Tech Veda

Vista

Vienna

Beyond Vista

Windows "Vienna" (formerly known as **Blackcomb**) is Microsoft's codename for a future version of Microsoft Windows, originally announced in February 2000, but has since been subject to major delays and rescheduling.

Development

The code name "Blackcomb" was originally assigned to a version of Windows that was planned to follow Windows XP (codenamed "Whistler"; both named after the Whistler-Blackcomb resort) in both client and server versions. However, in August 2001, the release of Blackcomb was pushed back several years and Vista (originally codenamed "Longhorn" after a bar in the Whistler Blackcomb Resort) was announced as a release between XP and Blackcomb.

Since then, the status of Blackcomb has undergone many alterations and PR manipulations, ranging from Blackcomb being scrapped entirely, to becoming a server-only release. As of 2006, it is still planned as both a client and server release with a current release estimate of anytime between 2009 and 2012, although no firm release date or target has yet been publicized. In January 2006, "Blackcomb" was renamed to "Vienna".

Focus

Originally, internal sources pitched Blackcomb as being not just a major revision of Windows, but a complete departure from the way we have typically

An
IEEE
Student Branch
Presentation

Extra Bits

➢ In **PlayStation 3** the data transfer rate between the processor and the graphics processor reaches an astonishing rate -- **20 GB/s** -- five to ten times what you can get with today's best PC--bus technology.

➢ Cloud gazing is a hobby that hasn't got much wide acceptance among laymen. For those who marvel the cloud formations, here is a site which is a must see--*http://www.cloudappreciationsociety. org*

➢ How reliably can you identify a person? has been a quesion that has perplexed authorities for a long time. **Vascular Pattern** -- pattern of blood vessels in hand forms a unique pattern that can be distinguished from anyone else's -- seems to offer a solution.

... continued from first page ...

thought about interacting with a computer. While Windows Vista is intended to be a technologies-based release, with some added UI sparkle (in the form of the Windows Aero set of technologies and guidelines), Vienna is targeted directly at revolutionizing the way we interact with our home and office PCs. For instance, the "Start" philosophy, introduced in Windows 95, may be completely replaced by the "new interface" which was said in 1999 to be scheduled for "Vienna" (before being moved to Vista ("Longhorn") and then back again to "Vienna").

The Explorer shell will be replaced in its entirety, with features such as the taskbar being replaced by a new concept based on the last 10 years of R&D at the Microsoft "VIBE" research lab. Projects such as GroupBar and LayoutBar are expected to make an appearance, allowing users to more effectively manage and keep track of their applications and documents while in use, and a new way of launching applications is expected among other ideas, Microsoft is investigating a pie menu-type circular interface, similar in function to the dock in Mac OS X.

Other features

Several other features originally planned for Windows Vista may be part of "Vienna", though they may be released independently when they are finished. "Vienna" will also feature the "sandboxed" approach discussed during the Alpha/White Box development phase for Longhorn. All non-managed code will run in a sandboxed environment where access to the "outside world" is restricted by the operating system. Access to raw sockets will be disabled from within the sandbox, as will direct access to the file system, hardware abstraction layer (HAL), and complete memory addressing.

All access to outside applications, files, and protocols will be regulated by the operating system, and any malicious activity will be halted immediately. If this approach is successful, it bodes very well for security and safety, as it is virtually impossible for a malicious application to cause any damage to the system if it is locked in what is effectively a glass box.

Another interesting feature mentioned by Bill Gates is "a pervasive typing line that will recognize the sentence that [the user is] typing in." The implications of this could be as simple as a "complete as you type" function as found in most modern search engines, (e.g. Google Suggest) or as complex as being able to give verbal commands to the PC without any concern for syntax. This former feature has been incorporated to an extent in Windows Vista.

Backward compatibility

Microsoft has stated that "Vienna" will be available in both 32-bit and 64-bit for the client version, in order to ease the industry's transition from 32-bit to 64-bit computing. Vienna Server is expected to support only 64-bit server systems. There will be continued backward compatibility with 32-bit applications, but 16-bit Windows and MS-DOS applications will not be supported as in Windows Vista 64-bit versions. The announcement referred to above was made prior to the decision to push back production of Vienna and release Microsoft Windows Vista as an intermediate product.

The Core Details

Developer : Microsoft

Release information

Source model	:	Closed Source
License	:	Microsoft EULA
Kernel type	:	Hybrid Kernel

and where he married his first wife Jane, a fellow employee, and in 1978, he worked at D.G. Nash Limited where he wrote typesetting software and an operating system.

