
DFID Internet Costs Study

Appendix K: Glossary

Admin Lease rate	An owner of capacity in a cable or terrestrial link may offer hard patched capacity, (i.e. not switched) for periodic (quarterly/annually) payments at Admin Lease rate. The rates charged can be based on either a discount on the private leased circuit charge or a fixed charge based on the cost of provision. An Admin Lease only provides the right to route traffic over that capacity for the duration of the lease, it does not confer any ownership rights.
APEC	Asia Pacific Economic Cooperation http://www.apec.org/
APEC TEL	The Telecommunication and Information working group of APEC http://www.apii.or.kr/apec/main.html , soon to be http://www.apectelwg.org
Call Detail Record	A record generated by network software for each call as it is made. Fundamental to the operation of tariffs currently in use for telephone calls. No equivalent for packet switching in IP version 4
Circuit-switched, Circuit switching	A method of moving information through a network from source to destination by allocating a circuit from end to end for the duration of the call. Originally conceived to meet the need for real-time communication between humans. Remains in use today and is optimised for voice traffic. Modern packet switching networks can also handle voice traffic effectively (see IP telephony).
Fixed wireless Internet access	Fixed wireless Internet access is an alternative to a leased line from the customer to the ISP. It is not dial-up telephone access. The technologies are tailored to be Internet access. Some of the technologies correspond to ADSL in performance, so they may outperform even good dial-up connections. The reach is short, kilometres rather than tens of kilometres
GATS	General Agreement on Trade in Services. Building on the GATT, this agreement opens up trade in services amongst members of the WTO. The Fourth Protocol to GATS covers telecom services. See

http://www.wto.org/english/tratop_e/servte_e/tel2_e.htm

GATT	The original General Agreement on Tariffs and Trade was established after the Second World War, with aim of opening up world markets to free trade. Before the WTO (qv) was created, the expression "GATT" was also used informally to describe its ad hoc role as an international organisation, without a proper foundation in international law. GATT has now been modernised and is the key agreement reached by the members of the WTO
Gbit, Gigabit,	1,024 Mbits, but often approximated to 1,000 Mbits
Gbps	Gigabits per second, a measure of data transmission speed, transmission capacity, or "bandwidth"
GMPCS	Global Mobile Personal Communication Services
GSM	Global System for Mobile Communications, digital cellular radio system in widespread use since the early 1990s. See www.gsmworld.com/index1.html
IBP	Internet Backbone Provider. An IBP routes traffic between other service providers (ISPs, TSPs), and interconnects with other IBPs
Internet eXchange Point (IXP)	See NAP
Internet telephony	Use of the internet by end-users to carry telephone calls usually from PC-to-PC or PC-to-phone. Not detectable in the network as anything different from other data in internet packets. Can be done with IPv4 or IPv6. Current interest in internet telephony is primarily driven by the opportunity to get international calls at local rates
IP	Internet Protocol, the method by which data is packetised and addressed for routing through the internet. IP is well suited to the Internet as it is

designed for networks of changing structure.

IP telephony

IP telephony can be used in several situations, e.g. by telcos within their main networks as a means of routing trunk traffic, and by organisations running virtual private networks. May require the end-user to dial a prefix to access the service. IP v6 is designed to include IP telephony.

IP telephony conveys digitised voice telephony signals by using IP packets to carry the encoded signals. Technically this was difficult in the early days of packet switching, because voice signals have to arrive in “real time” in order for a conversation to carry on (this is not required of an e-mail or web service to quite the same degree).

IPLC

International private leased circuit (see private leased circuit). An international circuit leased to one customer for a period of time, during which it is available for carrying calls or packets. It is provided between the two points nominated by the customer. Often ordered and paid for in two parts, relating to the notional half-circuit provided by the operator at each end of the circuit.

IRU

An indefeasible right of use is an arrangement whereby the right to use part of the capacity in a facility, e.g. submarine cable, may be purchased from the owner by payment of a capital sum rather than by a periodic payment as with administration leases. The purchase of an IRU does not confer ownership in the facility purchased but covers use of the capacity for a defined period, usually the estimated life of the facility.

