



# VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(Approved by AICTE, Affiliated to JNTU, Hyderabad)

[www.info.vmtw.in](http://www.info.vmtw.in)

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# PRAJWALAN

COLLEGE ANNUAL  
TECHNICAL MAGAZINE  
2017-18





## > About VMTW

Vignan ' s Institute of Management and Technology For Women , is the brainchild of Dr. L Rathaiah, Chairman, Vignan Group of Institutions , was founded during, August, in 2008, with four branches of Engineering.

VMTW is an exemplary institution of higher learning with a mission of pursuing excellence in education and research. The institution, with their diverse and dynamic community of about 2000 students offers a distinctive combination of some of the finest facilities for MCA, MBA and M.Tech. with 5 different graduate, and undergraduate programs ECE, CSE, EEE,IT,CIVIL accomplished faculty, world class facilities with hostel set on a sprawling area of 22 acres sylvan surroundings of mango groves and greenery.

While students at VMTW immerse themselves in academics, the college has a lot in store for them outside the classroom. Student life includes participation in sports, recreational & co-curricular and cultural activities. In short, at VMTW , students will find an academic and social environment where everyone from faculty members to peers help shape their future.

VMTW is a home to aesthetically designed buildings with state of the-art computer and internet facilities, modern laboratories, workshops, seminar halls, auditoriums and well stocked libraries, sports and games fields.

The Institution boasts of a strong alumni network with alumni events held every year serving as a platform for past students to give back to VMTW and share their experiences with its present fellow students. With so much to offer, it is only natural that students of VMTW get a unique opportunity to carve a niche for themselves in their chosen field of study that enables them to become well-rounded and discerning citizens, fully qualified for their chosen professions in the workplace. With so much to offer, it is only natural that students of VMTW get a unique opportunity to carve a niche for themselves in their chosen field of study that enables them to become well-rounded and discerning citizens, fully qualified for their chosen professions in the workplace.

## > VMTW VISION

To empower female students with professional education using creative & innovative technical practices of global competence and research aptitude to become competitive engineers with ethical values and entrepreneurial skills.



## > VMTW MISSION

To impart value based professional education through creative and innovative teaching-learning process to face the global challenges of the new era technology.

To inculcate research aptitude and to bring out creativity in students by imparting engineering knowledge imbibing interpersonal skills to promote innovation, research and entrepreneurship.







# VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN



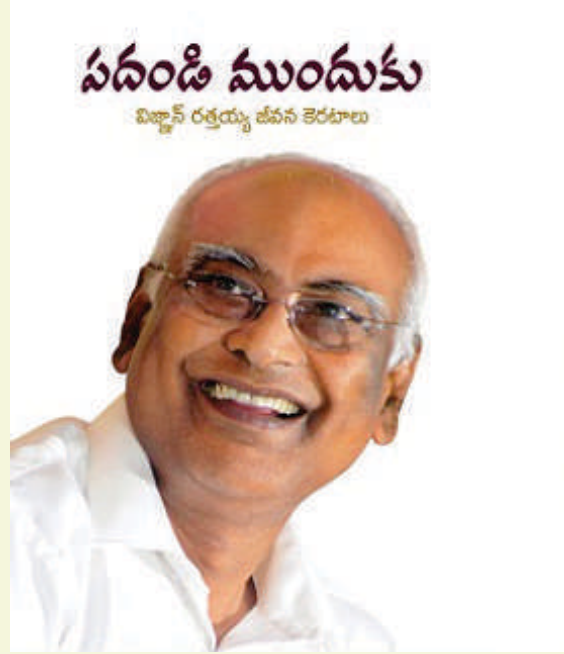




# VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

Prajwalan Annual Technical Magazine

## Chairman Message



I am glad to know that VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN is publishing a Departmental Magazine ONLINE 2nd EDITION. The Annual Magazine will highlight the academic and other activities like co-curricular and extracurricular activities we conduct seminars and workshops; encourages students to participate in technical paper presentation contests; organize lectures by experts from leading industries etc. VMTW aims at not only educating the young to be successful Engineers, Managers and Entrepreneurs but also to churn out socially responsible human beings of tomorrow. I convey my best wishes to all the students for a successful future and good education of the College which is fast developing into one of the best technical institutions in Telangana. I congratulate the faculty and students for their efforts to achieve excellence and wish them all the best for the future.







## CEO Message



DEPARTMENTAL MAGAZINE is an amalgamation of all the events held in the department and it plays an instrumental role in providing a greater exposure of the achievements accomplished by the students and the faculty. I congratulate the faculty and students for their efforts to achieve excellence and wish them all the best for the future.

## Principal's Message



It gives me enormous contentment that the issue of VMTW ONLINE departmental Technical Magazine is ready for the readers. A Departmental Magazine mirrors the success story of an institution and act as a great medium to reach out to the outer world. It reflects upon the constant and committed efforts made by faculty, staff and students for taking the institution one step ahead. I congratulate everyone for their bit of service for the institution and do expect the same in times to come. I also congratulate the editorial team for bringing out First Magazine Wish you good luck.

## HOD'S MESSAGE



*It is a matter of pleasure to speak with all of you through this PRAJAWALAN MAGAZINE. Within these pages you will find much news related to diverse activities from the whole faculty and students of department. I am happy for the initiatives taken by the faculty to disseminate knowledge by organizing various activities in the department. I hope everyone will find this ANNAULA MAGAZINE exciting and interesting*





## Scientist



**Mr. Sam Pitroda** is an internationally respected telecom inventor, entrepreneur, development thinker, and policy maker who has spent 50 years in information and communications technology (ICT) and related global and national developments.

Credited with having laid the foundation for India's telecommunications and technology revolution of the 1980s, Mr. Pitroda has been a leading campaigner to help bridge the global digital divide. During his tenure as Advisor to Prime Minister Rajiv Gandhi, Mr. Pitroda led six technology missions related to telecommunications, water, literacy, immunization, dairy production, and oil seeds. He was also the founder and first Chairman of India's Telecom Commission. In these plural roles, Mr. Pitroda helped revolutionize India's development philosophies and policies with a focus on access to technology as the key to social change.

As a way to induce the second phase of India's technology revolution, in 2005 Mr. Pitroda headed India's National Knowledge Commission (2005-2009), to provide a blueprint of reform for the knowledge-related institutions and infrastructure for the 21st century in the country.

Recently, Mr. Pitroda served as Advisor to the Prime Minister of India on Public Information Infrastructure and Innovation, with the rank of a Cabinet Minister. He served as the Chairman of the Smart Grid Task Force, as well as the committees to reform public broadcasting, modernize railways, deliver e-governance, and other developmental activities.

Mr. Pitroda is a Founding Chairman of five non-profit organizations including the India Food Bank, the Global Knowledge Initiative and the Institute of Transdisciplinary Health. He is also a founding Commissioner of the United Nations Broadband Commission for Digital Development and Chairman of the International Telecommunication Union's m-Powering Development Board that looks to empower developing countries with the use of mobile technology.





In addition, Mr. Pitroda is a serial entrepreneur having started several companies in the United States. He holds around 20 honorary PhD's, close to 100 worldwide



**William Henry Gates III** (born October 28, 1955) is an American business magnate, investor, author, philanthropist, humanitarian, and principal founder of Microsoft Corporation. During his career at Microsoft, Gates held the positions of chairman, CEO and chief software architect, while also being the largest individual shareholder until May 2014.

In 1975, Gates and Paul Allen launched Microsoft, which became the world's largest PC software company. Gates led the company as chief executive officer until stepping down in January 2000, but he remained as chairman and created the position of chief software architect for himself. In June 2006, Gates announced that he would be transitioning from full-time work at Microsoft to part-time work and full-time work at the Bill & Melinda Gates Foundation, which was established in 2000. He gradually transferred his duties to Ray Ozzie and Craig Mundie. He stepped down as chairman of Microsoft in February 2014 and assumed a new post as technology adviser to support the newly appointed CEO Satya Nadella.

Gates is one of the best-known entrepreneurs of the personal computer revolution. He has been criticized for his business tactics, which have been considered anti-competitive. This opinion has been upheld by numerous court rulings.

Since 1987, Gates has been included in the *Forbes* list of the world's wealthiest people, an index of the wealthiest documented individuals, excluding and ranking against those with wealth that is not able to be completely ascertained. From 1995 to 2017, he held the *Forbes* title of the richest person in the world all but four of those years, and held it consistently from March 2014 to July 2017, with an estimated net worth of US\$89.9 billion as of October 2017. However, on July 27, 2017, and since October 27, 2017, he has been surpassed by Amazon founder and CEO Jeff Bezos, who had an estimated net worth of US\$90.6 billion at the time. As of August 6, 2018, Gates had a net worth of \$95.4 billion, making him the second-richest person in the world, behind Bezos.

Later in his career and since leaving Microsoft, Gates pursued a number of philanthropic endeavors. He donated large amounts of money to various charitable organizations and scientific research programs through the Bill & Melinda Gates Foundation. In 2009, Gates and Warren Buffett founded The Giving Pledge, whereby they and other billionaires pledge to give at least half of their wealth to philanthropy. The foundation works to save lives and improve global health, and is working with Rotary International to eliminate polio





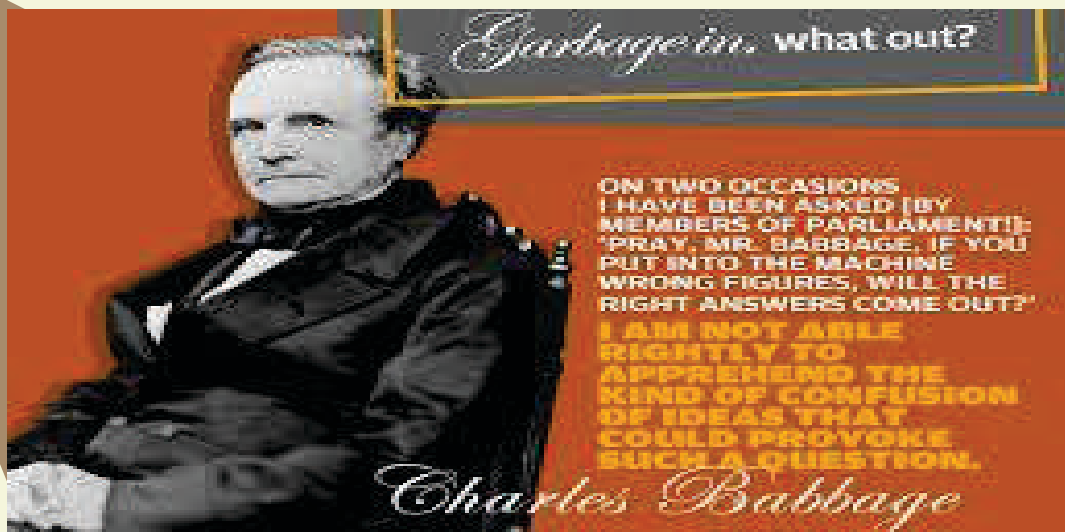
## QUOTES



[Computer science] is not really about computers and it's not about computers in the same sense that physics is not really about particle accelerators, and biology is not about microscopes and Petri dishes... and geometry isn't really about using surveying instruments.

