Star TECH

Graphics tablet
A graphics tablet is a computer peripheral device that allows one to hand-draw images directly into a computer, generally through an imaging program. Graphics tablets consist of a flat surface upon which the user may "draw" an image using an attached stylus, a pen-like drawing apparatus. The image generally does not appear on the tablet itself but, rather, is displayed on the computer monitor.
The first graphics tablet resembling contemporary tablets was the RAND Tablet, also known as the Grafacon (for Graphic Converter), introduced in 1964. The RAND Tablet employed a grid of wires under the surface of the pad that encoded horizontal and vertical coordinates in a small magnetic signal.

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TECHSPOTLIGHT

Homegrown online innovations on Road2Tunis

Screenshots of the SA Easylife a mobile phone micro-payment solution developed by two undergraduates of the Bangladesh University of Engineering & Technology (Buet)

BARNABY SKINNER

IN a three day road show lasting from 23 until 25 October at Bhasahi Navo Theatre the World Summit Awards (WSA) Bangladesh showcased home grown e-content projects. A project utilising mobiles as a payment system to reduce people's waiting time in bank queues stood out exceptionally.

The showcase was set up as a side kick of a preliminary workshop attended by two dozen experts and a crowd of 50 participants before the World Summit on Information Society (WSIS) staged in November this year in Tunis. UNDP and the Ministry of Science and Information and Communication Technology (ICT) invited international experts to the city to discuss online access, online content and the opportunities of developing countries like Bangladesh.

The three-day-talks highlighted three fundamental questions. Firstly: What is more important, online access or the ability to produce and read e-content? Secondly: Which technology should be stressed, mobile phones or PCs? Thirdly: How can new technologies be used to reach the UN millennium goal of reducing poverty by half by 2015.

Indian e-content activist Osama Manzar on Sunday, the opening day, emphasised teaching the people to upload their own online content, texts and images that really means something to them in languages they understand. "People with online access should be obliged to contribute their own e-content and spread and enhance their knowledge. If they don't, they are missing out", Manzar said.

On Tuesday, the final day, Managing Director of Grameen Phone, Eric Aas emphasised networks achieved by mobile networks. "Today, seven million Bangladeshis are using mobile phones", he said. This is

more that double the estimated 3.4 million Internet users in the country. Aas predicted that "in five years we should be reaching 25 million people." Nokia, also present at the road show, saw as many as 100 million phone users by 2015.

Aas located the reason for substantial growth in mobile telecommunications in low entry levels. "The larger the network gets and the more people using our lines, the cheaper phoning is", he said and added, "what's more, good quality mobile phones are now priced at $29.95 by the GSM Association, substantially cheaper than three or four years ago."
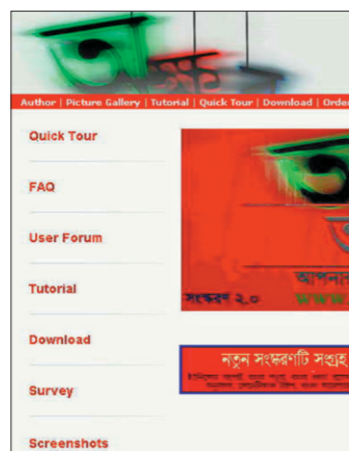
Wrapping up a preliminary talk on Tuesday, the British High Commissioner to Bangladesh, Anwar Choudhury, pointed out that one should consider how mobile and PC technologies are growing together. "One day they will be considered identical", Choudhury stressed breaching the gap between speakers stressing PC connectivity as opposed to those that believe in mobile phone connectivity.

The talks of the IT experts, however, were not the highlight of the three day event. The real action was happening in the stalls outside the plenary session. While two dozen experts and a crowd of around 50

participants from key Bangladesh IT companies theorised online access and capability of developing countries, four Bangladeshi online innovators showed how they had juggled these abstract ideas and come up with inspired online solutions for real and pressing problems.

The showcased online e-content

projects were participants of the national awards 2003 and 2005, preliminary national competitions of the World Summit Awards in Tunis.

The Daily Star has compiled four e-content projects on the Road2Tunis in detail:

"SA Easylife" - eBusiness
A mobile phone micro-payment solution developed by Sadeka Islam

and Mahmudul Haque Azad, two undergraduates of Bangladesh University of Engineering & Technology (Buet). The idea was inspired by Islam's mother, who scolded her daughter one day, because she had forgotten to pay the bills. "Paying your electricity or water bill takes ages in Bangladesh. Our product saves time", says Islam.

