

# Channel

## September 1998, Issue No.29

### What's inside ...

- [Second Phase HARNET upgrade in Oct 1998](#)
- [Barn PC enhancement](#)
- [Lecturer Theater and Classroom PC enhancement](#)
- [Mobile Network Computing](#)
- [Classroom Network](#)
- [Dial-up Service Enhancement](#)
- [Special ISP Offer from HKT IMS](#)
- [Access your email oversea - a Web Based Email Service](#)
- [New CCST Home Page](#)
- [Creating On-line Tutorial on Web using Streamcam](#)
- [Phase out of PATHWORKS mail](#)
- [Email with Digital Signature](#)
- [Pilot Video-Conferencing Services](#)
- [Computer Room Extension](#)
- [Chinese Portable Document - Dyna Doc](#)
- [Phase-out of DOS PATHWORKS environment in Student Halls](#)
- [Comparing various CPUs in the Market](#)



Channel Home Page

# Channel

*Channel - September 1998, Issue No.29*

*Mr. Charles Choy, [ccchoy@ust.hk](mailto:ccchoy@ust.hk)*

## **Second Phase HARNET upgrade in Oct 1998**

Since the upgrade of the HARNET (the Hong Kong Academic & Research Network) in early 1998, we have been enjoying a high bandwidth 6Mbps international Internet link and high speed domestic access through our 10Mbps ATM network.

With the start of the new term, our international Internet link begins to get congested due to increasing usage. To cater for the demand, JUCC (Joint Universities Computer Center) has planned to have our second phase HARNET upgrade carried out in Oct 1998. This upgrade includes the following major enhancements:

1. HARNET will be migrated from 20 Mbps to 30 Mbps ATM-based wide area network,
2. Local connection speed amongst institutions will be upgraded from 10 Mbps to 15 Mbps, and
3. Dual ATM links will be established to each institution to provide redundancy, and
4. The shared international Internet link will be upgraded from 6 Mbps to 12 Mbps connection, and
5. A 6 Mbps backup international path will be set up via the local ISP Netplus.

We would also like to remind you that in order to enjoy the improved speed of overseas web access, it is necessary to turn on the proxy setting of your browser. Information related to proxy can be found at [http://www.ust.hk/ccst/internet/proxy\\_setting](http://www.ust.hk/ccst/internet/proxy_setting)

For updated information on this upgrade, please point your web browser to <http://www.ust.hk/ccst/network/internet>

# Channel

*Channel - September 1998, Issue No.29*

*Miss Karen Chan, [cckaren@ust.hk](mailto:cckaren@ust.hk)*

## Computer Barn PC Enhancement

### Technology Update

With the aim to improve system performance, we have now adopted the [Reborn Card](#) technology to the Barn PC setup. One important feature of reborn card is that it can protect pre-installed software on hard disk and hence greater system stability and robustness can be achieved. Another benefit is that there is now considerable time savings for PC bootup (from the boot menu to the logon screen) using the reborn card to boot than using remote boot as in the past.

For details on the bootup time comparison between reborn card and remote boot, please click [here](#).

Initially, reborn cards are installed for the PCs at the Teaching Areas of Barn A (Rm. 4402) and Barn C (Rm. 4580) and the Pilot Area of Barn B (Rm. 1011). This implementation will also be extended to the remaining user areas in Barns later on.

### Software Upgrade

A good number of PCs in the Computer Barns have been upgraded to Windows 98 to improve robustness. The Windows 98 PCs can be found at the Teaching Areas of Barn A (Rm. 4402) and Barn C (Rm. 4580) and the Pilot Area of Barn B (Rm. 1011). The remaining PCs in Barns are expected to be upgraded to Windows 98 as well by the Spring semester. In addition, a number of academic software have also been upgraded to higher versions.

For details on Windows 98 software availability in Barns, please click [here](#).

### Hardware Upgrade

We are currently planning to upgrade the PCs in Barns, with the new configuration as follows:

- Pentium II 350
- 64 MB memory
- 6.4 GB hard disk
- ATI AGP graphic card

As seen from above, apart from CPU upgrade, there will also be increased memory and larger hard disk space so that software can be pre-installed whenever appropriate. Together with the mentioned reborn card implementation, we expect the overall system performance of PCs in Barns can be improved significantly.

