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THE CHALLENGES IN TALENT ACQUISITION FOR HR IN HOSPITALITY INDUSTRY – A STUDY OF HOTELS IN PUNE, INDIA

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ABSTRACT

Today, the field of Human Resource management (HR) in hospitality sector is experiencing frequent pressures for change due to increase in competition. The role of HR head has become crucial in building a talent company. The trend has been observed in shift toward millennial employees. Therefore today, talentmanagement, talent planning and talent acquiisition has become more significant. There is a considerable competition for the best people with human resource management concentrating on talent management and recruitment

Talent acquisition has been there for a long time, but is a constantly developing practice. Hotels are reconsidering their existing recruitment strategies and are looking to align talent acquisition with business outcomes. This research sought to focus on the challenges in talent acquisition for HR in hospitality industry

The research is focused on four star and five star hotels in Pune, India. Many of these hotels are operating finest brands of international hotel chains. The study is based on data collection by interviewing HR managers of hotels and secondary data includes literature review, interviews of HR managers of various hotels published in hotel magazines and websites.

The findings indicated that, the HR in hospitality industry is facing substantial challenges in talent acquisition in the scenario of existence of several international brands, considerable competition for the best people at the same time high staff turnover.

Keywords: *Hospitality Industry, Talent Management, Talent Acquisition, Millennial Employees.*

INTRODUCTION

Over the years there has been a phenomenal growth in the hospitality industry in India. The field of human resource management in hospitality sector is experiencing frequent pressure for change due to increase in competition. The role of HR head has become crucial in building a talent company[1].

There is a huge demand for hospitality graduates who are groomed for working in hotel industry. But due to the facts such as low wages, long working hours, shift patterns of duties, lack of proper career structure in hospitality industry, the present employees as well as employable graduates are opting to work in other areas such as call centers, facility management etc. In this situation, recruitment has become a challenging task for the hotel.To change this scenario, HR has taken the leapfrog from being 'administrative supporters' to 'business partners' working closely towards the development and evolution of human capital[2]

Organizations needed to strive more than ever for directing their employees to the common vision of the company to establish long term co-operation.{14} Being a part of service based and customer oriented industry, the human capital is the greatest source of competitive advantage for any hospitality industry.[3] In this context,Talent management, talent planning and talent acquisition has become more significant

More than just recruiting the manpower, the trends is hiring the upcoming crop of millennial employees which is more global in their thinking, more invested in relationship building, and more willing to be flexible within the workplace; knowing these values, plus the many other traits held by millennial such as having passion, believing in accountability, and being achievement driven, will help HR professionals as they seek out productive employees to fill new roles.[4]Today's organizations carry success stories based on its talent management strategies {13} In the present study, an attempt has been made to understand the challenges in the talent acquisition for HR in hospitality industry in Pune.

REVIEW OF LITERATURE

It is widely recognized that human resource plays a significant role for enhancing an organizations performance and effectiveness {5}.Having a right talent at right time is of great importance for any organization. In present environment, businesses wants to hire, develop and maintain extraordinary talent to endure competition. Talent management, therefore, is fast gaining top priority for organizations across the world {1}.Having a talented workforce and retaining them is on the priority for the organizations. Hospitality industry is not the exception for that.

Talent management is one of the primary management tool for 21st century human asset management{12}because the significant resource for firms competing in this century is no longer land, capital and other tangible assets but the human

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priority and a long term ply and not a transaction at the time of need. For them the quality of the people they hire directly determines the success of the organization. The hotels are looking at talent as a strategic objective.

The hospitality sector has been continuously seeing a high labour turnover. To overcome this loss, the hotels are formulating long term strategies for talent acquisition. Hotels want to hire the employees who believe in long term commitment and have desire to grow. The hotel in the sample particularly international brands emphasizes on hiring the talent who have potential to learn, evolve and grow with the company.

The hotel believe in hiring for attitudes. Right attitude and aptitude are very important factors considered for talent acquisition. In the present scenario, hospitality professional have multiple career options like BPOs, retail chains, multinational companies, facility management and so on. Having increased employment opportunities in hospitality industry, employees have become more confident in exploring new jobs. This has increased employee turnover and the work for the recruitment department. There is always a huge potential for highly talented resource and acquiring such talenthas always been a challenge for hotel industry.

It is found that some international brands from the sample focus on talent acquisition with well-planned policies and strategies. It involved the practices like writing a job description, focus on internal and external recruitment, and carrying out background check. Hotels are emphasizing various issues such as reputation of the organization in the industry, employee value preposition, promotion opportunities to attract the employees. An employer brand represents the corporate identity to its current and prospective employees. It helps hotels to attract employees with high commitment, who are highly qualified, talented and trustworthy that becomes a critical aspect for the success of the business. International hotel brand are getting benefit of these factors during talent acquisition. An international hotel brand from our sample has been found using time tested strategy to recruit employees which is super headed by its own staff who know the hotel best. The management believes that everyone at the hotel should be involved in attracting talent to the company.

Hotels in our sample are facing volatility as another challenge in talent acquisition. Today's talent is more demanding than ever. Their focus is on projects versus jobs. Today's candidates have more access to employer information than ever before. Organizations are now open book, and candidates can easily get a clear picture of the culture of the organization. Maintaining a brand image has become very crucial for hotels to attract talented candidates. Candidates want the job search experience to be easy and immediate. The hotels are facing talent sourcing challenges. If managers are focusing on rocuring employees rather than finding the right talent, they are limiting their scope. In a newly competitive and faster moving world. delays in hiring may cause the hotels to loose pliterally every top candidate. Reducing time to hire is one of the most difficult tasks within recruiting. The recruiters need to maintain its speed capacity. Use of networking and social and media interaction has brought the transformation in employee recruiting and hotel are getting benefitted due to this.

The strategies used byfewhotels in our sample varied. These hotels believe in acquiring talent that are sincere and hard working as well as knowledgeable and they believe in grooming them for a work culture after joining them. According to them, these employees tend to staywith the hotel for a longer duration.

FINDINGS

The shift is observed from merely recruitment to the talent acquisition in hospitality industry. The hotels are looking for upcoming crop of millennial employees. From the findings it can be revealed that hotels are now employing "talent Acquisition' specialist and training them to recruit high performing groups from competitors. Hotel are using mixed talent acquisition strategies to appeal and employ top candidates. The emphasis is on employer branding which has been found to be beneficial to attract top talent.

Though compensation is one of the key factor in attracting talent, an organizations culture plays a very important role in attracting talent towards the organization. Thus developing the right culture is an important concern for the hotels to attract talent.Recruitment for the hotels now is not just to fill the numbers, but to match the right competencies to the right kind of jobs

CONCLUSIONS

The aim of the current study was to highlight the challenges faced by HR in hospitality industry in talent acquisition. The hospitality industry is facing substantial challenges in talent acquisition in the scenario of existence of several international brands and considerable competition for the best people. Hotels are using multiple strategies and techniques to make talent acquisition effective. Attracting, developing and keeping employees is their top priority. Many hotels are enforced to find new ways in which they are setting themselves apart from immense competition. The trend in talent acquisition has been observed in shift towards use of new-age procedures, tools, use of technology and attracting and hiring millennial employees. Hotels are looking at talent as strategic objective and lot of organizations are now becoming purpose driven, to attract talent.

END NOTES

1. see http://www.peoplematters.in/article/2015/11/23
2. see http://www.internationalseminar.org/XIII_AIS/AIS/

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RELATION BETWEEN LEADERSHIP AND CROSS – CULTURAL ASPECT: IS LEADERSHIP AFFECTED BY CROSS – CULTURE ASPECT?

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ABSTRACT

Over years, Globalization has increased and we have more companies which are undoubtedly called Multi-National Companies (MNC's). These companies depend on lot of factors which makes them successful. However, the success of any organization comes to some extent from managers who can lead. This also means that most of the organizations are looking for managers who can be or are "leaders". When companies hire: they try to get those people who are qualified and have relevant experience. But they are also looking for an additional skill which is sometimes termed as "Team Player". In today's global world, we need people who are capable of working in teams. Additionally, it's believed that every manager in this competitive world can be a leader to be successful as an individual and these leadership skills also can support his company to achieve set targets or goals. Many companies and many people are talking about Leadership nowadays: Leadership has come up as a skill which can be beneficial at any level.

Leadership is a much wider term and gets affected at times by numerous concepts and one such concept is "Culture". It's very relevant in today's world where Globalization is spreading fast.

The current global environment allows a lot of scope for leaders to work with people from different cultures and corners. At times, a certain leadership style gets affected by factors which can be cultural in nature. When a manger or a leader works in cross culture, this can happen. This paper aims to explore the relation between Leadership and Culture.

Keywords: *Leadership, Culture, Globalization, Multi-National Corporations, Team–Player*

INTRODUCTION

Leadership

Leadership research is a tricky endeavor (Marcus W. Dickson). Leadership is term which is being research as every day the challenges in the corporate world are growing.

The so called concept of leadership has become very important in today's world. We know that the corporate world has turned very competitive and it has become mandatory for managers toturn leader. Leadership is a broad concept but we can say for now that it's about leadership. Leadership is a well-known concept and people around the globe are talking about it. It cannot be ignored that leadership is affected by many factors and there are no set rules for leadership. Managers can follow different techniques to be effective. These techniques can be different for each leader. They can have their own leadership style. It cannot be ignored that developing great leaders deliver great results and is a key to business success(Robert Fulmer).

Cross Cultural

One such factor is cross cultural: Today's global world has enabled that people from different cultures work together for attainment of one single goal. Each individual have different demands and are sensitive to a lot of things which are dependent on the culture they belong too. In today's world leadership is more effective, if the leader is flexible and adopts its techniques according to the cultural requirement of the situation. It must be noted that theories on the concept of cross cultural and transformational leader behaviour and organizational is growing but very limited(Maggie W Dunn).

