MARIA REGINA ANGELORUM

CRUCI DUM SPIRO FIDO

Loreto College

In House Journal

I.C.T. Society

Sixth Edition
2012-2013

CONNECT

FROM THE PRINCIPAL'S DESK

Every creative venture starts with a decision – one to put reflections, and thoughts into print for others to read and critique. The members of ICT Society have motivated their companions to share impressions in 'Connect 2013'.

The 6th issue of 'Connect' has attempted to peep into the history of computers and technology in the 1st section "Timeline". Student's contributions on articles of personal interest also make good reading.

I congratulate Sukanya Chatterjee and Shagufta Parveen, ICT Society President and Vice-President, respectively, contributors of articles who with the guidance of the Staff Advisors Mrs.Swati Chatterjee and Ms. Chandrani Sengupta have helped Connect 2013 to see the light of day.

FROM STAFF ADVISORS' DESK

The ICT Society has always been instrumental in imparting enriched knowledge regarding latest developments and innovations in the field of technology. This year, the society presents their in-house journal "Connect", highlighting the history of computers as Information, encounter with students where articles include social media as well as latest computer technologies.

The enthusiasm of contributors has enabled us to present the sixth edition of this journal. We thank the ICT Society President Sukanya Chatterjee, Treasurer Kathakali Ghosh for their sincere and ardent effort and our Principal, Sister Christine Coutinho for making this venture a success.

Mrs. Swati Chatterjee
Ms. Chandrani Sengupta

NOTE FROM THE EDITOR'S DESK

Loreto college is home to many societies, of which the "Information and Communication Technology", i.e., the ICT society forms an integral part. The sole goal of this society is to educate students about the various facets of the latest developing technologies that are taking over the world by storm and are influencing our lives in a diverse way.

This year we tried to capture those moments of past which lead us to the present developments in the field of computers and technology. We tried to capture the history of computer by mentioning most important dates and most people of computer history in our first segment "Timeline". Next we have the section called "Encounter with Students" where we gave the freedom to the students to write articles about any computer and technology related topic so that the content of this magazine can be vast and can include various aspects of technology and its social aspects.

As an editor it has been a privilege to be editing this journal.
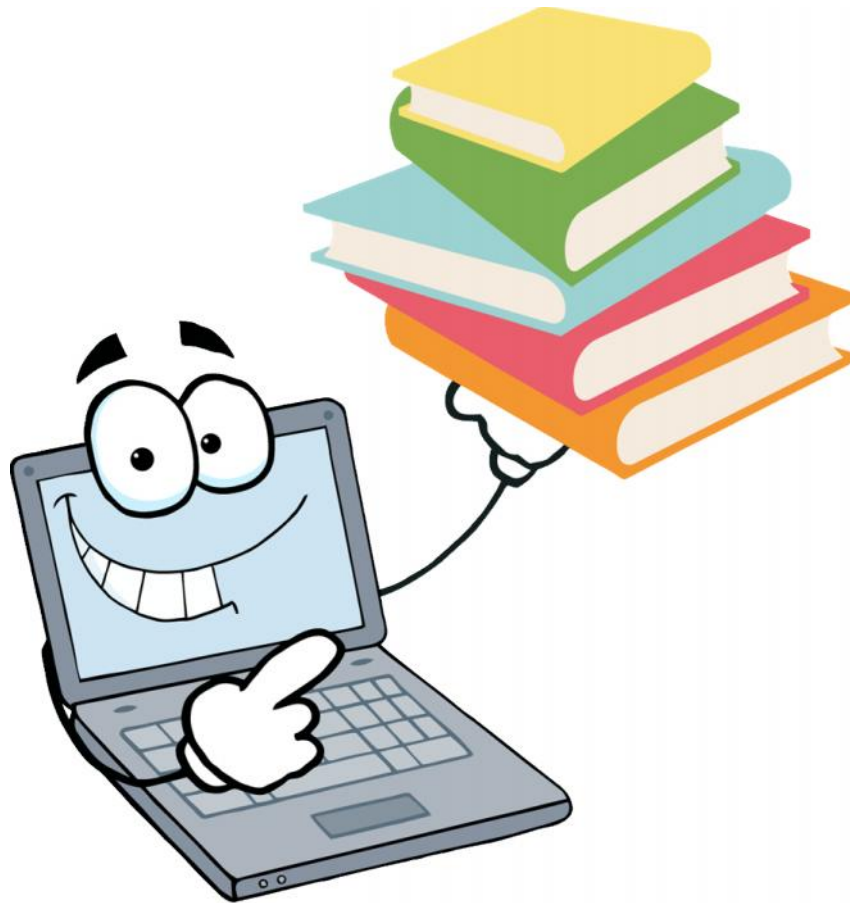
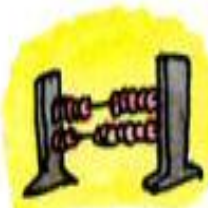President: Sukanya Chatterjee