"SA Easylife" informs a customer of open bills and helps him pay them within a few seconds with a cell phones or PDA. It's compatible with Nokia's 6600 and Motorola's A760 phones and programmed using Java technology (J2ME, J2EE and DBMS).

Azad and Islam used the road show to persuade mobile companies to implement their product and sell micro-payment cards, as online credit cards are still not in use in Bangladesh. On the final day of the workshop, however, they were both slightly disillusioned, as no mobile

company showed concrete interest in implementing their software.

Considering the willingness of Grameen Phones' Country Manager Eric Aas to invest in e-content producers in the country their product should be a success. "SA Easylife" came sixth in the global WSA in the eBusiness category.
www.mobilecommerce.tk

Road and Highways Department - e-government
The Road and Highways Department (RHD) is responsible for the management of the national, regional and *zilla* road network of about 21,000 Km and some 15,000 bridges with annual development and revenue funds of Taka 2,985. The RHD was on of the first ministries of Bangladesh to introduce e-governance.

The department's site was set up in 2003 and is continuously updated by 50 site administers using updates on roads and bridges from all over the country supplied by 20'000 people. "Site construction was a very weary process, but today it has become a vital tool for all our road contractors and the entire ministry", said Mohammed Rokanuzzaman, computer system engineer at RHD.
www.rhd.gov.bd

Akkhor Bangla e-learning
In 2000 Anawarus Salam Khan developed the Bangla word processor Akkhor Bangla. Umma Kulsum Khan, presenting the word processor, said: "It's the easiest Bangla word processor on the market." Khan was proud to stress that the BBC Bangla service uses the software. The tool is available at www.akkhorbangla.com for free or can be purchased on CD for a mere Tk50.
www.akkhorbangla.com

bdtender.info e-business
A website that provides a one-stop-shop of up-to-date information covering nearly all invitations to tender and sectional trade published across Bangladesh. The site works on a monthly fee basis, starting at Tk 280 per month. The site has been up and running since June 2003 with 500 registered users to date. Abdus Sattar Syed, the mastermind of the site, says, the English language service is valuable for both Bangladeshi and foreign businesses trading in Bangladesh.
Www.bdtender.info

TECHNEWS

Bangladesh to participate in Infocom 2005 in Kolkata

BDNEWS, *Dhaka*

BANGLADESH will participate in the Infocom 2005 fair in Kolkata aiming at getting outsourcings relating to the IT enabled service (ITES).

Nasscom, a well-known IT platform of India will organise the fair with the participation of 18 countries at the Salt-lake City Electronics Park on December 7-11.

Bangladesh Computer Samity (BCS) and Internet Service Providers Association of Bangladesh (ISPAB) would take part in the fair.

In the Bangladesh pavilion, 12 IT organisations, including Daffodil, Rabsoft, XOS, Shaili, RM Systems will showcase their technologies as well as services.

BCS President SM Iqbal told BDNEWS that his association, basically, is going to participate in the fair because of Nascom and ASSOCIO. The main objective of attending the fair would be to cooperate participant-organisations.

ISPAB President Akhtaruz zaman Manju said that the fair would create an opportunity of highlighting country's IT sector to the world market and hoped that Bangladesh would utilize it.

Shoeb Chowdhury, Chief Executive Officer of Information Handling Services (IHS) and Insoft hoped to get huge ITES orders from Infocom 2005. Theme country Germany would take huge ITES from the south Asian countries.

Due to cheap labour cost, Bangladesh has the opportunity, he said adding that Bangladesh would successfully display its IT services before the participant-countries of Europe, America and Africa.

BCS is the logistic partner, IHS marketing partner and Monthly computer Bichitra media partner of the Bangladesh part in the fair.

TECHNEWS

Remote-control device 'controls' humans

PHOTO: AP

Associated Press writer Yuri Kageyama tries on a headset, left, to be remote-controlled by a technology that Nippon Telegraph and Telephone Corp., Japan's top phone company, is developing during a demonstration at an NTT research in Atsugi, near Tokyo. An earphone headset, right, is shown that sends an electric current from the back of the ears through the head.

AP, *Japan*

WE wield remote controls to turn things on and off, make them advance, make them halt. Ground-bound pilots use remotes to fly drone airplanes, soldiers to maneuver battlefield robots.

But manipulating humans?

Prepare to be remotely controlled. I was.

Just imagine being rendered the rough equivalent of a radio-controlled toy car.

