This glossary contains certain definitions of technical terms used in this annual report as they relate to the Group. Some of these definitions may not correspond to standard industry definitions or usage.

"3G"	The third generation of wireless networks. These networks should be able to support peak data
	rates of 144 Kbps at mobile user speeds, 384 Kbps at pedestrian user speeds and 2 Mbps in fixed
	locations (peak speeds), although some initial deployments were configured to support just 64
	Kbps. ITU coordinates 3G standards through its IMT-2000 project and incorporates the key

standards bodies, 3GPP and 3GPP2.

"ADSL" Asymmetrical digital subscriber lines, a method of transmitting data over traditional copper

telephone lines. Data can be downloaded at speeds of up to 1.547 Mbps and uploaded at speeds

of 128 Kbps.

"ASON" Automatic switching optical network, the functions of the control interface of which allow it to

develop an optical communication channel customised to users' needs according to their requests on an unmanned basis and support multi-channel development, capacity expansion,

configurability and network intelligence development.

"CDMA" Code division multiple access, one of the standards for 2G mobile communications. It is a spread-

spectrum technology standard that assigns a pseudo-noise (PN) code to all speech and data bits, sends a scrambled transmission of the encoded speech over the air and reassembles the speech in its original format. By assigning a unique correlating code to each transmitter, several

simultaneous conversations can share the same frequency allocations.

"CDMA2000" A technical specification for the provision of enhanced capacity for voice under the CDMAOne

standard with a maximum data rate of 2Mbps, comprising particular specifications such as 1xRTT (radio transmission technology), 1xEVDO (data only version) and 1xEVDV (voice and data

version).

"DWDM" Dense wavelength division multiplexing, a technology that enables a single optical fiber to carry

multiple data channels (or wavelengths). Commercial DWDM systems now exceed 100 channels.

"DSL" Digital subscriber lines, the collective name given to a number of techniques used for transmitting

digital data over the local loop or subscriber line. These are also known as xDSL. Examples are

ADSL, HDSL, VDSL, MDSL and RDSL.

"GSM" A global system for mobile communications, a digital cellular phone system standard that

originated in Europe. It is deployed in more than 170 countries and uses a TDMA radio

propagation scheme.

"IP" Internet protocol, as more specifically defined in RFC 791, the primary purpose of which is to

define packet architecture and address format.

"NGN" Next generation network, a data packet-based network capable of providing a variety of services

by using multiple broadband transmission technology to support unlimited access to different service providers and of supporting ordinary mobile communication to provide uninterrupted

services to users.

"PHS" Personal handyphone system, a digital mobile telephone system using technology developed

according to Japanese standards and operating on the 1900Mhz frequency.

"softswitch" Abbreviation for software switch, softswitch is an application protocol interface which is used to

link a traditional PSTN to IP networks and manage traffic containing a mixture of voice, fax, data

and video.

"TD-SCDMA" Time division synchronous code division multiple access, a 3G technology developed in China to

support voice and data transmission.

"WCDMA" Wideband CDMA, a UMTS standard for 3G digital mobile networks adopting CDMA technologies

to provide enhanced capacity for voice with a theoretical maximum data rate of 3Mbps.