

## IP Telephony

# Ushering in new hope for Bangladesh

EDWARD APURBA SINGHA

BANGLADESH Telecommunications Regulatory Commission (BTRC), the supervisory body of the country's telecoms industry, is going to launch IP telephony service by the middle of the year. The BTRC has decided to award the licence to local internet service providers (ISPs) to kick-start IP telephony service across the country.

IP telephony is Internet Protocol (IP)-based phone service that is very cost effective compared to traditional circuit-switched telephony services. In IP telephony voice is transformed into series of packets and then the packets are transmitted over a data communication network. Voice quality in IP phone service is quite impressive and it depends on the traffic condition of the network.

IP phone service has two distinct categories such as IP deskphone and softphone. IP deskphone resembles regular phone set but incorporates more interactive features and use session initiation protocol (SIP) to transmit packets. Cisco is one of the market leaders in providing IP deskphone solution. Softphone, on the other hand, is a web-based telephony service that requires multimedia equipment to initiate phone calls. Skype is an ideal example of the softphone that uses point-to-point protocol to transmit data.

In IP telephony you do not need to follow a phone number rather the phone number will follow you. Precisely speaking, you can enjoy IP phone service from any place where internet access is available. When you subscribe to the IP telephony service, the particular ISP will provide you with a unique number and you can use it to initiate voice call.

The chief advantage of IP phone is that it offers low-cost phone service. In traditional phone system when you dial a number a dedicated circuit is established between you and your counterpart. This circuit remains occupied throughout the conversation. Technically speaking, it is wastage of resource because nobody else can share the link. As a result, you pay high when you make long distance calls. But IP telephony eliminates this problem as it uses shared link to route packets to the destination. As soon as your voice is converted into a chunk of data called packet it is deliberately scattered over the network.



All packets are given an identifier for accumulation and packets are sent over the available link.

An IP telephony system consists of three elements such as soft-switch, billing software and IP phone. ISPs install soft-switch and billing software at their end whereas client needs to install the IP phone at their end. The IP phone connects with the soft-switch through the internet, and this device is responsible for handling all incoming and outgoing calls. Billing software keeps the call log and generates bill against each call.

For IP telephony service, ISPs will be connected to international gateway (IGW) maintained by other operators. All cell-phone operators are also connected with IGW. IGW operators will be responsible for routing calls between different networks.

In Bangladesh IP telephony ushers in a new scope for economic progress. The BTRC is

planning to give licence for call centre operation. But it is not possible to make call centres viable without IP telephony service. Widespread implementation of call centres paves the way for bringing more Business Process Outsourcing (BPO) services in the country. At this moment most of the ISPs do not have wide network coverage in rural areas. In this regard, WiMAX can play an important role in making IP telephony service available in rural areas. Vietnam is a good example of this where WiMAX technology has been employed to enable rural people to access IP phone service from their own places.

Dr Zafar Iqbal, professor of Shahjalal University of Science and Technology (SUST), told StarTech that IP telephony is a "promising technology and the government should come forward to make this technology available to the people. Our existing submarine cable has a

huge bandwidth and we'll be able to utilise it properly if IP telephony service becomes a reality. IP telephony will also open the door of other IP-based services to the country".

Sumon Sabir, managing director of BDCOM, a leading ISP in the country, said, "We're ready to provide IP telephony service. But in some places outside Dhaka, we need more time to develop the infrastructure. Generally, IP phone is an expensive device but we're trying to explore cost effective products for the subscribers. Our projection is that if IP phone service starts in a few months, it will draw near about 10,000 users by the end of 2008 and by the end of 2010 it will be two-three lakh."

"We welcome the BTRC's move to materialise the long-cherished IP telephony dream but personally I believe that the revenue-sharing strategy is not a good decision. The BTRC can reconsider it. We also deserve more friendly approach from the

government in importing equipment. From technical point of view, we'll face problem to route the traffic because all IGWs are based on TDM (time division multiplexing) technology but ISPs use IP-based network. So when we send data to IGW we must do TDM conversion. If all IGWs are IP compatible then it will leverage our operation. At this moment it is hard to provide cheap IP phone service in rural areas. But if the government opens the door to the WiMAX players, it would be more helpful to us," Sumon explained.

Compared to other countries, Bangladesh is a late entrant to the world of IP telephony. Worldwide traditional phone technologies are being replaced with IP-based operations. In the developing world, many companies have converted their antiquated PBX system to IP PBX.

During the 2002 FIFA World Cup in Korea and Japan, IP-based system was used for communications. According to FIFA estimates, IP telephony saved the organisation more than US\$200,000 in telephone bills and networking costs over the month-long event.

Dell'Oro Group, a research firm, projected that IP phone revenues are expected to double over the next five years, reaching just over US\$6 billion by 2012. Major players in the IP telephony market are Avaya, Cisco, Nortel, Siemens and Alcatel-Lucent. Cisco has shown its outstanding performance in enterprise telephony equipment, securing second position in 2007.

Business research and consulting firm Frost & Sullivan said the IP Centrex market is expected to grow from 13,000 lines in 2001 to 10 million lines by 2008. Traditional Centrex market, which represented 16.5 million lines in 2001, is likely to drop to approximately 10.9 million lines by 2008.

Most IP Centrex deployments at present are with small business that have less than 100 lines. The study also says that IP Centrex might increase the penetration of network-based business voice services from 15.4 percent in 2001 to 17.4 percent in 2008.

IP telephony has a bright future in Bangladesh. The government should make this technology available for common people.