While an independent contractor at CERN from June to December 1980, he proposed a project based on the concept of hypertext, to facilitate sharing and updating information among researchers. While there, he built a prototype system named ENQUIRE. He saw an opportunity to join hypertext with the Internet: "I just had to take the hypertext idea and connect it to the TCP and DNS ideas and — ta-da! — the World Wide Web". He used similar ideas to those underlying the Enquire system to create the World Wide Web, for which he designed and built the first web browser and editor (called WorldWideWeb and developed on NEXTSTEP) and the first Web server called **httpd** (short for **H**yper**T**ext **T**ransfer **P**rotocol **D**aemon).

The first Web site built was at http://info.cern.ch/ and was first put online on August 6, 1991. It provided an explanation about what the World Wide Web was, how one could own a browser and how to set up a Web server. It was also the world's first Web directory, since he maintained a list of other Web sites apart from his own. In 1994, Berners-Lee founded the World Wide Web Consortium (W3C) at the Massachusetts Institute of Technology. The World Wide Web Consortium decided that their standards must be based on royalty-free technology, so they can be easily adopted by anyone.

The University of Southampton was the first to recognise Lee's contribution to developing the World Wide Web with an honorary degree in 1996. In 1997 he was made an Officer in the Order of the British Empire, became a Fellow of the Royal Society in 2001, and received the Japan Prize in 2002. In 2005 he was named Greatest Briton of 2004 for his achievements Time Magazine included Berners-Lee in its list of the 100 most influential people of the 20th century, published in 1999.

Sir Timothy John "Tim" Berners-Lee

Inventor of the World Wide Web
Director of the World Wide Web Consortium

Sir Timothy John "Tim" Berners-Lee, KBE (born June 8, 1955 in London, England) is the inventor of the World Wide Web and director of the World Wide Web Consortium, which oversees its continued development. Informally, in technical circles, he is sometimes called "TimBL" or "TBL".

Berners-Lee was born in London, England, the son of Conway Berners-Lee and Mary Lee Woods. His parents, who were both mathematicians, were employed together on the team that built the Manchester Mark I, one of the earliest computers. They taught Berners-Lee to use mathematics everywhere, even at the dinner table. Berners-Lee attended Sheen Mount Primary School (which has dedicated a new hall in his honour) before moving on to Emanuel School in Wandsworth. He is an alumnus of Queen's College (where he played tiddlywinks for Oxford, against rival Cambridge), Oxford University (which has dedicated a computer room in his honour), where he built a computer with a soldering iron, TTL gates, an M6800 processor and an old television. While at Oxford, he was caught hacking with a friend and was subsequently banned from using the university computer.

He worked at Plessey Telecommunications Limited in 1976 as a programmer

How fast time flies! 2006 is almost over. Its time to look back and reflect on what it was to be like living through the year that is on the verge of extinction.

2006 proved the best year for TechVeda. It was in 2006 that we decided to go public. It was a brave move as far as the newsletter was concerned — A small step for us but a leap for TechVeda. Not surprisingly the worth of the newsletter was recognised immediately and we were able to cross the first hundred annual subscriptions with in thirty days in public. In March the newsletter was released during *Melange 2k6*, the all Kerala intercollegiate technical festival conducted by the college. The goddess of luck continued to bless us all through out the year. We were able to complete one year in print. The occasion was celebrated with week – long celebration starting from 3rd of October and concluding by a grand finale on the 10th which witnessed the official release of a special issue of TechVeda by our chief guest. The newsletter was well accepted was first years as well. Ads began to appear along the way.

In the mean time there were great things happening in our college. One more batch of successful engineers passed out bringing academic achievements and professional credentials. The number of placements totalled to above 75 among them. The momentum was kept alive by the current final years who were able to complete a century of placements with in months the season began. We also witnessed some unhappy moments which we all want to forget.Somethings that shouldn't have happened, happened.

We look forward to the New Year with hope and expectations to reach new heights in publishing. Have a great **Christmas** and **New Year**! Until we meet again in the new year, adieu friends.

The Games Indians Play

On The Subcontinent, They're Either Dreaming Up Games For Cell Phones, Or Eagerly Devouring Them

His monkey face, muscular human body, and simian tail may not appeal to gamers in the West, but for those familiar with the ancient epic of Ramayana, there's nothing strange about this devotee of Rama, who fights evil, traverses oceans, lifts mountains and easily holds his own with Spiderman, at least with India's mobile gaming fans. *Indiagames* got the worldwide rights to make a mobile game in time for the Hollywood blockbusters release just as another Indian game developer came out with a game based on India's first full length animated feature film, Hanuman.

Both proved very popular, clocking between 20,000 and 30,000 downloads a month for over six months now, says Sanjay Trehan, head of broadband and content at Delhi-based *Times Internet*, a unit of India's largest media group, *Bennett, Coleman & Co*. There's a reason for all this madness: a recent survey by *Pyramid Research* showed that nearly a third of cell phone users in India play games on their mobiles, and gamers are showing a growing preference for local content.