Cross Cultural Leadership

Business these days has become complicated. What works in one situation or one culture may not work in other culture. It has been found that "Leadership" as a concept is broad and we cannot just narrow it down to one definition only. So, we can say that there is no consistent definition of leadership. Also, a cross cultural approach if added to the concept of leadership makes it more complicated. (Marcus W. Dickson). A major breakthrough was done by Hofestede. In his book Cultures' Consequences which was published in 1980; 2001, a major advancement was done in the application of the cultural construct to organization. (Marcus W. Dickson). Culture has been long being restricted to national borders and Hofestede who compared no less than 50 cultures and three regions (Miriam Spering) Above, we have seen that the three important factors in this are Leadership, Cross Cultural and Cross Cultural Leadership. We have explained the three concepts and the idea is to explain that for any leaders who wants to be effective has to keep in mind the cultural concept in mind. This concept becomes very important when we talk about globalization, multi – cultural organizations as at this level cultural things or cultural elements are kept in mind. Culture is again a broad term and it includes the way a person live, rules and regulations by

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Such a rejection is considered very rude and the business negotiations became stalled.

7. A Japanese manager in an American company was told to give critical feedback to a subordinate during a performance evaluation. Japanese use high context language and are uncomfortable giving direct feedback. It took the manager five tries before he could be direct enough to discuss the poor performance so that the American understood.

8. One company printed the "OK" finger sign on each page of its catalogue. In many parts of Latin America that is considered an obscene gesture. Six months of work were lost because they had to reprint all the catalogues performance so that the American understood.

CONCLUSION

The world is coming closer and the competencies for doing a successful business is changing. The concept of leadership with cross cultural context becomes very relevant in today's environment. Leaders who face challenges everyday have tried cultural approach while developing their teams and making them more effective.

"The leader is one who mobilizes others toward a goal shared by leaders and followers. ... Leaders, followers and goals make up the three equally necessary supports for leadership.

-Gary Wills

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A STUDY ON THE USE OF DECISION SUPPORT TOOLS/ALGORITHMS TRADING IN STOCK MARKET IN INDIA

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ABSTRACT

"The stock market is filled with individuals who know the price of everything, but the value of nothing." - Phillip Fisher

The main purpose of study is to analyze how a decision support tools like algorithmic trading works in stock market in India. The paper studies the significance of the decision support tools due to advancement of technology.

This research tries to focus on opportunities created by technology in stock market efficiently. One of the most interesting findings of the study is that investors need not to follow all time price level of the each stock. The other remarkable finding suggests that proper utilization of technology with up gradation and this tool will help investors a lot and save his time to enhance the capital gain and minimize the risk factor.

Keywords: *Decision Support Tool, Algorithms Trading, Stock Market, Technology, Stock Price Prediction.*

INTRODUCTION

Indian stock markets have a total life history of more than 125 years. They have undergone transformation in the last decade due to investor's interest, technology advancement, risk management and continuous growth. Technology has changed the profile of the stock market. Algo trading has been evolving with increasing power of the computers(machines), scientific technical knowledge advancement, applied science(calculations), strong automation power(auto setup), strong network connection(internet power) and ever smarter programmers(decision support tools designer) to code the Financial and technical analysis of the data with the help of huge information of different industry.

Algorithmic trading is a system of trading which facilitates investment transaction decision making in the financial markets using any simple or complex logics, based on financial and technical certain inputs. Securities Exchange Board of India (SEBI) define "algorithmic trading, popularly called 'algo trading' in trading parlance, as any order that is generated using automated execution logic in which the computer executes the pre-programmed trading instructions, accounting for a variety of variables such as timing, price and volume.

It offers the advantage of rapid, prompt, fast and more efficient order execution when compared to manual or human traders executing orders and also reduce execution cost as well as the extent for any manual errors and control the emotional trading decisions".

Algorithmic trading can be used in any kind of investment strategies, including market making, inter-market spreading, arbitrage or speculations. The decision for investment and implementation can be enlarged at any level with the algorithm because it is completely automatic process.

Algorithmic trading always entertains strategies that affect trading factors like:

1.Time (Time value of money)

2.Transaction cost (Cost)

3.Gain and loss (Profit/loss)

Basically, we should have to keep in mind that time is important factor as it is equivalent to money. Then cost also as it compares the return to make it worth.

Literature Review

A study done by Edward Tsang, Paul Yung & Jin Li (2003), "worked for EDDIE-Automation where they found that EDDIE is the architect based on technical analysis and economic model but it is not 100% correct in its prediction and not actual replacement of experts."

Chai Chee Yong and Shakirah Mohd Taib conducted a study (2009), " DSS(decision support system) model and architecture for prediction of stock market investment strategy which only present the information and outputs derived from various TA and FA techniques used in the system."

A study conducted by Gorav gupta and Umesh nihalani (2010), "identifies that algorithmic trading is high speed trading with low impact cost but it requires sophisticated system and highly skilled manpower. The most interesting challenge is transparency and visibility".

A study conducted by TCS, "they found that algorithmic trading are fast growing and extensively recognized in capital market. It also entail low transaction and commission cost and having full control of transaction, create cost –conscious trading environment to enhance the capital gain ultimately".

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Terrence hendershott, charles m. Jones, and albert j. Menkveld (2011), "found algorithmic trading enhance the liquidity position of the market due to lower trading cost and high technological changes".

Simranjit Singh Kohli and Nikunj Makwana (2012), introduced the concept of weighted value of asset with multiple period based boundary condition along with volatility where weighted price and boundary value gives exact entry point to find out the new trading rules in a quick and reliable way".

HFT and Algorithmic trading

Algorithmic trading is any algorithmic process which can automatically trade without human intervention. It can be high-frequency, but it can also be low frequency, trading at the daily or even weekly timeframe based on a bunch of pre-defined rules and regulations. High-frequency trading is automated trading, but it operates at the split-second timeframe trading multiple times very rapidly. HFT is a fragment of Algo trading. The contrast is that when HFT is done involving dark pools i.e. not accessible by the investing public. It constitutes an off-exchange trade wherein order book data is not displayed to market participants where dark pool of liquidity exists. The common factor is only the usage of cutting edge technology, used to make trading decisions efficiently.

Algo in Indian market and US market

As per NSE data, Current stock market has reached to the stage where the human intervention is completely erased by the algorithmic trading. 70% of trades in US are program driven trades and in Europe it is approx 40%. In India, one third of the exchange trades are done through algorithmic trading in both the segments. Trades by institutional investors in algo trading constitute 46% of the total volume on the National Stock Exchange (NSE) and over 30% on the Bombay Stock Exchange (BSE). We are still way long behind markets in the US and Europe in which Algo trades constitutes 75-80% and nearly 60% of the total trading volumes respectively. If Indian markets stay fundamentally strong or we can say keep investors faith in it to attract global capital over the next five years, we can see the proportion of algo trades equaling that of the US in the next five years.US Market is more efficient than Indian market for algo trading because of high technological advancement. HFT as it happens in the US markets is yet to happen here, and the Indian exchanges are gearing towards that technological advancement day by day. It will take a little more time. So in India anticipate huge cycles of fear for losing capital and greed for gaining more in short span of time.

Algo trading and Regulatory body (SEBI)

SEBI first issued guidelines on algo trades in March 2012, after it witnessed a growing trend of usage of advanced technology for trading in financial instruments. As per SEBI, stock brokers and traders offering algo facility would need to subject their algorithmic trading system to audit every six months so as to ensure compliance with the requirements prescribed by SEBI and the stock exchanges. Such audits would need to be undertaken by a system auditor with relevant certifications. As per SEBI, a member who intends to start algo trading should have a Base Minimum Capital Requirement of Rs.50 Lakhs. SEBI has issued detailed guidelines asking exchanges to contain possibilities of potential systemic risk caused by the use of sophisticated automated software by brokers to trade on stock exchanges. SEBI also said in requirement, the stock exchange should be in a position to shut down the broker's terminal. SEBI tighten the rules and regulation time to time to protect the right of investors in stock market through algorithmic trading in india.

Algorithmic trading and Stock exchange

AlgoNomics is an Algorithmic Trading Platform which is designed to Provide Low Latency Execution with comprehensive monitoring and control Mechanism by NSE. The solution allows the users to create, execute and monitor strategies for almost all possible market situations for all the Markets viz., Equities, Equity Derivatives and Currency Derivatives. Each favourable market condition serves as a trigger for order execution using the AlgoNomics platform. AlgoNomics provides for running of multiple strategies simultaneously, maximizing the organizational objective of reducing transaction cost and trading smartly for optimum profitability in the market.

Leading stock exchange BSE organized mock trading session to test software used for trading and risk management time to time. As per the norms, testing of new software or existing software that has undergone change in mock testing environment is mandatory. The new service is free of cost for the market participants.BSE has also made a provision to generate data analytics reports to check the performance of the strategies also.

CONCLUSION AND RECOMMENDATION

Algorithmic trading makes trades efficient and helps to keep prices consistent which improves liquidity. Algorithmic trades help automated trading in such a way that funds and portfolio management bring down costs significantly and ultimately helping significant returns to them. It reduces the time lag which enhances the efficiency level. Investors are more inclined to know more about algo trading and hassle free transaction by themselves.

Algorithmic trades don't just benefit the market overall. They can generate large profits for the people deploying them frequently. Algorithmic trading can become even more powerful with machine learning strategies, where algorithms can keep learning and improving their configurations and strategies with each execution. Stock exchange plays a vital

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role in not only efficiency but also the confidence of investors in algorithmic trading in India. Investors expect regulators like Securities and Exchange Board of India (SEBI) to help regulate markets, and ensure such systemic risks don't exist. On its part, SEBI has been coming up with multiple guidelines on algo trading.

