

# IT & TELECOM

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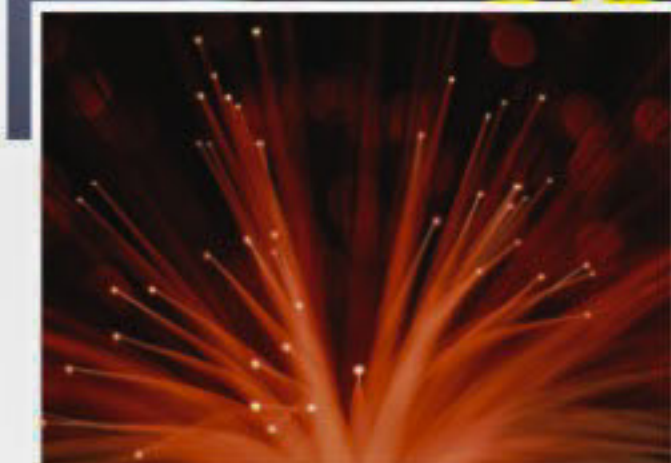
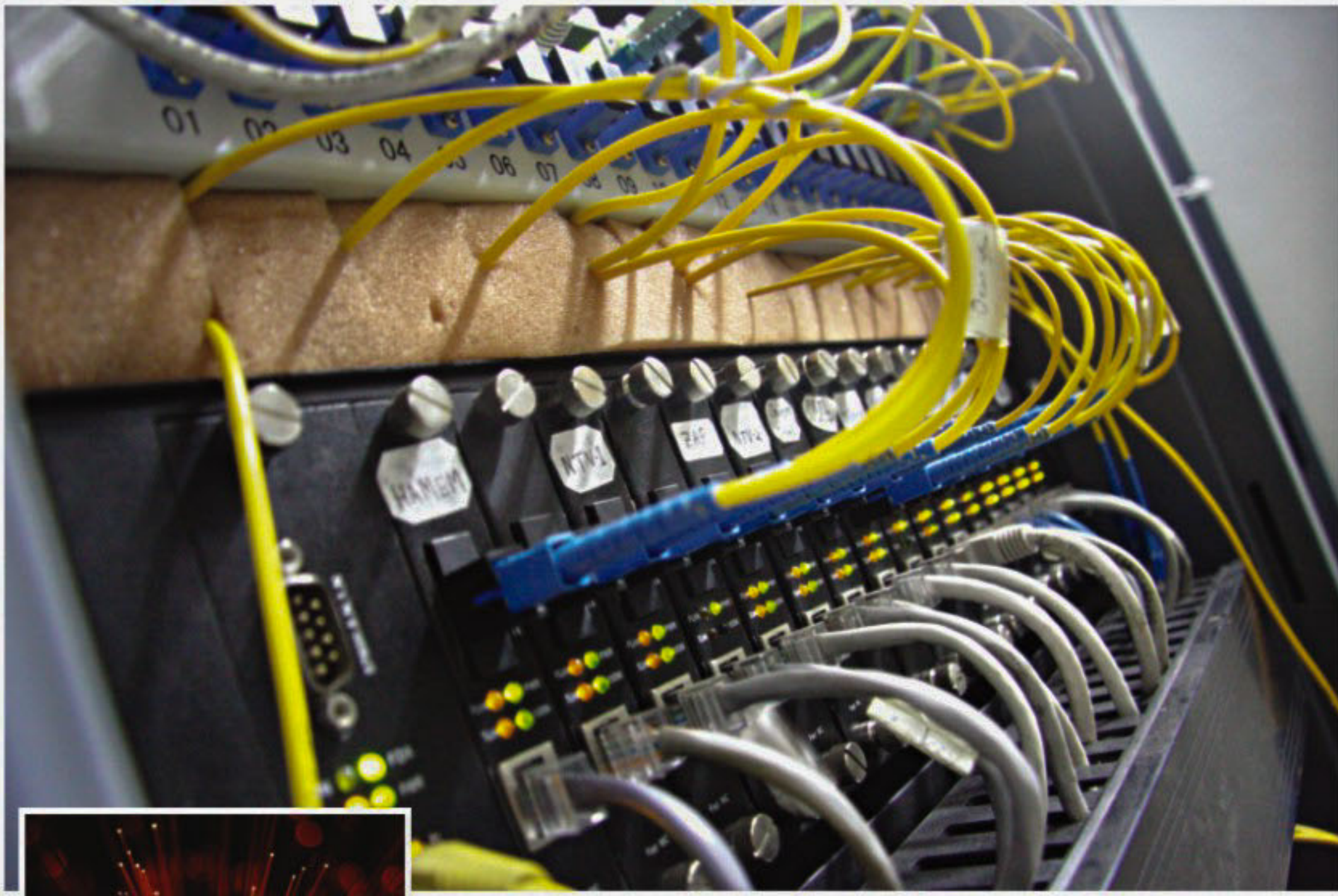


## Wired to a fast-track world

NAHID AKHTER

The world is getting smaller by the day with information passing around at lightning speed. However, as more and more information is passed, the need for better telecommunication infrastructure to keep up with the increasing demand becomes an urgent necessity. Installation of optical fibre networks are being stressed upon the world over as the currently most viable solution. Installations in Bangladesh have already begun and its appropriateness to Bangladesh's needs is being widely talked about. In spite of so much talk about fibre optics, many may have questions about the very basics of fibre optics. Many of us must have already seen a fibre optic wire in our homes, but not identified it. Sometime around the 90s, a particular type of showpiece had started becoming increasingly popular in homes of Bangladesh. These showpieces had a mass of hair-like white plastic wires coming out of a golden coloured sphere and only the ends of these wires would light up when the showpiece was plugged in and switched on. Why am I reminiscing about a showpiece in the Star Tech section? My point here is that each of these wires were actually a single strand of optical fibre.