Treasurer: Kathakali Abhijit Ghosh

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TIMELINE

HISTORY OF COMPUTERS

Techie Timeline
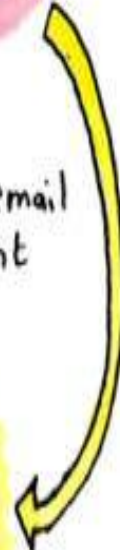
500 BC
The Abacus calculator.

1821
The first computer is invented.

1939
First electric computer for routine use.

1971
First email sent

1994
Web Surfing begins!

1983
Global internet created.

1975
First affordable home computer.

1973
First computer with graphical user interface, keyboard and mouse.

Event Date:	Event Title:	Event Description:
1st Jun, 1901	**Binary System**	The binary system invented by Pingala serves as the foundation of computing systems the world over (300BC).
1st Jun, 1936	**Z1 computer**	Konrad Zuse invents Z1 computer, the first freely programmable computer
1st Jun, 1947	**First Transistors**	John Bardeen, Walter Brattain & William Shockley invent the transistor which greatlty effected the history of computers
1st Jun, 1951	**UNIVAC**	John Presper Eckert & John W. Mauchly, UNIVAC, first commercial computer able to pick presidential winners
1st Jun, 1962	**"The Chip"**	Jack Kilby & Robert Noyce, invented the Integrated circuit, aka the chip
1st Jun, 1964	**First Computer mouse**	Douglas Engelbart invented the first mouse to work with windows
1st Jun, 1969	**The Internet**	the original internet
1st Jun, 1971	**First microprocessor**	Faggi, Hoff & Mazor, the first microprocessor
1st Jun, 1983	**Birth of a GUI**	The first home computer with GUI
1st Jun, 1985	**Microsoft VS Apple**	Microsoft begins the friendly war with Apple

1986: More than 30 million computers are in use in the United States.

1987: Microsoft introduces Microsoft Works
 Perl: Larry Wall introduces Perl 1.0

1988: Over 45 million PCs are in use in the United States.

1990: The Internet, World Wide Web & Tim Berners-Lee: Tim Berners-Lee and Robert Cailliau
propose a 'hypertext' system starting the modern Internet
Microsoft and IBM stop working together to develop operating systems

1991: The World Wide Web: The World Wide Web is launched to the public on August 6, 1991

1993: At the beginning of the year only 50 World Wide Web servers are known to exist

1994: The World Wide Web Consortium is founded by Tim Berners-Lee to help with the development of common protocols for the evolution of the World Wide Web
YAHOO: YAHOO is created in April, 1994.

1995: Java: Java is introduced
Amazon: Amazon.com is founded by Jeff Bezos
EBay: EBay is founded by Pierre Omidyar
Hotmail: Hotmail is started by Jack Smith and Sabeer Bhatia.

1996: WebTV: WebTV is introduced

1997: Microsoft acquires Hotmail.

1998: Google: Google is founded by Sergey Brin and Larry Page on September 7, 1998
PayPal is founded by Peter Thiel and Max Levchin

2001: Xbox: Bill Gates introduces the Xbox on January 7th 2001.

2001: Approximately 1 billion PCs been sold PayPal is acquired by eBay

2005: September 12: eBay acquires Skype

2006: Skype announces that it has over 100 million registered users.

ENCOUNTER WITH STUDENTS

THE INTERNET: MANY TIMES A BANE!