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STUDY OF EMPLOYEE WELFARE & BENEFIT PRACTICES AT INDIAN OIL CORPORATION LIMITED (LUBES PLANT, VASHI, NAVI MUMBAI)

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ABSTRACT

Employee Welfare and benefits is a corporate attitude or commitment reflected in the expressed care for employees all levels. It aims to produce a working environment which is stimulating enough to encourage development and interest in the employees. The present study is made an attempt to determine the status of employee welfare & benefit practices adopted by Indian Oil Corporation Ltd. (Lubes Plant, Navi Mumbai) and suggest some ways to improve the quality of welfare practices.

The research type is exploratory. The data base has been framed from a sample of 40 employees working in the plant those who are on the roll of IOC Limited. Primary data was collected with the help of questionnaire filled by the respondents. The data was analyzed using percentage analysis. The research findings revealed that overall employees were satisfied with existing welfare facilities; allowances, medical facilities, quality of work life, safety and security. Overtime allowances and canteen facilities were the two main areas where improvements are required.

Key Words: *Welfare & Benefits, Allowance, Quality of Work life, Safety & Security*

INTRODUCTION

Employee welfare includes various services, benefits and facilities offered to employees by the employers. Anything which is done for the comfort and improvement of employees; provided over and above the wages are considered as welfare services. Whereas employee benefits include various types of non-wage compensation provided to employees in addition to their normal wages or salaries. Employee welfare is a comprehensive term including various services, facilities and amenities provided to employees for their betterment. Welfare measures are in addition to regular wages and other economic benefits available to employees under legal provisions and collective bargaining. The basic purpose of employee welfare is to improve the work life and thereby making an employee a good employee and a happy citizen. Employee welfare is an essential part of social welfare. It involves adjustment of an employee's work life and family life to the community or social life. Welfare measures may be both voluntary and statutory. Employer offer welfare services and benefits to attract and retain their employees. Better employee welfare services results into organizational advantages, increased employee morale along with job security and reduces employee turnover.

REVIEW OF LITERATURE

Mohan Reenu and Panwar J S in their research paper titled as ***"Current Trends in Employee Welfare Schemes in Udaipur Retail Sector"***, published in International Journal of Scientific

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A Study on Employee Attrition at Firstsource Solutions Limited, Mumbai

Dr. Arjita Jain *

Abstract

This paper makes an attempt to find out the level of attrition at Firstsource Solutions Limited, Mumbai. Research type is descriptive. The study is based on both primary and secondary data. Primary sources comprise of interviews and responses collected through structured questionnaire. The primary data base has been framed from a sample of 70 employees. Data has been analyzed using excel. On the basis of research findings researcher has made certain suggestions to reduce the employee attrition at Firstsource..

Keywords: *Employee Attrition, Employee Retention, Compensation, Training & Development, Performance Appraisal.*

Introduction

Employee retention refers to the various policies and practices which let the employees stick to an organization for a longer period of time. Focus on employee retention techniques has a positive impact on the organization. In long term it increases employee productivity, performance, organizational reputation, quality of work, profit, and reduces employee turnover and absenteeism. Employee retention is beneficial both for the employees and the employer. Retaining the best employees ensures customer satisfaction, increased product sales, increased productivity, satisfied colleagues and reporting staff, effective succession planning and deeply embedded organizational knowledge and learning. Poor employee retention results into increased training cost, lost knowledge, insecure employees and costly recruitment and losing competitive edge.

Review of Literature

Aruna, M.; Anitha, J. (July 2015) in their article "Employee Retention Enablers: Generation Y Employees" published in SCMS Journal of Indian Management, reveals that organizations face a daunting challenge in retention of Generation Y workforce in a vulnerable, uncertain, complex and

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QR CODES AND ITS APPLICATION IN BUSINESS

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ABSTRACT

Quick Response code is commonly known as "QR codes". It is modern form of Barcode in two dimensional ways. It has very high data storage facility as compared to traditional barcode. A QR code provides the better security than Barcode. Hence now day's numbers of business organizations Marketing of Product, Advertisement, Supply chain Management, Health Care authentication, logistics, agriculture business.

The purpose of paper is to discuss the What QR code, its structure, how QR code is different from barcode, advantage and disadvantages and its application in business.

Keywords: *QR code, Security, SCM, Marketing, e-Business.*

INTRODUCTION

A barcode is an optical machine readable format of information relating to the object or product. Barcode represented data by varying the width and spacing of Parallel lines, referred to as linear or one dimensional. After research of one and half year Japanese scientist they developed a new code which has better features than the linear barcode. By doing certain technical and geometrical arrangement of dots in rectangle form in 2 dimensions the structure is formed in general referred to as QR code. QR code is a two dimensional digital image that can be easily read , scan by any mobile device camera.

QR code are become very popular than classical barcode in many areas because of its numbers of features like large data storage capacity, encryption technique, dirt and damage resistant, high speed reading ,small size, flexible and 360 degree reading.

This paper is divided into different sections. Section II covers what is QR code and its structure , Section III include Comparison between barcode and QR code. Section IV covers Applications of QR code and Section V is the Conclusion.

ABOUT THE QUICK RESPONSE CODE

Quick Response code is widely known as QR code. The QR (Quick Response) Code is a two-dimensional (2-D) matrix code that belongs to a larger set of machine-readable codes, all of which are often referred to as barcodes, regardless of whether they are made up of bars, squares or other-shaped elements.

QR code system was invented in 1994 by DENSO WAVE a Toyato subsidiary company in Japan. Initially it was designed for automotive industry to track vehicles component during manufacturing at automotive industry. The QR code consists of black and white dots. Black

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Consumer Perception for Pesticides in Agrochemical Industry

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ABSTRACT

India ranks fourth as a supplier of agrochemicals in the global market, after USA, Japan, and China. This indicates the significance of agrochemicals in India. The synthesis of agrochemicals in India involves a complex chain of manufacturers, formulators and distribution. Currently there are 125 technical grade manufacturers, which include 10 multinationals, 800 formulators and over 1, 45,000 distributors.

Indian market for agrochemicals which predicts growing at a CAGR of about 15%, the agrochemical sector is likely to cross Rs. 25,000 crore by 2015. The increase in production to meet the growing need for food grains can be achieved only through greater emphasis on agrochemicals and their judicious use. Today in India. MNCs account for 30–40% of the Indian pesticide market. There are 250 pesticides registered in India. 28 pesticides are banned in India, and 18 pesticides were refused for registration under Indian Insecticides act 1968 and Rules 1971.

Consumer perception is the one of the main factors in purchasing the products. Perception is the process by attaining awareness or understanding of the environment by organizing and interpreting sensory information. New pesticides (molecules) are introduced in Indian agriculture market by several agrochemical companies. The adaption for these new molecules on large scale is perceived to be on negative side by the farmers. Although the new molecules are safe for entire environment n species which are placed in Blue and Green triangles. Farmers in India still on large scale depend on yellow and red triangle pesticides.

The study defines the consumer perception for adaption of the new pesticides in agriculture market. This is mainly an outcome of externally caused behaviour rather than the internally caused behaviour, primarily influenced by the distributors and retailers.

Keywords: Perception, Pesticides, Agrochemical Market

INDUSTRY STRUCTURE

In India, there are about 125 technical grade manufacturers (10 multinationals), 800 formulators, over 145,000 distributors. 60 technical grade pesticides are being manufactured indigenously. Technical grade manufacturers sell high purity chemicals in bulk (generally in drums of 200–250 Kg) to formulators. Formulators, in turn, prepare formulations by adding inert carriers, solvents, surface active agents, deodorants etc. These formulations are packed for retail sale and bought by the farmers.

The Indian agrochemicals market is characterized by low capacity utilization. The total installed capacity in FY12 was 146,000 tons and total production was

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ACCEPTANCE OF INNOVATION IN AGROCHEMICAL INDUSTRY

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ABSTRACT

Agrochemical market in India is predicted to grow steadily at a CAGR of 9% in coming two years .Availability of credit facility to purchase the agrochemicals is now the primary driver for the rapid growth of the market. Indian government has been focusing on small and marginal farmers and the weaker sections of the society, so as to enable them to accept modern technology and improved agricultural practices, focusing on to increase agricultural production and productivity.

The Insecticide segment did hold the largest share of the agrochemicals market in India during 2015, with a market share of around 56%. The dominance of this segment is expected to continue over the next five years. New technology and new molecules are being introduced by the industry in this growing scenario. The adaption of this technology is very important by the farmers in India.

The key vendors in the market are Bayer, BASF, Rallies, Syngenta, UPL and prominent vendors are Dhanuka, Dow Agro science, DuPont and Insecticides India. The growth all vendors in agrochemical industry depends on adaption of new technology by farmers.

Keywords- *Perception, Pesticides , Agrochemical Market*

INTRODUCTION

India is fourth largest producer of agrochemicals globally after United States, Japan and China. The agrochemical industry is significant industry for the Indian economy. Indian population is increasing and the per capita size of land is decreasing, the use of pesticides in India has to improve further. The crop protection industry in India is generic in nature with ~80% of the molecules being non patented.

Hence, strong distribution network and brand image act as competitive factors. Crop protection chemicals are manufactured as technical grade sand converted into formulations for agricultural use. The crop protection industry consists of technical grade manufacturers, formulators producing the end products, distributors and end use customers.

The Indian agrochemicals market is characterized by low capacity utilization. The total installed capacity in FY15 was 186,000 tons and total production was 125,000 tons leading to a low capacity utilization of 78%. The industry suffers from high inventory (owing to seasonal & irregular demand on account of monsoons) and long credit periods to farmers, thus making operations 'working capital' intensive. India due to its inherent strength of low-cost manufacturing and qualified low-cost manpower is a net exporter of pesticides to countries such as USA and some European & African countries. Exports formed ~50% of total industry turnover.