An optical fibre is a glass or plastic fibre that carries light along its length. At the very core of this technology is a principle of light called Total Internal Reflection - a concept that ensures that light passed through the wire from one end comes out as it is, without loss, through the other end. Through this property, light is guided from one end of the wire to the other, without any kind of leakage in between. Optical fibres are widely used in fibre-optic communications, which permits transmission over longer distances and at higher bandwidths (data rates) than other forms of communications. Fibres are used instead of metal wires because



signals travel along them with less loss, and they are also immune to electromagnetic interference.

Optical fibre can be used as a medium for telecommunication and networking because it is flexible and can be bundled as cables. It is especially advantageous for long-distance communications, because light propagates through the fibre with little attenuation (loss) compared to electrical cables. This allows long distances to be spanned with few repeaters. Fibre is also immune to electrical interference; there is no cross-talk between signals in differ-

ent cables and no pickup of environmental noise. Non-armored fibre cables do not conduct electricity, which makes fibre a good solution for protecting communications equipment located in high voltage environments such as power generation. Wiretapping is more difficult compared to electrical connections, and there are concentric dual core fibres that are said to be tap-proof.

In a fibre optic cable, the cladding is usually coated with a tough resin buffer layer, which may be further surrounded by a jacket layer, usually plastic. These layers add strength to the fibre but do not contribute to its optical wave guide properties. Rigid fibre assemblies sometimes put light-absorbing ("dark") glass between the fibres, to prevent light that leaks out of one fibre from entering another. This reduces cross-talk

between the fibres.

Underwater cables for communications have a relatively long history. The first transatlantic cable was laid as early as 1858. It was used for telegraphy and transmitted less than a few words per minute. By the end of that decade high capacity optical fibre cables were laid under the Atlantic Ocean (TAT-8) and the Pacific Ocean (TPC-3) respectively. These formed part of the so-called first generation digital lightwave systems. The second and third generation cables have extended digital connectivity to the South Pacific, South East Asia and other points. Two of such global submarine cable networks that are in the vicinity of Bangladesh are the "South East Asia, Middle East and Western Europe (SEA-ME-WE)" and the "Fibre Link Around the Globe (FLAG)" long haul backbones respec-

tively.

Establishment of fibre optic links in Bangladesh began in 1986, along with the installation of new digital switches. Starting with the optical fibre link between Dhaka's Maghbazar and Gulshan telephone exchanges, all intra-city inter-exchange connections are now established through short distance fibre optic links. Moreover, to cater for the increasing international traffic, Bangladesh, having missed out on a similar opportunity earlier, has finally joined the SEA-ME-WE-4 submarine cable network consortium. The 10Gbs bandwidth of this network is expected to serve Bangladesh's needs for a long time to come.

GrameenPhone had leased dark fibres from the Bangladesh Railway to serve as the backbone for their domestic mobile phone communication network. In 2008, they took the initiative to increase the strength of their transmission network by upgrading a major portion of the leased Network from a composite cable network of single-pair fibre to 24-pair fibre and 10-pair copper cable network to support the requirements of Grameenphone and Bangladesh Railway simultaneously.

Banglalink, the second largest operator of the country, has also established a nationwide fibre optic network of 1920km with the longest submarine cable which lies under the river Padma. They have two strong ring cycles in Khulna-Rajshahi region including Dhaka to ensure quality and uninterrupted service for its subscribers.

Thus, installation and upgrade of optical fibre networks can help a developing country like Bangladesh be at par with global trends and latest information by providing a better and more reliable telecommunication system.

### Deadline for e-content award submission extended

IT, TELECOM DESK

The nomination submission deadline for e-Content and ICT for Development Award 2010 has been extended to April 5. Earlier the deadline was March 20.

The time extension was made following the requests from individuals and organisations.

The first of its kind contest in Bangladesh is being organised by Ministry of Science and ICT and Development Research Network (D.Net).

The objective of this contest is to find out and promote the best ICT initiatives and products which are related to the development of livelihood and society of Bangladesh.

The contest will be held in 14 categories both for online and off-line content products and ICT interventions and applications.

The contest categories for awards include e-Government & Institutions, e-Health, e-Learning & Education, e-Games, e-Entertainment, e-Culture & Heritage, e-Science & Technology, e-Environment, e-Business & Commerce, e-Enterprise & Livelihood, e-Inclusion & Participation, e-Localisation, e-News and Mobile Content.

