

When Will We See the Decline of 2G?

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August 22nd 2007 - In 2001 people expected that UMTS, with W-CDMA, would replace GSM and that the latter technology would have been a mere footnote in a matter of years. However, in 2001/02 the euphoria for W-CDMA faded; operators, which had spent billions of Euros and Dollars for licenses and infrastructure rollouts, realized that the technology, support and market were just not ready for it. They were hoping for immediate returns (which are still to be seen) and they had to find a way to improve the poor coverage for data services rapidly and cheaply. EDGE was, and in many cases still is, the best answer for that. The 3GPP Release 7 gives the EDGE standard double of the throughput previously available due to the availability of the multi-carrier data transfer, which raises the throughput up to 118.4Kbs (per time slot, with two carriers). Furthermore, on the flip side, voice is still the largest portion of the operators' revenues, both in developed and developing countries. In these regards, GSM has another competitive advantage; the number of base stations necessary to cover a given region is about half in GSM than required with W-CDMA, producing obvious savings both on CAPEX and OPEX.

In developed countries, operators are completing the deployment of HSPDA (and in the near future HSUPA) networks. Although there is now a much better acceptance of HSDPA, indoor coverage is still poor, representing one of the key challenges in network planning and optimization. In fact, mobile data services are used for the vast majority in offices and homes. Although, femto-stations could be a possible solution, they are still to be proven. It is IMS Research's opinion that the first commercial deployment of these "home base stations" will be in the second half of 2008, at the earliest.

In developing countries, such as India, China and Africa (which combined have population of at least 3 billion people), 2G is the preferred choice because equipment is relatively cheap and the technology is proven; furthermore there is a wide selection of low cost handsets available. On the data side, the good rate offered by the Evolved EDGE standard will allow operators to handle the explosive growth in these regions with relatively little CAPEX investment. It is IMS Research's opinion that GSM installed base in these regions (namely India, China and Africa) will grow from an overall approximated 677 million users in 2006 to over 1.3 billion users in 2011; at the same time, the negligible 2006 W-CDMA installed base is forecast to grow to a mere 100 million users in 2011.

As analyzed in the report "The Worldwide Market for Cellular Infrastructure" 7th edition, if EDGE continues to evolve and Release 8 from 3GPP is already on its way and adapt to the new technologies and challenges that are coming to the market, it is IMS Research's opinion that the lifespan of the technology will be protracted for further five years. Until a low cost 4G technology is commercially available and able to provide significantly superior performance, in an all-IP (next generation) network, GSM/EDGE will not be seriously threatened by any existing technology.