What is the use of a computer? 'Facebook, of course!' They might not be so blatant in saying this but this is what the computer has come down to in everyone's mind because what use is a computer if no internet connection is available! It is now evident that the computer has only made man more incompetent than before as we are now more dependent on the internet connection than on our very own grey cells.

Computer is supposed to have been invented to make our work easy but it was definitely not the goal of the inventor to make humans more dependent on something other than themselves. But this is exactly what has happened! People are much less knowledgeable than before because they have the internet to fall back on. They can look up anything and everything under the sun on the internet even if they have never heard of it. We have lost the urge to know more since the invention of the computers.

Writing answers also have a similar response. The first thing to check is Wikipedia. That will give you a basic idea of the topic and then you can find from other sites on which you can build. There is no urge to know of the topic by reading a few related articles or books or by remembering some things read may be a long time back. It takes a long time to make one understand what the topic pertains to if their knowledge about the topic is completely absent. If this is the approach, needless to say that they will be confined only to the syllabus.

The very ancient habit of reading books has gone absolutely out of the window but I think with the coming of the e-book reader books have come back in vogue, although it is not for the books but for the device. Books now seem outdated elements of civilization. But also some readers are definitely to be found who read to impress rather than out of interest. Our very own city is full of it.

And it is also not like internet is always put to good use. Everyone always seems to be glued to the internet but more specifically to social networking sites, not some 'useful' site. One does not expect anyone to look up sites of good use at all times but may be keeping oneself up to date can avoid embarrassments in public.

When Prof. Ananda Lal of the Jadavpur University came for a lecture for the Heritage Course, he referred to the art of reading newspaper as a 'near-extinct art' and one could not agree more with it. Clearly our generation is not interested in knowing what is happening around them.

What one could wish for in the concluding lines is that there is a whole other world outside waiting to be explored. So it is highly advisable to do so rather than become the frog that lived in the well.

Kathakali Abhijit Ghosh,

History Honours (2nd year).

DIGITAL JEWELLERY

Digital jewellery is the fashion jewellery with embedded intelligence. It can help you solve problems like forgotten passwords and security badges. "Digital jewellery" is a nascent catchphrase for wearable ID devices that contain personal information like passwords, identification, and account information. They have the potential to be all-in-one replacements for your driver's license, key chain, business cards, credit cards, health insurance card, corporate security badge, and loose cash. They can also solve a common dilemma of today's wired world – the forgotten password.

DIGITAL JEWELLERY AND ITS COMPONENTS:

Very soon cell phones will take a totally new form, appearing to have no form at all. Instead of one single device, cell phones will be broken up into their basic components and packaged as various pieces of digital jewellery. Each piece of jewelry will contain a fraction of the components found in a conventional mobile phone. Together, the digital-jewellery cell phone should work just like a conventional cell phone.The various components that are inside a cell phone: microphone, receiver, touch pad, circuit board, antenna and battery.

IBM has developed a prototype of a cell phone that consists of several pieces of digital jewelry that will work together wirelessly, possibly with Blue tooth wireless technology, to perform the functions of the above components. Cell phones may one day be comprised of digital accessories.

Here are the pieces of computerized jewellery phone and their functions:

• **Earrings** - Speakers embedded into these earrings will be the phone's receiver.

• **Necklace** - Users will talk into the necklace's embedded microphone.

• **Ring** - Perhaps the most interesting piece of the phone, this "magic decoder ring" is equipped with light-emitting diodes (LEDs) that flash to indicate an incoming call. It can also be programmed to flash different colors to identify a particular caller or indicate the importance of a call.

• **Bracelet** - Equipped with a video graphics array (VGA) display, this wrist display could also be used as a caller identifier that flashes the name and phone number of the caller.

Digital jewellery devices consist of a screen or display for information, most likely consisting of 7-16-segment, or dot matrix LEDs, LCDs, or other technologies such as electroluminescent material (EL) or others, which could become an optional display. So too, an audiovisual or other 'display' could consist of a speaker, a single flashing light, a sensor of some kind (such as

a temperature driven EL display), or other informational aesthetic. The display layer sits on a face of the device, which is enclosed in some material such as plastic, metal, crystal, or other material. It has external switches and buttons on its side and a data-port for accessing the programmable electronic circuit inside. A micro controller that is a surface mounted device (SMD) on a printed circuit board (PCB) with resistors (R) and capacitors (C) are the internal 'guts' of the jewellery.

