Fourth National Conference on Management and Information Technology
11-12 April, 2014

Book of Abstracts

Data Analytics and Business Intelligence : Emerging Paradigms

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Jaipur

Paper Code - C 133

CDroid in Fujitsu Server for Mobile Cloud

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In today's era, it is important to save energy as much as for the sake of better financial, environmental, national security and above all the mankind. The Smartphone batteries are huge consumer of energy when using several apps. The proposed system is to develop a CDroid operating system in Fujitsu server for mobile cloud computing as saving energy, enhancing battery life and put aside processor cycles of mobile phone, sharing data/ information and faster access. Our CDroid system shares both the server and phone memory as well by using offloading mechanism. The Smartphone transmits the data in binary format by using CDroid device stored in it. CDroid device includes application framework to countenance multitudinous applications. The FSK, FDMA and TDM maneuver to locomotion information. CDMA2000 1xEV-DV promote channelized the information that may include both data and voice. The UMTS, WCDMA, HSDPA, EVDO are some protocols to communicate through mobile tower. A mobile tower is made up of microwave, GSM antennas and radio frequency (RF) cables. They intercommunicate with the base station through MTSO. Bandwidth provided for this kind of radio network around 1200 to 1400 MHz. Wireless spectrum is used the RF between 800 MHz to 2.2 GHz bands. The Smartphone uses 0.6 to 3 watts. The CDroid OS inside fujitsu server in cloud is conveyed by ISP's as per standards.

World's fastest fujitsu server contains CDroid (a server approach) constituents within cloud accommodates the connection handler (secure), optimizer users traffic, caching and pre-fetching; content compression is also done here. The security issues must encompass various apps, anti-phishing, cookie handler, sensitive information blocker, push notification handler and remote wipers. Mobile advertisement blocker, push notification handler protects users' privacy. Synchronization handler, remote code executor handles mobiles computations and loading the data backup.

As the operating system and information are accumulated onto clouds the power necessitate to process consumed into fujitsu server. This preserves Smartphone battery life, besides this mobile cloud server is quickest among others. It provides the winged response to the user. We had described thoroughly the architecture of newly proposed system. This will be next step towards the changing nature of hybrid cloud unsegregated mobile technology for the future.

Keyword : Smartphone, CDroid, Fujitsu Server, Cloud Computing

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The Art of Learning: Knowledge Comprehension and Implementation

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The Learning concept can be categorized by supervised and unsupervised learning in a broad sense, where supervised learning model assumes the availability of a teacher or supervisor who classifies the training examples and unsupervised learning model identify the pattern classes by information heuristically or by experience. A novel concept of learning; Reflective Teaching-learning methodology is derived from reinforcement learning an accurate self-perception technique to promote learning process more interesting. Self-knowledge is the foundation of success and be enlightened. If the teacher or student integrates their mind tools such as metaphorical thinking and strategic superiority in his/her reflective learning-teaching methodology, the learning-teaching process becomes more challenging. Metaphorical thinking is a natural phenomenon of the human brain to find similarity between two different universes of meaning. Strategic- superiority is another natural phenomenon in which human brain associates challenges in to text material with structures and establish a direction in one's own mind. Integrating these two mind tools consciously in reflective teaching-learning process transforms the teachers as well as students to highly self motivated individuals. **The art of learning is a self evaluation approach** which is strategic and tactics in nature meaning that the learners construct new knowledge from their experiences related to the mental frame work that already exists in their mind. It naturally favors the self evaluation process providing competitive performance using knowledge compression.

Keywords : Reflective Teaching-learning, Strategic- Superiority, Metaphorical Thinking, Reinforcement Learning.

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Managing Information Technology

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Managing Information Technology

Selected Papers of Bilingual International Conference on
Information Technology: Yesterday, Today, and Tomorrow

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Defence Scientific Information & Documentation Centre
Defence Research & Development Organisation
Ministry of Defence, India
2015

Bilingual International Conference on Information Technology: Yesterday, Today, and Tomorrow, 19-21 February 2015, pp. 163-169

मोबाइल प्रौद्योगिकी के लिए फ्यूजिटसू सर्वर पर सीड्रियोड ओ एस आधारित क्लाउड संगणनान