Tata Indicom, for example, recently started marketing a popular homegrown comic strip called *Uncle Pai*. Interestingly, the strip was originally printed in English for city kids to learn about Indian classics. Adapted to CDMA phones with speech balloons in several languages they turned out to be a low-cost way to repurpose the strip and generate revenue in several other language markets across the country. The Indian market is ready to explode because people want value-added services on their phones, says Mohit Bhatnagar, vice president, alliances, at *Airtel*, India's No. 1 wireless operator. Game downloads are increasing 400 percent year on year. But just how fast the market is growing is a matter of opinion. Arun Gupta, CEO of *Mauj Telecom*, reckons there are currently 600,000 game downloads a month; Rajesh Rao, CEO of *Dhruva Interactive*, a Bangalore-based animation and gaming company, puts the number closer to 1 million.

Running the Numbers

India's wireless-game market will generate annual revenues of $336 million by 2009, according to projections from Delhi-based *Nasscom*, the India software industry body, and U.S. research firm *InStat/MDR*. An analyst at Mumbai-based equity research firm *SSKI* says he expects the wireless value-added services market to grow from an estimated $77 million to $844 million in 2010. Games constitute about 6 percent of this revenue today but their share is expected to rise to 8 percent by 2010. That's much less than the $336 million projected by InStat/MDR and Nasscom. In a market thats growing by over 50 percent every year, there can be no accurate estimates, says Mr. Rao. The market is so dynamic that I really cannot say for certain how fast it will grow.

Short messaging service (SMS) tends to dwarf all comers in the value-added services, accounting for 80 percent of India's VAS market. Next comes ring tone downloads, followed by games. Alok Shende, an analyst with *Frost & Sullivan*, reckons a 6 to 8 percent VAS share for games is about the norm. Even in Korea, VAS accounts for just 16 percent of a mobile operator's total revenues. Of this, games take up about 10 percent, he says. Its a nice story so far, but *Pyramid* analyst Nick Holland points out that there are obstacles to growth: a third of Indian mobile users remain cut off from serious gaming for lack of decent handsets like Java-enabled phones that support games.

It seems there are problems that even the amazing Hanuman cannot solve. But Reliance Infocomm has been working on it, and now offers over 60 games that run on black and white displays in a variety of Indian languages. The most popular games tend to be those based on cricket, Bollywood movies, local TV serials, mythic characters, and car and bike racing. The biggest hit so far has been Sholay, based on the blockbuster Bollywood movie of the same title. Rajiv Hiranandani, CEO of Mobile2Win, the company that created the game, reports over 1 million downloads, encouraging results as it prepares to release a series of 3D games.

Over a dozen companies are now serving the local market with local themes. The more the merrier, says *Dhruvas* Mr. Rao. We compete with so many other types of entertainment, so content needs not only to be compelling, but also plentiful and variegated, he says. Mr. Rao finds that most Indians game casually, to pass the time while waiting in queues or while commuting. So, the games are designed to be entertaining and are priced low: between a dollar or two per game.

Small Amounts, High Potential

The subscription model is actually new. But Indians like to pay small amounts, even if several times a month. That's why the prepaid call schemes are so popular, with some carriers offering recharge coupons for as little as 10 Rupees ($0.22) because even for that, subscribers can make as many as 10 calls. By months end, these piranha-scale nibbles can add up to a shark bite-sized spend. That call formula applies to gamers, too, who can subscribe to a game for Rs 20 or less a month. But over three months, that's still more than a user would pay buying a game outright for Rs 50. But the low-spend model is hardly failsafe, argues *Frost & Sullivans* Mr. Shende. A good gaming company will need to have a mix of games that are high-risk and high-revenue and others that bring in stable, not spectacular, returns, he says. But why should India have all the fun? Mobile2Wins Mr. Hiranandani is convinced his upcoming game based on the Indian classic Kamasutra, one of the worlds oldest instruction manuals about love and sex, has all the makings of being a global hit. Go move a mountain, Hanuman. The worlds got other things on its mind.

Kanbay International, Inc.

Profile

Founded in 1989, Kanbay International, Inc. (NASDAQ: KBAY) is a global IT services firm with almost 6,900 associates worldwide. The name **Kanbay** is a whimsical combination of the first and last syllables of the home country and city of two of the founders, John Patterson and Dileep Nath—**Can**ada and Bom**bay**. In 1989, Raymond Spencer took charge and Kanbay was officially transformed from a concept into an operating business.

Through a proven global delivery platform, it offers a highly integrated suite of management consulting, technology integration, application development, and outsourcing solutions to the following industries:

Financial Services
Consumer & Industrial Products
Communications & Media
Life Sciences.

Kanbay is a CMM Level 5 assessed company headquartered in greater Chicago with offices in North America and India, as well as London, Singapore, Hong Kong and Melbourne.