ADVANTAGES OF DIGITAL JEWELLERY:

1) It provides security. For example: - Java ring is used to lock or unlock doors or computers as we use passwords and keys to lock our computers and doors.

2) Easy to carry everywhere.

Sarodia Guha,

C.A. Major (2nd year).

SOCIAL MEDIA-THE GOOD, BAD AND UGLY!

Facebook, Twitter, Skype, MySpace, Google+, YouTube - the list of social networking sites accessible today is vast and still growing. These sites have become an integral part of our daily lives. Making status updates; uploading photos; sharing interesting articles- the social media is where we do it all. But is it all really as simple and rosy as it appears on the exterior? What are the implications of this new trend of socializing on society itself?

SOCIALIZING

The most obvious use of social media today is for communicating with people. "People" can comprise friends, acquaintances from the workplace, as well as family members. The best part is that one can even trace long-lost friends and re-connect with them with the help of these sites. Geographical distance being a hindrance for communication between individuals is now an issue of the past. The Internet makes the world your neighbor.

However, while on one hand social media is allowing us to strengthen our social ties, on the other hand it is introducing the major social issue of cyber-bullying. People (especially teens) tend to add names to their friend list without a second thought. We no longer ask ourselves questions such as "Have I ever met this individual?"; "How many times have I interacted with him/her in real life?"; "Do I really know him/her?" before accepting someone's friend request.

The next step tends to be that of interacting with these new "friends" through text, and sometimes even video chatting. In fact, the concept of chatting with strangers is what sites such as Omegle are based on. Before you know it, these new "friends" start taking advantage of your naivety and bully you into doing things you won't be proud of in retrospect. One thing leads to another, and one fine day you realize you are now a victim of sexual harassment. If a victim of cyber-bullying is not able to seek help from a trusted source, such as a parent, the consequences can be fatal, as it leads to mental disorders such as depression, low self-esteem, etc. Statistics tell us that the number of cyber-bullying victims committing suicide is on the rise. An example of this was the recent, much-publicized death of Amanda Todd. These sites can also be used for work purposes. People might not check their e-mail accounts regularly, but they check their social networking site accounts on an everyday basis. Taking advantage of this fact, people can use social media as a convenient and effective means of conducting project discussions and planning here as a group on a real-time basis.

It can also be used for educational purposes. A significant example of this is Khan Academy site, where lessons explaining concepts from a range of subjects are uploaded for students to view in video format. People also tend to post links to news articles or their opinions to world issues on networking sites such as Twitter. This is especially helpful to teens (the majority of the user populace), because they indirectly find out a lot about current affairs. However, these very sites can also distract one from work, very effectively that too, with the multitude of their additional apps (for example the many game apps on Facebook).

A relatively recent use of the social media has been to present one's talents to the world. With sites such as YouTube, people are no longer dependent on the media to publicize themselves. With a click of a button, you can upload onto the Internet a video of yourself dancing, singing, acting, etc. If you are good enough, production houses will notice you and you may just land yourself a contract, as Justin Bieber did. But where social media is capable of making your future, it is equally capable of breaking it. Teens tend to be impulsive and irresponsible when it comes to the content from their daily life they choose to post on these social networking sites. Examples of such posts could be ones containing explicit language or explicit photos of themselves. Universities nowadays tend to go onto these networking sites before accepting an applicant to check their social image. Companies too make it a point to check a potential employee's Facebook account before hiring him/her. Keeping such situations in mind, people have to carefully sieve through the information and content they choose to post on these sites.

BLOGGING

People also use the social media for the very popular purpose of writing and sharing thoughts on their spheres of interest with like-minded people, irrespective of whether these people are strangers or not. Here I am referring to the medium of blogging and it various branches. You can start a blog based on a narrow theme (such as 'films') or on a variety of themes. Other bloggers with similar points of interest then find their way to your blog, and you can then engage in extensive conversations with your new blogger friends on topics which interest all of you.