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GREEN COMPUTING : A LATEST TREND IN TECHNOLOGY

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ABSTRACT

Green Computing is one of the most contemporary technology practiced in modern IT. While global warming being the need of hour , Green Computing has made its way towards making the technology more green and efficient. The major purpose of green computing is to minimize the resource consumption and maximize energy efficiency. As the use of computers is increasing day by day, so is the amount of energy consumed by them which in turn is proving hazardous to the environment. If the rate of energy consumption is not reduced effectively, our environment may no longer be a sustainable place for every living being. Green Computing practices the eco-friendly way of consuming energy resources, reducing their impact on environment. Many IT industries are investing in creating their computing devices energy efficient, reducing the use of hazardous energy consumption. This paper discuss the basic principle's of green computing and its latest trends in the computer industry.

Keywords: *Green Computing, IT Trend, Clean Computing, E-Waste, Recycling.*

INTRODUCTION

In today's world we cannot live without computers or neither we can imagine our lives without energy. Using the energy resources to an extent has become a habit in our lives. The over consumption of energy resources can prove harmful not only to humans but also to the environment. We should adopt new technologies to use the resources in a friendlier way. Green Computing focuses on reducing the use of energy resources efficiently. The goal is to make the environment sustainable by cutting off the hazardous waste materials ,improving the energy efficiency, and promoting innovative technologies to adopt green technology. Green technology is a way of creating fully recyclable products like computers, servers and their associated subsystems, reducing pollution, providing alternative way of sustainable technologies in various fields. Many IT industries have taken up initiatives to adopt the trend of Green Computing and improving their use of energy resources.

What is Green Computing ?

Green Computing is commonly known as Green IT. The major purpose of green computing is to minimize the resource consumption and maximize energy efficiency .Green computing concentrates on reducing the human impact on the environment. It encompasses new generation technologies and strategies to preserve natural resources. It aims at achieving environmental sustainability.

It initiates innovative technologies that do not damage the natural resources. Green Computing targets at creating fully recyclable products, reducing hazardous pollutants and providing alternative technologies in the field of IT. Such initiatives include the implementation of energy efficient servers ,central processing units(CPUs) and peripherals. The term "Green Computing " was coined after the launch of "Energy Star " program initiated by U.S in 1992 as a voluntary labeling program .

Why Green Computing ?

Today, the ever increasing amount of electronic and hazardous waste materials like carbon emission from the servers has turned out to be the main reason for adopting sustainability. The electronic waste is itself contributing over 70% of the harmful waste in the environment. Research shows that Carbon Dioxide(Co2) and other toxic emissions are affecting the global climate and causing environmental damage to nature. The computers and their sub-systems utilize a hefty quantity of cadmium , mercury ,lead and other toxic chemicals which are impossible to completely burn. Such materials, when burn, merely pollute the underground water supplies fuming their particles into air. Computer are also harmful to our health because the toxic fumes emitting out are absorbed by the body making their way to lungs. Computers at home and data centers consume a huge amount of energy which make use of old technologies they don't have enough cooling systems. Result is a harmed and polluted environment.

To encounter this growing threat to the environment and ever growing use of electronic devices like computers, there is a need for going green, particularly adopting a eco-friendly computer.

Green computing has evolved as a latest trend in technology, where the IT businesses make an effort to accomplish the essential trade growth without causing any harm to the environment. Companies have to become keener while disposing their electronic materials in an effectual way without

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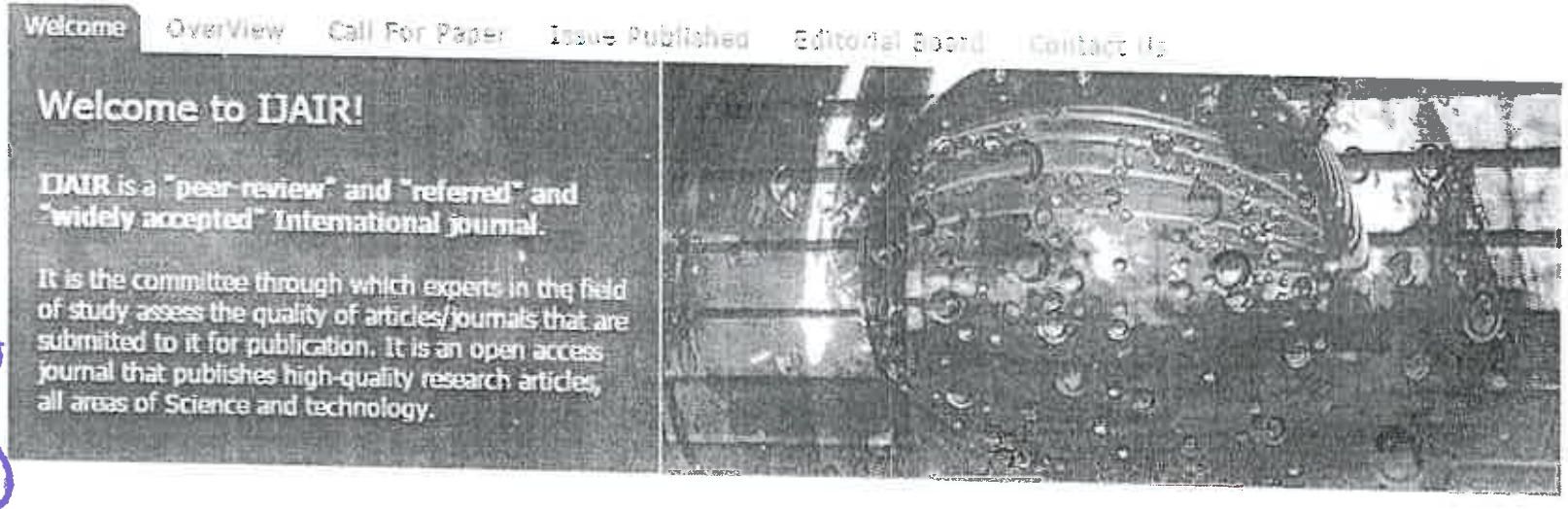

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Bluetooth Wireless Communication

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Abstract- **Bluetooth is an open standard for short-range digital radio to interconnect a variety of devices Cell phones, PDA, notebook computers, modems, cordless phones, pagers, laptop computers, printers, cameras by developing a single-chip, low-cost, radio-based wireless network technology. A Bluetooth ad hoc network can be formed by interconnecting piconets into scatternets. The constraints and properties of Bluetooth scatternets present special challenges in forming an ad hoc network efficiently. Bluetooth has client-server architecture; the one that initiates the connection is the client, and the one who receives the connection is the server. Bluetooth is a great protocol for wireless communication because it's capable of transmitting data at nearly 1MB/s, while consuming 1/100th of the power of Wi-Fi. We discuss criteria for different types of scatternets and establish general models of scatternet topologies. This paper highlights the Bluetooth wireless communication.**

Keywords: **Bluetooth, Scatternet formation, Piconet, Ad hoc network, Hotspot**

I. INTRODUCTION

Bluetooth, the new technology named after the 10th Century Danish King Harold Bluetooth, is a hot topic among wireless developers. This article will provide an introduction to the technology.

Bluetooth was designed to allow low bandwidth wireless connections to become so simple to use that they seamlessly integrate into your daily life. The Bluetooth specification is an open specification that is governed by the Bluetooth Special Interest Group (SIG). The Bluetooth SIG is lead by its five founding companies and four new member companies who were added in late 1999[7]. These nine companies form the Promoter Group of the Bluetooth SIG.

Founding Companies	New Members
Ericsson	3Com Corporation
IBM Corporation	Lucent Technologies
Intel Corporation	Microsoft Corporation
Nokia	Motorola Inc.
Toshiba Corporation	

More than 1200 additional companies are members of the Bluetooth SIG. The magnitude of industry involvement should ensure that Bluetooth becomes a widely adopted technology. The first Bluetooth products should begin to appear this year. The first Bluetooth product from Ericsson is a wireless cellular phone headset to be available in Europe in mid-2000.

A. Characteristics

Bluetooth is specifically designed to provide low-cost, robust, efficient, high capacity, ad hoc voice and data networking with the following characteristics:

1. Mb/sec. transmission/reception rate that exploits maximum available channel bandwidth.
2. Fast frequency hopping to avoid interference
3. Adaptive output power to minimize interference.
4. Short data packets to maximize capacity during interference.
5. Fast acknowledge, which allows low coding overhead for links.
6. CVSD (Continuous Variable Slope Delta Modulation) voice coding, which enables operation at high bit-error rates.
7. Flexible packet types that support a wide application range.
8. Relaxed link budget that supports low-cost single chip integration.
9. Transmission/reception interface tailored to minimize current consumption.

II. BLUETOOTH ARCHITECTURE

Bluetooth communication occurs between a master radio and a slave radio. Bluetooth radios are symmetric in that the same device may operate as a master and also the slave. Each radio has a 48-bit unique device address (BD_ADDR) that is fixed.

Two or more radio devices together form ad-hoc networks called piconets. All units within a piconet share the same channel. Each piconet has one master device and one or more slaves. There may be up to seven active slaves at a time within a piconet. Thus, each active device within a piconet is identifiable by a 3-bit active device address. Inactive slaves in unconnected modes may continue to reside within the piconet.

A master is the only one that may initiate a Bluetooth communication link. However, once a link is established, the slave may request a master/slave switch to become the master. Slaves are not allowed to talk to each other directly. All communication occurs within the slave and the master. Slaves within a piconet must also synchronize their internal clocks and frequency hops with that of the master. Each piconet uses a different frequency hopping sequence. Radio devices used

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USE OF INTERNET OF THINGS FOR BUILDING SMART CITIES IN INDIA

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ABSTRACT

Cities in India and around the world is a process that evolves gradually. Its not a sudden decision with preplanned infrastructure. The concept of Smart city has made us think in a planned city with such an impact that each activity conducted in the city is identified, monitored and controlled by the technology.

