K.S.Rangasamy College of Arts & Science
(Autonomous)
Ksr Kalvi Nagar,Tiruchengode-637215.Namakkal Dist.
Tamil Nadu,INDIA.

Department of computer sciecne

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IT is power

Ishare

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Ms.B.Sowmya M.C.A.,M.Phil.,

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Mr.R.Rajesh Kumar, II B.Sc. (CS)

Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of the Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 Institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various Institutions.

We would be very pleased to receive your feedbacks. Please send your feedbacks to ishare@ksrcas.edu

By,

Editorial Board

CONTENT

WHATSAPP MESSENGER

R.M. DINESH KUMAR

II B.SC CS "A"

WhatsApp Messenger is a cross-platform mobile messaging app which allows you to exchange messages without having to pay for SMS. WhatsApp Messenger is available for iPhone, BlackBerry, Android, Windows Phone and Nokia and yes, those phones can all message each other!

WhatsApp is an instant messaging app for smartphones that operates under a subscription business model. The proprietary, cross-platform app uses the Internet to send text messages, images, video, user location and audio media messages.

In January 2015, WhatsApp was the most globally popular messaging app with more than 600 million active users. In April 2015, WhatsApp reached 800 million active users.

History

WhatsApp Inc., was found in 2009 by Brian Acton and Jan Koum, both former employees of Yahoo!. After Koum and Acton left Yahoo! in September 2007, the duo travelled to South America as a break from work.

At one point they applied for a job at Facebook but failed. For the rest of the following years Koum relied on his $400,000 savings from Yahoo. In January 2009, after purchasing an iPhone and realizing that the seven-month-old App Store was about to spawn a whole new industry of apps, he started visiting his friend, Alex Fishman in West San Jose where the three would discuss "...having statuses next to individual names of the people".But this was not possible without an iPhone developer, so Fishman introduced Koum to Igor Solomennikov, a developer in Russia that he had found on RentACoder.com. Koum almost immediately chose the name "WhatsApp" because it sounded like "what's up," and a week later on his birthday, on February 24, 2009, he incorporated WhatsApp Inc. in California. However, early WhatsApp kept crashing or getting stuck and at a particular point,Koum felt like giving up and looking for a new job, upon which Acton encouraged him to wait for a few more months.

In June 2009, Apple launched push notifications, letting developers ping users when they were not using an app. Koum updated WhatsApp so that each time the user changed their statuses, it would ping everyone in the user's network. WhatsApp 2.0 was released with a messaging component and the active users suddenly swelled to 250,000. Koum visited Acton, who was still unemployed while managing another unsuccessful startup and decided to join the company. In October, Acton persuaded five ex-Yahoo friends to invest $250,000 in seed funding, and as a result was granted co-founder status and a stake. He officially joined on November 1. After months at beta stage, the application was eventually launched in November 2009 exclusively on the App Store for the iPhone. Koum then

hired an old friend who lived in Los Angeles, Chris Peiffer, to make the BlackBerry version, which arrived two months later.

WhatsApp was switched from a free to paid service to avoid growing too fast, mainly because the primary cost was sending verification texts to users. In December 2009,WhatsApp for the iPhone was updated to send photos. By early 2011, WhatsApp was in the top 20 of all apps in Apple's U.S. App Store.

In April 2011, the founders agreed to take $7 million from Sequoia Capital on top of their $250,000 seed funding, after months of negotiation with Sequoia partner Jim Goetz. According to Goetz, the venture capital firm originally discovered Whatsapp through an App store tracking system they developed called 'early bird', at a time when the app was much more popular in other countries than in the US. However, it took months for the VC firm to track down Koum and Acton, given that the company didn't have a publicly available address or signage at the time. All Goetz knew was that they were located in Mountain View, and Sequoia partners "literally walked the streets of Mountain View to see if they could intersect with Koum and Acton."

By February 2013, WhatsApp's user base had swelled to about 200 million active users and its staff to 50. Sequoia invested another $50 million, valuing WhatsApp at $1.5 billion.

In a December 2013 blog post, WhatsApp claimed that 400 million active users use the service each month. As of 22 April 2014, WhatsApp had over 500 million monthly active users, 700 million photos and 100 million videos are shared each day, and the messaging system handles

more than 10 billion messages each day. On August 24, 2014, Koum announced on his Twitter account that Whatsapp had over 600 million active users worldwide.WhatsApp added about 25 million new users every month or 833,000 active users per day. With 65 million active users, about 10% of the total worldwide users, India is the largest single country in terms of number of users.

By early January 2015, WhatsApp reached a new milestone of 700 million monthly active users with over 30 billion messages being sent every day. In April 2015, Forbes predicted that within 2012-2018, the telecommunications industry will lose a combined total of $386 billion because of OTT services like WhatsApp and Skype. In the same month, WhatsApp had over 800 million active users.

Advantages

- No need to manually add any contact.
- Save money on SMS/MMS.
- Most popular IM client, almost everyone is using it.
- Easy to create groups and chat.
- One - button Voice Messaging also added recently.
- No Ads ever - Why we don't sell ads.