ISDN

Integrated services digital network. ISDN comprises a multi-layered set of ITU-T recommendations for carrying both voice and data traffic in what is essentially a circuit-switched digital telecommunications network. It includes access technology for ISDN basic access (144 kbps, 2 channels, plus a packet switched channel) and ISDN primary rate access (2 Mbps, 30 channels, plus

	timing and signalling channels). It also includes the C7 signalling system for controlling digital telecommunications networks.
ISP	Internet service provider. A company that offers a retail internet service to end-users
ISVR	International simple voice resale. This occurs where a call originates on the public telephone network in one country, is then carried by an IPLC or equivalent, and is terminated via the public telephone network in the remote country, bypassing the international accounting regime.
ITU	International Telecommunication Union
IXP	Internet Exchange Point, see also network access point
Kbit, kilobit	1,024 bits, but often approximated to 1,000 bits
Kbps	Kilobits per second, a measure of data transmission speed, transmission capacity, or "bandwidth"
Mbit, Megabit	1,024 kbits, but often approximated to 1,000 kbits
Mbps	Megabits per second, a measure of data transmission speed, transmission capacity, or "bandwidth"
NAP	Network access point. A facility where three or more ISPs interconnect their networks, usually associated with peering and transit agreements
Packet-switching, packet-switched	A method of moving information through a network from source to destination by splitting each message into packets, addressing each packet, routing the packets using software-controlled routers and reassembling the packets when they reach their destination. Originally conceived to meet the need for communication between computers, which could not achieve best transmission speeds in circuit-switched networks.

Peering agreement	<p>Interconnection between two ISPs' networks that allows customers of one network to exchange traffic with customers directly on the second ISP's network.</p> <p>Peering provides connectivity to hosts whose routes are advertised on the global Internet, and generally permits delivery of packets only to the address space controlled by the networks concerned.</p> <p>Unlike paid transit, peering agreements are made on a settlement-free basis.</p>
Periodic pulse metering	<p>A method of metering calls in units of time (e.g. 3 minutes) and, while the call is held in place, the start of a unit is signalled by a specially designed pulse on the line which does not affect any voice or data being transmitted. As networks modernise, pulse-based metering (where it still exists) is being superseded by time-based metering. As a result, a fixed fee is charged for variable time that depends on the type of call. The first fee is normally charged on answer.</p>
POI	<p>Point of Interconnect. The facility where two or more networks interconnect, for example a NAP or IXP</p>
POP	<p>Point of Presence.</p>
Private line service	<p>See private leased circuit</p>
Private circuit	<p>See private leased circuit</p>
Private leased circuit	<p>A circuit leased to one customer for a period of time, during which it is available for carrying calls or packets</p>
Private network	<p>A network made up of private circuits, usually leased from public telecoms operators, allowing organisations to manage their own telecoms traffic, see also virtual private network</p>
QOS	<p>Quality of service</p>
SMS	<p>Short message service, part of the GSM specification that allows users of mobile phone to</p>

	send and receive text messages of up to 160 characters
TCP	Transmission control protocol, the method by which IP packets are reassembled at the destination address. See also IP. Often referred to together as TCP/IP
Transit agreement	One ISP pays the other (usually an IBP) to carry its traffic. The point of interconnect handles all Internet traffic that needs routing to or from the paying ISP, which could be coming onto the paying provider's network from anywhere in the world. Transit agreements generally guarantee delivery to the entire global Internet address space.
TSP	Transit Service Provider. An ISP that provides a wholesale service to other ISPs by means of transit agreements.
USO	Universal Service Obligation
VPN	Virtual Private Network. See private network. A VPN may function outwardly as a private network in that the links are available from e.g. a public telecoms operator as agreed; the links are not leased as physical circuits but as commitments of availability of bandwidth - they may be implemented by packet switching rather than circuit switching
Voice over internet	See internet telephony
Voice over IP	See IP telephony
VSAT	Very Small Aperture Terminal. A VSAT satellite communications system consists of one master earth station and more than one two-way satellite terminals
WAP	Wireless application protocol, a secure protocol that enables users of compatible radio equipment to access information, for example on the World Wide Web

WLL, WiLL	Wireless in Local Loop, a generic term for radio systems which serve as a substitute for the fixed, wired connection between the customer's premises and the local telephone exchange
WTO	World Trade Organization, see http://www.wto.org