



## WIMAX

WIMAX, the Worldwide Interoperability for Microwave Access, is a telecommunications technology that provides for the wireless transmission of data in a variety of ways, ranging from point-to-point links to full mobile cellular-type access. The technology provides users with the enjoyment of broadband speed without wires or bulky network structures. The technology is based on the IEEE 802.16 standard. The name "WIMAX" was created by the WIMAX Forum, which was formed in June 2001 to promote conformity and interoperability of the standard.



startech@thedailystar.net

## TECH FOCUS

# WiMAX in sight

## 3 companies to get BTRC licences

MAHDIN MAHBOOB

WIMAX, the Worldwide Interoperability for Microwave Access, is a wireless-broadband-access Metropolitan Area Network (MAN) technology, based on the IEEE 802.16 standard, that provides for the wireless transmission of data in a variety of ways, ranging from point-to-point links to full mobile cellular-type access. By virtue of its longer transmission distance, faster broadband access, excellent last-mile connectivity and multimedia communication services, WiMAX has already made its mark on markets worldwide.

In view of this, the Bangladesh Telecommunications Regulatory Commission (BTRC) has decided



WiMAX is likely to boost rural internet usage in Bangladesh.

A huge debate exists between the WiMAX and 3G authorities on the issue of which technology's performance is better. Although, both these technologies can work in tandem with each other; this table, collected from ZTE Corp, shows a comparative analysis between WiMAX and the two other 3G technologies (WCDMA and CDMA2000).

The name WiMAX was created by the WiMAX Forum (<http://www.wimaxforum.org>), which was formed in June 2001 to promote conformity with and interoperability of the standard. As a worldwide consortium, the forum is focused on global adoption of WiMAX and chartered to establish certification processes that achieve interoperability.

potential market for WiMAX. Currently, Pakistan has the largest fully functional WiMAX network in the world. Wateen Telecom installed the network (with an initial rollout in seven cities) throughout Pakistan using Motorola hardware. Many operators in different countries are now interested in deploying this advanced technology and some of the recent contracts include winning WiMAX contracts of Alvarion in Kenya and Malta, Alcatel-Lucent in Georgia, ZTE in Colombia and Libya, Airspan in Saudi Arabia and Ecuador, Cisco and NEC in Thailand and Nortel in Russia.

The WiMAX technology is expected to improve and

initial term, the licence may be renewed for subsequent terms, each of five years in duration, subject to the approval from the commission and other such conditions, including the payment of fees specified by the commission. The annual licence fee will be Tk 3 crore and the licensee will have to submit a bank guarantee of Tk 15 crore in favour of the BTRC within 15 days from the date of issue of the licence.

However, the BTRC has also stated that the operators, within one year of the issuance of licence, will have to install minimum five full-fledged Base

the first year the operators will have to cover 20% of the upazilas and 10% of villages in Bangladesh, and in the following 4 years the operators will have to cover the remaining parts of the country.

In Bangladesh, some of the major companies that are applying for such a licence include ZTE Corp, Agni Systems, Brac & Square consortium, Ranktel and Dhakaphone among others. Sources in the BTRC have said that ten to twelve companies have applied for the WiMAX licence and among these the top three bidders will be awarded licences after the open auction



Farmers can get access to crop information through rural internet connectivity.

published technical specifications based on recognised standards, promote the technology and pursue a favourable regulatory environment.

The forum has more than 522 members comprising the majority of operators, component and equipment companies in the communications ecosystem, among which, 15 are board members. The board of the WiMAX Forum is comprised of industry leaders who are committed to providing guidance and direction to the forum to ensure that the WiMAX Forum organisational staff executes on its vision and charter.

The current board members of the WiMAX forum are ZTE Corporation (China), Samsung (South Korea), Aperto Networks (USA), Airspan Networks (UK), Alcatel-Lucent (France), Alvarion (Israel), Fujitsu (Japan), Intel Corporation (USA), KDDI (Japan), British Telecom (UK), KT Corp (South Korea), Sprint Nextel (USA), Motorola (USA), AT&T (USA) and Nokia (Finland).

In South Asia, Pakistan is considered to have the biggest

enhance the current internet infrastructure in Bangladesh. All the government and non-government institutions, universities, medical colleges, technological research centres, ministries, educational boards and many other organisations are expected to benefit from WiMAX as it will provide data and telecommunications services, and also a wireless alternative to cable and DSL for "last mile" broadband access.

Once the WiMAX network is completely set up in the country, it is expected to provide a very high-speed broadband internet service to the people. It is likely to open up the many possibilities and services like IPTV, online gaming, downloading, video streaming, VoIP and other such facilities within the reach of the common people. It is also expected to boost the ICT sector of Bangladesh since high-speed internet access all over the country will open the door to more call centres and software outsourcing companies, which are primarily based in the capital city of Dhaka.

