer suicides. The highest number of farmer suicides were recorded in 2004 when 18,241 farmers committed suicide. The farmers suicide rate in India has ranged between 1.4 and 1.8 per 100,000 total population, over a 10-year period from 2005.



Historical records relating to frustration, revolts and high mortality rates among farmers in India, particularly cash crop farmers, date back to the 19th century. The high land taxes of 1870s, payable in cash regardless of the effects of frequent famines on farm output or productivity, combined with colonial protection of usury, money lenders and landowner rights, contributed to widespread penury and frustration among cotton and other farmers, ultimately leading to Deccan Riots of 1875-1877.

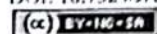
Various reasons have been offered to explain why farmers commit suicide in India, including: floods, drought, debt, use of genetically modified seed, public health, usage of lower quantity of pesticides due to less investments produce a decreased yield and also government economic policies. As much as 79.5% of India's farmland relies on flooding during monsoon season, so inadequate rainfall can cause droughts, making crop failure more common. In regions that have experienced droughts, crop yields have declined, and food for cattle has become

scarcer. Agricultural regions that have been affected by droughts have subsequently seen their suicide rates increase.

During 2014, major causes of suicides among male farmers were 'Bankruptcy or Indebtedness' and 'Family Problems', which accounted for 21.5% and 20.0% respectively of total male farmers' suicides. Whereas, in female farmers' suicides, 'Farming Related Issues' followed by 'Family Problems', 'Marriage Related Issues' and 'Bankruptcy or Indebtedness' were major causes of suicides, accounting for 21.4% (101 out of 472 suicides), 20.6% (97 suicides), 12.3% (58 suicides) and 10.8% (51 suicides) respectively during 2014.



In an article in The Indian Express, it is expressed: For over a decade, farmer suicides in India has been a serious public policy concern.... Indebtedness has been highlighted as the prime cause and leading public intellectuals have called for an end to the "debt deaths". The worst cases of farmers committing suicides come from the states of Andhra Pradesh, Karnataka and Maharashtra. What are the grave adversities that drive



Effect of growth regulators on callus morphology of Rice anther culture

Avinash Sharma*, Dalpat Lal and Monoj Sutradhar

University of Agricultural Sciences, GKVK, Bengaluru, India.

ARTICLE INFO

Article history:

Received on: 29/01/2017

Accepted on: 14/03/2017

Available online: 19/06/2017

Key words:

Anther culture, Japonica rice, Haploids, Callus morphology, Callus texture.

ABSTRACT

The present investigation was undertaken to know the effect of various combination of auxin and cytokinin on callus morphology in japonica rice. As the callus induction is a prerequisite for anthers culture and finally development of haploids certain callus morphology criteria empirically identified. Among the colour of callus, this was either white or yellow. The white colour was preferred. In addition to callus growth determine empirically low, medium and high define as 1, 2 and 3 respectively. Callus texture was also identified as compact and friable but compact texture was accepted as more promising. Callus morphology is an empirical which can be use to predict the regeneration ability of calli.

1. INTRODUCTION

Rice (*Oryza sativa* L.) is the world most important food supplier cereal crop after wheat and maize. It provides half of total dietary carbohydrate, especially in Asian countries and it is suitable diet for more than three billion people, supplying 50-80 % of their daily calorie intake [1]. However, traditional rice breeding methods are not sufficient to fulfill the demands of growing population. The production of haploids via anther culture represents an alternative biotechnology tool for crop improvement programs. Several advantages of haploid culture technique have been reported in the breeding program [2; 3 and 4]. Anther culture is an important technique to develop homozygous line by shortening of the breeding cycle of new varieties and allows early expression of recessive genes. Beside the advantages of using the techniques, anther culture has disadvantages and constraints, i.e., low efficiencies of callus production, low frequency of plant regeneration, and high proportion of albino plants [5, 6]. Several factors are effecting the callus texture derived from *in vitro* anther culture of rice are types of growth regulator along with its concentrations, genotype and microspore developmental stages [7]. Texture and colours of the calli reflect their green plantlet redifferentiation competences. The embryogenic calli which were milky white in colour and compact in texture had excellent regeneration ability. However, friable calli had poor plant regeneration ability or did not