(Hal Abelson)

lzquotes.com





## Google File System

### Abstract

The great success of Google Inc. is attributed not only to its efficient search algorithm, but also to the underlying commodity hardware and, thus the file system. As the number of applications run by Google increased massively, Google's goal became to build a vast storage network out of inexpensive commodity hardware. Google created its own file system, named as Google File System.

Google File System was innovatively created by Google engineers and ready for production in record time in a span of one year in 2003, which speeded Google's market thereafter.

Google File system is the largest file system in operation. Formally, Google File System (GFS) is a scalable distributed file system for large distributed data intensive applications. In the design phase of GFS, points which were given stress includes component failures are the norm rather than the exception, files are huge in the order of MB & TB and files are mutated by appending data. The entire file system is organized hierarchically in directories and identified by pathnames. The architecture comprises of a single master, multiple chunk servers and multiple clients. Files are divided into chunks, which is the key design parameter. Google File System also uses leases and mutation order in their design to achieve consistency and atomicity. As of fault tolerance, GFS is highly available, replicas of chunk servers and master exists.

### Assumptions

In designing a file system for Google's needs, they have been guided by assumptions that offer both challenges and opportunities.

- The system is built from many inexpensive commodity components that often fail. It must constantly monitor itself and detect, tolerate, and recover promptly from component failures on a routine basis.
- The system stores a modest number of large files. Usually a few million files, each typically 100 MB or larger in size. Multi-GB files are the common case and should be managed efficiently. Small files must be supported, but need not optimize for them.
- The workloads primarily consist of two kinds of reads: large streaming reads and small random reads. In large streaming reads, individual operations typically read hundreds of KBs, more commonly 1 MB or more. Successive operations from the same client often read through a contiguous region of a file. A small random read typically reads a few KBs at some arbitrary offset. Performance-conscious applications often batch and sort their small reads to advance steadily through the file rather than go back and forth.
- The workloads also have many large, sequential writes that append data to files. Typical operation sizes are similar to those for reads. Once written, files are seldom modified again. Small writes at arbitrary positions in a file are supported but do not have to be efficient.





- The system must efficiently implement well-defined semantics for multiple clients that concurrently append to the same file. The files are often used as producer consumer queues or for many-way merging. Hundreds of producers, running one per machine, will concurrently append to a file. Atomicity with minimal synchronization overhead is essential. The file may be read later, or a consumer may be reading through the file simultaneously.
- High sustained bandwidth is more important than low latency. Most of the target applications place a premium on processing data in bulk at a high rate, while few have stringent response time requirements for an individual read or write

## Google File System Architecture

A GFS cluster consists of a single master and multiple chunk servers and is accessed by multiple clients. The basic analogy of GFS is master maintains the metadata; client contacts the master and retrieves the metadata about chunks that are stored in chunk servers; next time, client directly contacts the chunk servers. Figure 1 describes these steps more clearly.

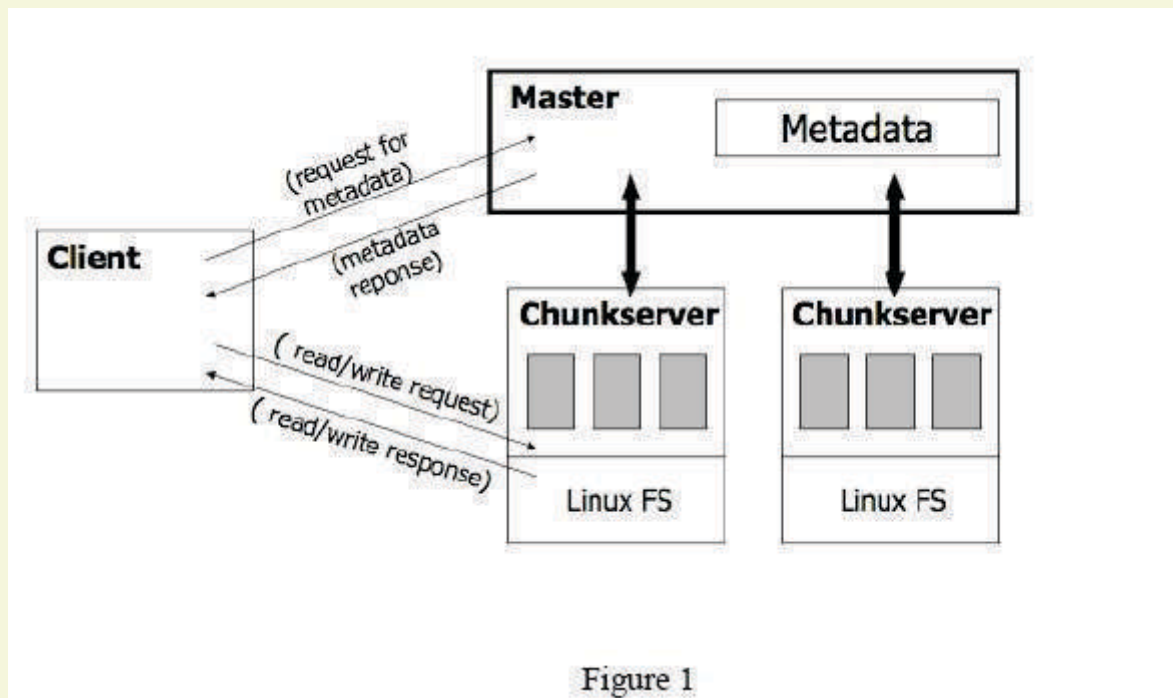


Figure 1

Each of these is typically a commodity Linux machine running a user-level server process. Files are divided into fixed-size chunks. Each chunk is identified by an immutable and globally unique 64 bit chunk handle assigned by the master at the time of chunk creation. Chunk servers store chunks on local disks as Linux files and read or write chunk data specified by a chunk handle and byte range. For reliability, each chunk is replicated on multiple chunk servers. By default, three replicas are stored, though users can designate different replication levels for different regions of the file namespace.



control information, the mapping from files to chunks, and the current locations of chunks. It also controls system-wide activities such as chunk lease management, garbage collection of orphaned chunks, and chunk migration between chunkservers.

The master periodically communicates with each chunkserver in HeartBeat messages to give it instructions and collect its state. GFS client code linked into each application implements the file system API and communicates with the master and chunkservers to read or write data on behalf of the application. Clients interact with the master for metadata operations, but all data bearing communication goes directly to the chunkservers. Neither the client nor the chunkserver caches file data. Client caches offer little benefit because most applications stream through huge files or have working sets too large to be cached.

Not having them simplifies the client and the overall system by eliminating cache coherence issues. (Clients do cache metadata, however.) Chunkservers need not cache file data because chunks are stored as local files and so Linux's buffer cache already keeps frequently accessed data in memory. Before going into basic distributed file system operations like read, write, we will discuss the concept of chunks, metadata, master, and will also describe how master and chunkservers communicate.

### **Leases and Mutation:**

mutation is an operation that changes the contents or metadata of a chunk such as a write or an append operation. Each mutation is performed at all the chunk's replicas. Leases are used to maintain a consistent mutation order across replicas. The master grants a chunk lease to one of the replicas, which we call the primary. The primary picks a serial order for all mutations to the chunk. All replicas follow this order when applying mutations. Thus, the global mutation order is defined first by the lease grant order chosen by the master, and within a lease by the serial numbers assigned by the primary.

The lease mechanism is designed to minimize management overhead at the master. A lease has an initial timeout of 60 seconds. However, as long as the chunk is being mutated, the primary can request and typically receive extensions from the master indefinitely. These extension requests and grants are piggybacked on the HeartBeat messages regularly exchanged between the master and all chunkservers. The master may sometimes try to revoke a lease before it expires (e.g., when the master wants to disable mutations on a file that is being renamed). Even if the master loses communication with a primary, it can safely grant a new lease to another replica after the old lease expires.

Write algorithm is similar to Read algorithm, in terms of contacts between client, master, and chunkservers. Google keeps at least three replicas of each chunks, so in Read, we just read from one of the chunkservers, but in case of Write, it has to write in all three chunkservers, this is the main difference between read and write.





Following is the algorithm with related figures for the Write operation.

1. Application originates the request
2. GFS client translates request from (filename, data) -> (filename, chunk index), and sends it to master
3. Master responds with chunk handle and (primary + secondary) replica locations
4. Client pushes write data to all locations. Data is stored in chunkservers' internal buffers

## Conclusion

data processing workloads on commodity hardware. While some design decisions are specific to the unique setting, many may apply to data processing tasks of a similar magnitude and cost consciousness. Google started work on GFS by reexamining traditional file system assumptions in light of current and anticipated application workloads and technological environment. We treat component failures as the norm rather than the exception, optimize for huge files that are mostly appended to (perhaps concurrently) and then read (usually sequentially), and both extend and relax the standard file system interface to improve the overall system.

The system provides fault tolerance by constant monitoring, replicating crucial data, and fast and automatic recovery. Chunk replication allows us to tolerate chunkserver failures. The frequency of these failures motivated a novel online repair mechanism that regularly and transparently repairs the damage and compensates for lost replicas as soon as possible. Additionally, check summing is used to detect data corruption at the disk or IDE subsystem level, which becomes all too common given the number of disks in the system. The design delivers high aggregate throughput to many concurrent readers and writers performing a variety of tasks.

This is achieved by separating file system control, which passes through the master, from data transfer, which passes directly between chunkservers and clients. Master involvement in common operations is minimized by a large chunk size and by chunk leases, which delegates authority to primary replicas in data mutations. This makes possible a simple, centralized master that does not become a bottleneck. GFS has successfully met the storage needs and is widely used within Google as the storage platform for research and development as well as production data processing. It is an important tool that enables Google to continue to innovate and attack problems on the scale of the entire web.