Kanbay is now a global IT services firm with approximately 6,900 associates worldwide. Kanbay is a CMM Level 5 assessed company headquartered in greater Chicago with offices in North America and India as well as London, Singapore, Hong Kong and Melbourne.

Some of its markable alliances are:

Actimize	ILOG
Actuate	Informatica
ASG	Kognitio
Business Objects	Microsoft
Cisco	Oracle
Cognos	Procuri
Calypso	SAP
Computer Associates	Siebel
DataSynapse	Strategic Systems Solutions
Distra	SunGard
FINEOS	Universal Conversion Technologies
IBM	webMethods

In 1991, established an office in India to support delivery of our software development services.
In 2006, inaugurated new state-of-the-art Hyderabad campus with the capacity to host approximately 4,000 associates.

Selection Procedure

1. Written Test (2 sections - 30 each)
   a) Maths
   b) Aptitude

2. Group Discussion

3. Interview (both Tech and HR)

Sample Question Paper

Logical:30qns : Math:30questions
Mark: correct ans/ Wrong ans : +1/-0.5

Logical

1. What is implied in the following sentence, During war the two countries formed allied.
I) There was war   II) the two countries are companions
a) I onlyb) II only   c) I & II both   d) neither I or II

2. 4 set of words are given out of which one is odd man ,find it?
a) sigh b) cough c) talk d) sniff

3 In the 4 options of jumble words given, find the odd man out:
a) llatfoob   b) rictek   c) llasm d) nisnet
(Except one all are representing games football,cricket & tennis)

4. Average of three numbers A,B,C is 17 when A is replaced by D the average increases by 2. What is the value of D?
a)16   b)18   c)12   d) none of these

5. If two days from tomorrow is Thursday then what will be 2 days before yesterday
a) Friday b) Saturday c) Sunday d) none of these

Maths

1. An unbiased coin is tossed 8 times what is the probability of getting at least 6 heads.

2. There are two pipes p,q which can empty a container at 24hr,32hr respectively.both the pipes are opened simultaneously after what time should the first pipe be closed so that the container is emptied in 16minutes.

3. $x+y=40, (1/x)+(1/y)=60$.what is the value of x,y ?

4. $S_1=\{1,2,3,4\}$; $S_2=\{A,B,C\ldots\ldots.Z\}$; $S_3=\{\ldots\ldots\ldots\ldots\}$,
then $(S1xS2)U\ S3 ==?$

5. Two taps a and b fill up a cistern in 2 and 3 hrs ,at wat time should b be clsed if the tank cistern is filled up in 17 minutes?

6. A doctor checks 5 patients every 3 hrs with abreak of 10 minutes between each two check ups.how many he patients he checks in 10 hrs and 15 minutes??

Group Discussion

Tips: Be cool, Listen carefully, and talk. Don't be too aggressive nor too submissive and yes, don't address any one member only.
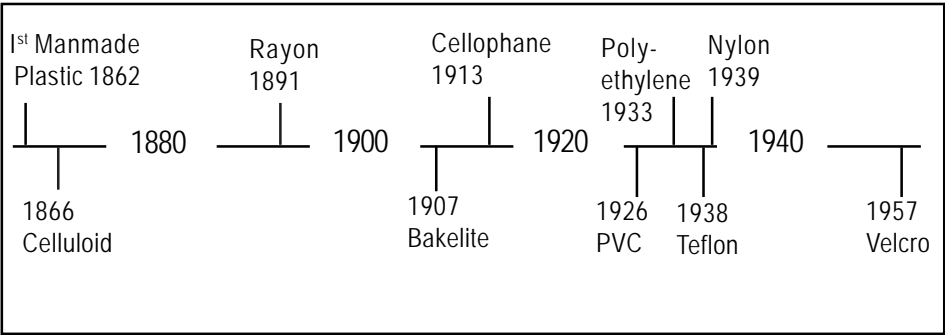
Interview

Expect everything under the sum to be asked to you. They also ask puzzles like: (1). 3 switches in the bottom floor, 3 bulbs on top floor..you can go upstairs only once. Find out which switch is for which bulb.
(2). What are your assets, hobbies, the last book that read , the last film that you saw, name of characters in that film etc..

The History of Plastics

Developement of Plastic - Timeline

I^st Manmade Plastic 1862	Rayon 1891	Cellophane 1913	Poly-ethylene 1933	Nylon 1939
1880	**1900**	**1920**		**1940**
1866 Celluloid		1907 Bakelite	1926 PVC	1938 Teflon	1957 Velcro

Alexander Parkes Invented First Man made plastic

Ist Man made plastic was invented by Alexander Parkes at the 1862 Great International Exhibition in London. This material which is the public dubbed Parkensine- was an organic material derived from cellulose that once heated could be moulded but that retained its shape when cooled. Parkes claimed that this new material could do anything rubber was capable of, but at a lower price. He has discovered something that could be transparent as well as carved into thousands of different shapes. But Parkensine soon lost its lusture, when investors pullled the plug on the product due to the high cost of its raw materials needed in its production.