# Channel

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## Lecture Theater and Classroom PC Enhancement

### Technology Update

With the aim to improve system performance, we have now adopted the [Reborn Card](#) technology to all Lecture Theater and Classroom PC setup. One important feature of reborn card is that it can protect pre-installed software on hard disk and hence greater system stability and robustness can be achieved. Another benefit is that there is now considerable time savings for PC bootup (from the boot menu to the logon screen) using the reborn card to boot than using remote boot as in the past.

For details on the bootup time comparison between reborn card and remote boot, please click [here](#).

In addition, the remote mouse setup has also been extended to all PCs in Lecture Theaters and Classrooms to facilitate users' ease of use.

### Software Upgrade

The latest multimedia applications have been upgraded for teaching and presentation. These include StreamCAM plugins, RealPlayer G2 and QuickTime 3.0, to name but a few.

For details on Windows 98 software availability in Lecture Theaters and Classrooms, please click [here](#).

### Hardware Upgrade

We are currently planning to upgrade the PCs in Lecture Theaters and Classrooms, with the new configuration as follows:

- Pentium II 350
- 64 MB memory
- 6.4 GB hard disk
- ATI AGP graphic card

As seen from above, apart from CPU upgrade, there will also be increased memory and larger hard disk space so that software can be pre-installed whenever appropriate. Together with the mentioned reborn card implementation, we expect the overall system performance of PCs in Barns can be improved significantly.

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*Channel - September 1998, Issue No.29*

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## Mobile Computing

Mobile Computing is a technology which helps you to connect your computer to network wherever you go. This technology is actually driven from the demands of users who ask for mobility and portability in using the computers.

As the price of notebook drops significantly in these days, the population of these mobile users grow significantly. To cope with their needs, mobile computing gives them an easy and convenient access to the campus network and the Internet.

Different people can gain benefits from this mobile computing service. For example, students can read emails and newsgroups, access library online catalogue information, download lecture materials when they are connecting their notebooks in computer barns. Staff can use their notebooks during teaching to demonstrate materials in the Internet. University visitors staying in our visitor center can check emails or even prepare seminar materials for their talks.

CCST has setup several pilot services to see the possible deployment of mobile computing in our campus:

- [Wireless LAN at Atrium and Academic Concourse](#)
- [Mobile Network access for Notebook Computer users in computer barn](#)
- [Mobile Network access for visitors and Conference participants](#)

For more information, please goto the web page

<http://www.ust.hk/ccst/network/mobilecomp>

# Channel

*Channel - September 1998, Issue No.29*

*Mr. Charles Choy, [ccchoy@ust.hk](mailto:ccchoy@ust.hk)*

## Classroom Network

In order to facilitate a better teaching environment for teaching staff in HKUST, network connectivity is available in those teaching areas. Now, all lecture theaters and nearly all classrooms are already equipped with network access points. This means that teaching staff can get access to the campus network and the Internet while teaching.

In all lecture theaters (LT A-H) and three more classrooms (Rm. 2302, 2465 and 3006), computer and other AV equipment are already installed there. For other classrooms, **teaching staff** can experience a similar computer environment in classrooms as the one in lecture theaters by connecting your own notebook to the network access point and to the LCD projector.

Moreover, all lecture theaters also provide extra connection points, other than the original computer setup, for notebook users. This give you the flexibility in choosing to use either your portable PC or the computer there.

The network access points are usually installed near the teaching area. Apart from the traditional use of presentation software (e.g. Powerpoint) in the classroom, you can even demonstrate and use the Internet to help teaching, for example, browsing the materials you have put on the web or accessing other materials on the Internet.

For more information, please see the web page at <http://www.ust.hk/ccst/network/classroom/>

# Channel

Channel - September 1998, Issue No.29

Mr. Raymond Chau, [ccrayc@ust.hk](mailto:ccrayc@ust.hk)

## Dial-up Service Enhancement for Staff

In the beginning of this new academic year there was several enhancements in our dial-up facility which aims at providing our users improved dial-up service:

### More 56K HiSpeed Dial-up Lines

#### On Student HiSpeed Pool

On 1 Sept, 46 dial-up lines have been added to the Student HiSpeed pool, bringing the total number of student dial-up lines up from 290 to 336.