**Written by**

**Dr. PENMETSА VAMSI KRISHNA RAJA**



## Green Cloud

Green computing is defined as the study and practice of designing, manufacturing, using, and disposing of computers, servers, and associated subsystems—such as monitors, printers, storage devices, and networking and communications systems—efficiently and effectively with minimal or no impact on the environment."

The goals of green computing are similar to green chemistry; reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime, and promote the recyclability or biodegradability of defunct products and factory waste. Research continues into key areas such as making the use of computers as energy-efficient as possible, and designing algorithms and systems for efficiency-related computer technologies.

There are several approaches to green computing, namely

Product longevity

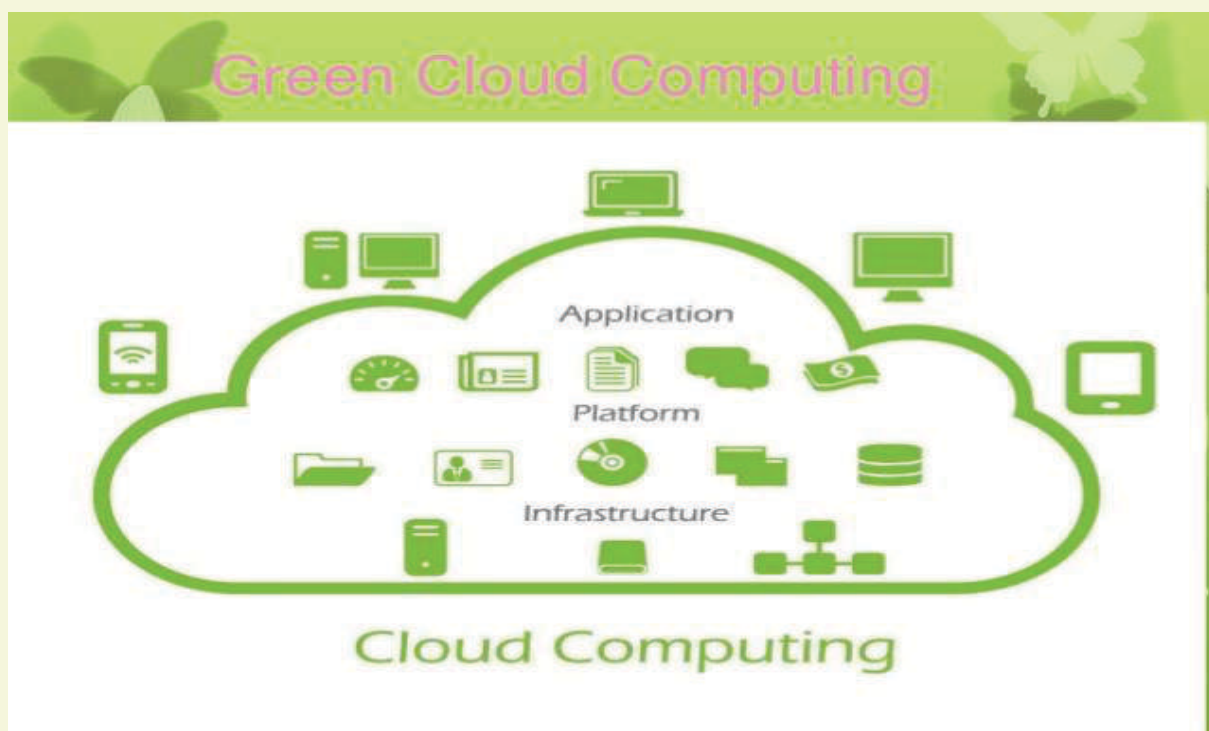
Algorithmic efficiency

Resource allocation

Virtualisation

Power management etc.

Need of Green Computing in Clouds







Modern data centers, operating under the Cloud computing model are hosting a variety of applications ranging from those that run for a few seconds (e.g. serving requests of web applications such as e-commerce and social networks portals with transient workloads) to those that run for longer periods of time (e.g. simulations or large data set processing) on shared hardware platforms.

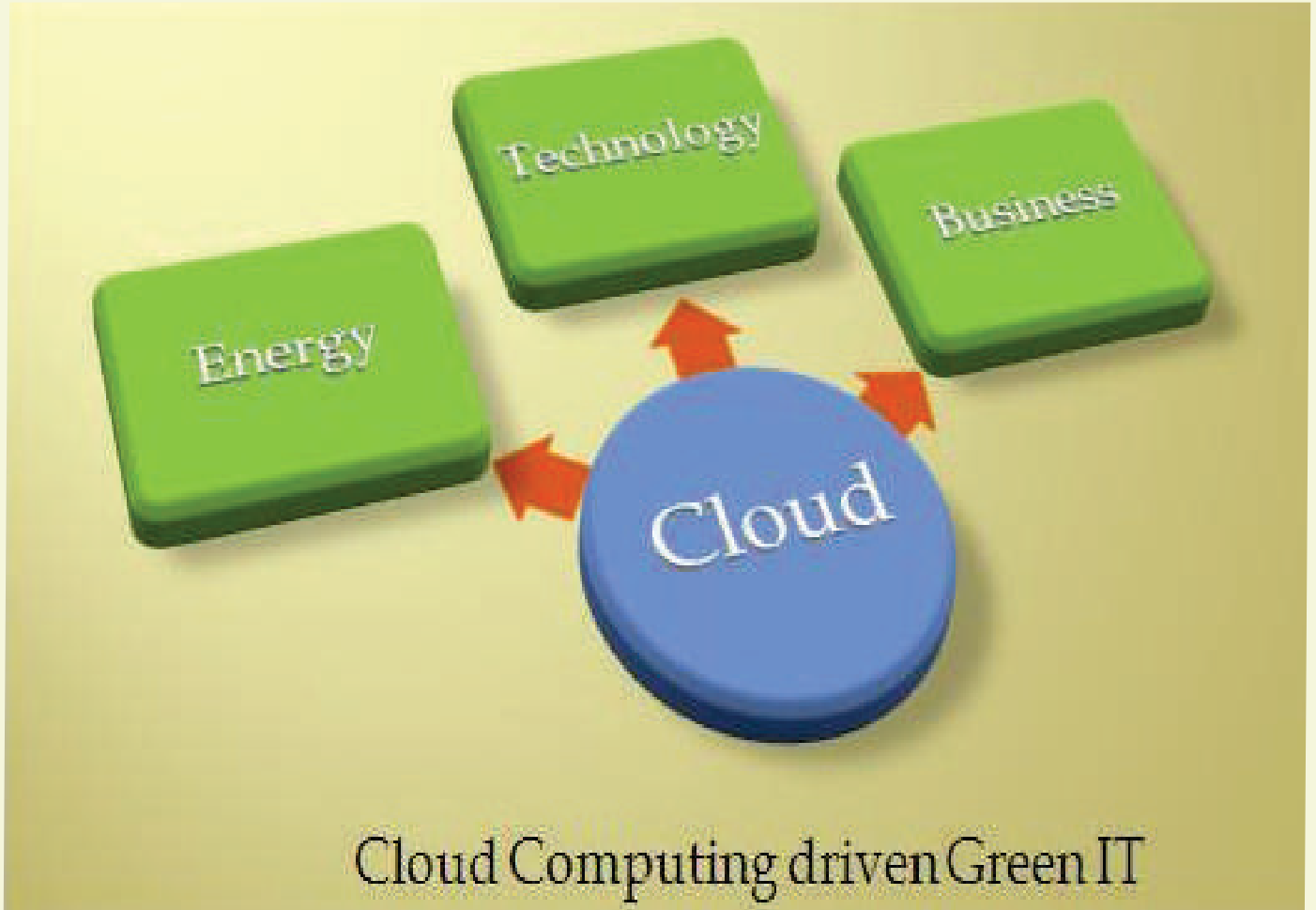
The need to manage multiple applications in a data center creates the challenge of on-demand resource provisioning and allocation in response to time-varying workloads. Normally, data center resources are statically allocated to applications, based on peak load characteristics, in order to maintain isolation and provide performance guarantees.

Until recently, high performance has been the sole concern in data center deployments and this demand has been fulfilled without paying much attention to energy consumption. The average data center consumes as much energy as 25,000 households [20]. As energy costs are increasing while availability dwindles, there is a need to shift focus from optimising data center resource management for pure performance to optimising for energy efficiency while maintaining high service level performance. According to certain reports, the total estimated energy bill for data centers in 2010 is \$11.5 billion and energy costs in a typical data center double every five years.

Applying green technologies is highly essential for the sustainable development of cloud computing. Of the various green methodologies enquired, the DVFS technology is a highly hardware oriented approach and hence less flexible

. The result of various VM migration simulations show that MM policy leads to the best energy savings: by 83%, 66% and 23% less energy consumption relatively to NPA, DVFS and ST policies respectively with thresholds 30-70% and ensuring percentage of SLA violations of 1.1%; and by 87%, 74% and 43% with thresholds 50-90% and 6.7% of SLA violations. MM policy leads to more than 10 times less VM migrations than ST policy.

The results show flexibility of the algorithm, as the thresholds can be adjusted according to SLA requirements. Strict SLA (1.11%) allow the achievement of the energy consumption of 1.48 KWh.



However, if SLA are relaxed (6.69%), the energy consumption is further reduced to 1.14 KWh. Single threshold policies can save power upto 20%,but they also cause a large number of SLA violations. Green scheduling algorithms based on neural predictors can lead to a 70% power savings. These policies also enable us to cut down data centre energy costs, thus leading to a strong,competitive cloud computing industry. End users will also benefit from the decreased energy bills.

Written by

**AVIRNENI PRATHIBHA**

**12UP1A0502**





## 4D Visualization

### Abstract

Visualizable objects in biology and medicine extend across a vast range of scale, from individual molecules and cells through the varieties of tissue and interstitial interfaces to complete organs, organ systems, and body parts.

The practice of medicine and study of biology have always relied on visualizations to study the relationship of anatomic structure to biologic function and to detect and treat disease and trauma that disturb or threaten normal life processes. Traditionally, these visualizations have been either direct, via surgery or biopsy, or indirect, requiring extensive mental reconstruction. The potential for revolutionary innovation in the practice of medicine and in biologic investigations lies in direct, fully immersive, real-time multi sensory fusion of real and virtual information data streams into online, real-time visualizations available during actual clinical procedures or biological experiments. In the field of scientific visualization, the term "four dimensional visualization" usually refers to the process of rendering a three dimensional field of scalar values.