Celluloid makes its debut

During the later part of 19th century, thousands of elephants were killed for ivory to make Billiards balls which became a popular game. John Wesley Hyatt, an American came up with a solution in 1866 i.e celluloid. Hyatt, upon spilling a bottle of collodion in his workshop, discovered that the material congealed into a tough flexible film. He then made Billiards balls using collodion as a subsitute for ivory. But due to its brittle nature, balls would break when they are hit each pther. The solution to this challenge was the addition of camphor - a derivative of the laurel tree. This addition made celluloid the first Thermoplastic. Celluloid went on to be used in the first flexible photographic film for still and motion pictures.

The Story of Bakelite

First completely synthetic man made substance was discovered in 1907, by a New York Chermist Leo Backeland. He developed a liquid resin and named it Bakelite. Using a special apparatus called Bakelizer, he developed Bakelite resin that rapidly hardened, the resin would form an exact replica of any vessel that contained it. This new material would not burn, boil, melt or dissolve in any commonly available acid or solvent. This means that once it was firmly set, it would never change. This one benefit made it stand-out from previuos plasters. Bakelite was the I^st Thermoset plastic while would retain its shape and form in any circumstances.

Bakelite would be added to almost any material- such as soft wood and instantly make it more durable effective. Bakelite was a key ingredient in most of the weapons used in second world war.

Bakelite was also used for domestic purposes such as electrical insulators. It is electrically resistant, chemically stable, heat-resistant, shatter proof etc.

to be continued....

Mr. Kiran K.J
S$_7$P

Are You Vista Ready?

One question you hear a lot these days is "Can I upgrade to Vista when the time comes?" Depending on your current setup, you may be able to get your system ready for the brave new world of Vista. Or you may decide that you're better off just getting a new Vista-ready system instead.

Here's what you need to consider.

MEMORY: Do you have at least 512MB? One gigabyte (1 GB) of system memory is a more comfortable amount, and 2GB is just about perfect for all iterations of Vista, though you may want 3GB to 6GB if you're a hardcore gamer or a multi-media maven.

GRAPHICS: If you have integrated graphics or a DX9-capable graphics card, it is likely that you can use Vista in its basic form, without all the fancy Aero effects. If your graphics card has at least 256MB of dedicated graphics memory, Aero will work fine for you. DX10 will be a Vista optimized graphics standard.

HARD DRIVE: While you can install Vista on any machine that has at least 15GB free, you may want to upgrade to at least 120GB if your current system has less than 80GB. You'll need the room if you upgrade to any new Vista-optimized programs.

PROCESSOR: Upgrading a processor is intimidating. If your processor is too slow for Vista (Intel Celeron Via C3, or AMD Sempron processors that are slower than 800 MHz), buy a new PC.

CUT AND RUN:If your system came with Windows 2000, it will probably be able to handle the hardware upgrades needed to run Vista Business or Home Basic, but won't run Vista's multimedia offerings. If your Windows XP system's invoice reads 2004 or later, then you should be in good shape for Home Basic and Premium. *One hint: Wipe your machine's C: drive and install Vista from scratch rather than upgrading from an existing copy of Windows XP. Just remember to back up your data*

ARE YOU READY FOR WINDOWS VISTA?

A high-end system will let you take advantage of more of the features in Windows Vista.

	GOOD (Vista–capable)	BETTER (Premium-ready)	BEST (Ultimate-ready)
Processor	800-MHz 32-bit (x86) or 64-bit (x64) processor	1-GHz 32-bit (x86) or 64-bit (x64) processor	Dual-core, 64-bitcapable processor, 1.66 GHz or faster
RAM	512MB	1GB	At least 2GB
Graphics card	DirectX 9 graphics support	DirectX 9 graphics support with a WDDM driver*	DirectX 10 graphics support**
Hard drive space	20GB with 15GB of free space	40GB with 15GB of free space	As much as you can afford
Optical drives	CD-ROM drive (can be external)	DVD-ROM drive (can be external)	Dual-layer DVD burner (can be external)

* 128MB of graphics memory (minimum); ** 512MB of graphics memory.

Give it a Thought 1011011010101001010101010110111010110101010

If we knew what we were doing, it wouldn't be called research, would it?

-- Albert Einstein

Somebody Kill It!

Invariably Windows says, "This is a critical system process. Task Manager cannot end this process." when you try to kill a system process and Windows doesn't allow you to do so in order not to damage it, because Microsoft considered it risky!