respond at all. These results are indicated that the callus induction medium has an influence on the morphogenic competence of the induced callus, determining its regeneration capability [8]. It was reported that there are conditions in which genotypes show high callus induction has displayed poor regeneration ability and vice versa [9]. Application of higher dose of auxin sources can significantly increase the callus induction efficiency, however such calli are less in embryogenic and poor in green plant regeneration. Anthers of three rice cultivars viz, BR-3, BR-10 and BRRI Dhan 29 produced friable and compact callus texture with white in colour in Z₂ media containing 2 mg/L 2, 4-D + 2.5 mg/l NAA + 0.5 mg/l Kinetin [10]. Many an embryogenic and nonembryogenic callus with multiple colours (white, yellow and brown) reported in rice cultivar Swat II on MS media containing different concentration of auxin and kinetin with Tryptophan [11]. The rice cultivars chinigura, kalijira, Radhuni pagal, modhumala, kataribog and mohonbhog produce compact callus texture with white in colour in media containing different concentration of 2, 4-D and NAA [12]. Anthers of BC₂F₃ of *Oryza sativa* L. × *Oryza rufipogon* regenerate double haploid lines through compact callus texture with light green colour in N6 media containing 2 mg/l NAA + 0.5 mg/l Kinetin + 2 mg/l 2, 4-D [13]. Different type of callus texture with multiple callus colour reported in rice cultivar Swarna on N6 media containing 2, 4-D, 2, 4-D + Kinetin, 2, 4-D + BAP and 2, 4-D + NAA [14]. With this background the present study was aimed to know effect of growth regulators on morphological characters of callus (texture and colour) produced by japonica rice varieties through anther culture.

* Corresponding Author
E-mail: avinashcau@gmail.com



Certified True Copy

Jagan Nath University, Jaipur



Effect of growth regulators on callus morphology of Rice anther culture

Avinash Sharma*, Dalpat Lal and Monoj Sutradhar

University of Agricultural Sciences, GKVK, Bengaluru, India.

ARTICLE INFO

Article history:

Received on: 29/01/2017

Accepted on: 14/03/2017

Available online: 19/06/2017

Key words:

Anther culture, *Japonica* rice, Haploids, Callus morphology, Callus texture.

ABSTRACT

The present investigation was undertaken to know the effect of various combination of auxin and cytokinin on callus morphology in *Japonica* rice. As the callus induction is a prerequisite for anthers culture and finally development of haploids certain callus morphology criteria empirically identified. Among the colour of callus, this was either white or yellow. The white colour was preferred. In addition to callus growth determine empirically low, medium and high define as 1, 2 and 3 respectively. Callus texture was also identified as compact and friable but compact texture was accepted as more promising. Callus morphology is an empirical which can be use to predict the regeneration ability of calli.

1. INTRODUCTION

Rice (*Oryza sativa* L.) is the world most important food supplier cereal crop after wheat and maize. It provides half of total dietary carbohydrate, especially in Asian countries and it is suitable diet for more than three billion people, supplying 50-80 % of their daily calorie intake [1]. However, traditional rice breeding methods are not sufficient to fulfill the demands of growing population. The production of haploids via anther culture represents an alternative biotechnology tool for crop improvement programs. Several advantages of haploid culture technique have been reported in the breeding program [2; 3 and 4]. Anther culture is an important technique to develop homozygous line by shortening of the breeding cycle of new varieties and allows early expression of recessive genes. Beside the advantages of using the techniques, anther culture has disadvantages and constraints, i.e., low efficiencies of callus production, low frequency of plant regeneration, and high proportion of albino plants [5, 6]. Several factors are effecting the callus texture derived from *in vitro* anther culture of rice are types of growth regulator along with its concentrations, genotype and microspore developmental stages [7]. Texture and colours of the calli reflect their green plantlet redifferentiation competences. The embryogenic calli which were milky white in colour and compact in texture had excellent regeneration ability. However, friable calli had poor plant regeneration ability or did not