Disadvantages

- You need to share your number in case you want to add someone and communicate.
- Not completely free.
- No sign-out option.

In this current scenario where everyone is busy in their Schedule, they often don't get time for their relatives, friends and family. But thanks to the technology that it helps to cut the distance between our relatives. Nowadays people prefer to wish from social site rather than make call on a special day like birthday or anniversary. And if they want to talk with their loved ones they like to prefer chat on several applications with free of cost and just required minimum amount of internet package which makes life easier rather to pay high cost of calls and messages to telecom companies. There are number of applications available in the market which people use according to their preference, WhatsApp application is one of them, an application which not only has function of chatting but also other very convenient functions. WhatsApp get famous worldwide with no age boundaries. But it is very popular amongst youth. To understand the 'usage of WhatsApp application amongst youth' a mini research was conducted with 30 college going students of Vadodara city. The findings of the study revealed that high majority of them possess smart phones and Giga byte Internet plan. All of them used WhatsApp for chatting with their contacts. They also used this application for sharing picture, audio and video files. The purpose behind using this app was keeping connectivity between their friends and relatives. Since this application is popular amongst users. It is the time to think about its usage for educational and informative purpose besides communication.

DEFINITION OF 5 PEN PC TECHNOLOGY

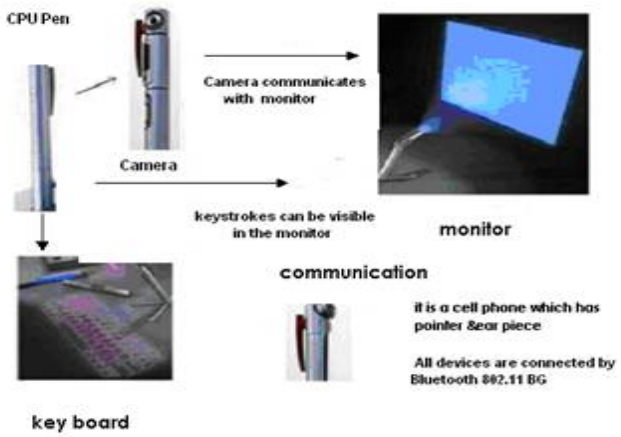
Ms. K. PRIYA

ASST. PROFESSOR, CS

P-ISM ("Pen-style Personal Networking Gadget Package") is a wireless technology, developed by NEC Corporation.

5 Pen PC Technology is a gadget package including five functions: a pen-style cellular phone with a handwriting data input function, virtual keyboard, a very small projector, camera scanner, and personal ID key with cashless pass function.

5 Pen PC Technology is connected with one another through short-range wireless technology. The whole set is also connected to the Internet through the cellular phone function. This personal gadget in a minimalist pen style enables the ultimate ubiquitous computing.



5 Pen PC

Technology is very effective because we can able to connect whenever we need, without having wires. 5 Pen PC Technology is used at the frequency band of 2.4 GHz ISM (although they use different access mechanisms). Blue tooth mechanism is used for exchanging signal status information between two devices. 5 Pen PC Technology techniques have been developed that do not require communication between the two devices (such as Blue tooth's Adaptive Frequency Hopping).The most efficient and comprehensive solution for the most serious problems can be accomplished by silicon vendors. They can implement information exchange capabilities within the designs of the Blue tooth.

LED Projector

The role of monitor is taken by LED Projector which projects on the screen. The size of the projector is of A4 size. It has the approximate resolution capacity of 1024 X 768 and gives more clarity and good picture.

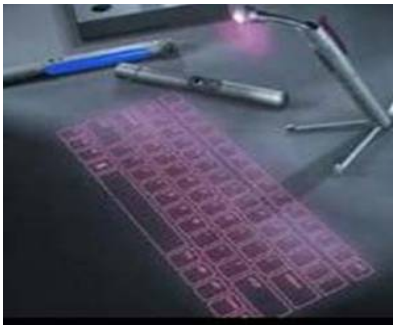
Virtual Keyboard

The Virtual Laser Keyboard (VKB) is the ULTIMATE new gadget for PC users. The VKB emits laser on to the desk where it looks like the keyboard having QWERTY arrangement of keys i.e., it uses a laser beam to

generate a full-size perfectly operating laser keyboard that smoothly connects to of PC and most of the handheld devices (PDA's, tablet PC's). TheI-Tech laser keyboard acts exactly like any other "ordinary" keyboard:

Features of virtual keyboards

1. Settings can be changed by Sound.
2. Controllable sound effects (key clicks).
3. Connection to the appropriate Laptop/PC port.
4. Intensity
5. Coordinated timeouts to conserve its battery life.
6. Adjustable sensitivity.
7. Allows to automatically repeat a key based onprescribed parameters.



Merits of 5 PEN PC'S

A 5 Pen PC have several merits. Few of them are:

i. **Portable:-**

The first and most important advantage of the 5 pen PC are that they are portable. Due to its size they can be carried anywhere. These PCs are in the shape of pens and that's why they can be carried in small bags or even in our pockets. A portable computer is a computer that is designed to be moved from one place to another and includes a display and keyboard.