Some examples of Windows 2000 critical system processes included in this category are: *csrss.exe, evntsvc.exe, lsass.exe, mstask.exe, regsvc.exe, services.exe and smss.exe.* So it is probable one of those is the backdoor. Windows 2000 is not case sensitive when determining whether or not a process is associated with the OS or not. If a file has the same name as a system process, a user will not be able to terminate it. This situation can be easily tested: copy the "notepad.exe" and rename it to, for example, "smss.exe". Run this "new" notepad image and try to kill its associated process; you will get the same message mentioned previously. There is a Microsoft Knowledge Base article explaining why a process cannot be terminated, "Q155075- Cannot End Service Processes with Task Manager" (*http:/ /support.microsoft.com/?kbid=155075*).

Although the article is based on another Task Manager error message, it explains that stopping a process involves a call to the "TerminateProcess" function of the Win32 API. When used, the process doesn't clean up properly and save its data, neither it notifies the DLLs loaded into the process address space.

The restriction for killing a process is related with the Windows security mechanisms. By default, it is not possible to kill a process that is running under a security context different than the one of the process who issued the call to "TerminateProcess". Every Windows process has an "Access Token" associated that contains its security privileges:

- A process runs by an interactive user run with the following security context: Interactive/Full Control and System/Full Control.

- A system process/service or DCOM server run under the following security context: Administrators/Read and System/Full Control. This is why a process of this type cannot be stopped even by an Administrator.

Winamp Easter Eggs

• This is one amusing egg in Winamp 5. First play a song with fast beats and heavy bass. Now, switch to the modern skin and resize the main window. Increase its width to make the Beat Resource Hacker is a handy tool to find out what's hidden inside Windows System files.
Analyzer visible to the left of the Spectrum Analyzer. Now, hold down **[Shift]** + **[Ctrl]** +**[Alt]** and click the centre of the Beat Analyzer. You'll see two llamas striking their heads on the ground in tune with each beat.

• Play a song that's akin to the one described above. Now, ensure that the main window has the focus (its title bar should be brighter than that of other windows) and type 'NULLSOFT'. However, since pressing [L] opens the File Open dialog, you'll have to press [Esc] after each [L]. Hence, you end up typing **[N] [U] [L] [Esc] [L] [Esc] [S] [O] [F] [T]**. This done, you see that the main window goes transparent at each beat and then reverts to being opaque. This Easter egg consumes a lot of system resources. If your system runs slow, type NULLSOFT again to turn it off, or just exit Winamp and restart it.

• An animated logo comes up as you go to Winamp menu > Nullsoft Winamp and click the Winamp tab. Press and hold [Shift] and double-click on this logo to change it to an ASCII art.

Fake folder

Every person has the desire to keep his data files safe and out of reach, unseen by others. This code fakes your folder as Control Panel. Clicking the faked folder will open the Control Panel unless you unlock your folder using the password specified during the locking. Experiment with more buttons along with this code. Read more in next issue.

```
Public Class Form1
    Inherits System.Windows.Forms.Form
// Windows Form Designer generated code here
Public oldpath As String
Public key As String = ".{21EC2020-3AEA-1069-A2DD-08002B30309D}"
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click Dim lg As Long, tmp As String
            folderdb.ShowDialog()
        oldpath = folderdb.SelectedPath
        lg = Len(oldpath)
        tmp = ""
        If ((lg - Len(key) + 1) > 0) Then
            tmp = Mid(oldpath, lg - Len(key) + 1, Len(key))
        End If
        If (tmp = key) Then
            txtfolder.Text = Mid(oldpath, 1, lg - Len(key))
        Else
            txtfolder.Text = oldpath
        End If
End Sub
Private Sub cmdLock_Click(ByVal sender As System.Object, ByVal e As
            System.EventArgs) Handles cmdLock.Click
        Dim nwPath As String
        If (Dir(txtfolder.Text, FileAttribute.Directory) = "") Then
            MsgBox("Plese Specify a valid folder....!")
        Else
            oldpath = txtfolder.Text
            nwPath = oldpath + key
            Rename(oldpath, nwPath)
            txtfolder.Text = ""
            MsgBox("Complete.....")
        End If
End Sub
Private Sub cmdUnlock_Click(ByVal sender As System.Object,
            ByVal e As System.EventArgs) Handles cmdUnlock.Click
        Dim nwPath As String, tmp As String
        Dim lg As Long
        If (Dir(oldpath, FileAttribute.Directory) = "") Then
            MsgBox("Plese Specify a valid folder....!")
        Else
            lg = Len(oldpath)
            tmp = ""
        If ((lg - Len(key) + 1) > 0) Then
            tmp = Mid(oldpath, lg - Len(key) + 1, Len(key))
        End If
        If (tmp = key) Then
            nwPath = Mid(oldpath, 1, lg - Len(key))
            Rename(oldpath, nwPath)
            txtfolder.Text = ""
            MsgBox("Complete.....")
        Else
            MsgBox("this folder is not potected with fake folder")
        End If
        End If
    End Sub
End Class
```

-Ajo Robert, S7CSE

How does spending prolonged time in microgravity affect astronauts?

