

Appendice A

PRINCIPALI CODIFICHE

Questa appendice riporta alcune tabelle contenenti i principali identificativi di protocollo che è comune trovare sulle LAN. Essa è principalmente ricavata dallo standard RFC 1340 "Assigned Number". Molto spesso esistono incertezze o ambiguità su alcune assegnazioni e queste vengono evidenziate con il simbolo "?". Inoltre il simbolo "x" indica una qualsiasi cifra esadecimale.

A.1 IEEE 802.2 SAP

Sono i valori che si possono trovare contenuti nei campi DSAP e SSAP del pacchetto LLC. I SAP LLC sono grandi un byte e hanno due bit con un significato particolare, come descritto in figura 5.9. Esistono due tipi di LLC SAP, quelli definiti dall'IEEE e quelli assegnati localmente.

A.1.1 LLC SAP definiti dall'IEEE

Per ottenere l'assegnazione di un LLC SAP standard occorre contattare lo IEEE Standards Office, 345 East 47th Street, New York, N.Y. 10017, USA, Attn: Vince Condello. Phone: (212) 705-7092.

Quelli ufficialmente definiti sono elencati in tabella A.1.

Esadecimale	Significato
00	Null LSAP
02	Individual LLC Sublayer Management
x2	Network Management Function
03	Group LLC Sublayer Management
x6	National Body Standard
06	DOD IP
0E	PROWAY-LAN
42	IEEE 802.1D (MAC bridge)
4E	EIA-RS 511
5E	ISI IP
8E	PROWAY-LAN
AA	SNAP
FE	ISO CLNS
FF	Global DSAP

Tab. A.1 - LLC SAP definiti dall'IEEE.

A.1.2 LLC SAP definiti dagli utenti

La tabella A.2 riporta alcuni LLC SAP definiti da IBM.

Esadecimale	Significato
04	SNA Path Control
05	SNA Path Control Group
F0	IBM Netbios
F4	LAN Management Individual
F5	LAN Management Group

Tab. A.2 - LLC SAP definiti dagli utenti.

A.2 ETHERNET PROTOCOL TYPE

Sono assegnati dalla Xerox. Se avete necessità di ottenere un Protocol Type ufficiale per un vostro protocollo proprietario contattate la Xerox Corporation, Xerox Systems Institute, 475 Oakmead Parkway, Sunnyvale, CA 94086, USA, Attn: Ms. Fonda Pallone, Phone (415) 813-7164. La tabella A.3 riporta una lista aggiornata a Luglio 1992.

0000-05DC	IEEE802.3 Length Field	7034	Cabletron
0600	XEROX NS IDP	8003	Cronus VLN
0800	DOD IP	8004	Cronus Direct
0801	X.75 Internet	8005	HP Probe
0802	NBS Internet	8006	Nestar
0803	ECMA Internet	8008	AT&T
0804	Chaosnet	8010	Excelan
0805	X.25 Level 3	8013	SGI diagnostics
0806	ARP	8014	SGI network games
0807	XNS Compatability	8015	SGI reserved
081C	Symbolics Private	8016	SGI bounce server
0888	Xyplex	8019	Apollo Computers
0900	Ungermann-Bass net debugger	802E	Tymshare
0A00	Xerox IEEE802.3 PUP	802F	Tigan Inc.
0A01	PUP Addr Trans	8035	Reverse ARP
0BAD	Banyan Systems	8036	Aeonic Systems
1000	Berkeley Trailer nego	8038	DEC LANBridge
1001-100F	Berkeley Trailer enca	8039	DEC Unassigned
1600	Valid Systems	803D	DEC Ethernet Encryption
4242	PCS Basic Block Proto	803E	DEC Unassigned
5208	BBN Simnet	803F	DEC LAN Traffic Monitor
6000	DEC Unassigned (Exp.)	8040-8042	DEC Unassigned
6001	DEC MOP Dump/Load	8044	Planning Research Corp.
6002	DEC MOP Remote Consol	8046	AT&T
6003	DEC DECNET Phase IV R	8047	AT&T
6004	DEC LAT	8049	ExperData
6005	DEC Diagnostic Protocol	805B	Stanford V Kernel experimental
6006	DEC Customer Protocol	805C	Stanford V Kernel production
6007	DEC LAVC SCA	805D	Evans & Sutherland
6008-6009	DEC Unassigned	8060	Little Machines
6010	3Com Corporation	8062	Counterpoint Computers
7000	Ungermann-Bass download	8065-8066	Univ. of Mass. @ Amherst
7002	Ungermann-Bass dia/loop	8067	Veeco Integrated Auto
7020-7029	LRT	8068	General Dynamics
7030	Proteon	8069	AT&T