"4D" is shorthand for "four-dimensional"- the fourth dimension being time. 4D visualization takes three-dimensional images and adds the element of time to the process. The revolutionary capabilities of new three-dimensional (3-D) and four-dimensional (4-D) medical imaging modalities along with computer reconstruction and rendering of multidimensional medical and histologic volume image data, obviate the need for physical dissection or abstract assembly of anatomy and provide powerful new opportunities for medical diagnosis and treatment, as well as for biological investigations. In contrast to 3D imaging diagnostic processes, 4D allows doctor to visualize internal anatomy moving in real-time. So physicians and sonographers can detect or rule out any number of issues, from vascular anomalies and genetic syndromes. Time will reveal the importance of 4d visualization

### 4D-THE MODERN DIMENSION

"4D" is shorthand for "four-dimensional"- the fourth dimension being time. 4D visualization takes three-dimensional images and adds the element of time to the process.

In contrast to 3D imaging diagnostic processes, 4D allows doctor to visualize internal anatomy moving in real-time. For example: Movement patterns of fetuses allows conclusions to be drawn about their development; increase of accuracy in ultrasound guided biopsies thanks to the visualization of needle movements in real time in all 3 planes. So physicians and sonographers can detect or rule out any number of issues, from vascular anomalies and genetic syndromes

### 3D GIVES LIFE TO 4D:

Locked within 3-D biomedical images is significant information about the objects and their properties from which the images are derived. Efforts to unlock this information to reveal answers to the mysteries of form and function are couched in the domain of image processing and visualization. A variety of both standard and sophisticated methods have been developed to



process (modify) images to selectively enhance the visibility and measurability of desired object features and properties. For example, both realism-preserving and perception-modulating approaches to image display have significantly advanced the practical usefulness of 4-D biomedical imaging.

Many life-threatening diseases and/or quality-of-life afflictions still require physical interventions into the body to reduce or remove disease or to alleviate harmful or painful conditions. But minimally invasive or noninvasive interventions are now within reach that effectively increase physician performance in arresting or curing disease; reduce risk, pain, complications, and reoccurrence for the patient; and decrease healthcare costs. What is yet required is focused reduction of recent and continuing advances in visualization technology to the level of practice, so that they can provide new tools and procedures that physicians “must have” to treat their patients and empower scientists in biomedical studies of structure-to function relationships.

Forming an image is mapping some property of an object onto image space. This space is used to visualize the object and its properties and may be used to characterize quantitatively its structure or function. Imaging science may be defined as the study of these mappings and the development of ways to better understand them, to improve them, and to use them productively. The challenge of imaging science is to provide advanced capabilities for acquisition, processing, visualization, and quantitative analysis of biomedical images to increase substantially the faithful extraction of useful information that they contain.

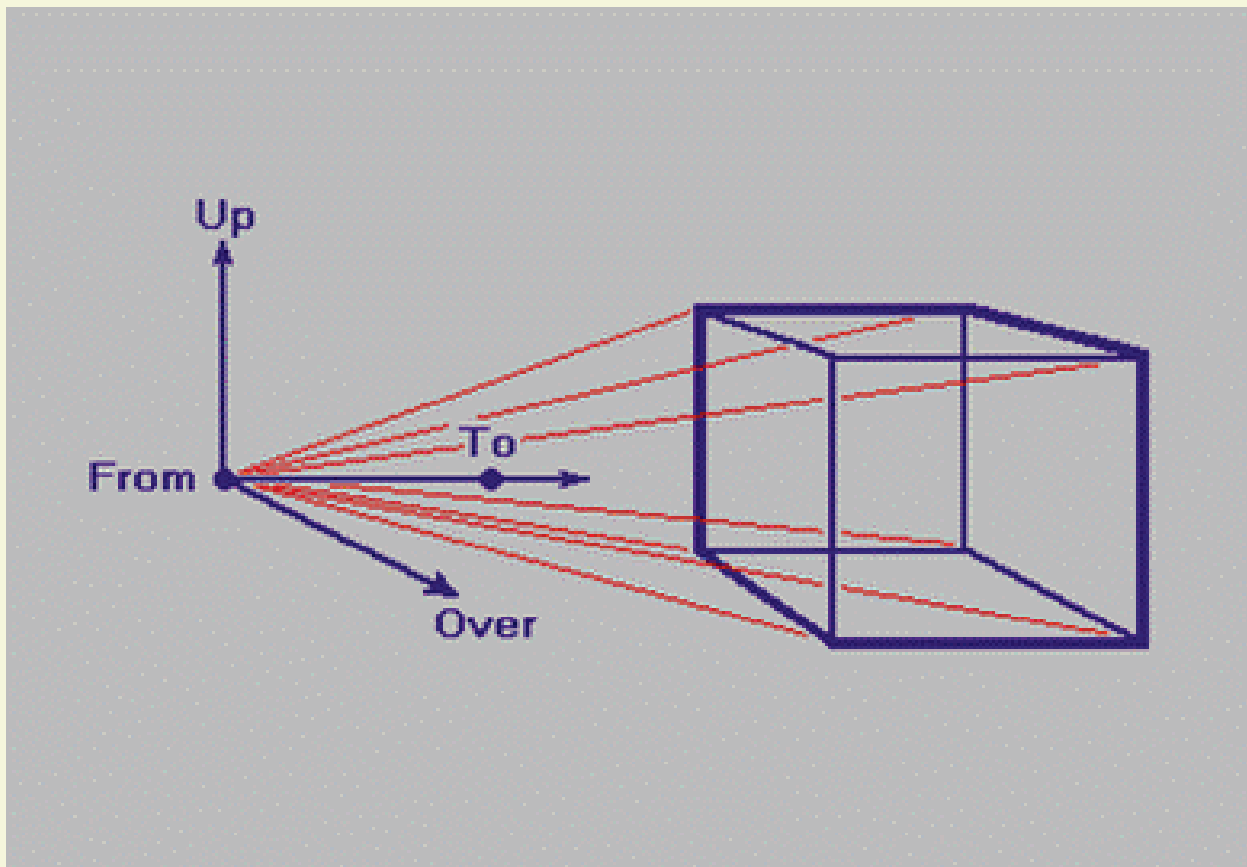
## Concept Of 4D Visualization

In the field of scientific visualization, the term "four dimensional visualization" usually refers to the process of rendering a three dimensional field of scalar values. While this paradigm applies to many different data sets, there are also uses for visualizing data that correspond to actual four-dimensional structures. Four dimensional structures have typically been visualized via wire frame methods, but this process alone is usually insufficient for an intuitive understanding. The visualization of four dimensional objects is possible through wire frame methods with extended visualization cues, and through ray tracing methods. Both the methods employ true four-space viewing parameters and geometry.

The ray tracing approach easily solves the hidden surface and shadowing problems of 4D objects, and yields an image in the form of a three-dimensional field of RGB values, which can be rendered with a variety of existing methods. The 4D ray tracer also supports true four-dimensional lighting, reflections and refractions. The display of four-dimensional data is usually accomplished by assigning three dimensions to location in three-space, and the remaining dimension to some scalar property at each three-dimensional location. This assignment is quite apt for a variety of four-dimensional data, such as tissue density in a region of a human body, pressure values in a volume of air, or temperature distribution throughout a mechanical object



#### 4D Viewing Vectors and Viewing Frustum



The viewing-angle is defined as for three-dimensional viewing, and is used to size one side of the projection-parallelepiped; the other two sides are sized to fit the dimensions of the projection-parallelepiped. For this work, all three dimensions of the projection parallelepiped are equal, so all three viewing angles are the same.

#### RAY TRACING ALGORITHM:

Raytracing solves several rendering problems in a straight-forward manner, including hidden surfaces, shadows, reflection, and refraction. In addition, raytracing is not restricted to rendering polygonal meshes; it can handle any object that can be interrogated to find the intersection point of a given ray with the surface of the object. This property is especially nice for rendering four-dimensional objects, since many N-dimensional objects can be easily described with implicit equations

#### 4D IMAGE WARPING

For robustly measuring temporal morphological brain changes, a 4D image warping mechanism can be used. Longitudinal stability is achieved by considering all temporal MR images of an individual simultaneously in image warping, rather than by individually warping a 3D template to an individual, or by warping the images of one time-point to those of another time-point. Moreover, image features that are consistently recognized in all time-points guide the warping procedure, whereas spurious features that appear inconsistently at different time-points are eliminated. This deformation strategy significantly improves robustness in detecting anatomical correspondences, thereby producing smooth and accurate estimations of longitudinal changes. The experimental results show the significant improvement of 4D warping method over previous 3D warping method in measuring subtle longitudinal changes of brain structures.





## METHOD:

4D-HAMMER, involves the following two steps:

(1) Rigid alignment of 3D images of a given subject acquired at different time points, in order to produce a 4D image. 3D-HAMMER is employed to establish the correspondences between neighboring 3D images, and then align one image (time  $t$ ) to its previous-time image ( $t-1$ ) by a rigid transformation calculated from the established correspondences.

(2) Hierarchical deformation of the 4D atlas to the 4D subject images, via a hierarchical attribute-based matching method. Initially, the deformation of the atlas is influenced primarily by voxels with distinctive attribute vectors, thereby minimizing the chances of poor matches and also reducing computational burden. As the deformation proceeds, voxels with less distinctive attribute vectors gradually gain influence over the deformation

## CONCLUSION

Advanced medical imaging technology allows the acquisition of high resolved 3D images over time i.e.4D images of the beating heart. 4D visualization and computer supported precise measurement of medical indicators (ventricle volume, ejection fraction, wall motion etc.) have the high potential to greatly simplify understanding of the morphology and dynamics of heart cavities, simultaneously reduce the possibility of a false diagnosis. 4D visualization aims at providing all information conveniently in single, stereo, or interactively rotating animated views.

The goal of the 2nd year of the Med-SANARE project is twofold. On one hand a virtual table metaphor will be utilized to set up a visionary high-end cardiac diagnosis demonstrator for educational purpose that makes use of augmented reality (AR) techniques. On the other hand a Cardiac Station will be implemented as functional reduced solution that supports image evaluation making use of standard PC-based technology. The functionality offered will be sufficient to successfully perform the tasks required by the diagnostic procedure. For both systems realistic and detailed modeling and visualization plays a crucial role

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**Written by**

**Dr. PENMETSА VAMSI KRISHNA RAJA**



## Java Database Connectivity

### Abstract

JDBC is a Java API for executing SQL statements. (As a point of interest, JDBC is a trademarked name and is not an acronym; nevertheless, JDBC is often thought of as standing for "Java Database Connectivity".)

