Wimax report

Business

What is WiMAX? WiMax is a wireless digital communications system, also known as IEEE 802. 16, that is intended for wireless “ metropolitan area networks”. WiMAX can provide broadband wireless access (BWA) up to 30 miles (50 km) for fixed stations, and 3 – 10 miles (5 – 15 km) for mobile stations. In contrast, the WiFi/802. 11 wireless local area network standard is limited in most cases to only 100 – 300 feet (30 – 100m).

With WiMAX, WiFi-like data rates are easily supported, but the issue of interference is lessened. WiMAX operates on both licensed and non-licensed frequencies, providing a regulated environment and viable economic model for wireless carriers. WiMAX can be used for wireless networking in much the same way as the more common WiFi protocol. WiMAX is a second-generation protocol that allows for more efficient bandwidth use, interference avoidance, and is intended to allow higher data rates over longer distances. The IEEE 802.

16 standard defines the technical features of the communications protocol. The WiMAX Forum offers a means of testing manufacturer’s equipment for compatibility, as well as an industry group dedicated to fostering the development and commercialization of the technology. WiMax. com provides a focal point for consumers, service providers, manufacturers, analysts, and researchers who are interested in WiMAX technology, services, and products. Soon, WiMAX will be a very well recognized term to describe wireless Internet access throughout the world.

WiMAX and other service: neration is 1G, the first for using cell technology that let users place their own calls and continue their conversations

seamlessly as they moved from cell to cell. AMPS uses what is called FDM or frequency division multiplexing. Each phone call uses separate radio frequencies or channels. You probably had a 1G phone, but never called it that. The next generation, quick on the heels of the first, is digital cellular. One standard uses a digital version of AMPS called D-AMPS using TDMA (Time division Multiple Access).

A competing system also emerged using CDMA or Code Division Multiple Access. As you might suspect, the two are incompatible but you can have a phone that works with both. Europe embraced yet a third standard called GSM which is based on TDMA. Digital transmissions allow for more phone conversations in the same amount of spectrum. They also lay the groundwork for services beyond simple voice telephone calls. Data services such as Internet access, text messaging, sharing pictures and video are inherently digital.

This is where the whole “ G” thing got started. The original analog and digital cellular services were invented to cut the wire on landline phone service and give you regular telephone service you could take with you. As such, the bandwidth they offer for adding data services is pretty meager, in the low Kbps region. Now that a cell phone is not merely a cell phone, but also a PDA, a messaging system, a camera, an Internet browser, an email reader and soon to be a television set, true broadband data speeds are needed. That new generation of cell phone service has been dubbed 3G for 3rd generation. G has proven to be a tough generation to launch.

The demand for greater bandwidth right now has spawned intermediate generations called 2. 5G and even 2. 75G. One such standard is GPRS (General Packet Radio Services) which is an extension of the GSM digital cellular service popular in Europe. It offers download speeds up to 144 Kbps. 3G phones and services are just starting to come into their own.

One service you'll find is called EVDO which stands for EVolution Data Only. EVDO has download speeds up to 2. Mbps, which is faster than T1, DSL or Cable broadband service. There is also an evolution that includes voice called EVDV which is in the works. While 3G is going to enable telephones to also become Internet computers, video phones and television receivers, its maturity phase will find it competing with wireless VoIP telephone services on Wi-Fi, WiMax, WiTV and the new wireless mobile standard 802.

20, which doesn't seem to have a catchy name yet. The slug-fest between analog wireline phone service and wired VoIP seems likely to be continued on the wireless front. There is also an emerging cellular standard you should be aware of called 4G. The fourth generation being championed in Japan will boost the data rates to 20 Mbps. These speeds enable high quality video transmission and rapid download of large music files. The first 4G phones may appear as soon as 2006.

That means we better starting thinking about what to do with 5G if this generation thing is going to continue. A good reference for the cellular generation standards can be found at Wikipedia and you may also enjoy reading some telephone history. [pic] IMAGE][IMAGE] T1 Rex's Business Telecom Explainer offers easy to understand information about complex

telecommunications and networking technology. T1 Rex explains how T1 lines work, VoIP telephone, PBX, virtual private networks, digital audio transport, Wi-Fi & WiMax, fiber optic carriers and other business telecom services. Advantage of wimax: Smart antennas use, OFDMA and specifically the spectral efficiency of OFDMA are routinely offered as the advantages of a mobile WiMAX.

