



TECHFOCUS

SMS based security system

Innovation by Buet students

EDWARD APURBA SINGHA

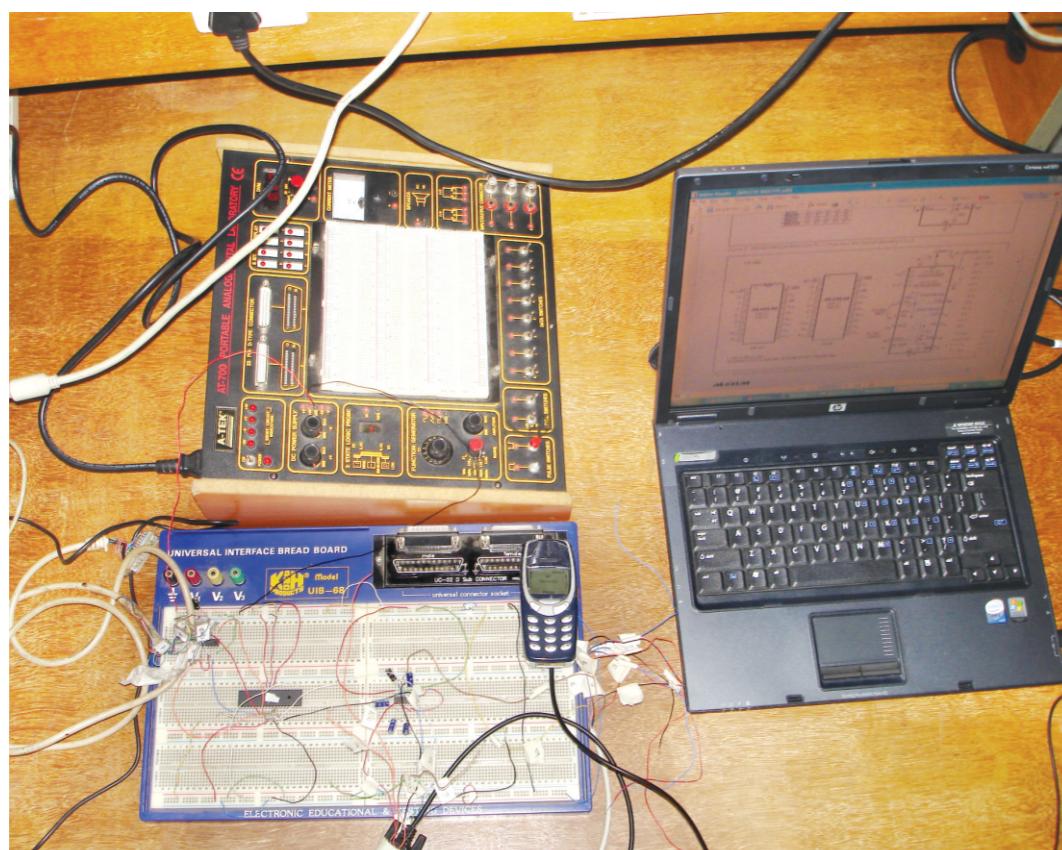
IT is a tale of some Buet (Bangladesh University of Engineering and Technology) students who were working on a project as part of their computer interfacing course. All these youngsters are 4th year students of the Department of Computer Science and Engineering (CSE). As new entrants to the course, they mulled over a project work of their predecessors and decided to work on the same track. Although it was a humble beginning, they were determined to come up with an exciting solution.

The project work of their seniors was a PC-based security system. As it was an expensive solution, they wanted to substitute the PC function with a micro controller. All the team members agreed on a time-sharing strategy in a bid to accomplish this task within a specific timeframe. As such, each individual diligently contributed to the project at their convenient time. The team used the Buet lab and sometimes shifted the task to their dormitories in order to accelerate the entire process.

These whiz-kids completed their mission at last, successfully coming up with an SMS-based security system. It is a simple project with enormous potential. It is basically a small device which is particularly designed for the car as well as any kinds of doors. It triggers an SMS alert whenever any unauthorised access takes place.

In this scheme a small circuit is installed into the car and then is connected to the sensors. A car owner needs to activate the circuit when they leave the car. If anyone tries to open the door, the circuit detects the illegal action and instantly sends an SMS to the owner's mobile phone.

An extra feature adds to the circuit's capability. For instance, if the car is driven off to a new location by the time the owner responds to the SMS alert, the device will send the network cell



ID of the current cell where the car is located.

An example will clarify this. Let's say a car was parked at the Buet premises when some intruders broke into it and drove on to Farmgate. In this case the car moved from the network cell of Buet to that of Farmgate. When the owner requests the device to notify the location, it will send cell ID of the network cell of Farmgate. The same strategy is applicable to home or office security purposes.

The system's function, however, will be disrupted where there is no network coverage. And it has only GSM compatibility and works with Nokia 3310 mobile sets at this moment.

But one of the exquisite features of the project is that the device is very cheap to make. The team claimed that though many technologies are available in the market at present, their device outdistances them by price. The entire system comprises sensors, connecting cables, micro controller, voltage shifter, voltage converter and a cell phone (yes, Nokia 3310). Total manufacturing cost, including the cell phone, is three thousand and one hundred taka.