806A	Autophon	80D5	IBM SNA Service on Et
806C	ComDesign	80DD	Varian Associates
806D	Computgraphic Corp.	80DE-80DF	Integrated Solutions TRFS
806E-8077	Landmark Graphics Corp.	80E0-80E3	Allen-Bradley
807A	Matra	80E4-80F0	Datability
807B	Dansk Data Elektronik	80F2	Retix
807C	Merit Internodal	80F3	AppleTalk AARP (Kinet
807D-807F	Vitalink Communications	80F4-80F5	Kinetics
8080	Vitalink TransLAN III	80F7	Apollo Computer
8081-8083	Counterpoint Computers	80FF-8103	Wellfleet Communications
809B	Appletalk	8107-8109	Symbolics Private
809C-809E	Datability	8130	Waterloo Microsystems
809F	Spider Systems Ltd.	8131	VG Laboratory Systems
80A3	Nixdorf Computers	8137-8138	Novell Inc.
80A4-80B3	Siemens Gammasonics Inc.	8139-813D	KTI
80C0-80C3	DCA Data Exchange Cluster	814C	SNMP
80C6	Pacer Software	9000	Loopback
80C7	Applitek Corporation	9001	3Com(Bridge) XNS System Mangement
80C8-80CC	Intergraph Corporation	9002	3Com(Bridge) TCP-IP System Management
80CD-80CE	Harris Corporation	9003	3Com(Bridge) loop detetction
80CF-80D2	Taylor Instrument	FF00	BBN VITAL-LanBridge cache
80D3-80D4	Rosemount Corporation		

Tab. A.3 - Ethernet Protocol Type.

A.3 OUI: ORGANIZATION UNIQUE IDENTIFIER

Gli OUI detti anche "Vendor Code" sono i lotti di indirizzi MAC 802 assegnati dalla IEEE. Il formato di un indirizzo MAC è su 48 bit di cui i primi 24 (6 cifre esadecimali) rappresentano l'OUI.

I due bit meno significativi del primo byte hanno un significato particolare (si veda il paragrafo 5.6.7).

Gli OUI si richiedono all'IEEE Standards Office, 345 East 47th Street, New York, N.Y. 10017, USA, Attn: Vince Condello. Phone: (212) 705-7092.

Quelli attualmente assegnati sono riportati in tabella A.4.

00-00-0C	Cisco	
00-00-0F	NeXT	
00-00-10	Sytek	
00-00-1D	Cabletron	
00-00-20	DIAB (Data Intdustrier AB)	
00-00-22	Visual Technology	
00-00-2A	TRW	
00-00-5A	S & Koch	
00-00-5E	IANA	
00-00-65	Network General	
00-00-6B	MIPS	
00-00-77	MIPS	
00-00-7A	Ardent	
00-00-89	Cayman Systems	Gatorbox
00-00-93	Proteon	
00-00-9F	Ameristar Technology	
00-00-A2	Wellfleet	
00-00-A3	Network Application Technology	
00-00-A6	Network General	internal use
00-00-A7	NCD	X-terminals
00-00-A9	Network Systems	
00-00-AA	Xerox	Xerox machines
00-00-B3	CIMLinc	
00-00-B7	Dove	Fastnet
00-00-BC	Allen-Bradley	
00-00-C0	Western Digital	
00-00-C6	HP	Intelligent Networks Operation
00-00-C8	Altos	
00-00-C9	Emulex	Terminal Servers
00-00-D7	Dartmouth College	NED Router
00-00-D8	3Com? Novell? PS/2	
00-00-DD	Gould	
00-00-DE	Unigraph	
00-00-E2	Acer Counterpoint	
00-00-EF	Alantec	
00-00-FD	High Level Hardware	Orion (UK)
00-01-02	BBN	internal usage
00-17-00	Kabel	
00-80-2D	Xylogics Inc.	Annex terminal servers
00-80-8C	Frontier Software Development	
00-80-C2	IEEE 802.1 Committee	
00-80-D3	Shiva	
00-AA-00	Intel	

