



# High-Speed Mobility: UMTS and HOB Software



## **UMTS – The Mobile Data Highway**

UMTS (Universal Mobile Telecommunications System) is the third generation (3G) mobile wireless communications standard. The main difference between UMTS and its predecessors is the greatly increased data transmission rate. UMTS enables transmission rates of – theoretically – up to 2 Mbit/s. That is 31-times faster than ISDN-devices in a fixed-line network. Faster Internet access, mobile multimedia video- and data-applications, mobile videotelephony, stock market transactions or online-travel reservations, anytime and anywhere: all this and more is made possible by the third generation mobile wireless communications standard. UMTS has two core components: a wireless network and a carrier network. The wireless network consists of the mobile devices and the base station, which communicate with each other via radio transmission. The carrier network connects the base stations with each other and also establishes the connection to an ISDN network and the Internet.

Until now, if you wanted to use mobile data transmission you had to be very patient. Conventional cell-phones, operating with the GSM standard, can only transmit data at a bandwidth of 9.6 kbit/s. New devices achieve rates of 14.4 kbit/s, but that is only just enough to transmit e-mail and browse through simple Internet pages. When it comes to a multimedia website, you really need a lot of patience and, above all, a lot of money, because the GSM price-per-minute is relatively high. New technologies such as HSCSD and GPRS enable you to surf the web faster, but, compared to the theoretically possible UMTS-speeds, this is only a small step.

In Europe, HSCSD (High Speed Circuit Switched Data) is being provided by E-Plus since November 1999 and by Vodafone D2 since October 2000. To increase the transmission capacity in GSM networks, HSCSD uses channel bundling, which enables the concurrent use of four channels to transmit at rates of up to 57.6 kbit/s.

GPRS technology (General Packet Radio Service), available since the year 2000, organizes the data into individual packets and "labels" these packets with additional information. This information informs the network of how the individual packets are related to each other and to whom the message is addressed. This is made possible by IP technology, which is also used for the Internet, and enables data transmission without a direct circuit-switched connection to the receiver. Theoretically, the top speed for GPRS is as high as 171.2 kbit/s, however, data-transmission rates of 40 to 50 kbit/s are currently the best that can be expected.

## **Mobile Data Transmission and HOB**

More powerful and faster technologies for mobile data transmission enable you to more efficiently use HOB products for server-based computing on mobile terminals. Thanks to mobile wireless communication technology, your employees can use HOB products on a laptop or PDA and access central data stocks and applications on various enterprise servers – no matter where they are. The Java technology used with the products HOBLink JWT (RDP) and HOBLink J-Term (3270, 5250, VT, HP700, SINIX 97801, RDP) enables you to use any client platform, providing the mobile user with the greatest flexibility. If the user decides on a Microsoft operating system, then the complete range of HOBLink products are available to him, including the native applications HOBLink Terminal Edition and HOBLink X11.

In today's economy, fast and targeted data access is a decisive factor for a successful sales department. While your employees in the office have convenient and fast access to centrally stored information, your field sales force can also quickly and conveniently access the same data: thanks to mobile information technology. The use of HOB software with UMTS results in many benefits, for example: Your salespeople can more quickly and easily call up the latest product information and prices direct from the central office, enabling them to advise their customers knowledgeably and accurately, without needing to have an available telephone connection. An insurance company's field sales force has access to centrally stored customer data, making it a simple matter to ascertain what contracts, if any, have already been closed with which customers. This enables your salespeople, for example, to create custom-tailored insurance protection for individual customers. Buyers can use the central data to check the current level of stock and use this data to know, and order, exactly what is needed.

The introduction of the Windows Server 2003 has made it possible to, via the RDP protocol, send your clients audio-data and pictures with a 24-bit color-depth. Together with the large UMTS bandwidth, this has created the necessary conditions for using mobile user terminals equipped with HOBLink JWT or HOBLink J-Term to run multimedia applications that are on the Windows Terminal Server. Users with mobile terminals can execute digital video or audio applications without having to have these applications installed on their computers.

The number of mobile Internet users is increasing steadily and will continue to rise rapidly with the introduction of GPRS and UMTS. When IPv6 arrives on the market, the current scarcity of available IP addresses will disappear. This is necessary to handle the expected growth of Internet use. Since HOBLink products are ready-for-IPv6, mobile access to all enterprise

servers from anywhere with the expected performance is guaranteed in the future as well as it is today.

for further information, please contact [marketing@hob.de](mailto:marketing@hob.de) or [www.hob.de](http://www.hob.de).

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