They can also be called a 'Portable Workstation' or 'Portable PC'.5Pen PC is the most easily portable PC ever made. Another major merit is that it works on battery and so it can be used whenever we want.

ii. Ubiquitous computing:-

Ubiquitous computing (ubicomp) is a post-desktop model of human-computer interaction in which information processing has been thoroughly integrated into everyday objects and activities. In the course of ordinary activities, someone "using" ubiquitous computing engages many computational devices and systems simultaneously, and may not necessarily even be aware that they are doing so. This model is usually considered as advancement from the desktop paradigm. More formally Ubiquitous computing is defined as "machines that fit the human environment instead of forcing humans to enter theirs".

iii.Wi-Fi technology:-

The major important merit of a 5 pen pc is that it has a Wi-Fi technology built in it through which the user can connect to the internet very easily. Wi-Fi is a mechanism that allows electronic devices to exchange data wirelessly over a computer network. A device enabled with Wi-Fi, such as a personal computer, video game console, smart phone, tablet, or digital audio player, can connect to a network resource such as the Internet via a wireless network access point. An access point (or hotspot) has a range of about 20 meters (65 ft) indoors and a greater range outdoors. Hotspot coverage can comprise an area as small as a single room with walls that block radio signals or a large area, as much as many square miles, covered by multiple overlapping access points. To connect to a Wi-Fi

LAN, a computer has to be equipped with a wireless network interface controller.

Conclusion

The communication devices are becoming smaller and compact. PCs are becoming smaller and smaller. We can see that the 5 pen pc technology is one of the advanced Portable PC that is easy to carry even in our pockets and work with it anywhere we want. This 'pen sort of instrument' produces both the monitor as well as the keyboard on any flat surfaces from where you can carry out functions you would normally do on your desktop computer. This has also Wi-Fi technology in which user can communicate through the internet. The major advancement is the camera which can be used even for video conferencing. We can expect more number of advanced PC systems in future.

SMART CARD

S. SINDUJA

II B.Sc CS "B"

A smart card is a device that includes an embedded Integrated Circuit Chip (ICC) that can be either a secure microcontroller or equivalent intelligence with internal memory or a memory chip alone. The card connects to a reader with direct physical contact or with a remote contactless radio frequency interface. With an embedded microcontroller,

smart cards have the unique ability to store large amounts of data, carry out their own on-card functions (e.g., encryption and mutual authentication) and interact intelligently with a smart card reader.

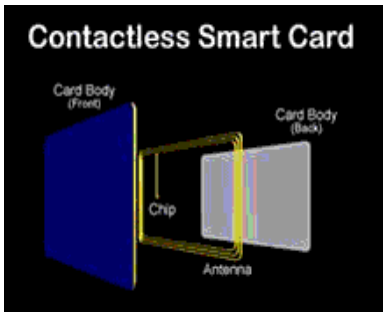
Smart card technology conforms to international standards (ISO/IEC 7816 and ISO/IEC 14443) and is available in a variety of form factors, including plastic cards, fobs, Subscriber Identity Modules (SIMs) used in GSM mobile phones, and USB-based tokens.

Smart Card Technology

There are two general categories of smart cards: contact and contactless.

A contact smart card must be inserted into a smart card reader with a direct connection to a conductive contact plate on the surface of the card (typically gold plated). Transmission of commands, data, and card status takes place over these physical contact points.

A contactless card requires only close proximity to a reader. Both the reader and the card have antennae, and the two communicate using radio frequencies (RF) over this contactless link. The range is typically one-half to three inches for non-battery-powered cards, ideal for applications such as building entry and payment that require a very fast card interface.



Two additional categories of cards are dual-interface cards and hybrid cards. A hybrid card has two chips, one with a contact interface and

one with a contactless interface. The two chips are not interconnected. A dual-interface card has a single chip with both contact and contactless interfaces. With dual-interface cards, it is possible to access the same chip using either a contact or contactless interface with a very high level of security.

The chips used in all of these cards fall into two categories as well: microcontroller chips and memory chips. A memory chip is like a small floppy disk with optional security. Memory chips are less expensive. Cards that use memory chips depend on the security of the card reader for processing and are ideal for situations that require low or medium security.

A microcontroller chip can add, delete, and otherwise manipulate information in its memory. A microcontroller is like a miniature computer, with an input/output port, operating system, and hard disk. They have the unique ability to store large amounts of data, carry out their own on-card functions (e.g., encryption and digital signatures) and interact intelligently with a smart card reader.

Issues

- Application dynamics.
- Prevailing market infrastructure.
- Economics of the business model.
- Strategy for shared application cards.

Applications

- Payment applications – contact and contactless credit/debit cards, transit payment cards.

- Telecommunications applications – GSM Subscriber Identity Modules, pay telephone payment cards.