Internet of Things is an emerging technology in the world of IT that can be explored to its zenith to achieve the goal of building a Smart City. Only building is not enough but maintaining and sustaining its identity. Integrity and authenticity is another task to be thought processed and implemented.

There are various challenges in make a city SMART in India as there are various implicit and explicit hurdles that are to be confronted. A model of Smart City is not a solution as every city is unique in its existence. But a prototype development is need of the hour to have a logical layout of the Smart City using IoT.

Keywords: *Internet of Things, Smart City, Big Data, Cloud Computing, IT.*

INRTODUCTION

Making of cities, in the world, are an evolutionary process. People migrate to locations where they are facilitated by better and convenient way of acquiring basic needs of living like food, shelter and clothing. But human needs are endless. They strive to makes their lives more easy and adaptable by using technology (facilities that enrich people's lives). In today's world, Internet is a resource that helps to achieve this task. Today is the age of technology, and internet has accomplished a lot in managing various tasks at a click of the mouse. Now the global village (term used for world) is trying to work smartly and get connected to every part of the world instantaneously with very much of ease.

A City evolves by

1. growth in industrial and commerce in that area
2. Having rapid growth, bring a sort of stability that makes the citizens at easy with the facilities provided in the city.
3. When the facilities get renewed, then the city needs to be redeveloped to adapt to the new and effective lifestyles.

SMART CITY

The cities are made more and more people-friendly and accommodate all that is needed to them. Keeping a vision of 2050, a new concept is emerging "SMART CITY".

A Smart City is a city that is intelligent. It helps to make our work easier that could only be imagined. All the devices are connected to each other. The data can be collected from every part of the devices that are around us and that would help us in future predictions. This can be achieved by establishing interactivity between humans, machines, hardware devices and software.

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Wireless Evil Twin Attack

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Abstract

In Today's world multiple Wireless Local Area Networks (WLANs) can coexist in a airspace. Every wireless mobility devices tries to find the access point through probe request using a unique name that is the Service Set Identifier (SSID) of the network to make automatic authentication. As a wireless user you are concerned only with the broadcast SSIDs that let you connect to a WLAN. This paper discusses about the Wireless Mobility devices communication security issues using Basic Service Set Identifier BSSID or Extended Service Set Identifier ESSID which a network administrator need to keep track of. Also it discusses about the available flaws in it and how by modifying the probe request header we can make the connectivity more secure for the new generation of devices.

Keywords: *Wireless, Evil Twin, Wi-Fi Security, Security, Exploitation.*

1. Introduction

Every wireless mobility devices tries to find the access point through probe request using a unique name that is the Service Set Identifier (SSID) of the network to make automatic authentication. The users are usually unaware of which basic service set (BSS) they belong to. When the user physically moves the laptop from one room to another, the BSS used could change because of moving from the area covered by one access point to the area covered by another access point, but this does not affect the connectivity of the laptop. In this paper we are going to study how a mobility device automatically connect to a Access point, the normal mechanism how a mobility device connects to an know Access point is very unsecure, also how an attacker take advantage of this connectivity mechanism for his/her benefit to hack AP's clients. The paper is organized as follows. In section 2, we will see that how a client and access point connects with each other by taking an Open Authentication method. All the handshakes and which packet header parameters are benefiting for that attacker malicious activities. In section 3, we will get to know that how a Wi-Fi Attacker will exploit the Client-Access Point (AP) Connection for malicious benefits in an open authentication environment. In section 4 we will discuss it in different scenarios e.g. In WEP, WPA or WAP2 environment. In section 5 we present how a client can defend these malicious attacks by the attacker. In section 6 we provide some concluding remarks.

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REVIEW OF BIOMETRIC SYSTEMS

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ABSTRACT

Biometrics systems haveimproved person identification and authentication, which plays an important role in personal, national, and global security. However, these system might be deceived. No matter how much advancement has been done in spoofing detection, domain knowledge, specific biometric reading systems, and attack types are necessary for solutions. Very limited knowledge about biometric spoofing is assumed at the sensor to obtain spoofingdetection systems for iris, face, and fingerprint techniques based on two learning approaches. The first consists of learning suitable network architectures for each domain, and the second focuses on learning the weights of the network through back propagation. Nine biometric spoofing benchmarks are considered. Each one containing real and fake samples of a given biometric modality and attack type and deep representations for each benchmark is learned by combining and contrasting the two learning approaches.

Keywords— *Biometric, Authentication, Fingerprint, Spoofing*

INTRODUCTION

Biometric is divided in to two terminologies "bio" means life or living and "metrics" means characteristics. Biometric human qualities and characteristics can effectively allow people identification and authentication and have been broadly used for access control, surveillance in many national and global security systems. During last few years, there has been enormous technological advancement for data acquisition, storage and processing, and scientific progress in computer vision, pattern recognition, varying from traditional methods like finger printing to face, to iris and more recent one is vein and blood flow. There are many ways to spoof a biometric system, from previous studies there have been at least eight different points of attack which are divided into two major groups i.e. *direct attack* and *indirect attack*. In direct attack there is probability to generate synthetic or artificial biometric samples, thus making it primarily the first vulnerability point of the system acting at sensor level. In irises, attacks are done normally using printed iris images or, or more clearly we can say cosmetic contact lenses. With faces, impersonator can present the acquisition sensor photography, a video or even a 3D mask of a valid authorized user.

SPOOFING

In biometric system, spoofing can be described as an attempt by an attacker to trick a system into thinking that it is proposed with a real biometric feature of a valid user though he is not authorized to do so.

Finger biometric system can also be spoofed by getting the image of the fingerprint, a number of resources can be used to develop a fake finger can. In serious cases, an individual's finger can be used for breaking into the system. An attacker can consume the communication channel between the network and scanner to spike with the biometric data.

The spoofing of face biometric system can be done in multiple ways one such is faking a face, by obtaining an image of the authorized user. Once d digital image is captured, the system can be easily tricked and the access can be gained in number of ways:

A two dimensional can be done by presented to a camera. This trick works for the systems that do not use iris or active eye recognition or depth recognition. Active eye recognition uses the reflective nature of the pupil to detect eyes on the image. The depth recognition calibrates the camera's focal length to seize macro features of the face. Another method to spoof this system is to replay the captured image of the video of the victim. This video can be replayed using any system like a DVD player or a laptop. In this system, the face can show some amount of movement thus making the system duped.

To spoof an iris biometric system is that you can print a high quality iris image. The imposter can crop the pupil area and insert with his pupil together with the fake iris to the camera. The spoofing is possible because of the robustness of some system which are tolerant to alterations in the size image to ease the positioning the demands for the iris acquisitions. With this hidden vulnerability making the attacker to print out the iris image large enough to hold it in its hands to adjust it with its pupils. However this printed image of iris can be recognized regardless how advanced this the system. It used the same distinct pattern for illustrating lines and filling in the gaps with color.

TYPES OF BIOMETRIC TECHNOLOGIES

Biometric system can be divided following to the data input they are based on authentication and identification. The most

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BENEFITS OF FOG COMPUTING IN INFORMATION SECURITY

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ABSTRACT

Fog computing is known as an extension to cloud computing by providing more security in the cloud environment. It is a response to some of the issue and problems encountered from regular cloud computing. So we can say that it is not a replacement to cloud computing. The idea of fog computing is to distribute all data and information closer to a user by removing network delays and other possible obstacles related to data transfer. User need to have all data and application at any time in any place. Fog computing has the tendency to take this services to the next level.

Keywords: *Insider Attack, Security, Extension To Cloud Computing.*

INTRODUCTION

The infrastructure of fog computing is in distributed form, in which application services are carried at the edge of the network in a device and some application services that are been carried out at data center remotely in the cloud. It provides an easy way for accessing, managing, and computation of user data, but it also has some security risks. There are traditional security mechanism such as identity, authorization and authentication, which are not sufficient enough nowadays. Very common risk now-a-days are data theft attacks which destroy the privacy of the user data. Data theft is considered one of the major threats to cloud computing by the Cloud Security Alliance. More ever, if an attacker is an insider than the chances of the data theft increase as the insider consists of some personal information. Insider risks are defined in two categories: The insider who showcase and exploit a cloud-related activity to steal information from a cloud system, and the insider who uses cloud system to carry out an attack or malicious activity on an employee's local resource. To deal with such cases and attackers, there are some techniques which allow us to secure user data from theft. A new technology called FOG COMPUTING in gaining attention of the cloud users nowadays. Salvatore J. Stolfo has used this technique for making disinformation or inaccurate information attacks against the malicious intruder or attacker. Fog Computing improves the Quality of services and also reduces latency. Due to its wide geographical distribution the Fog is well suited for real time analytics and big data.

Which provides low latency as well as location awareness; it has spread geographical distribution all over, which supports Mobility due to huge numbers of nodes. The Twitter incident is one of an example of a data theft attack from the Cloud. Several Twitter corporate and personal documents were ex-filtrated to technological website. TechCrunch, and customer's accounts, and including the account of U.S. President Barack Obama, were accessed illegally. The attacker used a Twitter administrator's password to access the Twitter's corporate documents which are hosted on Google's infrastructure as Google Docs file. The damage was more significant for both Twitter and for its customers. While this attack was launched by an outsider, by stealing a customer's admin passwords is much easier way as if perpetrated by a malicious insider. How the password can be stolen by a malicious insider of the cloud service provider or attacker was explained by Rocha and Correia. The authors also demonstrated in which manner the Cloud customers' private keys might get stolen, and how their data which is confidential might be extracted from a hard disk by the attacker. After stealing a customer's private key and authorized password, the malicious insider or attacker get the complete access to customer data, while the customer has no means of detecting this unauthorized access of his data by the malicious insider. Many researches in Cloud computing security has focused on ways of preventing unauthorized access to customer data by developing sophisticated and legal access control and encryption mechanisms to it. However these mechanisms have not been able to prevent the complete data. We propose a completely different approach towards establishing the complete security of the cloud using decoy information technology, that we call Fog computing. We use this technology to publish about the disinformation attacks against insider's attacker, preventing them from distinguishing the real customer data from fake customer's data. In this paper, we include two ways of using Fog computing to prevent attacks, one is the Twitter attack, by deploying decoy data within the Cloud Computing it is been recognize by service customer of cloud and other is personal online social networking profiles by individual users.