00-DD-00	Ungermann-Bass	
00-DD-01	Ungermann-Bass	
02-07-01	Racal InterLan	
02-04-06	BBN	internal usage
02-60-86	Satelcom MegaPac (UK)	
02-60-8C	3Com	IBM PC; Imagen; Valid; Cisco
02-CF-1F	CMC	Masscomp; Silicon Graphics; Prime EXL
08-00-02	3Com	Formerly Bridge
08-00-03	Advanced Computer Communications	
08-00-05	Symbolics	Symbolics LISP machines
08-00-07	Apple	
08-00-08	BBN	
08-00-09	Hewlett-Packard	
08-00-0A	Nestar Systems	
08-00-0B	Unisys	
08-00-11	Tektronix	Inc.
08-00-14	Excelan	BBN Butterfly, Masscomp, Silicon Graphics
08-00-17	NSC	
08-00-1A	Data General	
08-00-1B	Data General	
08-00-1E	Apollo	
08-00-20	Sun	Sun machines
08-00-22	NBI	
08-00-25	CDC	
08-00-26	Norsk Data	
08-00-27	PCS Computer Systems	
08-00-28	TI	Explorer
08-00-2B	DEC	
08-00-2E	Metaphor	
08-00-2F	Prime Computer	Prime 50-Series
08-00-36	Intergraph	CAE stations
08-00-37	Fujitsu-Xerox	
08-00-38	Bull	
08-00-39	Spider Systems	
08-00-41	Digital Comm. Assoc.	
08-00-46	Sony	
08-00-47	Sequent	
08-00-49	Univation	
08-00-4C	Encore	
08-00-4E	BICC	
08-00-56	Stanford University	
08-00-5A	IBM	
08-00-67	Comdesign	
08-00-68	Ridge	

08-00-69	Silicon Graphics	
08-00-6E	Excelan	
08-00-75	Danish Data Elektronik	
08-00-7C	Vitalink	TransLAN III
08-00-80	XIOS	
08-00-86	Imagen/QMS	
08-00-87	Xyplex	terminal servers
08-00-89	Kinetics	AppleTalk-Ethernet interface
08-00-8B	Pyramid	
08-00-8D	XyVision	XyVision machines
08-00-90	Retix Inc	Bridges
48-44-53	HDS ???	
80-00-10	AT&T	
AA-00-00	DEC	obsolete
AA-00-01	DEC	obsolete
AA-00-02	DEC	obsolete
AA-00-03	DEC	Global physical address for some DEC machines
AA-00-04	DEC	Local logical address for systems running DECNET

Tab. A.4 - Organization Unique Identifier.

A.4 INDIRIZZI MAC MULTICAST

La tabella A.5 contiene indirizzi di multicast assegnati a vari enti. La seconda colonna identifica, se esiste, il protocol type che utilizza il multicast.