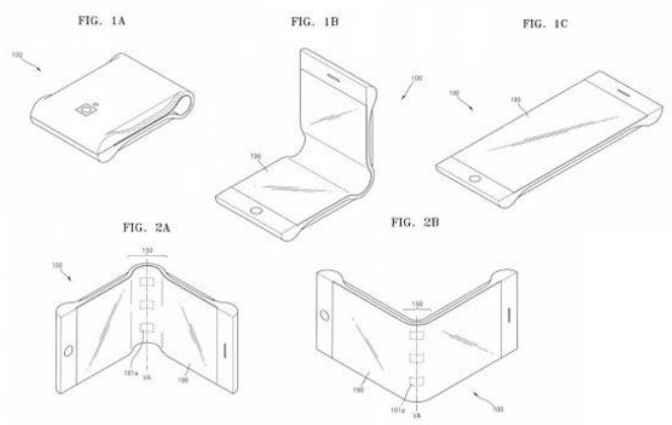
TOUCHSCREEN SMARTPHONE

A. MOHAMMED VASEEM

II BCA "A"

New Samsung patent suggests a smartphone that can fold into half like a wallet. Samsung has designed a smartphone that can completely bend into half. The South Korean smartphone maker has filed patent for technology. The patent portfolio registered with the United States Patents and Trademarks Office (USPTO) and approved in July 2015 hints that Samsung could be working on a smartphone that folds in half when not in use.

According to images filed with the USPTO, the smartphone has a super flexible touchscreen with a frame reminiscent of a flip phone. However, the images suggests that the smartphone could be fold in half with a bit of a gap at the hinge so the screen doesn't crease, either inward or outward, very similar to the two flaps of a wallet. The appearance of the smartphone could look a lot like the clamshell phones of the early 2000s.



It is not clear whether this foldable design from Samsung would see the light of the day or whether it would pursue and release similar flip phones in the U.S. However, in the recent years, the company has tried out new ways to come up with innovative phone designs that includes its curved Galaxy phone and its somewhat bendable Galaxy Note Edge.

On the other hand, sometime in August, a version of Samsung's flip phone called the Galaxy Folder is scheduled to go on sale in Korea. The smartphone will have all the modern functions that one would expect from their smartphones; however, the appearance may be a lot like the phones some years ago.

According to Reviewed.com, Samsung in a statement said, "The folding-style design combined with smartphone features, including the

Internet, messenger and social networking services, will add to the device's convenience."

With a fall in the profits and market share lately, Samsung has been struggling to have a hold in the market. Earlier this week, the tech company announced its plans to cut prices on its Galaxy S6 and Galaxy S6 Edge in an effort to encourage its sales.

According to reports by CNBC, International Data Corporation, a market research company, had noted in its latest Worldwide Quarterly Mobile Phone Tracker that "Samsung remained the leader in the worldwide smartphone market but was the only company among the top five to see its shipment volume decline year over year."

FLASH STORAGE SOLUTION

R. Nirmala

Asst. Professor, CS

Flash technology is now almost universally recognized as the future of the storage industry, but how can businesses get the best out of it?

'Before organizations get swept up in the tide it is important to take a balanced approach'

All storage administrators will be familiar with the fact that enterprise workloads are just as varied as enterprise applications.

Some workloads, such as online transaction processing (OLTP) and virtual desktops, are extremely latency sensitive, whereas others such as file shares and back up are throughput sensitive. In addition, there is avirtualisation I/O which sits somewhere in the middle and can make it harder to distinguish workloads due to the 'I/O Blender' effect.

As a result, storage administrators need to be cognizant of what storage functionality is required and what best suits the workload they are operating.

Much like reviewing features such as engine size, transmission and fuel type before purchasing a new car, before choosing a new storage system, business need to review their buying standards to ensure they get a solution that best suits their needs.

That being said, there are some key aspects companies should take into account.

1. IOPS (performance)

This is a key factor. Traditionally performance has been achieved by scaling up and down the number of disks/spindles used. However, the introduction of hybrid architectures that leverage flash to accelerate performance has meant organizations can achieve the same performance with significantly fewer disks, spinning or otherwise.

2. Latency

Whether it is an end-user application (VDI) or a server application (database or mail servers), lower storage latency affects perceived and real performance. As a result, it is important for an organization to review which applications are more latency sensitive and which require less attention.

3. Capacity

Reviewing storage capacity levels should be an ongoing focus for all organizations as the volume of enterprise data continues to increase, with IDC stating that "annual sales of storage capacity will grow by more than 30 percent every year between 2013 and 2017". Scalability is crucial in terms of capacity; solutions need be have the ability to accommodate data growth as and when this is required.

4. Storage functionality

Rich storage functionality also needs to be considered. This covers several important aspects such as access methodologies (not getting boxed into a single protocol), data protection (RAID, local snapshots, remote replication and DR support), high availability, integration into hypervisors and host operating systems.

While factors such as capacity and storage features are important, it needs to be mentioned that all the functionality in the world is useless unless an organization can ensure its databases and other applications are well protected locally and remotely, and can sustain disasters.