#### Student Modem Pools

	Hi Speed	Express
Telephone Number	2931 3300 (unchanged)	2358 4937 (unchanged)
Number of Lines	276 (230 before 1-Sep)	60 (unchanged)
Speed Support	max. 56 Kbps	max 28.8 Kbps
Protocol Support	PPP / SLIP	PPP / SLIP
Session Time Limit	1 hour	15 minutes

#### On Staff Dialup Pools

On 15 Sept, 40 lines from the Staff Regular Pool have been upgraded to support a faster speed at 56Kbps. At the same time, there will also be a slight increase of dial-up lines from 106 to 112. The table below illustrates the new arrangement after the re-configuration:

#### Staff Modem Pools

	Hi Speed	Express
Telephone Number	2931 3200 (unchanged)	2358 4000 (unchanged)
Number of Lines	92 (46 before 15-Sep)	20 (60 before 15-Sep)
Speed Support	max. 56 Kbps	max 28.8 Kbps
Protocol Support	PPP / SLIP	PPP / SLIP
Session Time Limit	2 hour	2 minutes

### Upcoming V.90 56K Dial-up Support

We have piloted a V.90 56K dialup pool between 27 August to 14 September. We are now working with equipment vendor to solve problems encountered, and we expect to have V.90 support ready by end of September/early October.

When the V.90 support is in place, both K56flex modems and V.90 modems will be able to enjoy a high speed connection to our HiSpeed dialup pools.

### **Dial-up Installation Kit**

To ease the configuration of dial-up setting at home for new users, we have prepared a Windows 95/98/NT dial-up installation kit.

### **Peak Period Dial-up Usage Regulation for UG and PG**

Our usage statistics indicates that dial-up demand is extremely heavy each evening especially for the 4 hours from 8pm to 12am. In order to maintain this precious shared resource on a fair basis and to discourage abusive use, we are piloting a trial run on a peak period budget scheme.

An initial budget of 100 hours of connect time has been assigned to each UG and PG for the duration from Sep 15 to Dec 22 (end of fall semester). Any daily dial-up usage during the 4-hour peak period (i.e. 8pm-12am) will be deducted from the allocated budget.

Within this peak period our dial-up facility will then give preference to students with budget remaining over those zero-budget students. For dial-up access outside this period, same preference will still be granted to all students including those zero-budget ones. Request for additional peak period dial-up budget will only be entertained with appropriate justification and upon the approval of students' supervisor or department head.

Please note that this scheme is rolled out on a trial basis, and will be subjected to review in December based on usage statistics as well as user feedbacks. Should you have any comments or suggestions, please e-mail to [cclisten@ust.hk](mailto:cclisten@ust.hk).

To get more details on the above changes, please refer to our dial-up home page at <http://www.ust.hk/ccst/dialup>

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Network Systems, CCST



# Channel

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## Special ISP Offer from HKT IMS

Students and staffs who are in need of an ISP account may find this offer attractive.

Hong Kong Telecom IMS is offering UST students, staff and faculty a discount on their Netvigator Platinum dial-up package. Below please find a summary of the offered terms:

### HKT IMS Netvigator Platinum Package

	<b>Standard Package</b>	<b>Special Offer to HKUST</b>
Joining Fee	HK\$50	Nil
Monthly Fee	HK\$138	HK\$88
PNETS* Payable	Yes	Yes
56K Support	Yes	Yes
Free Usage	Unlimited	Unlimited
Free Storage	8 MB	8 MB

Note: \* Current PNETS rates is charged at 3.3 cents per minute (or HK\$1.98 per hour)

Application is now open until 30 November 1998. Existing Netvigator users can also convert to this privileged scheme with a one-time handling fee of HK\$50.

Forms are available from your IDLP, or simply download one from the web page below.