01-00-5E-00-00-00	0800	Internet Multicast (RFC-1112), sino a
01-00-5E-7F-FF-FF	0800	
01-00-5E-80-00-00		Internet reserved by IANA, sino a
01-00-5E-FF-FF-FF		
01-80-C2-00-00-00		802 Spanning tree for bridges
09-00-02-04-00-01?	8080?	Vitalink printer
09-00-02-04-00-02?	8080?	Vitalink management
09-00-09-00-00-01	8005	HP Probe
09-00-09-00-00-01		HP Probe
09-00-09-00-00-04	8005?	HP DTC
09-00-1E-00-00-00	8019?	Apollo DOMAIN

09-00-2B-00-00-00	6009?	DEC MUMPS?
09-00-2B-00-00-01	8039?	DEC DSM/DTP?
09-00-2B-00-00-02	803B?	DEC VAXELN?
09-00-2B-00-00-03	8038	DEC Lanbridge Traffic Monitor (LTM)
09-00-2B-00-00-04		DEC MAP End System Hello
09-00-2B-00-00-05		DEC MAP Intermediate System Hello
09-00-2B-00-00-06	803D?	DEC CSMA/CD Encryption?
09-00-2B-00-00-07	8040?	DEC NetBios Emulator?
09-00-2B-00-00-0F	6004	DEC Local Area Transport (LAT)
09-00-2B-00-00-1x		DEC Experimental
09-00-2B-01-00-00	8038	DEC LanBridge Copy packets (All bridges)
09-00-2B-01-00-01	8038	DEC LanBridge Hello packets (All local bridges)
09-00-2B-02-00-00		DEC DNA Lev. 2 Routing Layer routers?
09-00-2B-02-01-00	803C?	DEC DNA Naming Service Advertisement?
09-00-2B-02-01-01	803C?	DEC DNA Naming Service Solicitation?
09-00-2B-02-01-02	803E?	DEC DNA Time Service?
09-00-2B-03-xx-xx		DEC default filtering by bridges?
09-00-2B-04-00-00	8041?	DEC Local Area Sys. Transport (LAST)?
09-00-2B-23-00-00	803A?	DEC Argonaut Console?
09-00-4E-00-00-02	8137?	Novell IPX
09-00-56-00-00-00		Stanford reserved, sino a
09-00-56-FE-FF-FF		
09-00-56-FF-00-00	805C	Stanford V Kernel, version 6.0, sino a
09-00-56-FF-FF-FF		
09-00-77-00-00-01		Retix spanning tree bridges
09-00-7C-02-00-05	8080?	Vitalink diagnostics
09-00-7C-05-00-01	8080?	Vitalink gateway?
0D-1E-15-BA-DD-06		HP
AB-00-00-01-00-00	6001	DEC Maintenance Operation Protocol (MOP)
09-00-09-00-00-01		HP Probe
09-00-09-00-00-04	8005?	HP DTC
09-00-1E-00-00-00	8019?	Apollo DOMAIN
09-00-2B-00-00-00	6009?	DEC MUMPS?
09-00-2B-00-00-01	8039?	DEC DSM/DTP?
09-00-2B-00-00-02	803B?	DEC VAXELN?
09-00-2B-00-00-03	8038	DEC Lanbridge Traffic Monitor (LTM)

09-00-2B-00-00-04		DEC MAP End System Hello
09-00-2B-00-00-05		DEC MAP Intermediate System Hello
09-00-2B-00-00-06	803D?	DEC CSMA/CD Encryption?
09-00-2B-00-00-07	8040?	DEC NetBios Emulator?
09-00-2B-00-00-0F	6004	DEC Local Area Transport (LAT)
09-00-2B-00-00-1x		DEC Experimental
09-00-2B-01-00-00	8038	DEC LanBridge Copy packets (All bridges)
09-00-2B-01-00-01	8038	DEC LanBridge Hello packets (All local bridges)
09-00-2B-02-00-00		DEC DNA Lev. 2 Routing Layer routers?
09-00-2B-02-01-00	803C?	DEC DNA Naming Service Advertisement?
09-00-2B-02-01-01	803C?	DEC DNA Naming Service Solicitation?
09-00-2B-02-01-02	803E?	DEC DNA Time Service?
09-00-2B-03-xx-xx		DEC default filtering by bridges?
09-00-2B-04-00-00	8041?	DEC Local Area Sys. Transport (LAST)?
09-00-2B-23-00-00	803A?	DEC Argonaut Console?
09-00-4E-00-00-02	8137?	Novell IPX
09-00-56-00-00-00		Stanford reserved, sino a
09-00-56-FE-FF-FF		
09-00-56-FF-00-00	805C	Stanford V Kernel, version 6.0, sino a
09-00-56-FF-FF-FF		
09-00-77-00-00-01		Retix spanning tree bridges
09-00-7C-02-00-05	8080?	Vitalink diagnostics
09-00-7C-05-00-01	8080?	Vitalink gateway?
0D-1E-15-BA-DD-06		HP
AB-00-00-01-00-00	6001	DEC Maintenance Operation Protocol (MOP)
AB-00-00-02-00-00	6002	DEC MOP Remote Console
AB-00-00-03-00-00	6003	DECNET Phase IV end node Hello
AB-00-00-04-00-00	6003	DECNET Phase IV Router Hello packets
AB-00-00-05-00-00		Reserved DEC sino a
AB-00-03-FF-FF-FF		
AB-00-03-00-00-00	6004	DEC Local Area Transport (LAT) - old
AB-00-04-00-xx-xx		Reserved DEC customer private use
AB-00-04-01-xx-yy	6007	DEC Local Area VAX Cluster groups
CF-00-00-00-00-00	9000	Ethernet Configuration Test protocol (Loopback)