When a person tries to make

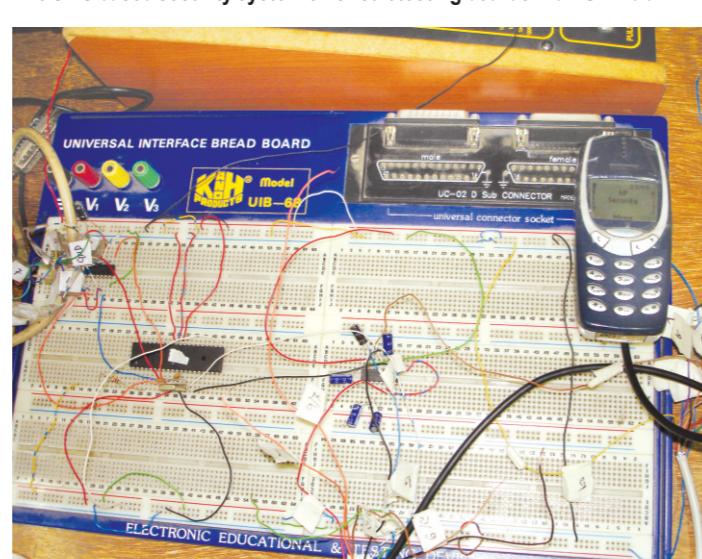
The micro controller is connected to the voltage level converter. Voltage level converter on the other hand is connected to the cellphone through a data cable. This cellphone sends and receives SMS to and from the owner's set.

According to Hillol Debnath, one of the team members, the main problem during the project development was selecting a micro controller. At first, they were in a dilemma over how to pick the right one for the right purpose. They later agreed that micro controller of Atmel would serve the purpose. This micro controller is relatively cheap and provides an efficient way to handle USART mode; it also supports the high baud rate needed to communicate with the mobile device through a data cable.

Presently the group is trying to promote their product on a commercial basis. So far one company has shown a keen interest in manufacturing the device. It will make 500-1000 pieces on a test basis.

The team hopes to add more features like GPS (Global Positioning System), web based enhancement and audible alarm etc. in the future. A GPS receiver can be embedded in the system to determine the precise location of the vehicle. Web based enhancement includes a dedicated web service that enables the authenticated user to trace their vehicle's current position; they can also get service by making a phone call to the control room. As the name implies, audible alarm promptly generates warning alarm when security is violated.

The Buet team is satisfied with what they have achieved so far. They believe this innovation will propel their effort to the widespread use of the technology.



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TECHNEWS

Microsoft puts computers on coffee tables

AFP, San Francisco

MICROSOFT on Wednesday trumpeted an unorthodox coffee-table computer design that it predicts will become a multibillion dollar portion of the hardware market.

Microsoft chief executive Steve Ballmer unveiled what the company heralded as "the first in a new category of surface computing products" at an industry conference in southern California.

Microsoft Surface machines are built into tabletops and have 30-inch (76-centimeter) screens that can recognize objects placed on them and are controlled by touch instead of keyboard strokes or mouse movements, said the Redmond, Washington state-based company.

Unlike standard touch-screen computers, Microsoft Surface allows more than one person at a time to drag icons or give commands to allow collaborative efforts "just like in the real world," Microsoft said.

"It is one of those things you have to play with to appreciate



three-dimensional graphics and infra-red sensors for reading bar code labels.

For example, surface computers in restaurants or stores could identify bottles of wine by labels and provide descriptions of vintages along with video or pictures from the places they were made.

"The bottle of wine I order at the restaurant gets added to the

tab simply by being put on the table," Rosoff said.

"At the end of the meal everyone puts their credit cards on the table and splits the bill by dragging icons to their cards."

Someone can place a mobile telephone on the table top and have the computer recognize them as well as access contacts, according to Microsoft.

"With Surface, we are creating more intuitive ways for people to interact with technology," Ballmer said.

The surface computer is the brainchild of Microsoft's hardware and research teams.

In a move unusual for Microsoft, which traditionally licenses its technology to partners, the company is contracting to have the computers made.

Microsoft is initially targeting stores, hotels and casinos with the technology.

Surface computers will be available in some Las Vegas casinos, Starwood hotels and T Mobile stores by the end of the year, according to Ballmer.



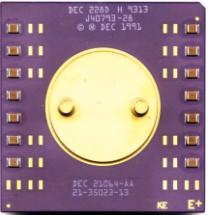
UNDER WATER MOVIES

A model for Japanese electronics maker Sanyo Electric displays the world's first waterproof digital camcorder, called the "Xacti", which is capable of recording in the water up to 1.5 meters deep, during a press conference in Tokyo on May 31. Sanyo will put the new product on the domestic market from 15 June at an expected price of 60,000 yen (490 USD) plus tax.