respond at all. These results are indicated that the callus induction medium has an influence on the morphogenic competence of the induced callus, determining its regeneration capability [8]. It was reported that there are conditions in which genotypes show high callus induction has displayed poor regeneration ability and vice versa [9]. Application of higher dose of auxin sources can significantly increase the callus induction efficiency, however such calli are less in embryogenic and poor in green plant regeneration. Anthers of three rice cultivars viz, BR-3, BR-10 and BRR1 Dhan 29 produced friable and compact callus texture with white in colour in Z₂ media containing 2 mg/L 2, 4-D + 2.5 mg/l NAA + 0.5 mg/l Kinetin [10]. Many an embryogenic and nonembryogenic callus with multiple colours (white, yellow and brown) reported in rice cultivar Swat II on MS media containing different concentration of auxin and kinetin with Tryptophan [11]. The rice cultivars chinigura, kalijira, Radhuni pagal, modhumala, kataribog and mohonbhog produce compact callus texture with white in colour in media containing different concentration of 2, 4-D and NAA [12]. Anthers of BC₂F₃ of *Oryza sativa* L. × *Oryza rufipogon* regenerate double haploid lines through compact callus texture with light green colour in N6 media containing 2 mg/l NAA + 0.5 mg/l Kinetin + 2 mg/l 2, 4-D [13]. Different type of callus texture with multiple callus colour reported in rice cultivar Swama on N6 media containing 2, 4-D, 2, 4-D + Kinetin, 2, 4-D + BAP and 2, 4-D + NAA [14]. With this background the present study was aimed to know effect of growth regulators on morphological characters of callus (texture and colour) produced by *Japonica* rice varieties through anther culture.

* Corresponding Author
E-mail: avinashcau@gmail.com



Certified True Copy
Jagan Nath University

102

P-ISSN: 2455-1124
E-ISSN: 2455-1198



PLEBS JOURNAL OF LAW

Dec. 2016
Volume 2 Number 2

32



Chief Editor
Dr. Raj Kumar

[Handwritten signature]



Jagan Nath Gupta *[Handwritten signature]*

Dr. Shweta - Mond.

p-ISSN 2454-4124

e-ISSN 2455-5096

PLEBS JOURNAL OF LAW

Dec. 2015

Volume-II, Number-II

Half Yearly

(A Refereed & Indexed Journal)

Certified True Copy

Signature
Legal Officer / Registrar

Under the Aegis of
PLEBS ASSOCIATION OF LAW TEACHERS

Certified True Copy



Signature
Date

Contents

Influence of Social Media in Evolution of Participatory Democracy in India <i>Rudrali Patil and Suhas Hosamani</i>	1-20
Legal Provisions for the Protection of Scheduled Castes and Scheduled Tribes: An Analysis <i>Dalliandeep Kaur</i>	21-34
Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex- Selection) Act, 2003- A Critical Analysis <i>Dr. Shweta Dhand</i> ✓	35-41
An Insight into Criminalization of Politics in India <i>Prof.(Dr.) Mahendra Tiwari and Dr. Abhishek Baplawat</i>	42-56
The Role of Police in The Administration of Criminal Justice: Under British Crown to Democratic India <i>Prof. G.S. Rajpurohit and Dr. Raj Kumar</i>	57-97
Judicial Activism – What Kind? <i>Dr. Vijay Pal Singh</i>	98-106
“Unfinished Agenda Of Indian Constitution” Under Article 44 <i>Dr. Gulab Rai</i>	107-111
State of West Bengal vs. Committee for Protection of Democratic Right: A Case Study <i>Akansha Srivastava and Sagar Khanna</i>	112-118
The Need of Nuclear Energy in India: Role of Law and Policies <i>Jyoti Jain</i>	119-131