Cloud Computing with CDroid OS based on Fujitsu Server for Mobile Technology

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सारांश

21वीं सदी ने हमें काफी स्मार्ट बना दिया है, वित्तीय और पर्यावरण की खातिर ऊर्जा की खपत को ज्यादा से ज्यादा बचाना अब अनिवार्य है। यह राष्ट्रीय सुरक्षा और मानव जाति के लिए भी उतना ही महत्त्वपूर्ण है। आज दुनिया की बहुत बड़ी आबादी स्माटफोन बैटरी के बारे में चिंतित है। कई एप को उपयोग करने वाले ऊर्जा के बहुत सारे उपभोक्ता हैं। हमारी प्रणाली सीड्रियोड आपरेशन सिस्टम के साथ क्लाउड संगणना विकसित करती है जो कि मोबाइल प्रौद्योगिकी के लिए फ्यूजिटसू सर्वर पर आधारित है, जिसे पूरी तरह से ऊर्जा की बचत, बैटरी जीवन को बढ़ाने और प्रोसेसर चक्र को बचाने के लिए ही नहीं बल्कि मोबाइल फोन, डाटा साझा करने और तेजी से एक्सेस पहुंचने करने के लिए भी उपयोग किया जाता है। सिस्टम ऑफलोडिंग तंत्र का उपयोग करने के साथ साथ सर्वर और फोन दोनों की मेमोरीज को साझा करता है। मोबाइल क्लाउड संगणन अवधारणा ऊर्जा संरक्षण में कई चीजों की मदद करती है। नवीनतम फ्यूजिटसू सर्वर दुनिया की सबसे तेज प्रसंस्करण प्रोसेसिंग प्रदान करता है। हमने ठीक प्रकार से नव प्रस्ताविक प्रणाली की संरचना का वर्णन किया है। यह तेजी से बदलते सेलफोन प्रौद्योगिकी की दिशा में एक और कदम होगा। कुछ वर्षों के भीतर ही अगली पीढ़ी के लिए हाइब्रिड क्लाउड कम्प्यूटिंग मोबाइल प्रौद्योगिकी दुनिया भर में तैयार हो जाऐगी।।

ABSTRACT

The twenty first century made us smart enough, it is now mandatory to save power consumption as much as for the sake of financial, environmental stability. It is equally important for national security and mankind. Today a huge number of populations in the world is worried about Smartphone batteries. They are huge consumer of energy when using several apps. Our system is to develop Cloud Computing with CDroid Operation System that is based on Fujitsu Server for Mobile Technology, which is completely used for saving energy, enhancing battery life and saving processor cycles more than ever of mobile phone, sharing data and faster access. The system shares both the memory of server and phone as well by using offloading mechanism. The mobile cloud computing concept helps several things to conserve power. The newest Fujitsu server provides world's fastest processing. We had described thoroughly the architecture of newly proposed system. This will be one more step towards the quickest changing cell phone technology. The hybrid cloud computing mobile technology for the next generation will be ready for our world within few years.

Keywords: Smartphone, CDroid, Fujitsu Server, Cloud Computing

1. INTRODUCTION

The CDroid operating system in fujitsu server or mobile cloud [1] finds easy to save battery lifes of a Smartphone. They are already able to upload or download data, software, mainly Apps to and from server by offloading technique [2]. The Android OS is stored completely on the mobile phone device memory in which it runs and consumes power. Our proposed system is to use a CDroid OS in Fujitsu server to best serve cloud computing facility. The system stores, executes in the cloud utilizes electricity at IaaS cloud location. As we know the current growth rate of battery capacity is just 5% per year (Robinson et al) [3], which is very less according to growing market needs. The Fujitsu server is fastest as because it transfers data between CPU and memory in a way which is best in the world. The energy consuming Apps are installed partly on clouds, so a lot of electricity is saved and enhances battery life.

Throughout this paper we will use several diagrams and figures to make others understand about our proposed system.

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ISBN: 978-81-86514-71-9

Price Rs. 200/-

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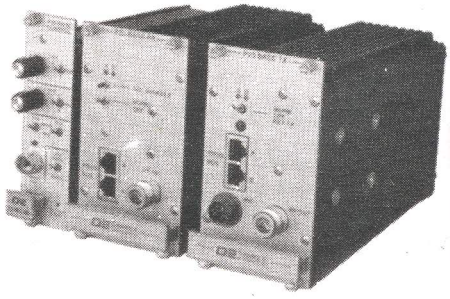


NUMBER SYSTEM AND CODES

CHAPTER-2

2.1 INTRODUCTION

As we are familiar with the decimal number system consisting of ten digits 0 through 9, are used to specify any number, it is also possible to have other number systems also. Some of most commonly number systems are- binary, octal and hexadecimal number systems. These are useful in computers, microprocessors and many digital systems. In decimal number system, there are 10 digits, so its base is 10. Similarly binary consists of two digits (1 and 0), its base is 2, octal consists of 8 digits (0 through 7), its base is 8 and hexadecimal consists if 16 digits (0 through 15), so its base is 16.