Space affects the body in many ways. A partial list of the consequences of long stays in microgravity (where the pull of Earth's gravity is virtually unnoticeable to humans) includes bone loss at a rate of 1 to 1.5 percent a month, producing changes similar to steoporosis; an increased risk of kidney stones and bone fractures, both associated with bone demineralization; and loss of muscle mass, strength and endurance, especially in the lower extremities. Other changes are diminished cardiac function and the possible occurrence of heart rhythm disturbances, redistribution of body fluids away from the extremities and toward the head, and alterations in the neurovestibular system that often lead to disorientation and decreased neuromuscular coordination on return from prolonged missions.

Disruptions of circadian rhythms because the 24-hourday-night cycle is absent result in sleep loss and stress, and the body experiences reduced blood volume, immunodeficiency and transient postflight decreases in levels of red blood cells, despite adequate nutritional intake. Space also presents health risks in the form of radiation, normally blocked by Earth's atmosphere. The space environment contains galactic cosmic rays, heavy ions such as iron, trapped electrons and protons, and neutrons. Such radiation can induce cataracts and cancer and adversely affect physiological processes.

To counter these dangers, mission planners have developed a variety of strategies. During prolonged missions, exercise is employed to minimize large-muscle atrophy. Certain tasks, such as extravehicular activities (spacewalks), are not performed routinely until bodily fluid redistribution stabilizes and astronauts have had an opportunity to acclimatize to space for several days. Medications have proved effective in treating motion sickness and orthostatic hypotension (low blood pressure when standing), and some drugs are potentially useful in reducing bone loss.

Different lighting intensities and wavelengths are also being studied and implemented as a way to maintain astronauts' normal circadian cycle. To protect against space radiation, special shielding is installed on spacecraft.

Why do people have different blood types?

The short answer: blood types can aid survival under certain conditions. The specific proteins, glycoproteins and glycolipids found (or expressed) on the surface of red blood cells define blood types, which are inherited. In 1900 Karl Landsteiner described the original classifi cations—A, B and — and doctors now recognize 23 blood-group systems with hundreds of different subtypes. Most such molecules do not seem to be essential for blood cell operation, but some have specific jobs on the red cell membrane.

Blood-type factors may be transporters, for instance, allowing materials to enter and exit the red cell, or receptors that permit the binding of certain substances to the cell surface. Environmental selective pressures clearly play a role in the persistence of some blood types. For example, a "Duffy" blood-type receptor enables certain malarial parasites to enter the red cell. Thus, in some malarial areas of Africa, populations who lack the Duffy blood factor gain a measure of protection against malaria, a distinct survival advantage.

We do not yet know the functions of the A and B bloodgroup factors. (O blood does not contain A or B factors.) They are probably important in some way, because they appear on many cells and tissues in addition to blood cells and circulate in plasma as well. Also, statistical differences in the frequency of certain malignancies associated with a given A, B or O group suggest that these factors play a role in these diseases.

Are one's fingerprints similar to those of his or her parents?

Yes, we inherit the overall size, shape and spacing of socalled friction ridge skin (FRS)—fi ngerprints. The individual details that make a fingerprint unique are not genetically determined, however. Made up of a series of ridges and furrows that aid in grasping, FRS is unique and permanent. No two individuals—including Identical twins—have the same arrangement, which also does not change throughout life (except in the case of signifi cant damage that creates a permanent scar). Why are the general patterns but not the identifying ridge features inherited? The reason is in the timing of aspects in fetal development. Fetuses acquire smooth volar pads—raised pads on the fi ngers, palms and feet—because of swelling mesenchymal tissue, which is a precursor of blood vessels and connective tissues. Around week 10, the fetus's volar pads stop growing, but the hand continues to enlarge. Over the next few weeks, the volar pads are absorbed back into the hand.

During this stage, the fi rst signs of ridges appear on the skin of the pads. The shape of the volar pads at the time the first ridges appear will dictate the general pattern that develops.Once the overall pattern has begun to take shape within its confi nes, the exact arrangement of the identifying ridge features is dictated by random, localized stresses on the skin. The timing of these two events—volar pad regression and primary ridge appearance—is genetically linked. The precise locations of the ridges and other features, however, are random.

How do computer hackers "get inside" a system?