Both individuals and organisations can submit their projects which are related to ICT and Development. So far a good number of nominations have been submitted for the contest.

Contestants can submit their projects through <http://naward.dnet.org.bd>

An independent jury board has been formed to evaluate the nominations. And to have the judgment process complete neutral, the submitted projects will be screened through customised software. Complete and relevant nominations will be distributed among the jury members.

Jury members will give their scores online. All the scores will be processed using an online blind system (in which jury will not know the project he/she is judging belongs to whom) and three best initiatives will be awarded in each category. These initiatives will be nominated for World Summit Award.

For further information on the contest, anyone may visit the website '<http://naward.dnet.org.bd>'.



### 2nd CFICC commences

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For the second year in a row, Citi Foundation in cooperation with Development Research Network (D.Net) on Sunday called upon universities to create technological solutions for the financial sector under the programme - 'Citi Financial IT Case Competition'.

For the top prize money of USD \$5000, combined teams of business and IT students from different public and private universities will compete with their unique software and information system development for an ever demanding market for financial sectors.

The competition will be held in three phases -- two preliminary rounds and a gala round.

Each team should be comprised of five members -- a faculty member as the project manager, two students with IT background and two with business background.

Interested teams have to register their names by April 15.

They can log onto [ficc.dnet.org.bd](http://ficc.dnet.org.bd) for details.

Apart from the champions, first runner up team will be awarded USD \$2000 and second runner up team will be awarded USD \$1000.

In 2009, at the first edition of the competition, a total of 54 teams from 20 universities and institutions took part while University of Liberal Arts Bangladesh (ULAB) won the title.

## Mobile 'apps' a \$17.5b market by 2012: study

AFP, San Francisco

A study released last week indicated that the market for mobile device software programs should rocket to 17.5 billion dollars (US) within three years.

Downloads of mobile applications to handsets will leap from slightly more than seven billion in 2009 to nearly 50 billion in 2012, according to the independent study commissioned by GetJar, the world's second largest app store.

"It is easy to see how mobile apps will eclipse the traditional desktop Internet," GetJar chief executive Ilija Laurs told AFP.

"It makes perfect sense that mobile devices will kill the desktop."

Apple runs the world's top App Store online at iTunes and the culture-changing firm was pronounced a "mobile devices company" by its iconic chief executive Steve Jobs in January.

Mobile applications have been around since the late 1990s but began to "blossom in earnest" after Apple launched its App Store for iPhone and iPod Touch devices in mid-2008, according to the report summary.

The annual market for mobile applications is six billion dollars and Internet firms large and small are racing to offer services that tap into geo-location, camera, touch-screen and other features of mobile phones.

Seventeen percent of GetJar users already spend more time on Internet-linked mobile phones than they do on desktop computers, according to Laurs.

iPhone owners are the most advanced users of mobile applications, spending more time and money on software for their smartphones than they do on music, he added.

The Apple App Store is reported to have more than 150,000 iPhone applications on its virtual shelves and recently passed the three-billion-download milestone.

Internet titan Google has weighed



free mini-applications for just about any kind of smartphone.

More than 842 million downloads of applications had been logged at [m.getjar.com](http://m.getjar.com) as of Tuesday, according to the firm's website.

into the smartphone arena with an Android mobile software used on an array of devices including its own touch-screen Nexus One handsets.

Google runs a rapidly growing Android Marketplace that already boasts more than 30,000 mini-programs made for smartphones running on that mobile operating system.

About 310,000 software developers have accounts to submit programs to GetJar, which boasts a collection of more than 65,000 mini-applications crafted for thousands of different types of handsets.

The average price of two dollars paid for mobile applications in 2009 is expected to drop to 1.50 dollars in two years, the study by Chetan Sharma Consulting indicated.

"This report signifies a battle for survival of the fittest among app stores worldwide," Laurs said.

GetJar has become a hot spot for

## Web inventor to head new institute of web science

AFP, London

Tim Berners-Lee, the man credited with inventing the Internet, will head a new British institute for web science, Prime Minister Gordon Brown announced Monday.

Thirty million pounds (45 million dollars, 34 million euros) has been set aside for the institute, to be based jointly at the University of Oxford and the University of Southampton, on the southern English coast, he said.

He said it would put Britain "at the cutting edge" by conducting research into new Internet technologies and identifying how they can be commercialised.

Berners-Lee, who is British, will head the institute alongside Nigel Shadbolt,



professor of artificial intelligence and deputy head of the School of Electronics and Computer Science at Southampton university.

"British innovation brought the web to the world," said Business Secre-

tary Peter Mandelson.

"This institute will ensure the UK remains at the forefront and that we anticipate and fully exploit the economic and social benefits of future developments."

**TECHPHOTO**

**4G**

The Sprint U301 3G/4G aircard (L) and the Sprint Sierra Overdrive 3G/4G mobile hotspot are displayed at the International CTIA Wireless 2010 convention at the Las Vegas Convention Center on March 23 in Las Vegas, Nevada. CTIA is the international association for the wireless telecommunications industry.

PHOTO: AFP



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