Users using HKT IMS or other ISPs can now telnet back to the HKUST campus network through a gateway machine:

telnetgw.ust.hk

For more information, please refer to the web page below:

<http://www.ust.hk/ccst/vendors/ims/>

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# Channel

*Channel - September 1998, Issue No.29*

*Mr. Ban Szeto, [ccszeto@ust.hk](mailto:ccszeto@ust.hk)*

## Web based email service

With the pervasive use of email, more and more colleagues do need to access their emails when they go on overseas trip. For those who are not used to carrying a portable computer, they would have to rely on the facilities provided at the remote sites. Usually this requires some knowledge about the email tools provided by the remote end and also a number of technical configuration parameters have to be properly set up.

To save these troubles, we would like to introduce a new way to access your email via the web which is nearly ubiquitous nowadays. Namely, just click to the following location:

<https://webmail.ust.hk>

Note that it begins with "https" instead of "http". This is for protecting your email data in encryption during transit across the world-wide Internet.

You will also find that the performance of this web-based email access interface does not compare to "real" email programs like Pine or Netscape. This is a technical limitation which makes it only suitable for casual use, not day-to-day use.

To use this tool, you must be already using:

1. the Unix-based email server;
2. at least Netscape 3.01 or above.

In case you have further queries about this new service or are interested to migrate to the Unix-based email server, please drop us a line at:

[ipo.ccst@ust.hk](mailto:ipo.ccst@ust.hk)

# Channel

*Channel - September 1998, Issue No.29*

*Mr. Patrick Leung, [ccpleung@ust.hk](mailto:ccpleung@ust.hk)*

## New CCST Home Page

CCST is pleased to announce the new CCST Home Page.

<http://www.ust.hk/ccst>

Other than having a new look, you will also find the following improvements on visiting our new home page:

- The loading time of the new page is much improved.
- Content of many web pages has been updated. And many new informative web pages have been added under the new home page. These new pages included:
  - [Computing Environment](#)
  - [Desktop](#)
  - [Network](#)
  - [The Year 2000 Issue](#)
  - [Web Technology Corner](#)
- The structure tree of the new page has been redesigned. More frequently visited web pages are being put on the first 2 web levels. In such, you are able to visit the web pages that you want to view within couple mouse clicks.
- The new InfoSEEK search engine in the new web page provides much speedy, accurate, and easy to use web page searching.

If you have any queries or suggestions on the New CCST Home Page, you are welcome to send them to [webmaster@ust.hk](mailto:webmaster@ust.hk), or contact:

Mr. Patrick Leung

Tel : X6245

Email : [ccpleung@ust.hk](mailto:ccpleung@ust.hk)

# Channel

*Channel - September 1998, Issue No.29*

*Mr. Steve Yau, [ccsyau@ust.hk](mailto:ccsyau@ust.hk)*

## Creating On-Line Tutorial on Web using Streamcam

### HIGHLIGHTS

Streamcam is a multimedia technology that helps to stream Lotus ScreenCam files to web browser. With this technology, one can show the following on web:

- PowerPoint presentation slides with narration
- Application software usage step by step
- Programming techniques by illustration

CCST has created some sample applications on:

- Introduction to Netscape Messenger
- Browsing Chinese Web Pages
- Reading and Sending Chinese E-Mail

Check out the following web page for details:

<http://www.ust.hk/ccst/tutorial>

### MORE DETAILS

Lotus ScreenCam is a program that can capture all the mouse and keyboard actions on screen as well as narration to a file.

With the help of Streamcam server, those Screencam files can be streamed to web browsers for playback.

For details on Lotus Streamcam technology and installing Streamcam plug-in, check the web page:

<http://www.ust.hk/ccst/streamcam>

### MORE INFORMATION

For more information, please contact:

Mr. Steve Yau

Tel: X6242

email: [ccsyau@ust.hk](mailto:ccsyau@ust.hk)

# Channel

*Channel - September 1998, Issue No.29*

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## Phase out PATHWORKS mail

PATHWORKS mail (for PC user running Win3.1/DOS, the "Electronic mail" option on "HKUST PC menu"; or for Mac user, the "Mail for Macintosh" icon) will be gradually phased out because:

- it is NOT "Year 2000 compliant", i.e., it will no longer work after 1-Jan-2000;
- it will not have features like security or WWW integration which is the industrial trend and becoming essential nowadays;

The cut-off date is tentatively set at 11-Jan-1999. There will be briefing sessions, conducted before the cut-off date, on how to migrate away from PATHWORKS mail, and how to choose and adopt to a new email platform. Details will be announced later.