Essentially, hackers get inside a computer system by taking advantage of software or hardware weaknesses that exist in every system. Before explaining how they do this, a few defi nitions are in order. The term "hacker" is fairly controversial: some use this word to describe those whose intrusions into computer systems push the boundaries of knowledge without causing intentional harm, whereas "crackers" want to wreak havoc. I prefer "unauthorized user" (UU) for anyone who engages in unsanctioned computer access. "Getting inside" can mean one of three things: accessing the information stored on a computer, surreptitiously using a machine's processing capabilities (to send spam, for instance) or capturing information being sent between systems. So how does a UU get inside a computer? The easiest weakness to exploit is a poorly conceived password. Password - cracking programs can identify dictionary words, names and even common phrases within a matter of minutes. Many of these programs perform a "dictionary attack": they take the encryption code used by the password system and encrypt every word in the dictionary. Then the UU plugs in the encrypted words until the password match is found.

If a system has a complex password, the UU could try a "technical exploit," which means using technical knowledge to break into a computer system (as opposed to nontechnical options such as stealing documentation about a system). This is more challenging, because the UU must fi rst learn what kind of system the target is and what the system can do. A profi cient UU can do this remotely by utilizing a hypertext transfer protocol (http) that gains World Wide Web access. Web pages usually record the browser being used. The UU could write a program that takes advantage of this procedure, making the Web page ask for even more information. With this knowledge in hand, the UU then writes a program that circumvents the protections in place in the system. Although you cannot eliminate all possible weaknesses, you can take steps to protect against unauthorized access. Make sure you have the latest patches for your operating system and applications. Create a complex password with letters, numbers and symbolic characters. Consider installing a fi rewall program, which blocks unwanted Internet traffic. Make sure your antivirus software is up-to-date and check frequently for new virus defi nitions. Finally, back up your data, so you can recover important material if anything does happen.

Puzzles to Puzzle You

Once more the puzzles from the matrix to challenge the brains of human. Prove them that, we are still over-ruling them.

```
1.  main()
    {  char  s[]={'a','b','c','\n','c','\0'};
    char *p,*str,*str1;   p=&s[3];    str=p;
    str1=s;   printf("%d",++*p + ++*str1-32);  }

2.  main()
    {  int i=5;
    printf("%d%d%d%d%d%d",i++,i—,++i,—i,i);  }

3.  main()
    {  int i=400,j=300;   printf("%d..%d");   }

4.  main()
    {  int i;   printf("%d",scanf("%d",&i));  }

5.  main()
    {  char *p;   int *q;   long *r;
    p=q=r=0;   p++;   q++;   r++;
    printf("%p...%p...%p",p,q,r);  }

6.  void main()
    {
    static int i=i++, j=j++, k=k++;
    printf("i = %d j = %d k = %d", i, j, k);  }

7.  main()
    {
    int a=10, b=0;
    printf("a=%d, b=%d :: ",a,b);
    a=a+b;  b=a-b;  a=a-b;
    printf("a = %d, b = %d",a,b);  }
```

Answers : 1)77 2)45545 3)400..300 4)1 5)0001...0002...0004 6)i = 1 j = 1 k = 1
7)a=10, b=0 :: a=0, b=0

Quiz Time

Prabhat Kesav
S5 CSE

1) What is BOGOMIPS?
2)   Which company developed WinZip?
3)   Who developed the first Web Server?
4)   Which was the first commercial modem?
5)   Who is called the father of Silicon Valley?
6)   Which company first manufactured CDs?
7)   What is the Yellow Book?
8)   Which was the first successful notebook computer?
9)   Who created the first computer game- Space War?
10) Codename of Pentium IV?
11) Who gives away the Webby Awards?
12) What did Chad Hurley, Steve Chen and Jawed Karim co-found?
13) What is the presiding message of `The Yahoo! Time Capsule'?
14) What is Sun Microsystems's new project to help developers of online games with server-side technology called?

Mind Bogglers

Solve the Su do ku:

		8				2	1	
2		5	7	1		8		
8					7			5
						5		
7		4	6		3	1		2
	9							
4		7						9
	1			2	4	5		3
3	2				1			

Medium

A mind game and a puzzle that you solve with reasoning and logic. Fill in the grid with digits in such a manner that every row, every column and every 3x3 box accomodates the digits 1 to 9, without repeating any.

Answer will be published in the next issue

Answer to last issue's SudOku

6	7	8	7	5	3	9	4	1
1	5	7	9	6	4	2	3	8
3	4	6	8	2	1	5	9	7
8	3	2	1	9	5	4	7	6
4	1	9	7	8	7	3	5	9
9	7	5	3	4	6	8	1	2
5	6	1	3	7	8	6	2	4
2	6	9	5	1	7	6	8	3
7	8	3	6	4	9	1	6	5

Guess Who

Hints:-

1. Light
2. Stanford University Network
3. JVM
4. Solaris

Answer:-
Andy Bechtolsheim, Bill Joy, Scott McNealy, Vinod Khosla
Founders of SUN Microsystems

Cartoon Corner

"Looks aren't everything. It's what's inside you that really matters. A biology teacher told me that."