The down-side of this kind of blogging is that many people end up creating an alternate universe for themselves on these social networking sites. They may indulge in a false sense of security in the social image they create for themselves here. Social media has also started hampering "real" social interaction. There have been so many instances where I have come across a group of friends sitting together and not talking to each other for the sole reason that each one is too busy updating their social networking account.

Social networking sites are a widely-used medium for holding political discussions on burning issues. In fact, these sites have decreased the distance between world leaders and the common man. Although this is a good thing as far as democracy is concerned, there have been times when this privilege has turned into a bane for the common man. We have seen plenty of situations in India itself recently where people have been arrested and had criminal cases filed against them for posting inflammatory comments regarding sensitive social or political issues (for example, the arrest of two girls in Palghar, Maharashtra, for posting on Facebook their displeasure over the shut-down following Bal Thackeray's death).

JOURNALISM

Journalism is an area which has been impacted greatly by the emergence of social networking sites. News reporting in its new form is more active, alive and kicking than ever before. With the audiences turning reporters, news of new developments gets spread across the globe at lightning speed by primary sources or witnesses. However, there have been

plenty of instances where rumors have been spread under the guise of news. In such situations, issues of credibility, reliability and authenticity come into question.

ADVERTIZING

A last important area which the social media has impacted has been that of the commercial world. Corporations and brands are using social networking sites to reach a larger sphere of target consumers than that allowed by print media. Facebook in fact has a side bar devoted wholly to product advertisement referred to as "Sponsored". A major disadvantage of this is that these social networking sites can let-out their users' personal information to their sponsored advertisers (personal information such as likes and dislikes, spheres of interest, etc., based on which advertisements get placed strategically on your home screen when you log into your account on these sites). Although Facebook and other networking sites are given this right by the very users in question (thanks to the seldom-read Policy Agreement at the time of creating the account), the issue arises that, "how far is it ethical on the part of these sites to share their user's information with any and every commercial brand?"

Social media has given the world a lot. The ease with which it lets people communicate with each other from halfway across the world is a gain we shall be indebted for forever. And the advantages people choose to take from this primary use are numerous. However, for every advantage there is an equal and opposite disadvantage. Social networking sites can harm you and scar you in more ways than one. The content boils down to the fact that it is really in an individual's hands what he/she chooses to make of the labyrinth known as the social media.

Ratnottama Aditya Chaudhuri,

English Honours (1st year).

THE RELATION BETWEEN COMPUTING AND PSYCHOLOGY

There is a symbiotic relationship between Computing and Psychology. Psychologists have helped in many ways to understand the way that computer systems are developed and used. The understandings of computer have even helped psychologists to investigate human cognitive and social processes. Further, it is important while teaching computing students to acknowledge the contributions from computing, to further understand the field of Psychology. For example, computational modeling is a tool often used in Cognitive Psychology which allows the psychologists to visualize hypotheses about the functional organization of mental events that could not be directly observed in a human being.

Psychologists have become increasingly involved in the design of new Computer systems and in research and theory aimed at understanding the human component of the problem. To design, develop and evaluate a user-friendly technology, students need to understand and consider how people perceive, remember, feel, think and solve problems, i.e. the domain of cognitive psychology. The psychological ideas and theoretical machinery helps in the creation of new models, analysis and engineering.

However, it is also important for the students to consider individual differences and social behavior if effective interaction between people and computer systems is to be achieved, i.e. the domain of personality and social psychology. An understanding of these topics in psychology enables students in computing to consider the potential capabilities and limitations of computer users and helps them to design computer systems that are more effective and affective. Applied Psychologists have been involved in these areas for many years and they often work in departments other than Psychology such as Human Computer Interaction (HCI) and Human Factors or Ergonomics.

In addition to cover the foundation areas of Psychology and HCI, it is also important that Computing students are taught evaluation methods and that they are able to consider the social impacts regarding the implementation and use of computer systems in organizations and society.

Nilanjana Mukhopadhyay,

History Honours (2nd year).

3D INTERNET

The topic 3D Internet in Web 3.0 is one of the most important technologies world is looking forward to. Generally, we do our things manually in the daily life, which can be said to be in the form of 3D. However, when it comes to internet we are actually using it in the form of 2D rather than 3D, hence this concept i.e. 3D Internet helps in achieving that.