LITERATURE REVIEW

Kaufman L. et al. (2009) has examined some basic security issues and their association regulated and legal concern that

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the intruder in the cloud. Such profiles would naturally include large information, which determine how often and how many documents are typically read. These simple user-specific features can serve to detect abnormal activity on Cloud computing access based partially upon the scale and scope of data transferred.

b) Decoys: Decoy information, which include decoy documents, honey files, honey pots, and various other bogus or fake information can be generated on demand and serve to the unauthorized user as means of detecting unauthorized access to information and to 'punish' the attacker ex-filtrated information. Serving decoys will surprise and confuse an attacker into believing they have ex-filtrated useful information of the customer over cloud, when they have not actually access them. This technology may be integrated with the behaviour profiling technology to preserve the user's information in the Cloud. Whenever unauthorized user access to the cloud service is noticed, then decoy information is returned by the Cloud and delivered in such a way that it appears completely legitimate and normal to the unauthorized user. The authorized user, who is the owner of the information, would easily identify that there is an attacker who is trying to access his data, when decoy information is being returned by the Cloud to the authorized user, and hence the Cloud's responses could be changed through a different means, such as asking the challenged questions, to inform the Cloud security system about an unauthorized access of information over cloud has been detected. In the case where the access is correctly identified as an unauthorized access, the Security System of Cloud is responsible to deliver unbounded amounts of bogus or fake information to the attacker, thus securing the user's true data from unauthorized disclosure to the third party user. The decoys, serve two purposes: validating whether data access is authorized when access to irrelevant access of information is detected and then it confused the attacker with fake information. We ensure that the combination of these two security features would provide unprecedented levels of security for the customer data on Cloud.

CONCLUSION

In this paper, we conclude that, with the increase of data theft attacks within the cloud the security of user data is becoming a serious issue for cloud service providers therefore the use of fog computing is done. Fog Computing is a process which helps in monitoring the behavioral aspect of the user and providing high security to the user data. Other techniques discussed in this paper use Fog computing for optimizing the website performance. We hope that by continuing this work using Fog Computing platforms it can lead to improved defensive techniques and would contribute in increasing the level of security of user data on the cloud.

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OPPORTUNITIES AND CHALLENGES OF EMERGING E-GOVERNANCE IN RURAL INDIA

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ABSTRACT

In India 70% of population resides in rural area therefore it important to provide basic internet services to each rural masses. This will lead to empowerment of E-governance resulting in better administrations, operations, interactions and reduce fraudulence. For the success of e-governance. Government introduced National e-governance plan and with the help of National Informatics Centre. E-governance without cyber security is illogical. The security in e-governance is negligible thus proper cyber security should be implemented for the welfare of the society. The security in e-governance is negligible. This can be well understood that enactment of e-governance is in bad state one cannot expect risk-free and cyber secure e-governance in India. In this paper we are focusing on cyber security concept, thus proper cyber security should be implemented for the welfare of society. For success of this plan, the government should take many initiatives and better actions for various upcoming projects.

Keywords: *E-governance, NeGP, NIC, Cyber Security.*

INTRODUCTION

The "E" in E-governance stands for electronic. It means organizing government electronically through the implementation of Information and Communication Technology; it provides systematic storing and retrieval of information, faster transmission of data than previous manual practices and systems. It speeds up the governmental processes by taking hasty decisions. The main objective of e-governance is to support and clarify governance for government, business and citizen. To make task more transparent, speedy and efficient. The main agenda behind E-governance is to assign SMART government (Simple, Moral, Accountable, Responsible and Transparent). [1]

E-Government applications developed through four-stage process. The three main groups in every e-Governance model are government (G), citizens (C) and businesses (B). Acronyms such as Business to Consumer (B2C) and Business to Business (B2B) communicate between the various groups. [8]

a) Information stage

Providing the masses (G2C & G2B) with admissible information. The format of the previous government websites is similar to that of a brochure. The government has made information accessible to the public, which enhances Services and democracy.

b) Interaction stage

People can enquire their queries via e-mail, use search engines, and download documents and forms. G2G organizations internally use LANs, intranets and e-mail to interact and exchange data.

c) Transaction stage

As technology is upgrading complexity increases, customer value is also higher. Entire transactions can be done online, which needs strong security measures. G2G's internal processes have to be restructured to offer good services. Government needs new laws, rules and legislation to authorize paperless transactions.

d) Transformation stage

When all systems are merged and the public can get the group services at one (virtual) counter. One single platform for all services is the main goal. Employees in different departments have to work together in effortless and seamless way.

According to the World Bank

"E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/ or cost reductions." [3]

Ravi Kant (Special Secretary, IT, Govt. of West Bengal):

"E-governance, however, is not really the use of IT in governance but as a tool to ensure good governance. E-

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CUSTOM ROM – A PROMINENT ASPECTS Of ANDROID

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ABSTRACT

This paper attempts to look behind the wheels of android and keeping special focus on custom rom's and basically check for security misconfiguration's which could yield to device compromise, which may result in malware infection or data theft. Android consists of a mobile operating system based on the Linux kernel, with middleware, libraries and APIs written in C and application software running on an application framework which includes Java-compatible libraries based on Apache Harmony. Android uses the Dalvik virtual machine with just-in-time compilation to run compiled Java code. Android OS used in smartphone itself but now it comes in PC, Tablets, TVs. This various ways makes them free to access internet by different conditional applications. Which increases security threats in private and business applications, such as online banking or to access corporate networks. The security issue generally arise in the OEM customisation layer. So people should be cautious about picking any android phone. If there are many customisations done in the phone this mean there are more chances of finding security issues in them. The manufacturer's warranty for the device gets void if the device is rooted. In this paper, discuss the Data security on Android OS.

Keywords: *Android OS, API, C.Smartphone, PC*

INTRODUCTION

What is Android ROM?

After good response from the users using Symbian, iOS and Windows there came into market a new Operating System called as Android. Android is the mobile operating system developed by Google. Android is a Linux-based software system, and similar to Linux, is free and open source software. One of the most widely used mobile OS these days is **ANDROID. Android** is a software bunch comprising not only operating system but also middleware and key applications.

This is a main reason to make Android smartphones a very attractive target for attackers and malware authors

Period	Android	iOS	Windows Phone	Blackberry OS	Others
2015Q2	82.8%	13.9%	2.8%	0.3%	0.4%
2014Q2	84.8%	11.6%	2.5%	0.5%	0.7%
2013Q2	79.8%	12.9%	3.4%	2.8%	1.2%
2012Q2	69.3%	16.6%	3.1%	4.9%	6.1%

Table 1 "Smartphone OS Market Share, 2015 Q2" **[Source:http://www.idc.com/prodserv/smartphone-os-market-share.jsp#]**

ANDROID HISTORY :-

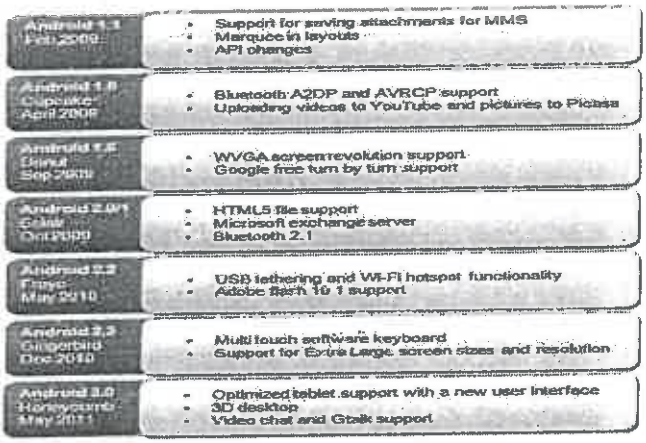

Table 2 "Android History"

FEATURES OF ANDROID

Android is a powerful Operating System supporting a large number of powerful applications. Hardware that supports Android is mainly based on ARM Architecture. The main feature of Android application includes:

1) Interface

The default interface of Android is based on direct manipulation. It uses the real world touches like tapping, swiping, pinching and reverse pinching and a virtual keyboard. It uses the user touches as an input to perform many functions or different tasks and provides a fluid touch interface. The hardware contained in the devices like accelerometers, gyroscopes and proximity sensor are used by the applications to perform various actions like to adjust the screen from portrait to

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COMPARATIVE STUDY OF EXISTING LOAD BALANCING TECHNIQUES IN CLOUD COMPUTING

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ABSTRACT

Cloud computing is a new rising technology in the distributed computing world. It is a rapidly growing technology which is a solution to common infrastructure, maintenance and cost constrained problems of this IT era. With the widespread use of this technology to provide on-demand access of service in the form of pay-as-you-use model to the customers, it has become one of the biggest concerns for the service providers to handle the user requests most efficiently without over-burdening or under utilizing the resources and in minimum time. Many load balancing algorithms have been proposed by various researchers providing different benefits. In this paper we have discussed and analyzed the load balancing algorithms with respect to different performance metrics with an aim to identify the most optimal algorithm having all the major desirable characteristics such as minimum response time and maximum throughput with optimum resource utilization.