5. Cost

There are a number of aspects that influence budgets; everything from acquisition costs to total cost of ownership will have an impact, not to mention the budget constraints of individual organizations. Businesses need to ensure they do not spend outside their means to achieve their goals; everything comes back to cost and return on investment (ROI).
Traditionally HDD (hard disk drive) has always been cheaper than its flash counterpart, but with the recent decline price of SDD (solid state drive) this may no longer be the case.

An ideal formula would consider cost per IOPS, cost per TB and ongoing management/support costs. Data reduction technologies such as de-duplication and compression can significantly reduce the cost of flash systems.

6. Quality of flash

Finally, one often ignored, but highly critical aspect is the quality of flash used within all-flash or hybrid storage systems.Multi-level cell (MLC) NAND, the most popular flash media used in all-flash and hybrid storage solutions, predominantly comes in two flavours: enterprise-grade (eMLC) and consumer-grade (cMLC).

The major difference between the two is the longevity of flash memory cells as defined by the number of times it can be erased and re-written (programme-erase cycles). It is important to be aware of the quality of flash in a storage array as it can greatly impact the lifespan of the array and reliability of data.

Flash is a revolutionary media, but before organizations get swept up in the tide it is important to take a balanced approach, keeping these criteria in mind.In doing so, organizations should be afforded a storage solution that best addresses individual business needs.

TIPS FOR DEVELOPING MOBILE APPLICATIONS

B. Sowmya

Asst. Professor, CS

You might already have a mobile or web application or you might be starting from scratch. Either way, once in the mobile and web application game you are constantly in a battle for improvement.

Whether you are part of the development team or responsible for the end-user experience, these tips will help when developing or improving a mobile application.

1. Do support real-time experiences

Modern apps require access to real-time events from backend services, such as an alert for a factory monitoring application, or flight information for airport ground staff, aircraft crew and passengers. Incorporate data distribution technologies within your app development cycle that intelligently assess data to only send the most up-to-date information instantly.

2. Do ensure your app is highly responsive

When your end-user does something with your app, you want to respond, immediately and certainly not longer than four seconds (we lose attention in that space of time!). Delivering an exceptional user experience is all about interactivity and responsiveness of the app, the timeliness and relevance of the data it presents and the cost of running the app. Provide a development platform that enables you to build apps that can cope with speed, engagement and relevance of data.

3. Do keep scale in mind. What happens if your app goes viral?

What happens if your app goes viral? Developing with data distribution at massive scale in mind, your existing infrastructure must have the ability to support millions of concurrent users and do so quickly without crashing. You need to ensure the app you've developed can cope with the vast amount of data that will be sent to it and the app infrastructure can also support all the connected devices.

4. Don't develop for one device and platform at a time

Use a development environment that allows developers to write an app once and deploy anywhere, whether for the browser, a hybrid mobile

application or native applications for iOS, Android or Windows. Ensure that your development environment supports all push notification methods.

5. Don't waste time getting to market

You want the development team focused on how your organization will offer an engaging app experience and you want your business teams identifying ways to monetize this. Give your developers the tools to develop apps that can reach the market quickly. You also don't want to waste time developing new ways to handle speed, scale and data efficiency, when the technology already exists.

6. Don't develop an app that cannot make use of device features

Ensure you are developing with the entire latest client device SDKs, so you can build apps that make use of device features such as GPS to enable functionality based on location to push out specific notifications. Without this functionality, you might as well just create a mobile website.

7. Don't assume network pressures and constraints will be blamed on the mobile operator

Deliver users quality of service by ensuring that if connections are lost you are picking up exactly where the session left off upon reconnection. This capability should be incorporated into the development lifecycle so that data distributed is cached close to the end user ready for delivery. Just as important is not wasting bandwidth or infrastructure on this; you should efficiently send only the most up-to-date changed data.

8. Do ensure your application integrates to the corporate and back-end systems and Cloud

You want your app to talk to all the existing data services you have in place otherwise you'll be wasting money introducing new data silos. Make sure you use plugin adapters to provide access to services apps require such as SOAP or REST, SQL databases and JMS message buses.

9. Don't ignore the insights you can gain from mobile customers

75% of mobile shoppers take action after receiving location-based messages. Make use of comprehensive analytics to allow you to see how an application is used, what type of device it's running on, where it is being run and what the common usage flows are through the application. All of this information should be fed back to the developers to further streamline the application for usability lending itself to better retention of users and improving revenue-generating opportunities.

10. Do incorporate security measures for apps

For enterprise apps, with end-users accessing sensitive corporate information via a company-issued device or their own (BYOD), ensure that you are only allowing a single point at which apps can access business-critical backend services. You will also want to ensure all network traffic between the app and the server is encrypted and includes user authentication and authorization for access to sensitive information.

11. Don't use templates that dictate your look and feel

You should therefore look to replicate your brand on your app and should avoid using development frameworks and templates that dictate your look and feel of the user interface and the flow of the user experience. Instead, use a development environment built on top of open, standards-based technology such as Eclipse and Apache Cordova.