We highly recommend our users to migrate to Netscape Messenger because it is one of the modern email tools which provides functions that can cope with the University's current and future needs, such as

- attachment
- Digital Signature
- mail delivery notification
- mail of Web page format, and etc.

Of course you are still free to choose any other email tools which support open standards, like Microsoft Outlook or Eudora.

For more details, you may visit the following Web page:

<http://www.ust.hk/ccst/email/migration.html>

# Channel

*Channel - September 1998, Issue No.29*

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## **Email with Digital Signature**

Digital Signature is a secure way to claim genuine sender of an email. The concept is the same as a hand written signature, but it is in digital format.

If you need to send important email which the recipient needs to confirm that you must be the sender, or you don't want someone to send a forged email pretending you, such as announcing exam date or sending course grades, Digital Signature is the technology that helps.

CCST has setup a "Certificate Authority" which issues Digital ID for you so that you can send email with Digital Signature.

For details on how to use, please refer to the web page:

<http://www.ust.hk/ccst/email/digitalsig.html>

Feel free to let us know if you have any questions.

# Channel

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## **Pilot Video-Conferencing Services**

Recently, with the support of a special grant from the UGC (University Grants Committee), a video-conferencing system has been set up in each of the local tertiary institution. The video-conferencing facility enables participants to conduct live, two-way video and audio conferences with remote university colleagues, overseas scholars, exchange students, industry firms and government officials throughout the world. Applications may include remote interview, or even remote PhD thesis defense.

This service will not only reduce travel time and costs, but will also enable users to expand the frequency, the number of participants, and the nature of their discussions, presentations and collaborative efforts.

CCST is currently testing the video conferencing system and we expect it to be available for pilot testing in early Oct. If you need more information on this project, please feel free to [contact us](#).

# Channel

*Channel - September 1998, Issue No.29*

*Mr. Raymond Chau, [ccrayc@ust.hk](mailto:ccrayc@ust.hk)*

## Computer Room Extension

CCST Computer Room is the data and network center of the University. With its small 140 sq. meters capacity, it houses the following equipment:

- More than 180 central servers in 24 cabinets
- 18 cabinets full of central network equipment

The Computer Room Extension is 68 sq. meters in size and is now in operation since June 1998. It is now occupied by new servers and will be used to house network equipment for areas such as the University Annex.

Raymond Chau  
Network Systems, CCST



# Channel

*Channel - September 1998, Issue No.29*

*Mr. Steve Yau, [ccsyau@ust.hk](mailto:ccsyau@ust.hk)*

## DynaDoc, Chinese Portable Document

### HIGHLIGHTS

When surfing the web or receiving Chinese Information from external sources, you may encounter problems that there are missing characters in the page. Most likely, the web pages or the documents contain End-User Defined Characters that are not in your Chinese viewing system.

DynaDoc provides a portable document environment of which DynaDoc documents can be viewed and printed in major Windows systems with document format preserved.

### MORE DETAILS

End-User Defined Characters (EUDC) have caused a great problem in Chinese information exchange. Though CCST is helping campus users to migrate to Government Chinese Character Set (GCCS) standard, we cannot assure everyone has this character set installed in their Chinese system.

DynaDoc, in this case, may help to provide a quick solution. CCST has setup a Chinese Windows 95 machine in our helpdesk that is capable of generating DynaDoc. The generation procedure is as simple as printing a document using DynaDoc generator as the printing driver.

Upon successful generation, you may put the document on web for viewing. Users can view and print the Dynadoc document by using DynaDoc Reader. Starting from 1st September, 1998, all the PCs in computer barns and lecture theaters will have DynaDoc reader installed.