Certified True Copy

Jagan Nath University

G.H.S. Institute of Law for Women
SIDHWAN KHURD-142024 (Ldh.)
Principal

103

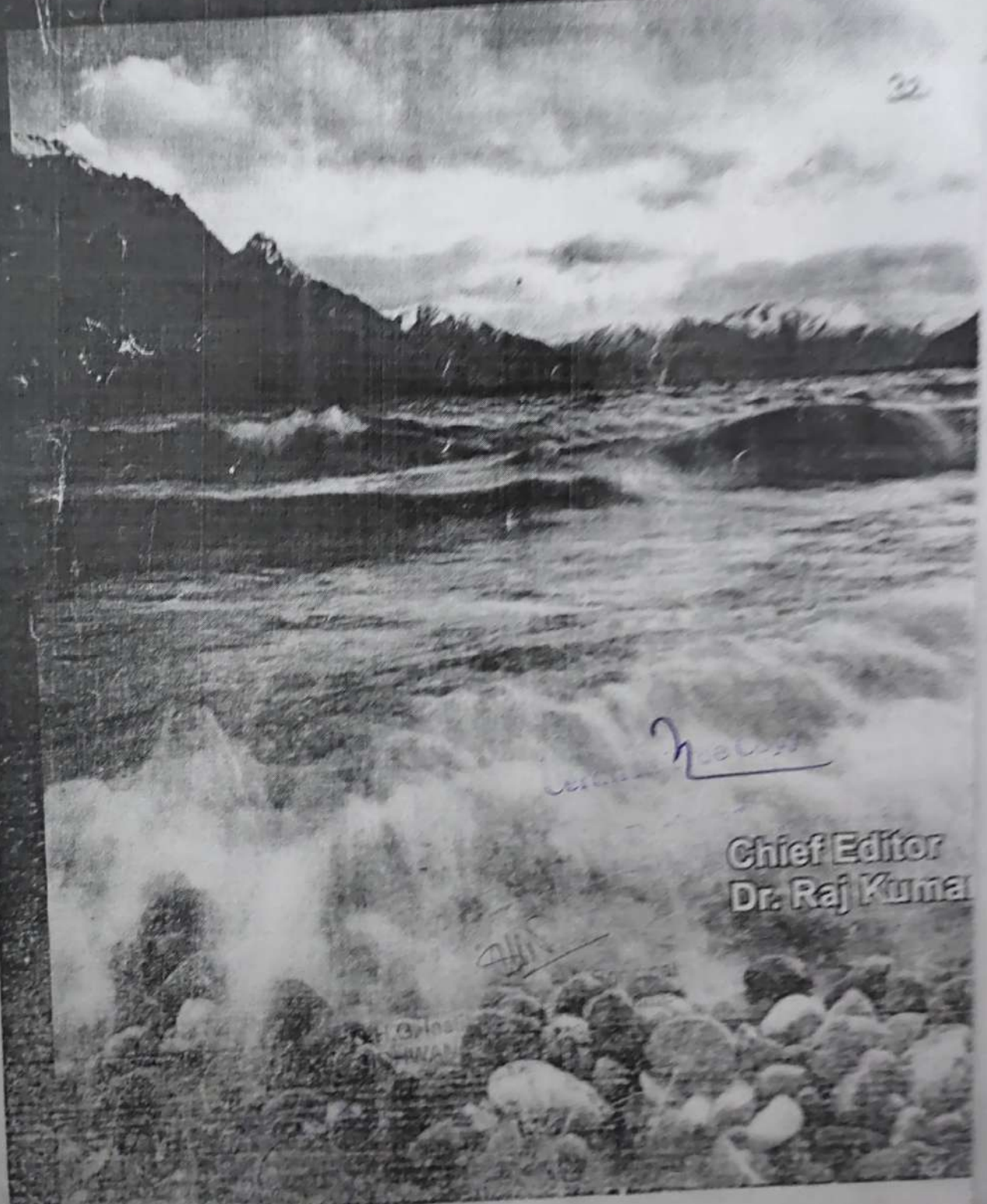
p-ISSN : 2454-1124
e-ISSN : 2454-1125



PLEBS JOURNAL OF LAW

Dec. 2016
Volume : 2 Number : 2

22



Chief Editor

**Chief Editor
Dr. Raj Kumar**

[Handwritten signature]