The success of 3D communities and mapping applications, combined with the falling costs of producing 3D environments, are leading some analysts to predict that a dramatic shift is taking place in the way people see and navigate the Internet. The appeal of 3D worlds to consumers and vendors lies in the level of immersion that the programs offer. The experience of interacting with another character in a 3D environment, as opposed to a screen name or a flat image, adds new appeal to the act of socializing on the Internet. Advertisements in Microsoft's Virtual Earth 3D mapping application are placed as billboards and signs on top of buildings, blending in with the application's urban landscapes. 3D worlds also hold benefits beyond simple social interactions. Companies that specialize in interior design or furniture showrooms, where users want to view entire rooms from a variety of angles.

A POWERFUL OPPORTUNITY

In today's ever-shifting media landscape, it can be a complex task to find effective ways to reach your desired audience. As traditional media such as television continue to lose audience share, one venue in particular stands out for its ability to attract highly motivated audiences and for its tremendous growth potential — the 3D Internet.

People who take part in virtual worlds stay online longer with a heightened level of interest. To take advantage of that interest, diverse businesses and organizations have claimed an early stake in this fast- growing market. They include technology leaders such as IBM, Microsoft, and Cisco, companies such as BMW, Toyota, Circuit City, Coca Cola, and Calvin Klein, and scores of universities, including Harvard, Stanford and Penn State.

The most well-known of the 40-some virtual world platforms today is Second Life. It's "in-world" residents' number in the millions. As residents, they can:

- Remotely attend group meetings, training sessions and educational classes

- Engage in corporate or community events

- View and manipulate statistical information and other data such as biological or chemical processes in three dimensions

- Try out new products, electronic devices and gadgets

- Take part in virtual commerce

- Participate in brand experiences that carry over to the real world.

Indeed, practically anything than can be done in the real world can be reproduced in the 3D Internet —with the added benefit being that someone can experience it from the comfort of their home or office. The possibilities for the 3D Internet are such that Forrester Research expects that virtual worlds may approach the Web in popularity in as little as five years, while Gartner forecasts that within ten, the greatest impact on consumer purchases will come from virtual experiences.

CHALLENGES:

Advertisers, marketers and organizations have yet to capitalize on the vast potential of the 3D Internet.

Factors inhibiting the commercial usability of virtual worlds include:

The limited effectiveness of traditional media techniques such as fixed-location billboards when applied to virtual worlds:

In the 3D Internet, participants have complete control over where they go and what they do — and can move their avatars instantly through virtual space. What is required is a means for making content readily available to people not only at specific points, but throughout virtual worlds.

Lack of an effective way for enabling people in virtual worlds to encounter commercial content that enhances their virtual experience: Because participants have a choice in whether to interact with an offering, it is essential that it be viewed as relevant and valuable to their particular goals in the 3D Internet, an inconsistent means for enabling in-world participants to easily interact with and access video, rich multimedia, and Web content.

The lack of a cohesive means for advertisers and content providers to receive the detailed metrics required to measure success.

**Ankita Roy,**

C.A. Major (3RD year).

GREEN COMPUTING

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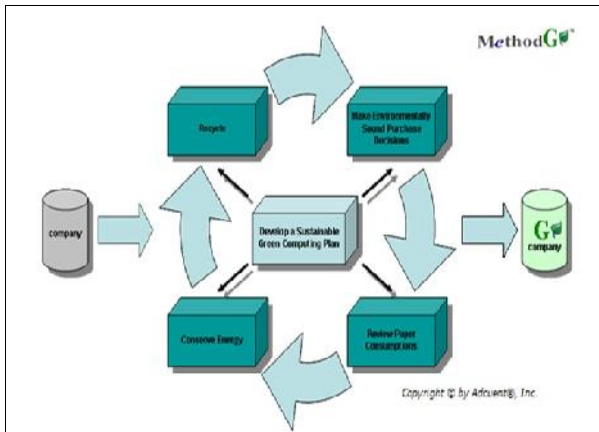
Thin-client computing is also a way of easily maintaining computational services at a reduced total cost of ownership.

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.

In simpler terms, Thin Client is nothing but a computer, but with very less configuration (specifications /capacity / power). 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.

Sukanya Chatterjee,

C.A. Major (3rd year).

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