For details on DynaDoc, check the web page:

<http://www.ust.hk/ccst/chinese/app/dynadoc>

To get the DynaDoc Reader, check the web page:

<http://www.ust.hk/ccst/chinese/download>

To see what kind of DynaDoc can produce, check the web page:

<http://www.ust.hk/ccst/chinese/app/dynadoc/samples.html>

### MORE INFORMATION

For more information, please contact:

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# Channel

*Channel - September 1998, Issue No.29*

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## **Phaseout of DOS PATHWORKS environment in Student Hall**

Please be informed that the DOS 6.2/Win3.1/PW5 PC environment (old PC environment) we have been providing in campus will be gradually phased out. This is because

- Some components are NOT "Year 2000 compliant", i.e., it may no longer work at/after year 2000;
- Vendors of some components in this environment have already stopped both the development and the support on their old products;
- Most of the new software now comes on more advance operating systems (e.g. Win95) which most students have already migrated to. Less and less students need to rely on the old environment;
- It does not have enhanced features (like networking security) which are available in modern operating systems like Win95/Win98/WinNT;

This phase out process will be done smoothly. Initially, we are preparing to discontinue the old PC environment for student hall users starting Fall 98. Meanwhile, the old PC environment in Computer Barns, Lecture Theaters, Department Labs and Staff Office will still be available. The phase out in these area is planned to be done sometime later next year. We expect the old PC environment will be eventually eliminated in campus before year 2000.

Starting from Fall '98, students living in student hall can connect to the student hall network with Win 95/98 and other more advance network operating systems. In rare case, if students still need to access the old PC environment, they will still be able to access it in Computer Barn for the time being.

In case if you have questions or queries on this phase out exercise, please feel free to contact Mr. David Shiu at [ccdshiu@ust.hk](mailto:ccdshiu@ust.hk) or Ext: 6248.

## Comparing various CPUs in the market

PC Magazine has done a evaluation test, for comparing various brands and models of CPUs available in market.

### WinStone 98 Test

	<b>Bus Speed MHz</b>	<b>ZD Business Winstone 98 Score</b>
AMD K6-2/266	66	20.4
AMD K6-2/300	100	23.4
Cyrix MII/300	66	21.3
Intel Celeron/266	66	17
Intel Celeron/300	66	17.4
Intel Pentium MMX/233	66	17.5
Intel Pentium II/266	66	22.3
Intel Pentium II/300	66	23.8
Intel Pentium II/333	66	24.5
Intel Pentium II/350	100	25.7
Intel Pentium II/400	100	26.2

Remark :

1. higher score means better
2. WinStone 98 is used to test the performance of PC in running traditional applications including word processor, spreadsheets, databases and Web browsing.

### Floating Point Test

	<b>Bus Speed MHz</b>	<b>Synthetic Floating Point Score</b>	<b>ZD 3D WinBench 98 Processor Score</b>
AMD K6-2/266	66	866	332
AMD K6-2/300	100	979	356
Cyrix MII/300	66	527	261
Intel Celeron/266	66	1,240	426
Intel Celeron/300	66	1,380	456
Intel Pentium MMX/233	66	900	337
Intel Pentium II/266	66	1,370	545
Intel Pentium II/300	66	1,540	599

Intel Pentium II/333	66	1,700	645
Intel Pentium II/350	100	1,790	683
Intel Pentium II/400	100	2,050	752

Remark : Higher score means better

From the performance results and comparing with the street prices of each CPUs, users can easily find out which one can fulfill their requirements in budget, computing speed and their specific software applications.

As seen from the results, the performance of Intel Celeron CPUs are very poor as these CPUs do not consist any level 2 cache memory. So, Celeron CPUs are not recommended for business users. To get rid of poor performance, Intel will roll out another version of Celeron CPU with 128K level 2 cache memory very soon.

Comparing AMD's K6-2 and Cyrix's MII CPUs with Intel, the performance in running general office applications, of the AMD K6-2/300 is close to Pentium II 300 with Cyrix MII lags 10% behind them. But in running floating point applications, AMD and Cyrix CPUs are much poorer than Intel's Pentium II. Both AMD and Cyrix CPUs can only used in socket 7 but not slot 1 which is patented to be used for Pentium II CPUs only. With better expandability and if the price difference between Intel with AMD and Cyrix CPUs is not so big, Pentium II 300Mhz or higher should be recommended for business users and graphic art professionals.