The true competitive strengths of WiMAX may prove to be elsewhere. Intelligent antennas are on the road map of every major standard not just WiMAX, including those from the 3GPP (WCDMA) and 3GPP2 (CDMA) and the emerging 802. 20 standard. Existing mobile carriers are unlikely to deploy intelligent antennas with a new air interface initially for coverage or capacity since these carriers already possess substantial tower assets and existing mobile carriers generally scale capacity on new services and/or air interfaces gradually to meet initial and limited demand for those services. Thus WiMAX may have a time advantage in implementation of intelligent antennas but that gain will be neutralized by mobile carriers themselves.

Equally important are the benefits of OFDMA, especially when pertaining to spectral efficiency in a wide area, multi-cellular, mobile environment, remain unproven regarding the implementation which WiMAX purveyors and most others will use. The advantage may exist from use of the air interface but the level of improvement, especially in a challenging mobile environment, may not be as great as many are expecting. Likewise, performance may vary substantially according to implementation and performance of the MAC level, which governs how the radio spectrum is employed and which is rarely considered in RF simulations. Ultimately more testing is required now that

802. 16e has been ratified and vendors are working on implementing the standard.

So what are the advantages of mobile WiMAX at the current time? WiMAX is the first truly open mobile standard (802. 16e). It is governed by the IEEE's fair licensing practices and participation in the group is open and democratic compared to other groups. This is in fact revolutionary as 3GPP and 3GPP2 are ultimately consortiums and its implications are wide. This open process should lead to greater innovation and hence a better performance when moving forward and also potentially lower intellectual property licensing fees and provide for a quicker rate of change compared to that of existing mobile technologies.

A lack of history within the mobile industry is also an advantage for WiMAX vendors. For the most part, and in contrast to CDMA/GSM/WCDMA vendors, key WiMAX equipment vendors lack a mobile product line to protect. They must push the envelope on technology and move forward as they cannot rely on a steady stream of existing GSM, WCDMA, or CDMA mobile contracts. In other words, WiMAX proponents benefit from disrupting the status quo and their survival may depend on it. WiMAX is also the first major mobile standard to offer all IP as a standard feature set.

3GPP will get there in subsequent releases but it still employs a complicated and ultimately expensive core network. Major mobile carriers, who are often also wireline or even cable operators, will seek to consolidate their core networks under IP. Doing so offers cost advantages, the ability to offer multiple services over a single platform, reductions in operating and capital

expenditures, rapid application development and often a competitive edge. In summary, we need to look beyond RF performance criteria alone when evaluating the relative merits of mobile WiMAX vs. future incarnations of existing mobile technologies due to lack of real world data and the existence of other often ignored criteria.

GSM won the 2G mobile war despite offering inferior capacity figures due to strengths in other quadrants of the competitive matrix and we can not accurately gauge the performance that FLASH-OFDM, UMTS or 802. 16e air interfaces will offer in 2008 or 2009 when mobile WiMAX gear is certified and ready to ship today. Wimax in Bangladesh: Three companies, Bangla Lion Communications, Brac Bdmail Network Ltd and Augere Wireless Broadband Bangladesh Ltd, have won licences to operate WiMAX or Broadband Wireless Access in Bangladesh, a BTRC official said Wednesday. The three firms purchased the licences in auction for Tk 215 crore. The three companies that won will run WiMAX (Worldwide Interoperability for Microwave Access) technology that allows wireless data to travel over long distances by various means, from point-to-point links to full mobile cellular type access.

According to the licence conditions, the winning companies will set up at least 90 base stations in the first year, and the whole country will have to be brought under WiMAX network within three years. Foreign investment in the licenced companies should not be more than 60 percent and non resident Bangladeshis are allowed to invest at 70 percent ownership. The licencees will have to file for initial public offering (IPO) within three years of the issuance of a license, and shall not be allowed to transfer any shares before issuance of the IPO without prior written permission from the commission.

Qubee: It was a historic moment indeed for Internet technology in Bangladesh. On October 21, 2009 Augere Wireless Broadband Bangladesh Ltd. started its WiMAX service in Bangladesh by introducing Qubee Wimax service.

With an aim to bring positive changes in people’s lives. The brand is devoted to open up the endless door of possibilities through the Internet to the people of Bangladesh. High speed Internet; Qubee started WiMax Internet service in Bangladesh Qubee will give users the “ True Internet Experience. ” Internet coverage: Initially, Qubee will cover Gulshan, Banani, Baridhara, Mirpur and Uttara residential and commercial area. Soon, the Qubee Internet service will cover entire Bangladesh.