## TECHNEWS

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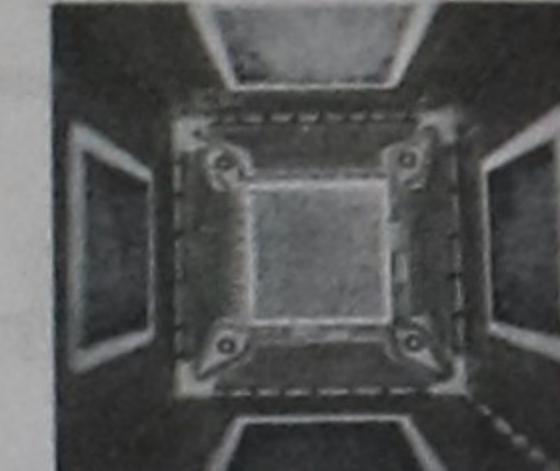
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## Rare memory board

One of the first memory boards dating from 1960 is pictured April 11, 2008 on exhibition at the Museum of Computers in Paris which opens to the public on April 15, 2008. Philippe Nieuwbourg, passionate about information technology, who sparked the idea for this exhibition, has gathered 200 rare objects originally from private collections, to retrace the history of information technology.



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## TECHVIEWS

## Imaging Show 2008

## All about digital imaging

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IMAGING Show 2008, a showcase for image capturing and processing equipment, was held at Hotel Sheraton, Dhaka from April 12-14. The aim of the fair was to assess the needs of customers and, based on this, introduce high-end technology in order to drive the craze for imaging products.

The demand for imaging products is soaring day by day and the market is gradually expanding as well. Teenagers



and professionals are the main target group for digital imaging products.

Products from Canon, HP, Lexmark and Samsung were the key attraction at this year's fair. Eight local vendors offered these products and some of them offered special gifts and discount prices in order to

make the event more exciting. The turnout of visitors was satisfactory; many of them came to explore different high-end imaging products displayed under the same roof.

J.A.N Associates, authorised distributor of Canon digital camera, told StarTech that demand for high-end camera

is increasing considerably. Customers also took a keen interest in mid-range products. People mostly looked for better resolution and interactive features. At the exhibition, J.A.N displayed a wide range of Canon digital cameras such as Power Shot, Digital Ixus, EOS Digital and Camcorder. J.A.N offered one-year warranty for each of these products.

Flora Limited came up with digital multifunction devices such as multifunction printer/copier and multifunction printer/fax. Flora also exhibited high-end HP printers, scanners and copiers while Samsung offered high-speed, cost-effective, laser printers at the expo. Canon, HP, Lexmark, Samsung and Intel sponsored the Imaging Show 2008, organised by event management firm Maker.

## BitDefender Antivirus launched in local market

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BITDEFENDER has introduced the renounced antivirus software products in the local market at a special as well as affordable rate with a view to encourage customers for using licensed software.

This was disclosed at a press conference on April 13 at a city hotel. The organisers also discussed and highlighted the advantages of using original software.

They mentioned that BitDefender solutions are distributed through a global network of value-added distribution and have reseller partners in more than 100 countries worldwide.

BitDefender is the creator of one of the fastest and most effective lines of internationally certified security software, they said, adding, since its inception in 2001, BitDefender

products

of

BitDefender

elaborated the prospects of BitDefender in Bangladesh. BitDefender's Channel Manager Khalid Muashir said, "The antivirus Rescue CD is capable of rescuing and making most of the affected software work".

Denisa Stroe, marketing and PR coordinator, BitDefender, and Prabir Sarkar, managing director of Techniques Computers Ltd, the local distributor of BitDefender products, also

participated in the event.

Denisa Stroe, marketing and PR coordinator, BitDefender speaks at the event, left, while the company's Channel Manager Khalid Muashir looks on



## HP unveils small laptop for schoolkids

AP, San Francisco

ONE more of the world's biggest technology companies is clamoring to enter the growing market for pint-sized computers targeted mainly for pint-sized customers.

Hewlett-Packard (HP), the No. 1 seller of personal computers worldwide, said Tuesday it's throwing its weight behind a new class of miniaturized laptops, a fledgling market already populated with products from Intel Corp., the world's largest semiconductor company, and Asustek Computers Inc., the world's largest maker of computer motherboards.

The machines are so new the industry hasn't settled on a name for low-cost and scaled-down laptops used primarily for surfing the Internet and performing other basic functions like word processing.

HP has labeled them "netbooks," and it expects more than 50 million netbooks to be in circulation by 2011.

HP executives say their new machines, which go on sale later this month, are an important piece of the Palo Alto-based company's effort to build market share in schools, where machines had to be smaller and cheaper without losing too many functions.



The companies also expect adults to cotton to the idea of buying two laptops: a lightweight one just for Web browsing on the go and the full-power machine for the home or office. But industry executives acknowledge that the market is untested and that no one knows what demand will be once the machines are deployed widely.

HP's foray comes in the form of a new computer called a "Mini-Note" that weighs less than 3 pounds with a screen that measures 8.9 inches diagonally. The machines start at under \$500 for a Linux-based model. Prices go up for Windows Vista models with faster processors.

## PHOTO



### SATELLITE JAM

This computer-generated image released by the European Space Agency (ESA) on April 15 shows trackable objects in Low Earth Orbit (LEO) around Earth from the North Pole. There are now more than 12,000 objects that are monitored in orbit, 11,500 pieces of which are in low Earth orbit, which is at an altitude of between 800 and 1,500 kilometres, where there are many commercial, military, scientific and navigational satellites. In low orbit, debris can stay adrift for decades before they eventually burn up in Earth's atmosphere. Another 1,147 pieces are in geostationary orbit, about satellite orbits in the direction of the Earth's rotation, at an altitude of approximately 35,786 km, where telecommunications satellites are typically deployed.

PHOTO: AFP

