

TECH FOCUS

# Call Centres A sleeping giant

EDWARD APURBA SINGHA

THE country's telecom watchdog, Bangladesh Telecommunication Regulatory Commission (BTRC), has formally invited applications from eligible entrepreneurs for licence to establish call centres. According to the BTRC, any eligible person or company can get call centre licence with a nominal payment.

A call centre is a place used for the purpose of receiving and transmitting a large volume of requests by telephone. Nowadays many centres have implemented CTI (Computer Telephone Integration) technology to handle calls.

Large companies generally operate call centres to provide customer service for their clients. For instance, US-based PC manufacturer Dell has housed its call centre in India. If any client of this company calls for customer support, their call will be automatically routed to India for the relevant solution. Besides, some companies also use call centres for their internal purposes such as help desk service and sales support.

Call centre is an emerging revenue opportunity for Bangladesh. The global market of call centre industry was US\$ 382.5 billion in 2004 and is expected to reach US\$ 641.2 billion by 2009. This is an enormous opportunity for Bangladesh: at the moment all ingredients are available in the country to seize a significant chunk of the global market.

The BTRC downsized call centre licence fees from Tk 50,000 to Tk 5,000 in order to help flourish this service across the country. Call centres are being considered as a booming industry. Dhaka- and Chittagong-based call centre operators will enjoy tax holiday up to three years while other operators will enjoy this incentive for five years. Furthermore, the BTRC proposed 0.5 percent revenue sharing when the holiday period is over.

For connectivity, the BTRC recommends call centre operators to use IPLC (International Private Leased Circuit) and in this regard the Bangladesh Telephone and Telegraph Board has already offered 25 percent discount on bandwidth charge for IPLC.

Call centres can be divided into various categories based on their strategy of function and nature of service. But there are mainly two types of call centres such as inbound call centre and outbound call centre.

In an inbound call centre, customers generally place their queries about product information and report any technical glitches. In an



The GP call centre in action. Currently there are around 600 customer managers in call centre and it is currently handling around 2,00,000 calls every day.

outbound call centre, agents initiate a call to a customer mostly to sell a product or a service. Other types of call centre include CRM call centre, interactive call centre, phone call centre, telemarketing call centre, virtual call centre, web-enabled call centre, etc.

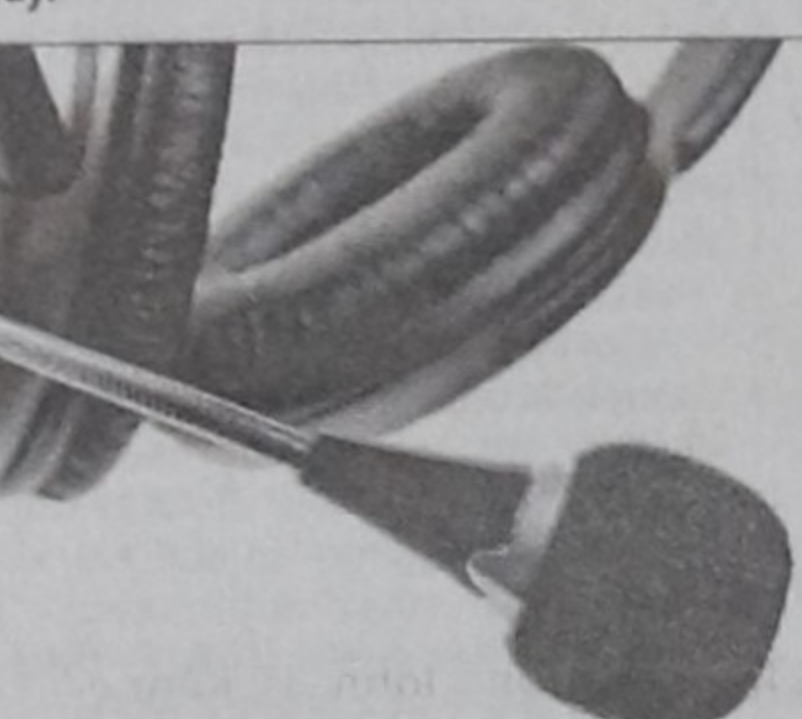
Call centres can create huge employment opportunity for students in Bangladesh. Every year many university graduates in our country remain unemployed. Call centre business can open a new horizon for them.

