Internet of Things
IOT Structure and Advancements with Applications

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ABSTRACT

Internet of Things symbolizes an idea in which the Internet encompasses into the real world implementing routine objects. In this paper the idea, the challenges, possible usage situations and technical architectural blocks of the ―Internet of Things‖ have been discussed. Many technical organizations are vigorously following research topics that contribute to the Internet of Things (IoT). Today, as sensing, actuation, communication, and control becomes even more intelligent and universal, there is momentous overlap in these communities, sometimes from slightly different perspectives. More cooperation between communities is encouraged. The increase of these devices in a communicating–activating network creates the Internet of Things (IoT), in which sensors and actuators merge effortlessly in our surroundings, and the information is shared across levels in order to develop a common operating picture (COP). The paper concludes with solutions to the issues that are likely to arise as the idea of the Internet of Things becomes a reality.

Keywords: IOT (Internet of Things), RFID, Cloud computing, Internet. IICMR Research Journal I4, Vol.10, Issue 2, June 2016, ISSN No.0975 2757

Targeting second green revolution in India: Applying Big Data technology to precision agriculture management systems for sustainable production

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ABSTRACT

Precision Agriculture (PA) has evolved from a concept some decades ago into an emerging technology today. The catalyst for the emergence of Precision agriculture has been satellite positioning and navigation. The combination of Global Positioning System (GPS) and mobile mapping provide the agriculturist with a new capability of gathering information for implementing decision-based Precision Agriculture. While adoption of precision farming in wide concept has been modest in India. In India, the current agricultural management and its practices are not prudentially viable neither environmentally supportable and the yields of many agricultural products in India are critically low. In the near future, it will become essential for the country to build a high yielding and varied agricultural. This paper identifies the corollaries of traditional farming practices and addresses how to increase the yield of the agricultural commodities by using present day computer technologies. Further, it also acknowledges the critical computing and diagnostic ability of Big Data analytics in processing huge volumes of transactional data in real time situations. It was identified that the small size of farms and fields in most of Indian agriculture limits economic gains from currently available precision farming technology. However, the public concerns for the environment and food security may mean that those potential benefits of precision agriculture in rural agriculture system are beginning to receive attention.

Keywords: Precision Farming, Agriculture Management, Big data, Farming Technology, Food Security IICMR Research Journal I4, Vol.10, Issue 2, June 2016, ISSN No.0975 2757

Enhancing Relevance Estimation of Source document via Query-biased Source Document Summary

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ABSTRACT

Aim of this paper is to investigate if query-biased source document summary enhances relevance estimation of source document. For this purpose a summarization system has been developed, and a query-biased source document summary is generated automatically for every distal source document connected to current page via hyperlink. User estimates expected gain and cost of hyperlinked information via browsing cues present on and around hyperlink. The system presented in this paper provides additional automatically tailored browsing cues to users in the form of summary so as to assist users in relevance estimation of source document.
To investigate the relevance estimation capabilities of summary a within subject study was conducted where by users performed certain tasks on experimental summarization system and on a baseline system. The performance of user for relevance estimation parameters on both the systems was compared. The results from the evaluation indicate that query-biased source document summary enhances the relevance estimation of source document.

Keywords: Query-biased, summarization, relevance estimation, complementing hyperlink, browsing cues.

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Awareness of App Usage and Security Issues among Smartphone Users in India

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ABSTRACT

As per the survey reports (the Hindu Feb 2016) India has become the second biggest smart phone users. Numbers of users have become habitual of using Internet and various mobile Applications. Whether it is business App, entertainment App or consumer App, user is using all such Apps very frequently. But basic challenge is that user is downloading such Apps for ease and comfort might be free or by paying, without bothering for agreement terms and security issues. The purpose of this study is to understand and explore the awareness of Indian Smartphone users about security and privacy issues related with free Smartphone Apps. The study focuses on various free Android apps downloaded by users, awareness about permissions to be granted while installing free apps, and problems faced by users. Research study is conducted and primary data is gathered from users of all age groups.

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LI-FI technology
An LED Light Communication

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ABSTRACT

Li-Fi or Light Fidelity refers to 5G Visible Light Communication frameworks utilizing light-emitting diodes as a medium to high speed communication in a comparative way as Wi-Fi. In the days where Internet has turned into a noteworthy interest, individuals are in a quest for Wi-Fi hotspots. Li-Fi or New Life of information correspondence is a superior different option for Wi-Fi in remote correspondence. This paper proposes a study on Li-Fi Technology.
The Li-fi Technology was created by Professor Harald Hass of University of Edinburgh. Li-Fi has more capacity in terms of bandwidth in visible region thusly it does not interfere in other communications which uses radio frequency range, without taking its frequency bands.. Li-Fi has thousand times more prominent rate than Wi-Fi and gives security as the visible light can't penetrate through the walls, which propose another period of wireless communication. The idea of Li-Fi is information correspondence on fast flickering of light which is not identified by human eye but rather it is centered around photo detector which converts the on-off state into binary digital data. It has picked up a tremendous prominence in two years of its creation. Such innovation has brought greener as well as more secure and less expensive fate of correspondence.

Keywords—LED, Li-Fi

Proposed Life Cycle Model for Implementing the RFID Technology in a Factory

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ABSTRACT

RFID stands for Radio Frequency Identification (RFID) which is an automatic identification technology to read the data from the tag which is attached to some object. Mechanical Engineering is one of the fields where it can be used widely and we can see various benefits coming out. In any production unit, there are many departments which are interacting with each other to manufacture the final product. From getting the order from the customer to its delivery RFID technology can be used to increase the co-ordination between the departments, improving decision making thus managing the time effectively.

There are many issues which need to be taken care of for implementing the technology like transponder & antenna together called reader. There are various kinds of readers, and tags. The cost of implementation mainly depends on these two. Its use depends on the application under consideration. If this selection along with location, environment is not considered properly, the implementation becomes unsuccessful.

This paper proposes a model for implementing the technology, phase wise in the production process of a manufacturing Industry.

Keywords: RFID Technology,RFID Reader,RFID Encoder