Tab. A.5 - MAC Multicast.

A.5 INDIRIZZI IP

Ci sono cinque classi di indirizzi IP: dalla classe A alla classe E. La classe E è riservata ad usi sperimentali. Ci sono alcuni casi particolari per gli indirizzi IP che sono discussi nel seguito. La notazione usata è:

IP-address ::= { <Network-number>, <Host-number> }
oppure

IP-address ::= { <Network-number>, <Subnet-number>, <Host-number> }.

Inoltre il valore "-1" indica un campo di tutti uno.

I casi speciali sono riportati nella tabella A.6.

{0,0}	Questo calcolatore su questa Net
{0, <Host-num>}	Questo calcolatore su questa Net
{ -1, -1}	Broadcast limitato alla (Sub-)Net mittente
{<Network-num>, -1}	Broadcast verso una data Net
{<Network-num>, <Subnet-num>, -1}	Broadcast verso una data Subnet
{<Network-num>, -1, -1}	Broadcast verso tutte le subnet di una net
{127, <any>}	Internal host loopback address.

Tab. A.6 - Indirizzi IP speciali.

A.6 INTERNET MULTICAST ADDRESSES

Lo standard RFC 1112 descrive le estensioni per l'implementazione del multicasting su IP.

Questi indirizzi sono elencati nel Domain Name Service sotto MCAST.NET and 224.IN-ADDR.ARPA.

Gli indirizzi considerati sono riportati nella tabella A.7.

224.0.0.0	Reserved
224.0.0.1	All Systems on this Subnet
224.0.0.2	All Routers on this Subnet
224.0.0.3	Unassigned
224.0.0.4	DVMRP Routers
224.0.0.5	OSPF All Routers
224.0.0.6	OSPF Designated Routers
224.0.0.7	ST Routers
224.0.0.8	ST Hosts
224.0.0.9	RIP2 Routers
224.0.0.10-224.0.0.255	Unassigned
224.0.1.0	VMTP Managers Group
224.0.1.1	NTP Network Time Protocol
224.0.1.2	SGI-Dogfight
224.0.1.3	Rwhod
224.0.1.4	VNP
224.0.1.5	Artificial Horizons - Aviator
224.0.1.6	NSS - Name Service Server
224.0.1.7	AUDIONEWS - Audio News Multicast
224.0.1.8	SUN NIS+ Information Service
224.0.1.9	MTP Multicast Transport Protocol
224.0.1.10-224.0.1.255	Unassigned
224.0.2.1	"rwho" Group (BSD) (unofficial)
224.0.2.2	SUN RPC PMAPPROC_CALLIT
224.0.3.0-224.0.3.255	RFE Generic Service
224.0.4.0-224.0.4.255	RFE Individual Conferences
224.1.0.0-224.1.255.255	ST Multicast Groups
224.2.0.0-224.2.255.255	Multimedia Conference Calls
232.x.x.x	VMTP transient groups

Tab. A.7 - Indirizzi Internet Multicast.

