WiMAX: how to manage expectations
Aristóteles Cañero
e-business Center PwC&IESE
01/02/05

Playing with expectations can be a double edged sword for new technology. The experience of recent years, with the slow roll-out of UMTS, for example, shows that neither makers nor operators have learned the lesson on the importance of promising credible and achievable development schedules. An aggressive development plan encourages investors, but not fulfilling it can dishearten them and lead them to abandon many projects.

History repeats itself. A few days ago the WiMAX Forum, an organism set up by the makers who are behind the drive for this wireless technology, announced that the certification of the IEEE 802.12-2004 standard would be delayed for another six months. This means that CETECOM, the Andalusian Technology Center recently chosen by the WiMAX Forum as the sole world certification laboratory for WiMAX, will not receive shipment of the first equipment to test until July 2005.

The certification process of a new technology guarantees the interoperability of the equipment, which means that a deployed network of certified WiMAX equipment may be made up of components from different manufacturers. This is a prerequisite for the mass production of devices, as those made before certification is granted are only used as prototypes and test labs for the suppliers of the pioneering service. Without the certification, and therefore before the start of mass production, the prices of the devices cannot be below the required level for their success on the market. To give you an idea, the new equipment should be similarly priced to the Wi-Fi equipment available today.

This delay seriously affects the commercial deployment of WiMAX, given that the new dates for certification mean that the first equipment will not be on the market until 2006. What’s more, the portable computers with this technology will not be in the shops till 2007. This is a major setback that may force many manufacturers and operators to abandon the WiMAX project and focus on other new technologies that can come along. The few operators offering experimental WiMAX networks in certain areas with pre-certification technology stand to lose a lot. In any case, the biggest loser in this delay would be Intel, which is the company that, from the very beginning, has made the greatest effort and more than likely is responsible for the changes in the certification schedule.

---

1 By 2008, the sale of WiMAX equipment will soar to thousands of millions of dollars, according to Cahners In Stat. The research firm states that this technology should embrace wireless broadband services with VoIP. Thanks to both networks, WiMAX could be the answer to the high cost of mobile telephony.

2 WiMAX is a serious rival to UMTS. While the UMTS signal is affected by concrete and even fog, WiMAX can go through clouds, trees and walls. The 802.16 standard could also be an alternate for cable and DSL technologies.

3 26 operators and phone makers, led by NTT DoCoMo, the Japanese operator, are trying to face off WiMAX. They have launched a more advanced version of third generation technology called “Super 3G”. This multiplies by 10 the power of the present 3G technology, but it will not be ready before 2009.

4 In Spain, the main operators preparing to offer WiMAX services are Iberbanda (owned by Prisa and Ibercaja, among others), Broadnet (the J.P Morgan Group and Bankinter are among the shareholders) and Neosky (owned by Iberdrola).
The delay in the certification of the 802.16-2004 standard should be a lesson to makers. They should do their utmost to avoid any future delays in the deployment of the next revision, the IEEE 802.16e, known as Mobile WiMAX, which is the one that could really offer a solid alternative to the 3G telephony network and in which most hopes are placed. A quick consensus by the makers in the certification could help to turn Mobile WiMAX into the dominant 4G technology on the market.

Anyway, we must not forget that if eventually the terms and expectations are met, the biggest battle for the success of WiMAX will be fought at the regulation stage. WiMAX operates on free frequency bands (5.8 GHz) and on other bands that are in the hands of the LMDS operators (3.5 GHz). Given that free bands are technically less suitable for mobile use, the owners of LMDS licences, as well as those operators that get licences to sell WiMAX in its future versions, will enjoy an excellent position to compete against cellular telephony.

There are still too many uncertainties to say that WiMAX will be the winner in the 4G race. Expectations have to be played out very well and there can be no new over-optimistic schedules that could create distrust when they are not met.