Dr. Shweta Shand.

p-ISSN : 2454-4124
e-ISSN : 2455-5096

PLEBS JOURNAL OF LAW

Dec. 2016
Volume-II, Number-II
Half Yearly

(A Refereed & Indexed Journal)



Certified True Copy

[Signature]
Jagan Nath Choudhary, Jaipur

Under the Aegis of
PLEBS ASSOCIATION OF LAW TEACHERS



Principal
G.H.G. Institute of Law for Women
SIDHWAN, RAJ. RD-142034 (Raj.)

Contents

Influence of Social Media in Evolution of Participatory Democracy in India 1-20
Rudrali Patil and Suhas Hosamani

Legal Provisions for the Protection of Scheduled Castes and Scheduled Tribes: An Analysis 21-34
Dalliaandeeep Kaur

Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex- Selection) Act, 2003- A Critical Analysis 35-41
Dr. Shweta Dhand ✓

An Insight into Criminalization of Politics in India 42-56
Prof.(Dr.) Mahendra Tiwari and Dr. Abhishek Baplawat

The Role of Police in The Administration of Criminal Justice: Under British Crown to Democratic India 57-97
Prof. G.S. Rajpurohit and Dr. Raj Kumar

Judicial Activism – What Kind? 98-106
Dr. Vijay Pal Singh

“Unfinished Agenda Of Indian Constitution” Under Article 44 107-111
Dr. Gulab Rai

State of West Bengal vs. Committee for Protection of Democratic Right: A Case Study 112-118
Akansha Srivastava and Sagar Khanna