Nippon Telegraph & Telephone Corp., Japans top telephone company, says it is developing the technology to perhaps make video games more realistic. But more sinister applications also come to mind.

I can envision it being added to militaries' arsenals of so-called "non-lethal" weapons.

A special headset was placed on my cranium by my hosts during a recent demonstration at an NTT research center. It sent a very low voltage electric current from the back of my ears through my head either from left to right or right to left, depending on which way the joystick on a remote-control was moved.

I found the experience unnerving and exhausting: I sought to step straight ahead but kept careening from side to side. Those alternating currents literally threw me off.

The technology is called galvanic vestibular stimulation essentially, electricity messes with the delicate nerves inside the ear that help maintain balance.

I felt a mysterious, irresistible urge to start walking to the right whenever the researcher turned the switch to the right. I was convinced mistakenly that this was the only way to maintain my balance.

The phenomenon is painless but dramatic. Your feet start to move before you know it. I could even remote-control myself by taking the switch into my own hands.

There's no proven-beyond-a-doubt explanation yet as to why people start veering when electricity hits their ear. But NTT researchers say they were able to

make a person walk along a route in the shape of a giant pretzel using this technique.

It's a mesmerising sensation similar to being drunk or melting into sleep under the influence of anesthesia. But it's more definitive, as though an invisible hand were reaching inside your brain.

NTT says the feature may be used in video games and amusement park rides, although there are no plans so far for a commercial product.

Some people really enjoy the experience, researchers said while acknowledging that others feel uncomfortable.

I watched a simple racing-car game demonstration on a large screen while wearing a device programmed to synchronize the curves with galvanic vestibular stimulation. It accentuated the swaying as an imaginary racing car zipped through a virtual course, making me wobbly.

Another program had the electric current timed to music. My head was pulsating against my will, getting jerked around on my neck. I became so dizzy I could barely stand. I had to turn it off.

NTT researchers suggested this may be a reflection of my lack of musical abilities. People in tune with freely expressing themselves love the sensation, they said.

"We call this a virtual dance experience although some people have mentioned it's more like a virtual drug experience," said Taro Maeda, senior research scientist at NTT. "I'm really hopeful Apple Computer will be interested in this technology to offer it in their iPod."

Research on using electricity to affect human balance has been going on around the world for some time.

James Collins, professor of biomedical engineering at Boston University, has studied using the technology to prevent the elderly from falling and to help people with an impaired sense of balance. But he also believes the effect is suited for games and other entertainment.

"I suspect they'll probably get a kick out of the illusions that can be

created to give them a more total immersion experience as part of virtual reality," Collins said.

The very low level of electricity required for the effect is unlikely to cause any health damage, Collins said. Still, NTT required me to sign a consent form, saying I was trying the device at my own risk.

And risk definitely comes to mind when playing around with this technology.

Timothy Hullar, assistant professor at the Washington University School of Medicine in St. Louis, Mo., believes finding the right way to deliver an electromagnetic field to the ear at a distance could turn the technology into a weapon for situations where "killing isn't the best solution."

"This would be the most logical situation for a nonlethal weapon that presumably would make your opponent dizzy," he said via e-mail. "If you find just the right frequency, energy, duration of application, you would hope to find something that doesn't permanently injure someone but would allow you to make someone temporarily off-balance."

Indeed, a small defense contractor in Texas, Invocon Inc., is exploring whether precisely tuned electromagnetic pulses could be safely fired into people's ears to temporarily subdue them.

NTT has friendlier uses in mind.

If the sensation of movement can be captured for playback, then people can better understand what a ballet dancer or an Olympian gymnast is doing, and that could come handy in teaching such skills.

And it may also help people dodge oncoming cars or direct a rescue worker in a dark tunnel, NTT researchers say. They maintain that the point is not to control people against their will.

If you're determined to fight the suggestive orders from the electric currents by clinging to a fence or just lying on your back, you simply won't move.

But from my experience, if the currents persist, you'd probably be persuaded to follow their orders. And I didn't like that sensation. At all.

PHOTOTECH

STRUCK BY LIGHTNING

Melanie Baxter aged 11 holds her hand on a Van Der Graaf generator which causes her hair to rise, while a dummy holding a golf club over his head is struck by lightning during a display at Melbourne's Scienceworks Museum on October 27. The display also shows a three metre long bolt of lightning, generated from nearly two million volts of electricity as the Museum's new Lightning Room show is opened and is used to teach children about its formation in clouds, what happens when it reaches the ground and what people can do to stay safe.

PHOTO: AFP