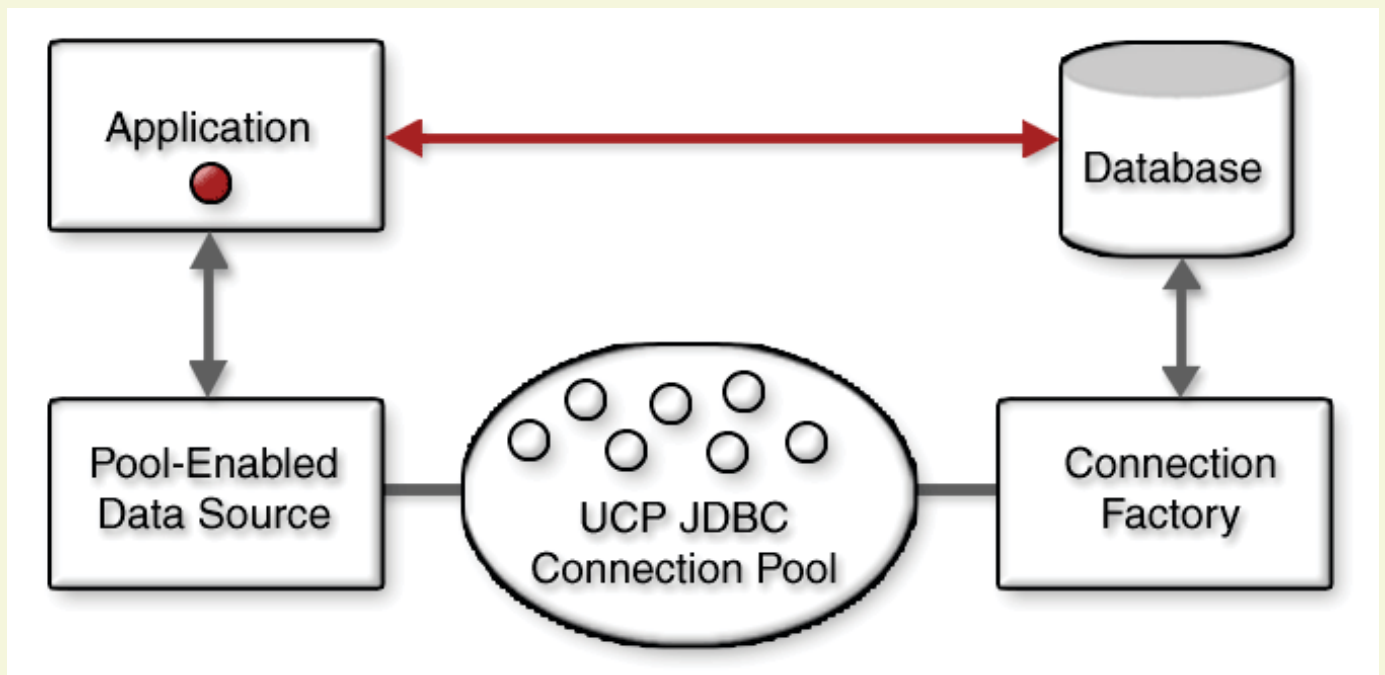
It consists of a set of classes and interfaces written in the Java programming language. JDBC provides a standard API for tool/database developers and makes it possible to write database applications using a pure Java API.

Using JDBC, it is easy to send SQL statements to virtually any relational database. In other words, with the JDBC API, it isn't necessary to write one program to access a Sybase database, another program to access an Oracle database, another program to access an Informix database, and so on. One can write a single program using the JDBC API, and the program will be able to send SQL statements to the appropriate database. And, with an application written in the Java programming language, one also doesn't have to worry about writing different applications to run on different platforms. The combination of Java and JDBC lets a programmer write it once and run it anywhere.

### Introduction of Java Database Connectivity

Java, being robust, secure, easy to use, easy to understand, and automatically Downloadable on a network, is an excellent language basis for database applications. What is needed is a way for Java applications to talk to a variety of different databases. JDBC is the mechanism for doing this. JDBC extends what can be done in Java. For example, with Java and the JDBC API, it is possible to publish a web page containing an applet that uses information obtained from a remote database. Or an enterprise can use JDBC to connect all its employees (even if they are using a conglomeration of Windows, Macintosh, and UNIX machines) to one or more internal databases via an intranet.

With more and more programmers using the Java programming language, the need for easy database access from Java is continuing to grow. MIS managers like the combination of Java and JDBC because it makes disseminating information easy and economical. Businesses can continue to use their installed databases and access information easily even if it is stored on different database management systems. Development time for new applications is short.



Installation and version control are greatly simplified.

### What Does JDBC Do?

Simply put, JDBC makes it possible to do three things:

1. establish a connection with a database
2. send SQL statements
3. process the results.

The following code fragment gives a basic example of these three steps:

```
Connection con = DriverManager.getConnection (
"jdbc:odbc:wombat", "login", "password");

Statement stmt = con.createStatement();

ResultSet rs = stmt.executeQuery("SELECT a, b, c FROM Table1");

while (rs.next()) {

int x = getInt("a");

String s = getString("b");

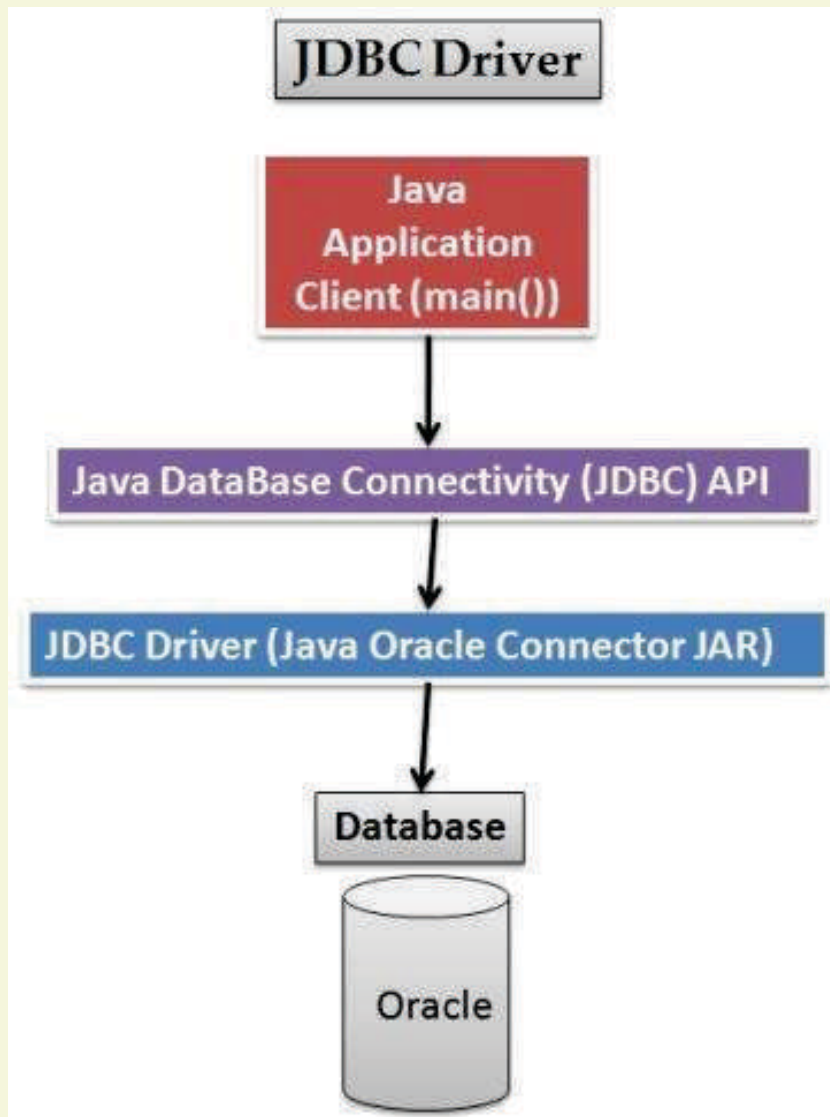
float f = getFloat("c");
```





JavaSoft provides three JDBC product components as part of the Java Developer's Kit (JDK):

- . the JDBC driver manager,
- . the JDBC driver test suite, and
- . the JDBC-ODBC bridge.



The JDBC driver manager is the backbone of the JDB architecture. It actually is quite small and simple; its primary function is to connect Java applications to the correct JDBC driver and then get out of the way.

