ENTER BROADBAND WWAN: WHAT DOES IT MEAN FOR THE MOBILE PROFESSIONAL?

Increasingly, seamless high-speed connectivity is essential to the success of any business as well as to the efficiency of the mobile professional. Whether working as a member of a distributed team or responding to customer requests, professionals require a broadband-speed level of access to real-time data, the Internet, online resources (such as databases), email and even rich media.

In this context, wired and wireless network connectivity is useful, but a fast, secure connection is not always available, particularly when a user is on the move in a car or train.

How does the mobile professional stay online with a consistently fast, secure and always-on connection? The answer is with a notebook equipped for Wireless Wide Area Networking (WWAN).
What exactly is WWAN?

WWAN takes advantage of the cellular network infrastructure to provide the user with roaming wireless networking connectivity over large areas. Via WWAN, the user can maintain network connectivity even when in motion.

With WWAN, connectivity is both seamless and roaming because the user can move across various areas of coverage – and even use different kinds of network connectivity – while maintaining an uninterrupted connection.

Unlike WLAN, which is location-based and associated with 802.11 Wi-Fi standards, WWAN offers greater coverage and takes advantage of various kinds of technologies. Among WWAN-enabling technologies, the most important “generations” are as follows:

- 2.5G - GPRS (General Packet Radio Services)
- 2.75G - EDGE (Enhanced Data GSM Environment),
- 3G - UMTS (Universal Mobile Telecommunications Service)
- 3.5G – HSDPA (High Speed Downlink Packet Access).

Eventually, WWAN will extend to 3.75G HSUPA (High Speed Uplink Packet Access) and 4G communications. For now though 3G and emerging 3.5G technologies remain the most important for the mobile professional.
3G for mobile broadband internet and beyond

Widely available today, 3G UMTS connectivity offers the mobile user the following advantages:

- **Broadband on the move**: data transfer rates of up to 1920 kbit/s are available, although typical data rates are up to 384 kbit/s.

- **Always-on connectivity**: once a connection is made, the user is always connected wherever network coverage is available.

- **Automatic roaming**: the user can move within and across multiple coverage areas without losing the connection to valuable data and communication.

- **Global access**: the user can roam among 195 countries on over 500 networks using GSM, GPRS and UMTS networks.

- **Highly secure communications**: encryption and authentication programs, along with UMTS SIM (Subscriber Identity Modular) cards, offer data security.

- **Packet-based communications**: this feature supports internet-based communications and applications.

Already, 3G is quickly being overtaken by the next-generation 3.5G technology called HSDPA, which supports data transfer rates of up to 1.8 Mbit/s today. Theoretically capable of up to 14.4 Mbit/s for downlink speeds and 2.0 Mbit/s for uplink rates, it is anticipated that HSDPA deployments for up to 3.6 Mbit/s will be available in parts of Europe in the near future.

With 3G data rates and higher, the user can take advantage of transfer rates comparable to, or greater than, a broadband connection. Access to email, the ability to quickly download large files, streaming audio/video and other internet-based applications (such as podcasts or education) are easily supported by the high-speed transfer rates of WWAN.
What does broadband WWAN mean for the mobile professional?

While wired LAN (Local Area Network) connectivity and WLAN (Wireless Local Area Network) connectivity meet the professional’s need for high-speed connectivity in the office and in select mobile working locations, WWAN connectivity is particularly beneficial in remote locations where wired or WLAN connections are unavailable or when the professional is on the move and wants to take advantage of seamless, roaming connectivity.

Here are just a few examples of how WWAN notebooks can enable new levels of working productivity and greater business efficiencies.

Real-time access to data, internet and email

The ability to stay connected enables the professional to deal with business issues as they arise or gain greater productivity while on the move. WWAN is ideal for the mobile worker who needs quick access to information, email or a corporate network for transactional information. For personnel in the field, WWAN is an ideal way to maintain contact with colleagues and customers.
The highly mobile user may find that he or she spends quite a bit of time in taxis, on the train or in airport lounges. WWAN connectivity is particularly beneficial in these situations because the user can establish and even maintain a connection while on the move. This means that he or she can download large files or synchronise email even while driving in a cab and traveling to the hotel. Alternatively, a professional user could spend a train ride catching up on email. Finally, WWAN connection is particularly useful in remote locations where WLAN or hotspot connections are unavailable.

Increasingly, business users need to be able to take advantage of streaming video and audio applications for video conferencing or other applications, such as podcasts for educational purposes. WWAN is great for such applications because the higher speed broadband levels of connectivity support this kind of rich media experience.
Summary

Equipped with a notebook offering seamless connectivity capabilities, the mobile professional benefits from significantly improved access to information, email and other online resources. Broadband WWAN notebooks deliver competitive advantages to business by providing high-speed access on the move for enhanced professional productivity and operational efficiency.