According to World Call Centre Report 2007, 70 percent call centres in India hired college graduates to conduct their operation. This could be equally true for Bangladesh if we properly use the talents of our youngsters.

Arnfinn Groven, customer service director of Grameenphone (GP), told StarTech, "Grameenphone was the first company in Bangladesh to set up a 24-hour call centre in 1999 and today it has the largest call centre in the country."

GP call centre has both automated and human-agent interactions with its customers for 24 hours round the year. Call centre hotline 121 is running through Computer Telephone Integration (CTI) and Interactive Voice Response (IVR) system.

"We have a flexible call centre model doing both inbound and outbound calls serving our different customers according to



their needs," he added.

"Currently there are around 600 customer managers in our call centre and it is currently handling around 2,00,000 calls every day. From the Grameenphone perspective, our call centre is a very effective and customer friendly way to give over 18 millions Grameenphone customers a professional after-sales service. In addition, we are informing customers about our products and services in order to enable them to take the right purchase decisions", he added.

Fahim Mashroor, former director of Bangladesh Software and Information Services (BASIS), told StarTech, "We're glad to see that the BTRC has simplified the call centre licensing process which will have a profound impact on our country very soon. But we should bear in mind that call centre establishment is not the ultimate thing. We must act proactively to bring overseas work and in this regard we need to start international marketing immediately."

"Nowadays many unwanted

activities in the society may give wrong signals to new entrepreneurs. It is hard for a newcomer to unilaterally deploy a successful call centre," he added mentioning that they require network to attract global players. Obviously non-resident Bangladeshis can play an important role in investing in this sector and luring foreign investments as well.

"I personally believe if we pave the way for multinational companies to establish their call centres in Bangladesh, it will be more beneficial for the industry," he said.

India has shown its successes in call centre business. Pragmatic government approach was key to creating a huge outsourcing flow to the neighbouring country. The Indian government gives tax exemption on the export of ITES (Information Technology Enabled Services) and provides other assistance for Indians in building software technology parks. Time factor also drives global companies to choose India as an outsourcing destination.

India's twelve-hour time difference enables global organisations to provide their customers with 24x7x365 days services. By taking advantage of India's time difference, companies in the US have been able to ensure that their customers receive round-the-clock customer support.

Remarkable IT-enabled services in India are helpdesk

services, accounting services, transaction processing services, remote network management and end-to-end processing etc. Call centres in India can offer expert product specific solutions, such as risk modelling, data mining, actuarial services and underwriting variation analysis.

China's continuing economic growth holds a bright future for the call centre industry. Revenue of call-centre technology vendors grew by 34 percent in 2005 and by 40 percent in 2006, according to marketresearch.com.

Call centre industry in the Philippines also shows dynamic growth. A research forecasts that more than one million Filipinos would be employed in the call centre industry and the market will reach US\$ 12 billion by 2010.

Call centres offer a wide range of services which are given below:

**Customer acquisition:** It is one of the effective services offered by call centres. The aim of this scheme is not only to generate customers but also to allow consumers to contact a representative to make a purchase. Basically, a business nominates a call centre to conduct marketing services on behalf of them.

**Customer care:** Customer care is one of the common services offered by the call centre. When a customer buys any product or service from a particular company, they are advised to contact the customer care division of the call centre. Many companies in the western world outsource their customer support facility. This in effect reduces the operations cost of hiring new workforce.

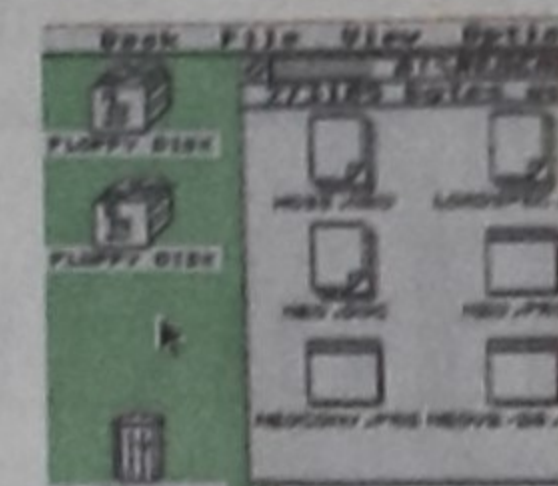
**Direct response:** It is one of the important services offered by the call centre to the business. During product advertisement, companies mention a phone number for the customers. When any call is initiated to this number, the call centre provides adequate information to make an informed purchase decision.