Keywords: *Cloud Computing, On-demand Access, Load Balancing*

INTRODUCTION

Cloud computing is an Internet-based computing that provides shared processing resources and data to computers and other devices. Cloud provider outsourced all the resources to their client and it allows the user to make requests/demands and provide the services accordingly to the users.Cloud computing technology provides online resources and online storage to the users. It provides all the data at a lower cost and users can access resources all the time through internet. It is based on the concept of virtualization. Virtualization is a method for creating virtual servers that run on a cluster of a number of real servers. Cloud computing consists of numerous characteristics such as Broad network access, on demand service, Resource pooling, Measured services, Rapid elasticity etc.[2]

The cloud offers applications and services to all over the world from data center. Cloud computing provides applications and services that are offered over the internet. These services provided are platform as a service (PaaS), software as a service (SaaS) and infrastructure as a service (IaaS) that are made available to clients.[1]

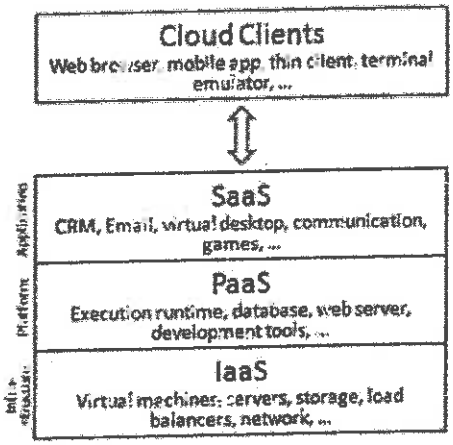

Fig: Cloud-computing layers accessible within a stack

Load balancing

In cloud computing balancing the load is necessary to distribute the workload equally between all the nodes. There are numerous existing issues in cloud computing and the main problem is load balancing. Load balancing helps to distribute loads between all the nodes and also ensures even resource distribution efficiently. Load balancing technique provides high resource utilization and improved response time.[1]

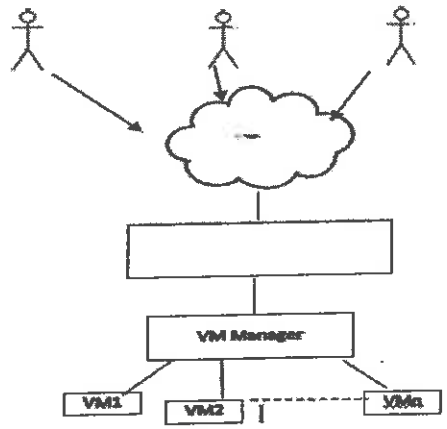

Fig: Load balancing in cloud computing

Business 2020 : Issues & Challenges

9

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WEB BASE VOTING SYSTEM USING EYE RETINA SCANNING

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ABSTRACT

In the present world the technology used for voting is unsafe. We are using electronic voting machine which is not able to determine the person having the right to vote or not. In proposed system it will scan the eye pattern which we determine the eligibility of the voter and the result will be store with higher security. It refers to the automatic identification of a voter, based on his/her physiological or behavioral characteristics. The person to be identified should be physically present at that point of time. Authorization or access to the voter into the system is based on bio metric techniques which removes the need of remembering the password or carry a token. By replacing PIN, bio metric techniques can potentially prevent unauthorized users to get accessed in the system. A bio metric system is essentially a pattern recognition system which helps in making personal identification by determining the authenticity of a user by its psychological or behaviourial aspects.

Keywords: *Biometric, Eye Pattern, Web base Voting, E-Voting*

INTRODUCTION

In the present world the technology used for voting is unsafe. The heart of fairness is voting. The heart of fairness voting is trust that each vote is recorded and stored secure. Voting now days carried out through electronic machine, where present system has each and every section is given the electronic machine which reserves the votes of the persons and given to the in charge officer. So the eligibility of the candidates are been checked by the officer and allow for the voting. Finally all the voting machine is collected at a given place and goes for counting[2].

PRESENT VOTING SCENARIO IN INDIA

The election carried is very messy. Many places vehicles are removed from the road for carrying election. Public sectors works are suspended due to the election. Public sectors officers and staffs are kept on election duties. So the public sectors people have to face the problems.Schools, colleges and other related institutions has the work for collection and distribution of voting equipment's, related applications & documents, to the officers. Due to this students have to face problems.

On day of election, the election area is heavily packed, because of which people hast to wait hours in a line to just vote. For the senior citizens and pregnant women face similar problems. Which results majority of the women don't come to cast their votes [3].

Fig 1: Old & aged person standing in a long vote queue waiting for her turn.[3]

Traditional Voting Process:

Traditional voting process can be classified into following phases [1]:

*1. **Authentication:*** In this person authenticate by carrying voting card, verified by officer. After this person can vote once done.

*2. **Vote:*** After authenticate vote place in booth hidden not seen to anyone. And can be voted through the electronic machine.

*3. **Vote counting:*** At the end of the process the electronic machine is taken by officer and then the counting is done at one place

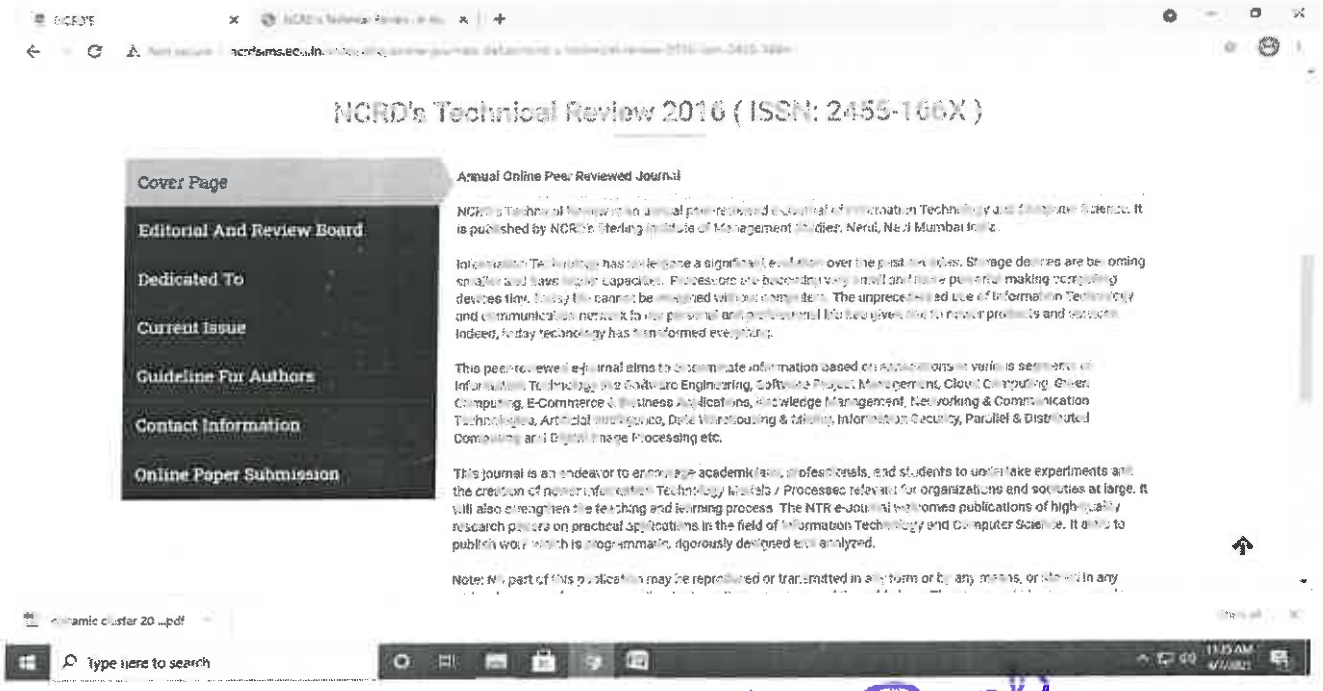
*4. **Verification:*** different verification process is been done if any fault or error again counting is done.

ELECTION TYPES

A. Paper-Based Voting:

Paper is been used for the traditional voting system. Before invention of internet, people were using paper base voting system. Presence of candidate is must when he wants to vote at the time and place specified. Further the candidates go to that specified place and vote and that paper was dropped in the ballot box. But this process have lot of disadvantages, for example the

NRT 2016 e voting (2 print)



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E-VOTING WITH FINGER RECOGNITION & WATCHDOG (WEBCAM) USING CLOUD COMPUTING