Qubee has already giving out various attractive service packages for interested residential and enterprise customers. Qubee will launch its new WiMAX service, for both commercial and residential users, in Dhaka at the beginning of October. From there it plans to rapidly build-out its network and extend its services into the other major population areas — and eventually across the country. Qubee Offers Wimax Packages Qubee’s WiMAX (News – Alert)-based broadband service is already available in Pakistan and is set to launch in Bangladesh at the beginning of October. The company has reportedly been working with consultants and local telecoms experts to identify the requirements for customer support. It reportedly selected Interactive Intelligence’s contact center platform because it is entirely software-based and is modular in architecture, so can be scaled to match requirements as Qubee grows in the region.

It also didn’t hurt that Interactive Intelligence already has some installations in the region and is therefore able to provide support. “ The existing users of Interactive Intelligence in Bangladesh showed me how well the system works, and we have had excellent continuing response from the whole company,” said Anna Jordan, Qubee director of marketing, in a press release. They have proved to be very reactive and very good at delivering to our tight timescales. ” Qubee is also reportedly using Interactive Intelligence’s training services to train new agents on how to use, expand and support the system. The new contact center will deliver customer service in two languages, Bangla and English. “ Markets like Bangladesh are currently limited by slow, unreliable and expensive internet connections,” Jordan explained.

“ But there is a very hungry customer base. We need to make our customers feel supported and secure in using our services. Mission and vision of wimax: Today’s competitive marketplace demands fast, reliable wireless internet connectivity that reaches beyond hotspots areas. No doubt about it, wireline infrastructure, is becoming a thing of the past as the market demands more broadband, more content, and more mobility. Mobile Broadband-on-the-Go will enable people to enjoy the complete benefits of the internet and experience new freedom in mobile information, interaction, user generated content and social networking.

As a consequence, Mobile Broadband Internet access based on WiMAX, is the key to meet the demands of today’s society. WiMAX puts us on the path of a vision to the internet that was meant to be mobile, fast and above all, reliable and affordable. By combining broadband speed with the greatest in-

and outdoor coverage Worldmax delivers on the promise of true mobility. The Worldmax WiMAX Network will provide high-speed broadband internet access people have come to love from WiFi while giving you even more mobility: nationwide “ Broadband-in-Your-Pocket” accessibility. Wimax future in Bangladesh: Augere Wireless Broadband Bangladesh Ltd, one of the two WiMax licensees, launched high-speed broadband internet services yesterday on a trial basis with a focus for commercial operations.

Finance Minister AMA Muhith inaugurated the wireless internet technology, which will initially be launched in some areas of Gulshan and Banani on trial. WiMax (Worldwide Interoperability for Microwave Access) is a wireless digital communication system that can provide broadband wireless access across 30 miles for fixed phone and 3-10 miles for mobile stations. Three bidders — BanglaLion Communication, BRAC BD Mail Network Ltd and Augere Wireless Broadband Bangladesh Ltd — won the WiMax licences through an auction organised by Bangla-desh Telecommuni-cation Regulatory Commission (BTRC) in September last year. However, BRAC later refused to take the licence. The Tk 215 crore bid price had become a ‘ double bind’ for both the telecom regulator and licensees. The regulator extended the deadline for launching WiMax services several times.

UK-based Augere Holdings owns 60 percent of Augere Wireless Broadband Bangladesh Ltd along with two other local companies. Teleport Bangladesh owns 30 percent and Aamra Resources Ltd owns 10 percent in the company. “ Technology must be welcomed, but we should avoid a digital divide. WiMax is a technology that can be availed anywhere,” he said. Rajiuddin Ahmed Raju, telecommunication minister, Abul Kalam Azad, information minister,

Zia Ahmed, BTRC chairman, and Jerry Mobbs, chief executive officer of Augere Bangladesh, were also present at the launch at the Westin Dhaka. The real internet experience is here," said Sanjiv Ahuja, chairman and chief executive officer of Augere Holdings.

Augere Bangladesh is poised to meet demand for the internet using WiMax technology, he said. Bangladesh, with the lowest internet penetration in the world at 4 percent, will be exposed to high-speed wireless internet by the launch of the WiMax technology. At present, the country has four million internet users.