**Business to business:** It is a potential call centre solution for any company to generate business-to-business sales. The role of the call centres in this regard is to reduce cost and provide resources for a business to beefup its revenue.

No doubt call centre operation is a big opportunity for Bangladesh. But most importantly, expert human resources are vital in order to ensure the development of the call centre industry. In this regard, private companies should come forward to train people and the government must ensure the quality issues so that the entire system works smoothly and perfectly.

## Graphical Environment Manager

Digital Research (DRI) created the Graphical Environment Manager as an add-on program for personal computers. GEM was developed to work with existing CP/M and MS-DOS operating systems on business computers such as IBM-compatibles. It was developed from DRI software, known as GSX, designed by a former PARC employee. The similarity to the Macintosh desktop led to a copyright lawsuit from Apple Computer, and a settlement which involved some changes to GEM. This was to be the first of a series of 'look and feel' lawsuits related to GUI design in the 1980s.



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## TECH NEWS

# Tech Valley seminar on Socomec UPS solutions

STARTECH DESK

TECH Valley Computers, a local IT solutions provider, organised a seminar on Socomec UPS at Hotel Sheraton, Dhaka on April 29. The seminar mostly highlighted technical and service related aspects to the clients.

Tech Valley Computers has been distributing an assortment of Socomec UPS to different industrial segments of the country for 17 years. Socomec is a French-based UPS manufacturing company founded in 1922. Presently the firm markets its products in more than 70 countries.

Jean Michel Pigeon, international key accounts manager of Socomec UPS said, "We upgraded the technology a lot to improve the performance of our UPS. Our UPS efficiently handles sudden power surge and successfully stable the voltage level".

In addition, Socomec also



markets central power supply systems (CPSS), modular solutions, rectifiers and inverters, harmonic compensators, etc to different clients. In 2006, the company achieved 'Innovative Product Award 2006' from Frost & Sullivan, USA for their product and customer service quality.

Socomec's major clients in

Asia are SingTel in Singapore (8X800 kVA, 16X500 kVA, 8X400 kVA), KingYuan Electronics in Taiwan (16X600 kVA, 15X500 kVA), Cisco Systems in India (40X500 kVA), Beijing Telecoms in China (37X400 kVA), Fujitsu in Vietnam (4X800 kVA, 10X500 kVA) and Bank of Central Asia in Indonesia (12X300 kVA).

## Canon unveils SLR 450D in local market

STARTECH DESK

J.A.N Associates, the authorised distributor of Canon Image Communication Products in Bangladesh, has introduced Canon Digital SLR 450D camera in the local market on April 29, 2008.

Abdullah H Kafi, managing director of J.A.N. Associates, said, "Digital camera trend in the local market is really exciting and we want to add new dimension to this by introducing new models available on the global market. We're also committed to supplying our customers with best-quality services and for this all essential camera accessories will be available on the local market".

Roland Poon, senior manager with Consumer Imaging & Information Products Division of Canon Singapore Pte Ltd, said, "We're optimistic about the local market performance of EOS 450D DSLR camera for the year 2008. This is completely a new camera embedded with

Canon's latest technologies that we have introduced in this region earlier this month".

J.A.N. also introduced small, lightweight photo printer Selphy CP740 on the occasion. This printer incorporates Bluetooth, infrared and memory card slots to print images directly. The simultaneous introduction of multiple products will help consumers choose suitable cameras and

printers from a wide variety.

Canon also introduced IXUS camera series that includes IXUS 80 IS, 85 IS, 90 IS and 970 IS. A number of features in the IXUS range, especially the DIGIC III image processor, is same as used for high-end DSLR cameras. J.A.N. also organised a workshop on EOS 450D in association with photography associations and schools.



Roland Poon, senior manager with Consumer Imaging & Information Products Division of Canon Singapore Pte Ltd, speaks at the event

## 'Asus Summer Cool' kicks off

STARTECH DESK

GLOBAL Brand Pvt Ltd, a renowned local IT accessories vendor, officially announced its 'Asus Summer Cool' programme at a press conference on April 23.

The initiative aims at familiarising a broad range of ASUS notebooks in the local market. The two-month long Summer Cool programme offers customers some exciting stuff. They can win AC, refrigerator, IPS, charger fan,

table lamp, torch light, etc through scratch cards.