12. Do test your app across platforms and devices without wasting time

In the race to get to market, companies will sometimes reduce the amount of time available to properly test their app. This ultimately leads to lack of testing, poorly performing software and inevitable customer frustration and lack of confidence.

13. Don't deploy your corporate app on a public App Store

Why spend the money and time validating your app in Apple App Store, Google Play or Amazon Appstore when your end users are within your own organization? Set up your own Application Center so you can deploy your app to your end users on your own terms.

14. Do develop for clustering and failover support

Make use of a development platform that can provide all the clustering and failover support to provide a highly available and reliable connection point for applications.

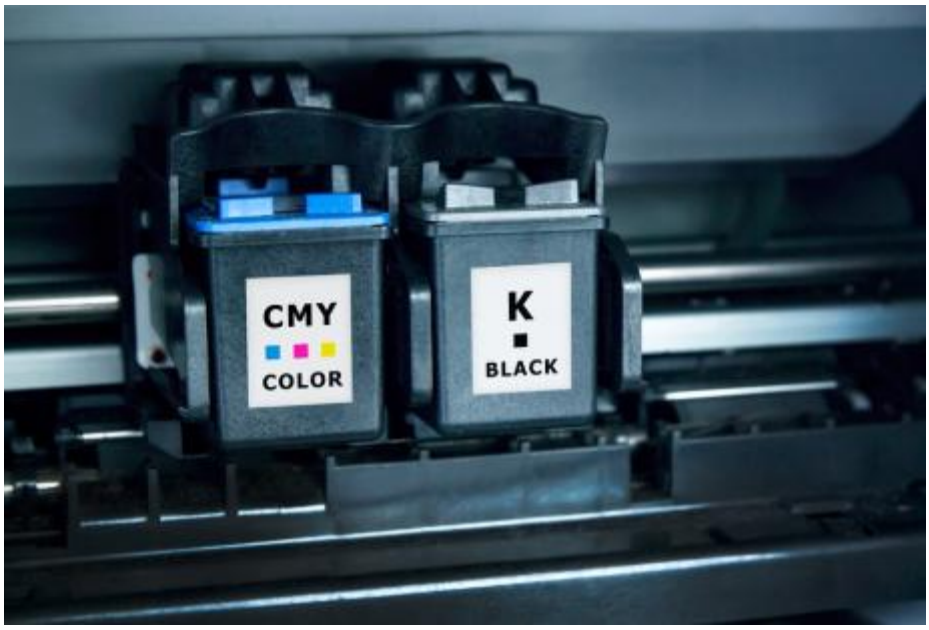
15. Don't make the development environment too complex

You want your development team focused on competitive advantages so make sure you select a development platform that is easy to use. This can include capabilities such as a drag and drop development interface based on the industry standard Eclipse IDE, coupled with a large built-in library of common UI elements.

HOW TO ENSURE NETWORK PRINTER SAFE AND SECURE

MATHESWARAN.P
System Admin

Cyber security tools are getting more sophisticated by the day, but IT teams are still neglecting to secure the humble office printer.



Last year, a security researcher **hacked a wireless printer** to run the classic video game, Doom, to demonstrate the security risked posed by unsecured printers on professional and personal networks.

This test showcased how hackers could access an internet network using only the IP address of a printer – potentially gaining access to delicate and private information.

This has highlighted the importance of ensuring the security and privacy settings of a network printer is as tightly controlled as those on the computers and devices also connected to the network.

Consumer-end printers

Whilst printers and machines aimed at the more professional and corporate end of the market will traditionally include comprehensive security features and measures - printers for the home often neglect such functions. This can prove problematic for home printers connected to a wireless network, making the vulnerable to hacking.

Even if the printer, network and connected computers have no important information stored on their hard drives – hackers can use the access to trigger faults and spread viruses.

This means it is important to install the manufacturer software and security features when prompted – even for the most casual of users.

Cloud printing

As more and more companies and home users turn to **cloud printing** as a means to reduce impact upon their own hard drives, the relatively new technology offers its own problems and drawbacks.

Whilst the process is ultimately more efficient and offers a range of benefits – it also poses a number of security issues for users, with more opportunities for hackers to access networks and computer systems.

Google's cloud printing service has a comprehensive range of security features to protect the sharing and reproduction of personal and business files.

Leased printers

Many companies leasing multifunction printers with copy and scan facilities do not realize that all of the scanned and copied files are stored on an internal hard drive. Upon returning a leased multifunction printer, these files are still store on the hard drive and can be accessed by the next organization which leases the machine.

This CBS report examines the dangers of companies and organizations which copy and scan delicate information and don't clear the hard drive before returning the multifunction printer to the lease company – serving as a warning to any parties leasing a unit.

Off-brand printers

When in the market for a new printer for the home of office, a model from a lesser known brand may be more affordable and subsequently attractive. However, these models may not have the security options that have been developed by the larger and more established manufacturers - offering little protection from the prospect of hacking and security infringements.