Written by

**BASUDE SHRADHA**

**12UP1A0503**



## Green Computing

### Abstract

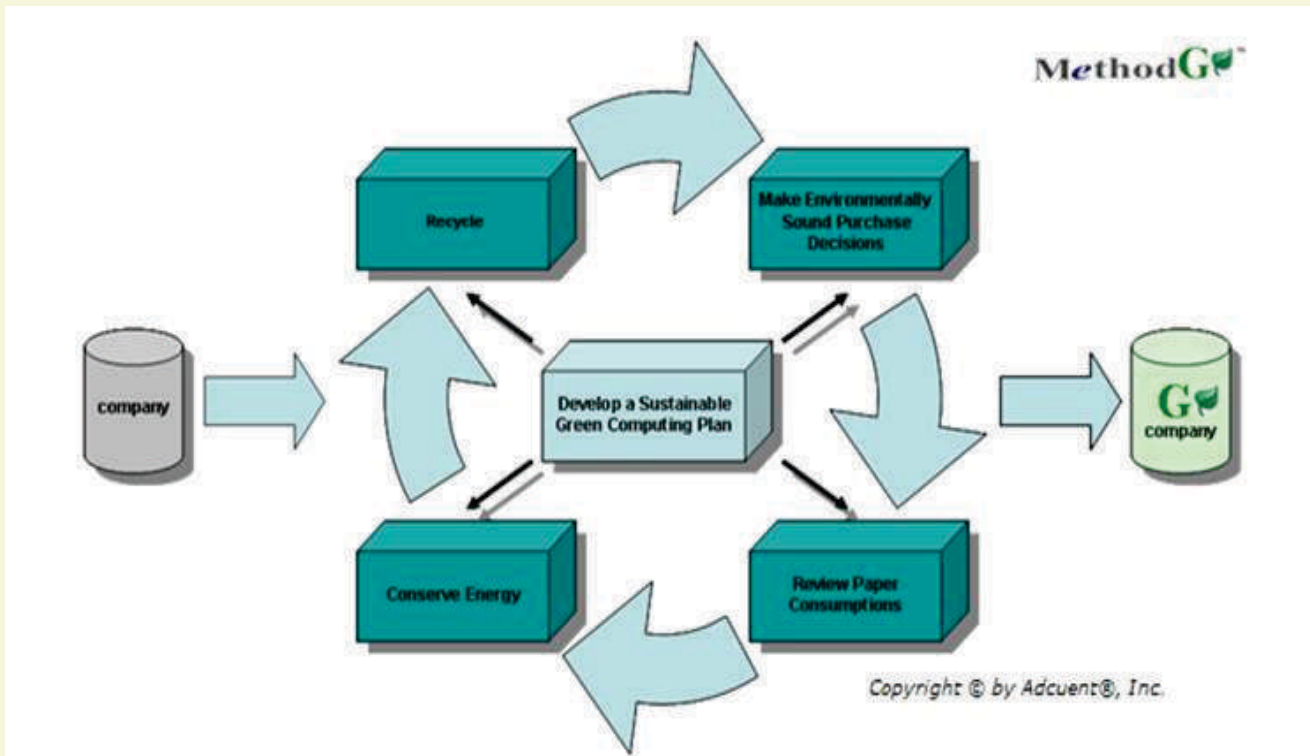
Green computing, green IT or ICT Sustainability, refers to environmentally sustainable computing or IT. In the article *Harnessing Green IT: Principles and Practices*, San Murugesan defines the field of green computing as "the study and practice of designing, manufacturing, using, and disposing of computers, servers, and associated subsystems—such as monitors, printers, storage devices, and networking and communications systems — efficiently and effectively with minimal or no impact on the environment.

"The goals of green computing are similar to green chemistry; reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime, and promote the recyclability or biodegradability of defunct products and factory waste. Research continues into key areas such as making the use of computers as energy-efficient as possible, and designing algorithms and systems for efficiency-related computer technologies.

Green computing is the environmentally responsible use of computers and related resources. Such practices include the implementation of energy-efficient central processing units (CPUs), servers and peripherals as well as reduced resource consumption and proper disposal of electronic waste (e-waste). One of the earliest initiatives toward green computing in the United States was the voluntary labeling program known as Energy Star. It was conceived by the Environmental Protection Agency (EPA) in 1992 to promote energy efficiency in hardware of all kinds. The Energy Star label became a common sight, especially in notebook computers and displays. Similar programs have been adopted in Europe and Asia.

### What is a thin client?

A thin client (sometimes also called a lean or slim client) is a computer or a computer program which depends heavily on some other computer (its server) to fulfill its traditional computational roles. This stands in contrast to the traditional fat client, a computer designed to take on these roles by itself. The exact roles assumed by the server may vary, from providing data persistence (for example, for diskless nodes) to actual information processing on the client's behalf.



Thin clients occur as components of a broader computer infrastructure, where many clients share their computations with the same server. As such, thin client infrastructures can be viewed as the amortization of some computing service across several user-interfaces. This is desirable in contexts where individual fat clients have much more functionality or power than the infrastructure either requires or uses. This can be contrasted, for example, with grid computing.

Thin-client computing is also a way of easily maintaining computational services at a reduced total cost of ownership.

The most common type of modern thin client is a low-end computer terminal which concentrates solely on providing a graphical user interface to the end-user. The remaining functionality, in particular the operating system, is provided by the server.

Thin clients have their roots in multi-user systems, traditionally mainframes accessed by some sort of terminal computer. As computer graphics matured, these terminals transitioned from providing a command-line interface to a full graphical user interface, as is common on modern thin clients. The prototypical multiuser environment along these lines, UNIX, began to support fully graphical X terminals, i.e., devices running X server software, from about 1984. X terminals remained relatively popular even after the arrival of other thin clients in the mid-late 1990s. Modern UNIX derivatives like BSD and GNU/Linux continue the tradition of the multi-user, remote display/input session. Typically, X server software is not made available on thin clients; although no technical reason for this exclusion would prevent it.

Windows NT became capable of multi-user operations primarily through the efforts of Citrix Systems, which repackaged NT 3.5.1 as the multi-user operating system Win Frame in 1995. Microsoft licensed this technology back from Citrix and implemented it into Windows NT 4.0 Terminal Server Edition, under a project codenamed "Hydra". Windows NT then became the





basis of Windows 2000 and Windows XP. As of 2011 Microsoft Windows systems support graphical terminals via the Remote Desktop Services component.

The term thin client was coined in 1993 by Tim Negris, VP of Server Marketing at Oracle Corp., while working with company founder Larry Ellison on the launch of Oracle 7. At the time, Oracle wished to differentiate their server-oriented software from Microsoft's desktop-oriented products. Ellison subsequently popularized Negris's buzzword with frequent use in his speeches and interviews about Oracle products. Size comparison - traditional Desktop PC vs. Clientron U700

### Client Simplicity:

Since the clients are made from low-cost hardware with few moving parts, they can operate in more hostile environments than conventional computers. However, they inevitably need a network connection to their server, which must be isolated from such hostile environments. Since thin clients are cheap, they offer a low risk of theft in general, and are easy to replace if stolen or broken. Since they do not have any complicated boot images, the problem of boot image control is centralized to the server.

On the other hand, to achieve this simplicity, thin clients sometimes lag behind thick clients (PC Desktops) in terms of extensibility. For example, if a local software utility or set of device drivers are needed in order to support a locally attached peripheral device (e.g. printer, scanner, biometric security device), the thin client operating system may lack the resources needed to fully integrate the needed dependencies. Modern thin clients attempt to address this limitation via port mapping or USB redirection software. However, these methods cannot address all use case scenarios for the vast number of peripheral types being put to use today.



Thin Clients has many advantages, so different people define thin clients in different way basing one of its advantage. Below are the few common definitions & sentences people often use to define thin client. Simply, Thin Client is nothing but a computer, but with very less configuration



(specifications /capacity / power), still users can able to run all the latest Operating Systems and Applications (software), with the help of SERVER Computer which is connected to it through LAN Means, In Thin Clients you need not to install any OS or Applications, you have to install Only in SERVER where all thin clients are connected to it, all the OS and Applications will run on server and results are displayed in Thin Clients (user computers) Several users can run the same program simultaneously, but the program only needs to be loaded once with a central server. In Traditional PC, We have to Install OS and Applications Locally and use its Local Resources (CPU, Ram, HDD) for its Processing and Storing, where as in Thin Client you need not install any OS or Applications in Thin Client, but you can access OS and Applications from SERVER.



## References

- 1) Aducent Inc
- 2)3) <https://satheeshgnair.blogspot.com/2009/06/selected-case-studies-oncyber-crime.html>

Written by

**Dr. CHARLES BABU**



## WI-VI

### Abstract

Can Wi-Fi signals enable us to see through walls? For many years humans have fantasized about X-ray vision and played with the concept in comic books and sci-fi movies. This paper explores the potential of using Wi-Fi signals and recent advances in MIMO communications to build a device that can capture the motion of humans behind a wall and in closed rooms.

Law enforcement personnel can use the device to avoid walking into an ambush, and minimize casualties in standoffs and hostage situations. Emergency responders can use it to see through rubble and collapsed structures. Ordinary users can leverage the device for gaming, intrusion detection, privacy-enhanced monitoring of children and elderly, or personal security when stepping into dark alleys and unknown places

WI-VI is Based on the principle of RADAR and SONAR imaging(doppler effect). RADAR is an object detection system which uses radio waves to determine the range, altitude, direction, or speed of objects. It's similar to the way radar and sonar work but without the expensive ,bulky gear and restricted frequencies that radar requires. Depends on its own transmitting signal.

The concept underlying seeing through opaque obstacles is similar to radar and sonar imaging. Specifically, when faced with a non-metallic wall, a fraction of the RF signal would traverse the wall, reflect off objects and humans, and come back imprinted with a signature of what is inside a closed room.signal power after traversing the wall twice (in and out of the room) is reduced by three to five orders of magnitude . Even more challenging are the reflections from the wall itself, which are much stronger than the reflections from objects inside the room . Reflections off the wall overwhelm the receiver's analog to digital converter (ADC), preventing it from registering the minute variations due to reflections from objects behind the wall. This behavior is called the "Flash Effect" since it is analogous to how a mirror in front of a camera reflects the camera's flash and prevents it from capturing objects in the scene. So how can one overcome thesedifficulties? The radar community has been investigating these issues, and has recently introduced a few ultra-wideband systems that can detect humans moving behind a wall, and show them as blobs moving in a dim background .