## TECH VIEWS

# Testing the 'Big Bang' theory



CERN scientist looks at computer screens showing traces on the Atlas experiment during its switch-on operation

NAHID AKHTER

IT all started with a bang that's what physicist and astronomer Georges Lemaitre had postulated. According to his theory, the universe has expanded from a primordial hot and dense initial condition some 15 billion years ago and continues to expand to this day, owing to some sort of an explosion - thus was coined the nomenclature of the Big Bang Theory. But until today, this postulation could not be physically explained, at least not what had happened in the initial stages following such an explosion.

Therefore, on September 10, 2008, the European Organisation of Nuclear Research (CERN), after fourteen years of study, attempted to create a mini-version of the "Big Bang" about 300 feet below the Swiss-French border by using its Large Hadron Collider (LHC) particle smasher, which is a 17-mile tube that has been designed to facili-

tate high energy collisions between protons. Scientists believe that these collisions will recreate exactly those same energy density conditions that existed shortly after the Big Bang.



A woman walks near the world's largest superconducting solenoid magnet at CERN.

The collision is also expected to give way to the appearance of the 'Higgs boson' or 'God's

particle' that made life possible in the universe. The launch on September 10<sup>th</sup>, although a success, did not run the LHC at full capacity yet. Protons will not begin colliding for a couple of weeks. The goal is to begin proton collisions at 5 trillion electron volts before the end of the year.

The real hype about this project though stems from possible implications of this experiment. Scientists believe that there is a very narrow possibility that the experiment could create a black hole with the capability of ending the universe. However, officials from CERN say that such conditions are unlikely. Mixed reactions have always characterized any revolutionary experiment.

Whatever the results, the experiment is expected to generate huge amounts of informa-

# New iPod to colour up your life

AFP, San Francisco

APPLE chief executive Steve Jobs on Tuesday unveiled new iPod models and iTunes store upgrades for the coming holi-

ated," on the screen as he stepped onstage.

"Enough said: the real topic of today is music," Jobs began. The iconic Apple pitchman's medical condition has been the subject of consider-

shape people preferred.

Jobs also showed off an upgraded iPod Touch model made slimmer than the original version and with a built-in speaker.

The iPod lineup combines feature upgrades with price cuts of as much as 100 dollars on higher end models.

iPod Touch models with 32 gigabytes of memory are priced at 399 dollars while a 16-gigabyte version will sell for 299 dollars and an eight-gigabyte iPod for 229 dollars.

Jobs cited statistics showing iPods command nearly 74 percent of the MP3 market and said that more than a hundred million applications for iPhones and iPod Touch models have been downloaded since the "App Store" opened 60 days ago.

He also addressed concerns about iPhone 3G performance problems by saying a free iPhone 2.1 update will be released on Friday to fix the troubles.

"It's a big update," Jobs said of the iPhone software release. "It fixes a lot of bugs. You will get fewer call drops... You are not going to get some of the crashes and other things that we've seen."



Apple CEO Steve Jobs announces a new version of the iPod Nano during a special event on September 9

day season as he brushed aside reports about his health.

Jobs kicked off a theatrical press event in downtown San Francisco by poking fun at persistent rumors about his health.

He flashed a famous Mark Twain quote, "The reports of my death are greatly exagger-

able debate since he appeared gaunt at a conference in June.

New products announced by Jobs include high-definition television shows available on Apple's online iTunes store and a slim new iPod Nano model that upgrades the technology while returning the gum stick

## Facebook makeover nettles some devotees

AFP, California

FACEBOOK'S new look became mandatory Wednesday in a shift to what the popular social networking website says is a faster, streamlined and more spam-resistant format that has some devotees in a state of rebellion.

The Northern California firm actually rolled out revamped profile pages back in May, having learned from past experience how touchy Facebook members can be about tinkering with their cherished online community's website.

Nearly 30 million of Facebook's more than 100 million users switched to the new format before Wednesday, when the website began forcing the holdouts to adopt the new design.

Forums devoted to saving the new Facebook format have surfaced on the website and claim thousands of members.

"Life is about change," Nikki Gerwel of Canada wrote in a 'Who hates the new Facebook format' forum on Wednesday. "But I like good change, not crappy change... the changes are horrible."

The new design lets Facebook members use tabs to give priority to fresh pictures, messages, or "feeds" on main profile pages and compartmentalize mini-applications and "static" information such as curriculum vitae.

## TECH NEWS

### ASUS F80L Notebook

## Infusion technology with unmatched durability

STARTECH DESK

WITH the staunch belief that good design enhances the consumer experience, ASUS unveiled the F80 series notebook with the revolutionary Infusion technology.

An all round mobile computing workhorse based on the latest platform with advanced graphics solutions, the F80 Series is sophisticated inside-out with robustness, state-of-the-art computing technolo-

gies and unique aesthetics, says a press release.