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ABSTRACT

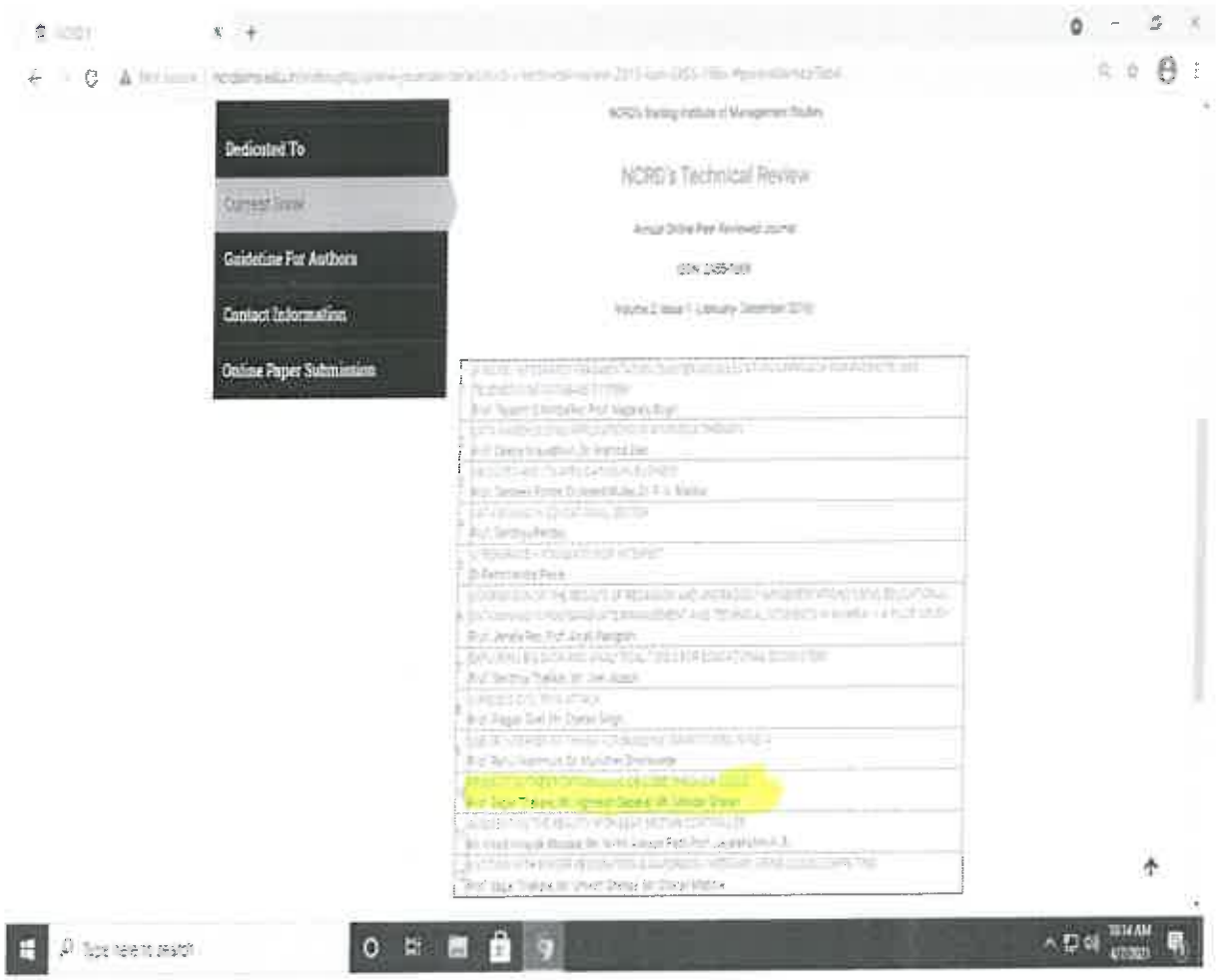
From last few year, in Information and Tele-Communications Technologies there is rapid advancement in cloud computing. This paper gives the details of requirements, design and implementation of a generic and secure electronic voting system where voters can cast their votes any-time, anywhere and mainly to cast a vote to that person to whom voter want to cast a vote using a number of electronic devices including private computer networks, web technology. This paper exhibits the notion behind the hype of cloud computing and evaluates its relevance to electronic government and electronic voting information system. Adopting a cloud computing approach for electronic voting solutions is investigated, reviewing the architecture within the previously described context. This E-Voting system is based on a Biometric i.e. fingerprint recognition technique. In fingerprint recognition technique, fingerprint matching technique is used to validate the user. Fingerprint matching is the process used to determine whether two sets of fingerprint ridge detail come from the same finger. There exist multiple algorithms that do fingerprint matching in many different ways.

***Keywords**: E-Voting System, Cloud Computing, Biometric device, Computer network*

INTRODUCTION

In every country, Election is a basic process of democracy which allows people to show their opinions by electing their leaders. [1] As the modern communications and Internet, today are almost accessible electronically, the computer technology users, brings the increasing need for electronic services and their security. Usages of new technology in the voting process improve the elections in natural. This new technology refers to electronic voting systems where the election data is recorded, stored and processed primarily as digital information. Countries all over the world are examining e-voting [4], for it has some striking advantages over traditional paper voting, including security for casting votes, accuracy of counting and analyzing votes, options to conduct voting in a centralized and decentralized manner, etc. Traditional voting system is a time-consuming and very much prone to errors. Every country has different needs. That's why every electronic voting solution we design is different.

E-voting system is secure way to cast the vote as it must meet security requirements such as confidentiality, integrity, fairness, forgery attack, verifiability and so on.[1][2] This makes E-voting system to be more vulnerable than traditional voting due to the nature of digital processing of election data which can be easily manipulated. The ultimate aim of E-Voting is to provide voters a good environment so that voters can cast their votes with minimum cost and efforts on the internet[1][3]. Auditable, transparent, secure and accurate people can trust the results because it allows for a process that is so auditable, Increases accessibility: meaning it's easier for disable people to vote independently visibly secure. this way could involve asking



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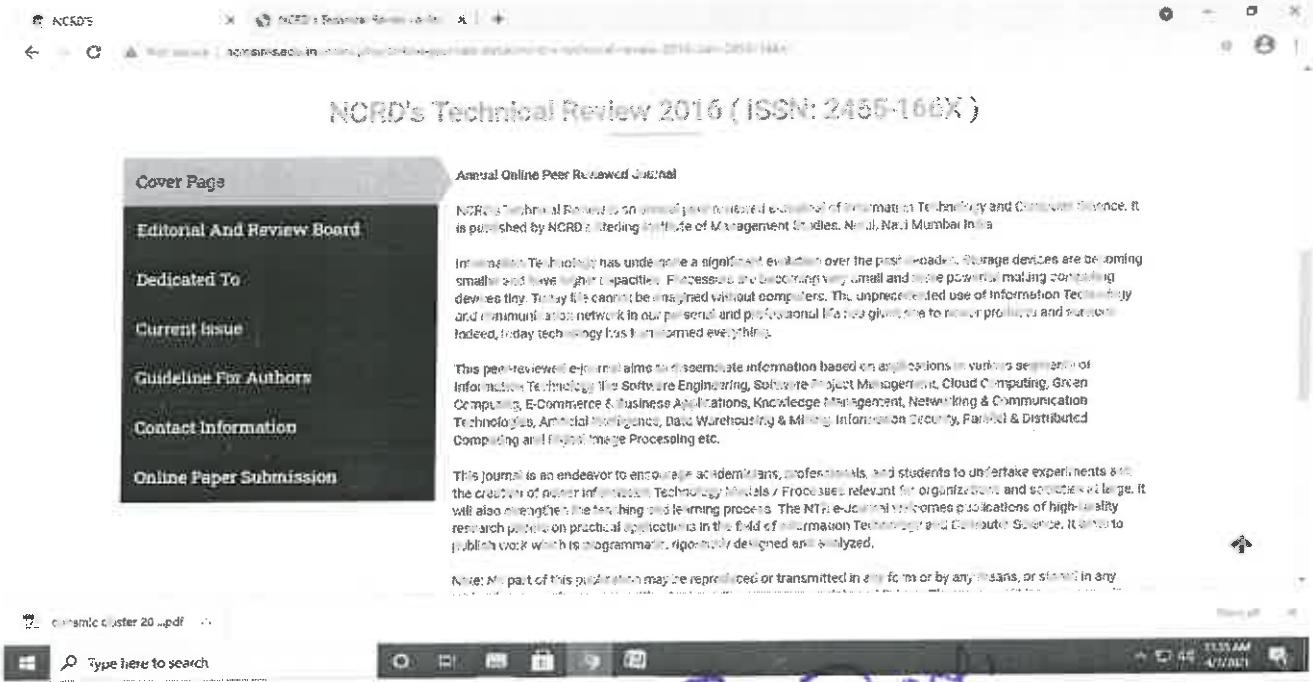

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PRODUCT AUTHENTICATION USING QR-CODE THROUGH CLOUD

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ABSTRACT

The development of a new product or technology always comes with the risk of getting duplicated, something that could affect company revenue and good will. QR codes present themselves as a low cost mobile solution which helps enterprises and consumers identify the authenticity of products. This is a convenient process as it can be deployed on smart phones and other mobile devices .Although the usage of QR codes for this purpose has been prevalent for a while, this POV highlights how companies can derive instantaneous results and detection that goes beyond mere QR code implementation. Product Authentication is one of the fundamental procedures to ensure the standard and quality of any product in the market. Counterfeit products are often offered to consumers as being authentic. Counterfeit consumer goods such as electronics, music, apparel, and Counterfeit medications have been sold as being legitimate. Efforts to control the supply chain and educate consumers to evaluate the packaging and labeling help ensure that authentic products are sold and used. Our work ensures that the task is made as simple with the help of a camera enabled mobile phone supported with QR (Quick Response) Code Reader. We propose a model whereby the application in the mobile phone decodes the captured coded image and sends it through the Cloud Data for authentication. The response received from the cloud enables the consumer to decide on the products authenticity.

KEYWORDS: *QR-code, authentication, counterfeit, security, genuineness, encryption, decryption.*

INTRODUCTION

According to the United Nations, the counterfeit market is worth Us $250 billion a year and growing. Almost every company faces the threat of product duplication as it not only hits revenue but also damages brand reputation. Companies often do not recover their R&D investments due to these losses, thus influencing their potential to create impactful products in the future.

There is also a school of thought that believes that counterfeit products fund organized crime in certain countries. This is something that no company of repute would want to be associated with duplicate puts consumers at risk and certain products can Cause serious health risks or even be fatal. On a strictly economic note, with a highly competitive market and shrinking margins, a counterfeit operation directly hits the top line and bottom line of the company and can be detrimental to business longevity. Authentication is one of the most important process for any consumer to identify whether the product we buy was from an authentic manufacturer or from any fake company. The consumers cannot judge whether the product is original or duplicate on their own by checking the manufactured date and the expired date. The lack of awareness about a products authenticity was well exposed in a recent issue where the consumers faced an issue with the duplication of products. The present authentication systems dealing with the product identification and authentication are Barcode and Hologram. The