Printer specialists, **Printerland,** advises: 'Manufacturers such as HP and Lexmark set aside huge budgets to ensure their security features protect their printers from all kinds of attacks. Even though frequent updates can seem like overkill, these added security features could help protect your printer and your entire computer network.'

The team

If your work team is connected to a printer via a network, it is important the entire office is aware of their duties in protecting the

network and keeping the connection secure. Implementing a system of logins for printers which are carefully and respectfully observed can help the network retain a higher level of security. Comprehensive staff training can help reduce the risk of a member of the team compromising the safety and security of the network.

Similarly, it is important that any members of an IT team observe all of the security requirements of a printer – paying printer technology the same respect they would pay computer systems.

10 THINGS TO KNOW ABOUT WINDOWS 10

R. Sudha

Asst. Professor, CS

29th July 2015 marked the launch of Windows 10, and what Microsoft has called the final version of Windows. There are 10 essential things you need to know about Windows 10.

Not quite a free for all

It's true that Microsoft will offer free upgrades to users of Windows 7 and 8 until 29th July 2016. However, this offer will not extend to enterprise

editions of Windows, which are common at businesses. As a result, as usual, we can expect companies to upgrade at a slower rate than consumers who can take advantage of the offer within the first year of launch.

The return of the start button

If there's one thing that IT departments disliked about Windows 8, it was the removal of the Start button. Such a massive change to the user interface caused much confusion and distracted IT departments with mountains of IT support tickets.

Even though Microsoft brought a version of the Start button back in Windows 8.1, it didn't feel the same to the end users that IT supports. Windows 10 will see the return of a more familiar Start button, and will bring a huge sigh of relief from IT professionals across EMEA.

Universal OS, apps and doc syncing

Windows 10 will make it much easier for the IT department to offer a consistent user experience across a range of devices. The OS will span PCs, tablets and smartphones with each capable of running the same (select) universal applications.

For an IT department looking to manage a company's environment, device integration with OneDrive and Azure Active Directory will also be a huge positive. As a result, users can access the same files, apps and preferences regardless of the Windows 10 device they are using. That's a win for IT professionals.

Enhanced security

As the risk of security breaches increases with every week, Microsoft has reinforced Windows 10 with further security features including built-in multi-factor authentication, secure containers based on Hyper-V, and integrated data loss prevention solutions.

In addition, sensitive data can be automatically encrypted, and policy-based access control to specific information has been improved so that it applies to data even after it has left the network.

IT will also benefit from better ways of separating personal and work data, granular control over which apps are allowed VPN access, and customizable Windows stores that will help regulate which applications users can install.

Faster update cycle and more options for delivery

Windows 10 bids goodbye to Patch Tuesday. From now on, updates and new features can be pushed out when they're ready, not in a single batch once a month. Companies using Windows 10 Pro and Enterprise will have greater control over when to apply updates, through Windows Update, System Center, or WSUS.

Multiple desktops (AKA Virtual Desktops)

If you like to stay organised, Windows 10 offers a built in way to separate all of your running applications into multiple virtual desktop views. For example, you can set up one virtual desktop for your emails, another for your productivity software, and another for web browsers, etc.

Users can then arrange windows within the views as they like (the OS remembers their position within each virtual desktop), then switch between the views while they work.

Facial, biometric, and voice recognition

Windows 10, in particular Microsoft Hello, will embody Microsoft's efforts to eradicate the use of single factor authentication methods such as the familiar username and password. Hello can recognise a user's face, iris, or fingerprint, and the new OS can also use the device running Windows 10 itself as an authentication factor as well. Windows 10 will also provide voice recognition through Cortana, which will finally make the move from mobile devices to PCs.

New web browser

In the new OS, Microsoft Edge will replace the familiar yet often maligned Internet Explorer. Edge will not be held back by the legacy support constraints that hampered Internet Explorer and will offer better adherence to HTML standards, faster page load times, support for third party extensions, and the ability to write sharable notes on web pages.

Windows 10 will be the last version of the OS

With Windows 10, Microsoft will move towards an OS model which will provide more frequent, incremental feature rollouts to the same OS, instead of the periodic OS launch cycle that we've known for more than two decades. And according to sentiment within the Spiceworks community, many IT pros are eager to migrate their systems to Windows 10.

Windows 10 is clearly going to offer a lot for the IT pro, but there are still questions that remain unanswered.

What exactly does the 'Windows as a Service' model mean?

IT pros have been told that Windows 10 marks a shift to a 'Windows as a Service' model, but some IT pros are unclear on exactly how this will affect them. To many, 'as a service' implies a monthly fee for using a product, but Microsoft has stated that Windows 10 will not require an annual fee.

Additionally, there's confusion over what Microsoft means when it says it will support and update Windows 10 for the 'supported life' of a device. Many also lack clarity around OEM and volume licenses as well, so IT pros will keep a close eye on announcements from Microsoft in the coming months.

As ever, there is uncertainty leading up to a new Microsoft OS release, but early signs show that Windows 10 has great potential.