The Need of Nuclear Energy in India: Role of Law and Policies 119-131
Jyoti Jain

Certified True Copy

Jagan Mohan
Jagan Mohan

G.H.G. Institute of Law for Women
SIDHWAN KHURD-142024 (Ldh.)
Principal



104

619

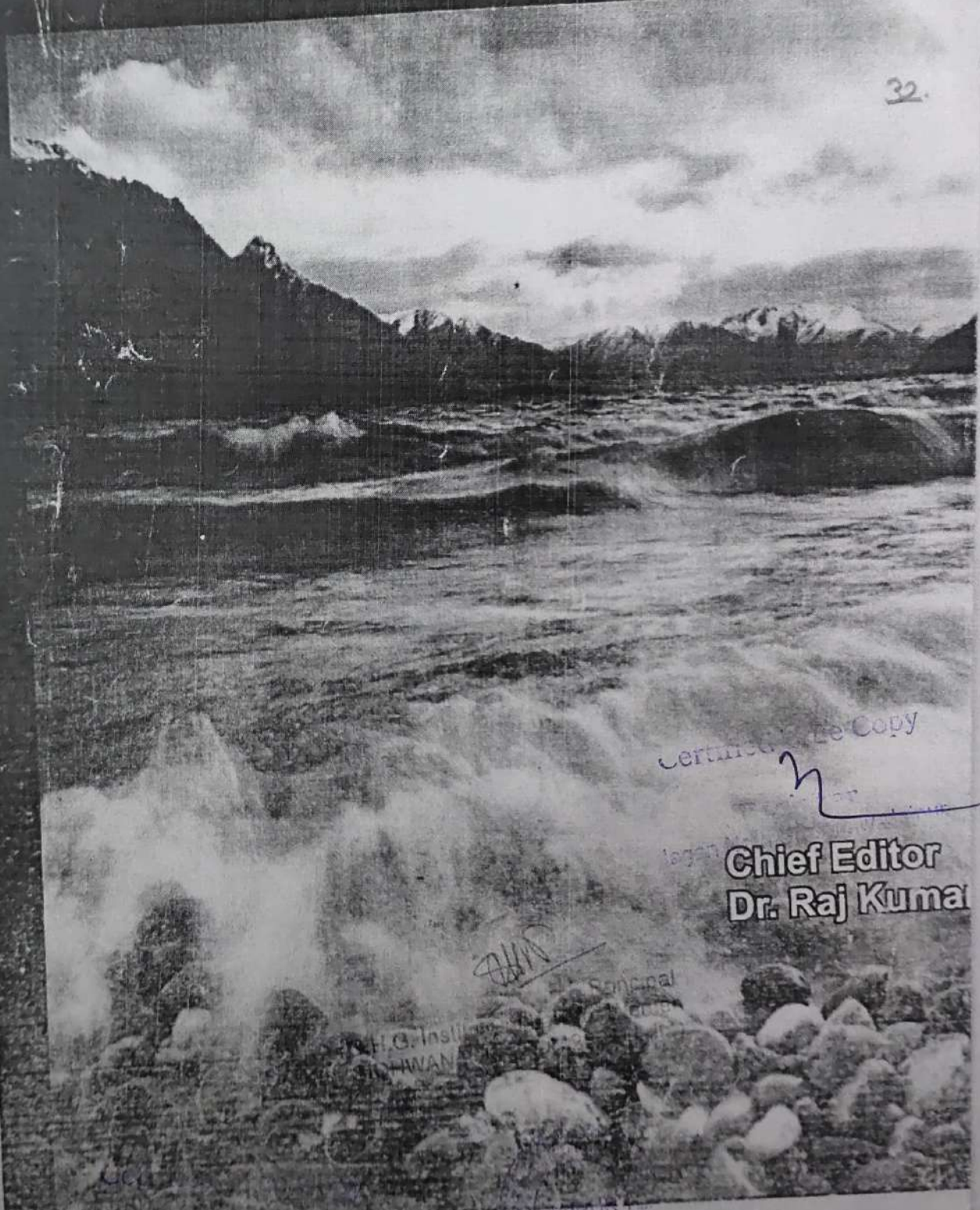


p-ISSN: 2454-1124
e-ISSN: 2455-0096

PLEBS JOURNAL OF LAW

Dec. 2016
Volume : 2 Number : 2

32



Certified True Copy

Chief Editor
Dr. Raj Kumar

H.G. Institute
JALPUR



Published by
Jagan Nath University, Jalpur

Dr. Shweta. Dhand.

p-ISSN : 2454-4124
e-ISSN : 2455-5096

PLEBS JOURNAL OF LAW

Dec. 2016
Volume-II, Number-II
Half Yearly

(A Refereed & Indexed Journal)



Under the Aegis of
PLEBS ASSOCIATION OF LAW TEACHERS

Certified True Copy

Jagan Nath University, Jaipur



Principal
G. Institute of Law for Women
PO-142024 (Ldh.)

(104)

Contents

Influence of Social Media in Evolution of Participatory Democracy in India <i>Rudrali Patil and Suhas Hosamani</i>	1-20
Legal Provisions for the Protection of Scheduled Castes and Scheduled Tribes: An Analysis <i>Dalliandeep Kaur</i>	21-34
Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex- Selection) Act, 2003- A Critical Analysis <i>Dr. Shweta Dhand</i> ✓	35-41
An Insight into Criminalization of Politics in India <i>Prof.(Dr.) Mahendra Tiwari and Dr. Abhishek Baplawat</i>	42-56
The Role of Police in The Administration of Criminal Justice: Under British Crown to Democratic India <i>Prof. G.S. Rajpurohit and Dr. Raj Kumar</i>	57-97
Judicial Activism – What Kind? <i>Dr. Vijay Pal Singh</i>	98-106
“Unfinished Agenda Of Indian Constitution” Under Article 44 <i>Dr. Gulab Rai</i>	107-111
State of West Bengal vs. Committee for Protection of Democratic Right: A Case Study <i>Akansha Srivastava and Sagar Khanna</i>	112-118
The Need of Nuclear Energy in India: Role of Law and Policies <i>Jyoti Jain</i>	119-131

Certified True Copy

Jagan Nath University, Jaipur

G.H.G. Institute of Law for Women
SIDHWANI UNIVERSITY
142024 (Ldh.)