At the press conference Global Brand also unveiled two notebook PCs: X80LI and X51. X80LI notebook encompasses 14.1 inch wide screen, 1.73 GHz Intel dual-core processor, Intel 965 GM chipset video memory, 1024 MB DDR2 RAM, 120 GB hard drive, dual-layer DVD writer etc. This notebook also incorporates communication facilities such as firewall port, TV output, 10/100 Base-T LAN, five USB 2.0 port etc. The market price of this notebook is Tk 55,600.

X51 notebook is a midrange device that basically encompasses 15.4 inch wide screen, 1.73 GHz Intel Celeron processor, Intel GMA 950 chipset video memory, 512 MB RAM, 120 GB hard drive etc. The market price of X51 notebook is Tk 45,000. Another notebook model X51R incorporates 15.4 inch wide screen, 2.0 GHz Intel dual-core processor, ATI Radeon X300 chipset video memory, 1024 MB DDR2 RAM, 120 GB hard drive, dual layer DVD writer etc. The market price of X51 is Tk 59,000.

## PHOTO TECH



**SHIELD PRO**

Japan's computer giant NEC displays a new heavy duty notebook PC 'Shield Pro', equipped with Intel's Core 2 Duo processor on its CPU and a 12.1-inch LCD display on the shock and water-proof body, in Tokyo on May 8, 2008. NEC will put it on the market in next month and will start to export abroad this year.

PHOTO AFP

## DIY TECH

# Work function of a MIDI keyboard

IN order to understand the MIDI keyboard, we should know about the musical keyboard first. A musical keyboard is the set of adjacent depressible levers on a musical instrument which cause the instrument to produce sounds.

Keyboards almost all share the common layout shown. Musical instruments with keyboards of this type include the piano, harpsichord, virginals, clavicord, organ, electric piano, digital piano, synthesizer, "arranger keyboard" or "home keyboard" (also called "electronic keyboard"), celesta, dulcitone, accordion, melodica, glasschord, and carillon. Since the most commonly encountered keyboard instrument is the piano, the keyboard layout is often called the piano keyboard.

The twelve notes of the Western musical scale are laid out with the lowest note on the left; the larger keys (for the seven "natural" notes of the C major scale: C, D, E, F, G, A, B) jut forward. Because these keys are often coloured white on a keyboard, these are often called the white notes or white keys. The keys for the remaining five notes which are not part of the C major scale



(namely C#/D#, D#/E#, F#/G#, G#/A#, A#/B#) are set back. Because these keys are often coloured black, these notes are often called the black notes or black keys.

The pattern repeats at the interval of an octave. The arrangement of longer keys for C major with intervening, shorter keys for the intermediate semitones dates to the 15th century. Many keyboard instruments dating from before the nineteenth century have a keyboard with the colours of the keys reversed - darker coloured keys for the white notes and white keys for the black notes.

A few electric and electronic instruments have had this feature. It should be noted that the reverse-coloured keys on Hammond organs

such as the B3, C3 and A100 are not playable keys; they physically latch when pressed like radio buttons, and serve as selector switches for preset sounds. There are 21 white keys on the keyboard and 15 black.

**How to make a MIDI Keyboard**

MIDI keyboard connects to computer sound card or synthesizer module to create MIDI code. This Project is built around the 8031 microcontroller. Once keyboard circuit diagram is drawn out, one can construct scanning circuitry that continuously loops through a test of each key to see if it is open or closed.

**Circuit Components**  
Microcontroller, memory, keyboard/switch interface, MIDI/RS232 interface and power supply

**Software Algorithm**  
-The software loops through a check of each 1st switch for every key.

-If it finds that switch 1 is open it checks to see if it was open the last time it looked. If this is the case it continues scanning.

-If it finds that it is open but was closed the last time it looked then it stores info that it is now open and then sends the "note off value" for that key out the midi port.

-If it finds that switch 1 is closed then it checks to see if switch 2 for that key is open.

-If it is open then it increments the velocity register value and continues the scan. If it finds that switch 2 is closed then it checks a register to see if that note is already on. If so then it continues the scan.

-If not then it sends the "note on value" for that key out the midi port and also sends a velocity value that is incremented for each key check loop. Therefore, the more times that the software loops the lower the velocity value sent.

Reference: Wikipedia, Internet.

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