## INTRODUCTION:

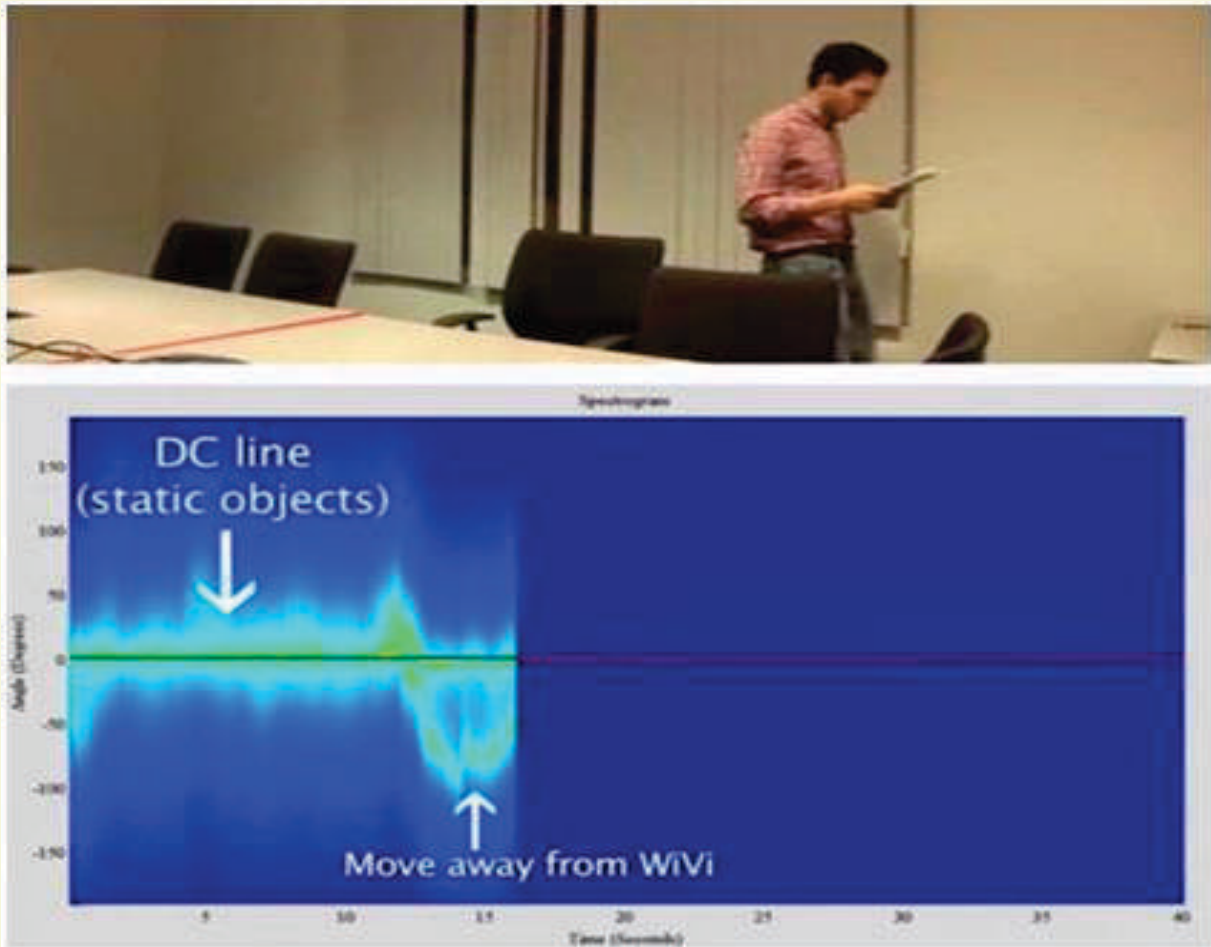
Wi-Vi shares the objectives of these devices; however, it introduces a new approach for eliminating the flash effect without wideband transmission. This enables it to work with concrete walls and solid wood doors, as well as fully closed rooms. The only attempt which we are aware of that uses Wi-Fi signals in order to see through walls was made in . This system required both the transmitter and a reference receiver to be inside the imaged room.

Furthermore, the reference receiver in the room has to be connected to the same clock as the receiver outside the room. In contrast, Wi-Vi can perform through-wall imaging without access to any device on the other side of the wall.

Wi-Vi uses interference nulling to cancel both the wall reflections and the direct signal from the transmitter to the receive antenna. To eliminate flash, a sample  $x$  is transmitted on each transmit antenna separately and the ratio  $p$  is calculated. Then  $x$  and  $px$  are transmitted concurrently to get the perceived channel at the receiver. The process repeats until channel estimates in step 1 are perfect so that the received signal is zero.

## Tracking A Single Human

This is a demonstration of the technology that makes use of Wi-Fi to let the users 'see' a person moving behind a wall.



The name is a combination of Wi-Fi and vision; get that? Wi and Vi combined! It has been proven that delicate reflections of wireless inter signals that bounce off a human can be used to track the person's movements. However, these methods were tiresome and required either a Wi-Fi router in the same room as the person or as Professor Katabi puts it; 'a whole truck just to carry the radio'.

Now that we have eliminated the impact of static objects in the environment, we can focus on tracking moving objects. We will refer to moving objects as humans since they are the primary subjects of interest for our application; however, our system is general, and can capture other moving bodies. Below, we first explain how Wi-Vi tracks the motion of a single human. We then show how to extend our approach to track multiple moving humans. Tracking a Single Human Most prior through-wall systems track human motion using an antenna array. They steer the array's beam to determine the direction of maximum energy. This direction corresponds to the signal's spatial angle of arrival. By tracking that angle in time, they infer how the object moves in space.

Wi-Vi, however, avoids using an antenna array for two reasons: First, in order to obtain a narrow beam and hence achieve a good resolution, one needs a large antenna array with many antenna elements. This would result in a bulky and expensive device. Second, since Wi-Vi eliminates the flash effect using MIMO nulling, adding multiple receive antennas would require nulling the signal at each of them. This would require adding more transmit antennas, thus making the device even bulkier and more expensive. To capture the benefits of an antenna array while avoiding its drawbacks, Wi-Vi leverages a technique called inverse synthetic aperture radar (ISAR). ISAR exploits the movement of the target to emulate an antenna array. Existing systems

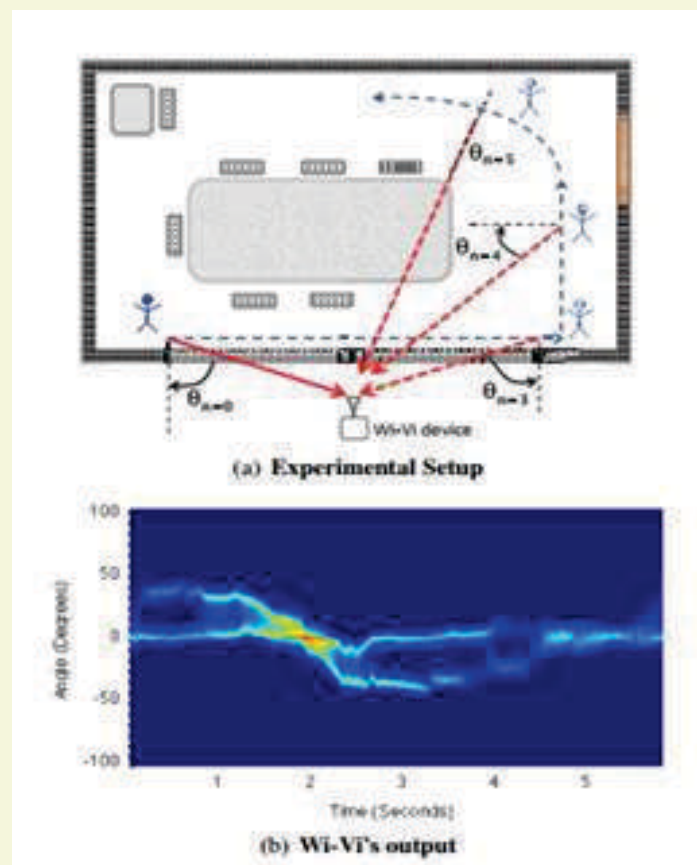


which use antenna arrays capture the signal reflected off a target from spatially spaced antennas and processes this information to identify the direction of the target with respect to the array. In contrast, in ISAR, there is only one receive antenna; hence, at any point in time, the receiver captures a single measurement.

## Tracking Multiple Humans

In this section, we show how Wi-Vi extends its tracking procedure to multiple humans. Our previous discussion about using human motion to emulate an antenna array still holds. However, each human will emulate a separate antenna array. Since Wi-Vi has a single antenna, the received signal will be a superposition of the antenna arrays of the moving humans. In particular, instead of having one curved line at any time, there will be as many curved lines as moving humans at that point in time.

However, with multiple humans, the noise increases significantly. On one hand, each human is not just one object because of different body parts moving in a loosely coupled way. On the other hand, the signal reflected off all of these humans is correlated in time, since they all reflect the transmitted signal. The lack of independence between the reflected signals is important. For example, the reflections of two humans may combine systematically to dim each other over some period of time.



The problem of disentangling correlated super-imposed signals is well studied in signal processing. The basic approach for processing such signals relies on the smoothed MUSIC algorithm. Similar to the standard antenna array processing, smoothed MUSIC computes the power received along a particular direction, which we call  $A! [\theta, n]$  because it estimates the same function in but in manner more resilient to noise and correlated signals. For a given antenna array  $h = (h[n], \dots, h[n + w])$  of size  $w$ , MUSIC first computes the  $w \times w$  correlation matrix  $R[n]$ :  $R[n] = E[hh^H]$ , where  $H$  refers to the hermitian (conjugate transpose) of the vector. It then



performs an eigen decomposition of  $R[n]$  to remove the noise and keep the strongest eigenvectors, which in our case correspond to the few moving humans, as well as the DC value.

For example, in the presence of only one human, MUSIC would produce one main eigenvector (in addition to the DC eigenvector). On the other hand, if 2 or 3 humans were present, it would discover 2 or 3 eigenvectors with large eigen values (in addition to the DC eigenvector). MUSIC partitions the eigenvector matrix  $U[n]$  into 2 subspaces: the signal space  $U_S[n]$  and the noise space  $U_N[n]$ , where the signal space is the span of the signal eigenvectors, and the noise space is the span of the noise eigenvectors. MUSIC then projects all directions  $\theta$  on the null space, then takes the inverse. This causes the  $\theta$ 's corresponding to the real signals (i.e., moving humans) to spike.

## CONCLUSION:

High quality images. Future Scope Evolution of seeing humans through denser building material and with a longer range. Wi-Vi could be built into a Smartphone or a special handheld device. Wi-Vi, a wireless technology that uses Wi-Fi signals to detect moving humans behind walls and in closed rooms. In contrast to previous systems, which are targeted for the military, Wi-Vi enables small cheap see-through-wall devices that operate in the ISM band, rendering them feasible to the general public, without carrying any transmitting device.

- Wi-vi could be built in a smartphone or special handheld devices.
- Evolution of seeing human beings through denser building material with longer range.
- High quality images

Written by

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**13UP1A0504**





# VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

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## Industrial visit CCNB

### Images of industrial visits





**Workshops / Seminars / Guest Lectures**

<b>S. No</b>	<b>Gap</b>	<b>Action Taken</b>	<b>Date- Month -Year</b>	<b>Resource Person with designation</b>	<b>Students Attended</b>
1	Utilization of E-Waste	A Guest Lecture on "Recycling of e-waste"	1/08/2015	Mr.K.Sathish , Gurunanak Institute of Technology	80
2	Linux Programming	A Guest Lecture on "Shell Programming"	3/08/2015	Mr.Sujith Majetty, Coign	85
3	Workshop	A Workshop on "Cloud Computing"	17/09 / 2015 to 19/09 /2015	Mr.Sujith Majetty, Coign	85
4	Data Structures	A Guest Lecture on "RedBlack trees"	3/10/2015	Ms. Vanaja, CVR Engineering College	80
5	Software Testing Methodologies	A Guest Lecture on "Advanced Testing tools"	5/10/2015	Ms Sunitha Rekha, CVR Engineering College	85
6	Cloud Computing	A Seminar on IBM BlueMix	12/10 / 2015	Mrs. Shravani, TASK, ITE & C Dept, Govt. of Telangana	70



## Images of workshops



## Guest Lectures:

S.No	Gap	Action Taken	Date	Resource Person with designation	% of students
1	Database Management System	A Guest Lecture on "Normalization"	8/12/ 2015	Ms. Harika Jalli, TCS	85
2	Network Security	A Guest Lecture on "Ethical hacking"	21/12/2015	Ms. Harika Jalli, TCS	85
3	Software Engineering	A Guest Lecture on "Six Sigma"	25/01/2016	Mr.Prakash, TCS	70
4	JAVA	A Guest Lecture on "Generic classes"	29/1/ 2016	Mr.Prakash, TCS	70

guest lecture was organized by the Dept. of Computer Science and Engineering of VMTW on 8th Dec 2015 at Seminar hall for CSE students. It was specially organized to inculcate knowledge among the students regarding "Normalization in Database Management System".