COMPULSORY LICENSING OF PHARMACEUTICAL PATENTS IN INDIA: A RESEARCH STUDY

Vipin Mathur^{1*}, Dr. B. P. Nagori² and Dr. Mahendra Tiwari³

¹PhD Scholar, Jagannath University, Jaipur; and Assistant Professor, Pharmacy Wing, Lachoo Memorial College of Science & Technology (Autonomous), Jodhpur, Rajasthan, India.
²Professor & Director, Pharmacy Wing, Lachoo Memorial College of Science & Technology (Autonomous), Jodhpur, Rajasthan, India.
³Dean & HoD, Dept. of Law, Jagannath University, Jaipur, Rajasthan, India.

*Correspondence for Author: Vipin Mathur
Vipin Mathur, PhD Scholar, Jagannath University, Jaipur; and Assistant Professor, Pharmacy Wing, Lachoo Memorial College of Science & Technology (Autonomous), Jodhpur, Rajasthan, India.

Article Received on 17/01/2016 Article Revised on 08/02/2016 Article Accepted on 29/02/2016

ABSTRACT
Patents provide monopoly rights for the patent owners over their new, inventive and innovations. Patents are granted with an expectation that the patent owners would work the patented inventions without undue delay on the commercial scale to the fullest extent as practically possible. But in some cases the patent rights may be subject to abuse by the patent owner. To prevent such abuse provisions of compulsory license are provided under the patent law. However, compulsory licensing provisions in India have been under criticism particularly at the international front. This paper examines and compares provisions for compulsory licensing in India with the relevant provision in U.S., Europe and China. The paper also takes into account important case laws, and empirical data collected on the issue through a questionnaire based survey. The paper concludes by proposing measures to strengthen the compulsory licensing provisions in India.
KEY WORDS: Patent, Patents Act, patent abuse, compulsory license.

INTRODUCTION
Patent is an exclusive right granted to a person who invents a new and useful product or process. Patent provides a monopoly right for 20 years to the patent holder to prevent others from exploiting the invention. Patents reward the inventors for their skills, efforts and resources to encourage innovation. Patent is granted from the government in lieu of full disclosure of the invention by the inventor. Without the presence of a patent system the inventor will not be encouraged to disclose his invention and may prefer to keep it as a trade secret, which may lead to sluggishness in the research and development of new technologies.

Research in the field of drugs & pharmaceutical is very expensive, time consuming and unpredictable in nature. Innovator pharmaceutical companies therefore try to get their research patented in order to prevent market entry of their competitor generic drug companies. However, sometimes patent rights may be subject to abuse by the patent holder. Pharmaceutical company holding the patent right may not commercialize the patented drug in the country, or may not provide the drug in sufficient quantity to meet the requirements of the public, or may price the drug exorbitantly high. As drugs are an essential commodity, such abusive or monopolistic

practice by the companies can severely aggravate the sufferings of the patients, especially of the poor ones.

To prevent such abuse of the patent rights, provisions of compulsory license are included in the patent laws. Compulsory licensing is defined by the World Trade Organization (WTO) as a practice in which the government allows someone else to produce the patented product or use the patented process without the consent of the patent owner. It is one of the flexibilities on patent protection included in the TRIPS (Trade Related Aspects of Intellectual Property Rights) Agreement.

Compulsory licence is an involuntary contract between a willing buyer and an unwilling seller imposed or enforced by the law. Compulsory licence authorizes a third party to make, use, or sell a patented invention without the consent of the patent holder. In India grant of patent rights and compulsory license are governed by the Patents Act, 1970.

RELEVANCE AND OBJECTIVES OF THE STUDY
In 2012, India issued its first compulsory license for patents. The compulsory license was issued to Natco Pharma Ltd. in patent number 215758 granted to M/s Bayer Corporation. This decision of the Indian government provoked intense debate at the international



Certified True Copy
Registrar
Jagan Nath University, Jaipur