MAILING LIST – To Whom We Send

- **Mr.B.Murali, HOD of CS, PSG college of Arts and Science, Coimbatore-14.**
- **Mr.P.Narendran, HOD of CS, Gobi Arts &Science College, Gobichettipalayam-53.**
- **Dr.M.Chandrasekharan, HOD of CS, Erode Arts College (Autonomous), Erode - 09.**
- **Mr.S.SureshBabu, HOD of CS, Thiruvalluvar Government Arts College, Rasipuram.**
- **Dr.K.Thangavel, HOD of CS, Periyar University, Salem-11.**
- **Prof S. Joseph Gabriel, HOD of CS, MazharulUloom College, Vellore – 02**
- **Dr.P.Venkatesan, Principal, Vysya College of Arts and Science, Salem-03,**
- **Dr.P.Swaminathan, Dean, School of Computing, SASTRA University, Kumbakonam.**
- **Dr.S.K.Jayanthi, HOD of CS, Vellalar College for Women, Erode-9**
- **Dr.S.Krishnamoorthy, Dean, Anna University, Trichy-24.**
- **Dr. K. Rama, Deputy Adviser, NAAC, Bangalore.**
- **Dr.HannahInbarani, Asst Prof, Dept of CS, Periyar University, Salem-11.**
- **Dr.R.Balasubramaniam, Prof& HOD of CS, ManonmaniamSundaranar University, Tirunelveli.**

- **Dr.P.Jaganathan, Director, Dept of MCA, PSNA Engineering College, Dindugal-22.**
- **Dr.D.Venkatesan, SeniorAsst. Prof, Dept. of CS, School of Computing, SASTRA University, Tanjore-01.**
- **Dr.C.Muthu, Reader, Dept of Information Science and Statistics, St. Joseph College, Tiruchirapalli– 02.**
- **Dr. D.I. George Amalarethinam, Director, Department of MCA, Jamal Mohamed College, Tiruchirapalli – 20.**
- **Mr. B. Rajesh Kanna, Assistant Professor in Elect &Comm, Annamalai University, Chidambaram.**
- **Dr.H.FaheemAhmed, Asst Prof & HOD of CS, Islamiah College, Vaniyambadi – 02**
- **Dr. S. Leela, Controller of Examination, Periyar University, Salem-11.**
- **Dr. K. Angamuthu, The Registrar, Periyar University, Salem-11.**
- **Prof.Dr.C.Swaminathan, Vice Chancellor, Periyar University, Salem-11.**
- **Mr.Vaithiyanathan, Project Manager HCL Technologies, Chennai.**
- **Dr.T.Santhanam, Reader& HOD of CA, Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai –06.**
- **Dr.SheelaRamachandran, Vice Chancellor, Avinashilingam University, Coimbatore.**
- **Dr.R.Rajesh, Asst. Prof, Dept of CS & Engineering, Bharathiyar University, Coimbatore – 46**

- **Dr.R.S.Rajesh, Reader, Computer Science and Engineering, ManonmaniamSundaranar University, Tirunelveli-12.**
- **Dr.L.Arockiam, Associate Professor, Dept of CS, St. Joseph College, Tiruchirapalli-620002**
- **Mr.V.Saravanan, Associate Professor, Dept of CA, Hindustan College of Arts and Science, Coimbatore – 28.**
- **Dr.R.Ravichandran, Secretary, Dept of CS, KGISL Institute of Technology, Coimbatore-35.**
- **Dr. N.Sairam, Associate Dean, School of Computing, Sastra University, Tanjore – 01**
- **Dr.T.Senthikumar, Asst Prof, Amrita Institute of Technology, Coimbatore - 12**
- **Mr.S.T.Rajan, Sr. Lectr, Dept of CS, St. Josephs College, Trichy-02.**
- **Dr.R.AmalRaj, Prof. Dept Of CS, SriVasavi College, Erode – 16.**

COMPUTER JARGON 1

SOLUTIONS FOR SEPTEMBER MONTH PUZZLE

APPLICATION	DEFRAGMENT	GOOGLE	NANOSECOND	SCANNER
BACKUP	DIRECTORY	HTML	NETWORK	SECURITY
BINARY	DISK DRIVE	ICON	PARTITION	SHAREWARE
BLUETOOTH	DOS	INTERNET	PASTE	SOFTWARE
BOOT	DRAG	JAVASCRIPT	PDF	SPAM
BYTE	EMAIL	KERNAL	PIXEL	TASKBAR
CHAT	ENCRYPTION	LCD	POWER SUPPLY	THUMBNAIL
CLICK	FILE	LOGIN	PROGRAMMER	UNIX
COOKIE	FIREWALL	MEMORY	ROUTER	WALLPAPER
CURSOR	FOLDER	MONITOR	SAVE AS	WIRELESS
DATA	GIF	MOUSE		

The hidden word is: MOTHERBOARD

Google play

Google play,orginally the Google Play Store or Android Market,is a digital distribution platform operated by Google.