2.2 NUMBER SYSTEMS

2.2.1 Binary Number System

The number system with base (or radix) two is known as the binary number system. Only two digits 0 and 1, are used to represent any number in this system. These are known as bits.

A group of 8 bits is known as a byte and a group of 4 bits is known as nibble. For example 10010001 is one byte and 1011 is a nibble.

This number can be converted into decimal number system as follows-

$1\times2^5+0\times2^4+1\times2^3+1\times2^2+0\times2^1+1\times2^0+1\times2^{-1}+0\times2^{-2}+1\times2^{-3}+0\times2^{-4}+1\times2^{-5}$

$= 32+0+8+4+0+0+1+1/2+0+1/12$

$= 45.65625$

By using this procedure, a binary number can be converted into its decimal equivalent.

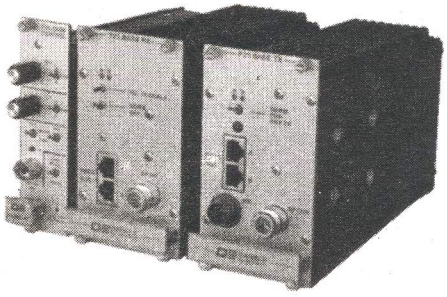
The conversion from decimal to binary is explained in the following examples-

Example 1: $(13)_{10}=(?)_2$

Steps	Quotient	Remainder
13/2	6	1
6/2	3	0
3/2	1	1
1/2	0	1

Therefore (13)10=(1101)2 (The remainders are written from bottom to top.)

MEMORY ORGANIZATION



CHAPTER-10

INTRODUCTION

Basically computer memory is the main storage of any type of computer. Some of the memory is permanent and some are temporary. In this chapter, Memory Organization we have discussed about the hierarchy of different memory. The main memory i.e. RAM, ROM is discussed here. The auxiliary memory like magnetic disk and magnetic tape, associative memory, cache memory, virtual memory is discussed briefly. Here we also know about memory management hardware.

10.1 MEMORY HIERARCHY

In today's computer system memory is an important part; it can be used to store data during, before and after processing of data. Like an auxiliary memory (Magnetic tape or magnetic tape) is used to store data permanently as a backup storage. The memory unit that communicates directly with the CPU is called the main memory (RAM). The data and programs that are currently being used by the CPU are stored in this type of memory. Other information are stored in auxiliary memory and transferred to main memory. There are another type of memory is used is called cache memory to increase the speed of data transfer between main memory and CPU, because the high speed processors cannot match the speed of relatively slow main memory. In the diagram below we can see there is an I/O (input-output) processor between auxiliary memory and main memory to make free the CPU for the input output operations performed to and from auxiliary and main memory.

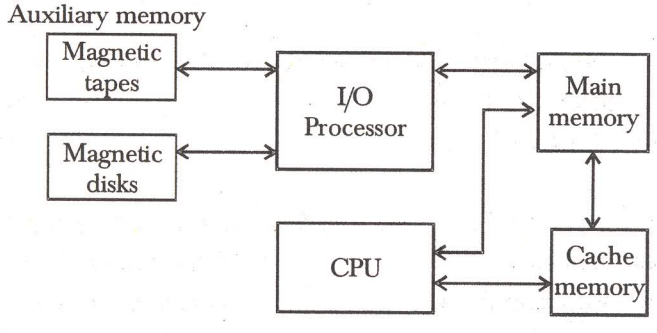


Fig. 10.1: Memory hierarchy in a computer system

Digital Electronic

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- Number System and Codes
- Boolean Algebra and Logic Gates
- Minimization of Boolean Function
- Combinational Circuits
- Boolean Algebra and Logic Gates
- Hard Wired & Micro Programmed Control Unit
- Central Processing Unit
- Input Output Organization
- Memory Organization

THE BOOK

The book, is an up-to-date, comprehensive and simple introduction to all aspects of digital electronics in today's context. The book is self contained, systematically organised and covers all the relevant topics. The presentation has been kept at a level suitable for undergraduate students. The book has been written in a very simple and lucid way. Every effort has been made to make the treatment simple and comprehensive.

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ISBN 978-93-80712-06-2
9 789380 712062