The lecture was delivered by highly qualified and experienced Ms. Harika Jalli, TCS having 17 years experience of software development. Her lecture focused on "Database Normalization". He explained the concept of NORMALIZATION, its various forms along with its relationship with the Real World Entities. Then she taught how to solve its different forms by quoting a practical example. The lecture was an effective mix of rigorous exercises for the students along with an interactive presentation. In the end there was a query session in which students queried their doubts which were well





explained and resolved by his thus enhancing the knowledge of the students about the subject. The session was enlightening as it proved to be very fruitful and beneficial for all the students.

## Guest Lecture on Ethical Hacking

**Topic :** Guest Lecture on “Ethical Hacking ” for the students of III rd and IV years by Mr. Sachin Kataria, Sr. Technical Head (Cyber Security), Crezone Technologies.

**Date of event :** 21/12/ 2015

**Aim of the Event :** The session aimed at introducing various concepts related to Hacking in general & Ethical Hacking in particular, Cyber Security, job opportunities in the area of Ethical Hacking and Cyber Security

**Event Report in brief :** Mr. Sachin Kataria initiated the session by talking about the types of hacking & hackers and the need for cyber security. He told that there are three types of hackers: 1. Black Hat Hackers, 2. White Hat Hackers and 3. Grey Hat Hackers.

There was a discussion about Operating System Security which can be done on any kind of operating system. He also spoke on how we can take backdoor entry in Windows XP if we have forgotten our user password. Sir also demonstrated the following operations related to security and hacking:

- Manual removal of some VIRUSES with the help of Windows Registry by using ‘regedit’
- Take login to the website using SQL Injection
- Phishing attack
- Creation of Batch File Virus, etc.

There was also discussion about the necessity of ethical hacking which is helpful in detecting the vulnerability and security flaws of a website, so that one can take necessary precautions for Cyber Security. The talk included:

- Shoulder searching attack,
- Social engineering,
- E-mail bombing,
- Caller Id spoofing,
- Virus on facebook, etc.

In the end, the speaker informed about the various career opportunities in the area of Ethical Hacking & Cyber Security and the openings regarding the same in government sector. He motivated the students to look at these.



## A Guest Lecture on “Six Sigma”

Six Sigma is a management philosophy that emphasizes setting extremely high objectives, collecting data, and analyzing results to a fine degree as a way to reduce defects in products and services. The Greek letter sigma denotes variation from a standard. By measuring the defects in a process, we can figure out how to systematically eliminate them and get as close to perfection as possible.

He explained the reasons why six sigma evolved. Earlier, there was only a domestic market and people bought local products. But due to globalization, people had to export their products to various countries. As a result of export quality, they had to be the world class manufacturer of the products. This is the main reason for the evolution of six sigma. Even 99% of quality is not enough. Six sigma also controls input and reduce defects.

Six sigma allows a very minimal percentage of the products to be defective due to chances and causes which are out of human control. Six Sigma includes Process standardisation, Process stability, capability improvement and robust design. Six sigma significantly helps in reducing the process variability and helped in reaching excellence. JIT stands for Just In Time. Ex: we can collect raw materials from our suppliers when needed (JIT).

The various qualifications in Six sigma are Green belt, black belt, master black belt and Champions. USL and LSL stands for upper Specification Limit and Lower Specification Limit which are given by the buyers or the suppliers for each and every product. Accuracy is the process of clustering the data about a known target. Precision means to tightly close the data around a particular point. So, we should work both on accuracy and precision.

Six Sigma proponents claim that it improves the bottom line as it helps in cost reduction, cycle-time improvement, less wastage of materials, a better understanding of customer requirements, increased customer satisfaction, and more reliable products and services.

It was interesting to note how scientific analysis of minute things that we tend to overlook can have a bearing on the overall effectiveness of a company.

## Internships

S.No.	Roll No.	Organization Name	Duration	Location
1	12UP1A0501	Coign	3 months	Hyderabad
	12UP1A0503			
	12UP1A0516			
2	12UP1A0539	E nexus	3 months	Hyderabad
	12UP1A0515			
	12UP1A0512			
3	12UP1A0534	Coign	3 months	Hyderabad
	12UP1A0509			
	12UP1A0522			
4	12UP1A0561	E nexus	3 months	Hyderabad
	12UP1A0582			
	12UP1A0583			



## Campus Visited

### Campus Drive Information

S.NO	Name of the Company	Date
1	APALYA TECHNOLOGIES	18th October, '15
2	NTT DATA	17th October, '15
3	ZEN TECHNOLOGIES	13th October, '15
4	TEK SYSTEMS	05th October, 15
5	MAQ SOFTWARE	12th & 14th August, '15
6	Model N	05th August, '15
7	TECH MAHINDRA	21st June, '15

## CULTURAL EVENTS

### Bathukamma :

Bathukamma is a colorful floral festival of Telangana and is celebrated by VMTW womenfolk on 13 OCT with exotic flowers of the region. The festival has over the years become a symbol of Telangana culture and identity







## Teacher's day

Students of CSE department celebrated teacher's day here on Wednesday. The Hod of CSE Department V. Indrani delivered a speech about Dr. Sarvepalli Radha- Krishnan, who was a great scholar and teacher. On 5<sup>th</sup> of September celebrated as Teachers 'Day all over the India every year. Spoke about the importance of Teachers and motivating the students. She said all the teaching and non-teaching staff should work together as a family.







## ENGINEER'S DAY CELEBRATION

“Engineering is the art of directing the great sources of power in nature for the use and convenience of man” The department enthusiastically celebrated Engineer's day on 15th September 2015 with active participation from students of all years of B.Tech.

Engineering is not merely knowing and being knowledgeable; engineering is not merely analysis; engineering is not merely the possession of the capacity to get elegant solutions to non-existent engineering problems; engineering is practicing the art of the organized forcing of technological change. Engineers operate at the interface between science and society.

To identify the great works done by our hardworking engineers each year 15th September is celebrated as Engineer's Day marking the birth anniversary of Sir Mokshagundam Visvesvarayya, recognizing his contributions in the field of hydro energy in India.

There were four technical competitions: Poster Making, Project Presentation and Coding Decoding, computer Crossword organized by the English Faculty and CSE Department for the students of CSE.

The winners were accolade by prizes given by, HOD of CSE Dept.





## International Yoga Day:

The yoga day was celebrated with great enthusiasm by the students - The proceedings began at 8:30 am with the lighting of the lamp by principal **Dr. P. Sudhakara Rao**, HOD's, **V Indrani**, **Dr. A.Narmada**, **T.Srinivasulu**, **L.Kiran Kumar**, The special faculty for yoga pointed out the importance of yoga in order to remain physically fit and mentally alert. Yoga deepens our breath, opens our vocal chords, increases the intake of oxygen by the blood, alkalizes our body and relaxes our mind







### Ugadi festival celebration:

Students of the Vmtw College celebrated Chandramana Ugadi on Friday. Nearly 100 students, mostly from Andhra Pradesh and Telngana, along with fellow students from other States and faculty members, celebrated the festival. Traditional prasadam, puliyogarai, kaaja bobbatlu (Bhakshalu/ polelu/ oligalu), and Ugadi Pachadi were prepared by Telangna students. There was a mass prayer and pooja. The students gathered to listen to the recitation of the religious Panchangam (Panchanga Sravanam) of the New Year-2016.







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## Holi Celebration

Everyone was looking quite excited to participate in the '[Holi Milan Samaroh](#)' (Holi Get-together) at the Vmtw College. The event started with greetings by HOD of CSE. Afterwards, the dignitaries of the campus conveyed good luck to all the staff, faculty and students for their future endeavours. People embracing their friends and putting colours on the faces of each other was the common scene at the event.

All the attendees were in the ecstasy of joy and festivity. Even the workers of campus looked so enthusiastic and participated in putting colours on the faces. Holi celebration in the campus became the great reason of unity in diversity where the multicultural students came forward in the bond of harmony and togetherness.

The dry gulal was used as the colour to celebrate dry Holi. It also spreads the message that we need to save water. People, drowned in the festivity, sometimes wastewater in the name of Holi, which is not good for the mankind. The students of Vmtw College enjoyed to the fullest in a waterless Holi celebration, which sets a perfect example to the people who don't care about this precious natural resource.









### **International Yoga Day:**

Vmtw Engineering College, kondapur enthusiastically celebrated 3<sup>rd</sup> International Yoga day, kondapur at college Campus on 21<sup>st</sup> June, 2016. It was grand convergence of 7 days Yoga practice series conducted at Vmtw, Vmtw College from 12<sup>th</sup> June to 20<sup>th</sup> June, 2016. Many students and staff took part in this celebration and practiced YOGA. It was a matter of joy for all Yoga Enthusiasts that the “Vishva Yoga Divas- WORLD YOGA DAY” got declared to be celebrated on June 21st. The day was chosen as it's the longest day of the calendar year, a day connected with Sun, light and nature and not a day of personal importance. The yoga instructors listed importance of mind, body and soul nourishment through YOGA. Proper scientific instructions were given for all the yoga asanas and all the participants performed it as per instruction. Various asanas like Makarasana, Pavanmuktasan, Tadasan, Vrikshasana, Butterfly etc. were performed and its uses were told to all. Yoga develops strength and balance as well as inner peace. All yoga styles create a feeling of lightness, ease and relaxation. Program started sharp at 6:35 AM and ended at 8:30 AM. Total 148 students and 50 staff members were present in the celebration. At the end all the student participants served refreshments from vmtw college management.





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