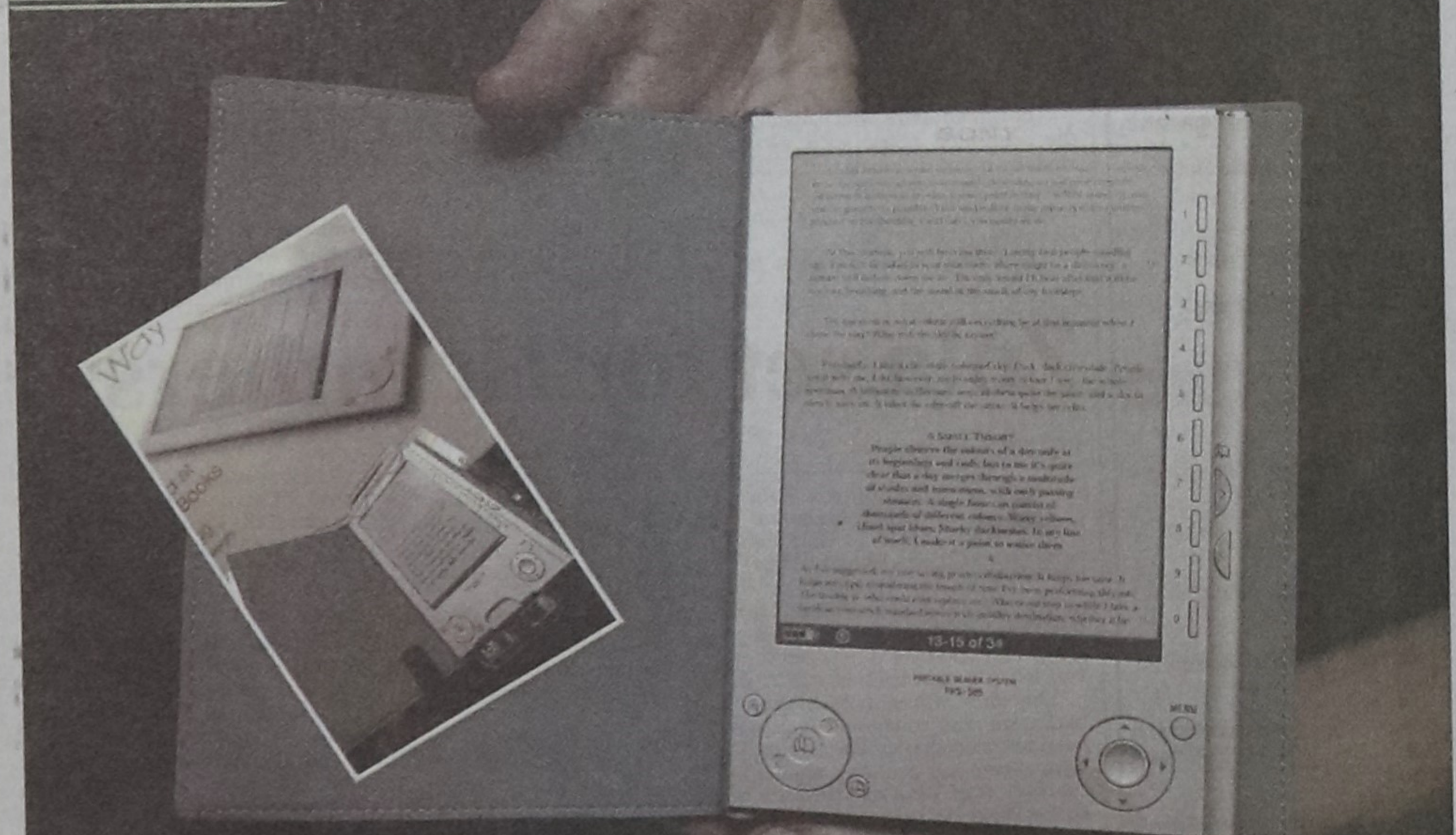
The F80 series notebook is equipped with 'Spill-proof keyboard' and is protected from direct exposure and users will no longer need to worry about the occasional drink spills.

The exclusive ASUS Splendid Video Intelligence Technology of the notebook takes PC graphics capability to the next level by enhancing depth and color intensity in real time. Based on the latest Intel



Centrino Duo Processor Technology and a host of ASUS features, the 14.1" widescreen F80 series is the fabulous jewel to light up any computing experience with extra sparkle that will sure to captivate all eyes. The product has a price-tag of Taka 52,500/- only.

## PHOTO E-BOOK



## E-BOOK

A Sony 'e-book' electronic book is pictured at a Waterstones book store branch, in central London, on September 4. Japanese group Sony launched its electronic book in the United Kingdom on Thursday. With enough memory to hold up to 160 novels and at 260g (just over half a pound), the e-book weighs less than a hardback and uses power only when readers turn a page.

PHOTO: AFP