DEC Alpha

The DEC Alpha, also known as the Alpha AXP, is a 64-bit RISC microprocessor originally developed and fabricated by Digital Equipment Corp (DEC). Designed to power successors to the VAX line of computers, it was used in a variety of DEC workstations and servers, eventually forming the basis for almost all of their entire mid-to-upper-scale lineup. Several third-party vendors also produced Alpha systems, as well as PC compatible form factor motherboards. Alpha supports both the OpenVMS operating system and Tru64 UNIX. Open source operating systems also run on the Alpha, notably Linux and BSD UNIX flavors. The Alpha series was sold, along with most parts of DEC, to Compaq in 1998.



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TECHSEMINAR

SAP & Solitus to share expertise with local firms

INFORMATION technology (IT) is a top need for modern businesses to achieve strategic goals and increase efficiency. Many countries have dramatically changed their economic landscape by fitting in IT as an integral component of their businesses.

Bangladesh also needs to upgrade its present status by slotting in IT in all its business activities. In line with this, SAP India, a leading provider of business software solutions, organised a seminar, entitled 'SAP Overdrive', at Bangladesh China Friendship Conference Centre in Dhaka on May 28.

The seminar, co-sponsored by SAP's Bangladeshi partner Solitus Infotech Ltd., aimed to introduce local entrepreneurs to different SAP software solutions (especially ERP) and create awareness to promote technology supported business operations in the country. Keynote speaker of the seminar MA Matin, director of IT of IFIC Bank Ltd., stressed the necessity of right technology to drive innovation and strengthen the capacity of business firms to cope with the challenges of the hi-tech age.

SAP India's Regional Director, East, Moushume Basu Roy said "Bangladesh's strategic location offers tremendous growth potential and has seen tremendous developments across segments like, logistics, manufacturing, telecoms, garments & textiles, pharmaceuticals, constructions, infrastructure, insurance, banking and so on". She also highlighted the Enterprise Resource Planning (ERP) solution from SAP and analysed its various options to the entrepreneurs concerned.

Sufi Farook Ibne Abubakar, head of IT, Aktel, shared his experience of using ERP at the mobile phone company and gave his insights into how SAP has helped in streamlining operations and promoting control over the entire business process of the company. With the technical help of Solitus Infotech, the firm, he said, implemented SAP across the most critical business functions.

SAP is a world leader in providing business



software. Today the company has more than 38,000 customers in more than 120 countries. It has developed diverse software applications in a bid to meet the requirements of small, medium and multinational companies. Some of its leading customers in Bangladesh include Aktel, British American Tobacco, Aventis Pharma, Novartis, BOC Bangladesh Limited, Young One and MGH.

Edward Apurba Singh

TECHNEWS

Hasee unveils an array of products

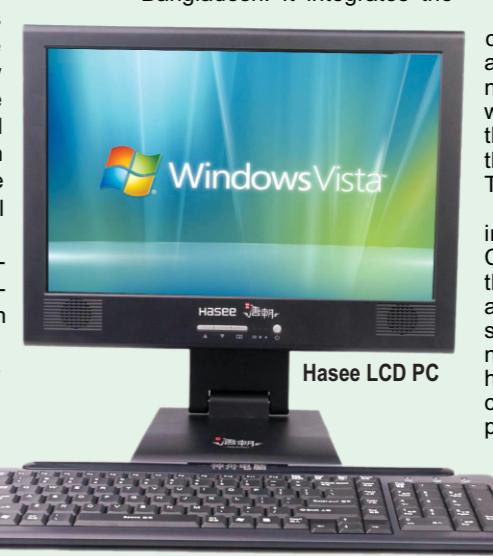
STARTECH DESK

HASEE, a Chinese innovative PC company, have launched an array of products at a very competitive price in the local market. Along with traditional notebook and desktops, Hasee's new all-in-one solutions are a new dimension in the computing world and can become an attractive substitute of the traditional desktop PCs.

Hasee manufactures third generation LCD PC that in practise save space and power simultaneously, says a press release. Nicely designed LCD PC incorporated all

most all functionalities of a desktop PC and it is easy to fold and move around. The price of these LCD PCs range from Taka 35,000-45,000.

PC TV from Hasee is a newest edition that has been introduced for the first time in Bangladesh. It integrates the



functions of both -- a TV and a PC on one large 26 inch LCD display. A combine source of Live TV with full PC applications also includes this solution.

The product comes with remote control and a wireless keyboard. The price of this setup is 75,000 taka.

Hasee is also offering cheap notebooks. The cost and product design of Hasee notebooks are comparable with other renowned brands in the market. The price range in the local market starts from 32,950-95,000.

In brand ranking, Hasee is in the second position in China. In 2005, Hasee started their International operations and today Hasee covers and supports customers and partners in 55 countries. Hasee hopes to create a revolutionary change in the world of computer market.

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Unlike standard touch-screen computers, Microsoft Surface allows more than one person at a time to drag icons or give commands to allow collaborative efforts "just like in the real world," Microsoft said.

"It is one of those things you have to play with to appreciate

how intuitive it is," said Directions on Microsoft analyst Matt Rosoff, who previewed the new computer.

The pricing and software of the machines are geared to business customers, according to Rosoff. Microsoft's Surface computers are priced at 5,000 dollars and up, the analyst said.

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