A.7 IP PROTOCOL NUMBERS

Nel protocollo IP esiste un campo detto "Protocol" per identificare quale protocollo è contenuto nel campo INFO del pacchetto IP.

I valori assegnati a tale campo sono riportati nella tabella A.8.

0		Reserved
1	ICMP	Internet Control Message
2	IGMP	Internet Group Management
3	GGP	Gateway-to-Gateway
4	IP	IP in IP (encapsulation)
5	ST	Stream
6	TCP	Transmission Control
7	UCL	UCL
8	EGP	Exterior Gateway Protocol
9	IGP	any private interior gateway
10	RCC-MON	BBN RCC Monitoring
11	NVP-II	Network Voice Protocol
12	PUP	PUP
13	ARGUS	ARGUS
14	EMCON	EMCON
15	XNET	Cross Net Debugger
16	CHAOS	Chaos
17	UDP	User Datagram Protocol
18	MUX	Multiplexing
19	DCN-MEAS	DCN Measurement Subsystems
20	HMP	Host Monitoring
21	PRM	Packet Radio Measurement
22	XNS-IDP	XEROX NS IDP
23	TRUNK-1	Trunk-1
24	TRUNK-2	Trunk-2
25	LEAF-1	Leaf-1
26	LEAF-2	Leaf-2
27	RDP	Reliable Data Protocol
28	IRTP	Internet Reliable Transaction
29	ISO-TP4	ISO Transport Protocol Class 4
30	NETBLT	Bulk Data Transfer Protocol
31	MFE-NSP	MFE Network Services Protocol
32	MERIT-INP	MERIT Internodal Protocol
33	SEP	Sequential Exchange Protocol
34	3PC	Third Party Connect Protocol
35	IDPR	Inter-Domain Policy Routing Protocol
36	XTP	XTP
37	DDP	Datagram Delivery Protocol
38	IDPR-CMTP	IDPR Control Message Transport Protol
39	TP++	TP++ Transport Protocol
40	IL	IL Transport Protocol
41-60		Unassigned
61		any host internal protocol

62	CFTP	CFTP
63		any local network
64	SAT-EXPAK	SATNET and Backroom EXPAK
65	KRYPTOLAN	Kryptolan
66	RVD	MIT Remote Virtual Disk Protocol
67	IPPC	Internet Pluribus Packet Core
68		any distributed file system
69	SAT-MON	SATNET Monitoring
70	VISA	VISA Protocol
71	IPCV	Internet Packet Core Utility
72	CPNX	Computer Protocol Network Executive
73	CPHB	Computer Protocol Heart Beat
74	WSN	Wang Span Network
75	PVP	Packet Video Protocol
76	BR-SAT-MON	Backroom SATNET Monitoring
77	SUN-ND	SUN ND PROTOCOL-Temporary
78	WB-MON	WIDEBAND Monitoring
79	WB-EXPAK	WIDEBAND EXPAK
80	ISO-IP	ISO Internet Protocol
81	VMTP	VMTP
82	SECURE-VMTP	SECURE-VMTP
83	VINES	VINES
84	TTP	TTP
85	NSFNET-IGP	NSFNET-IGP
86	DGP	Dissimilar Gateway Protocol
87	TCF	TCF
88	IGRP	IGRP
89	OSPF	OSPF
90	Sprite-RPC	Sprite RPC Protocol
91	LARP	Locus Address Resolution Protocol
92	MTP	Multicast Transport Protocol
93	AX.25	AX.25 Frames
94	IPIP	IP-within-IP Encapsulation Protocol
95	MICP	Mobile Internetworking Control Pro.
96	AES-SP3-D	AES Security Protocol 3-D
97	ETHERIP	Ethernet-within-IP Encapsulation
98	ENCAP	Encapsulation Header
99-254		Unassigned
255		Reserved

Tab. A.8 - Possibili valori del campo IP Protocol.

A.8 PPP DLL PROTOCOL NUMBER

Il protocollo PPP (Point-to-Point Protocol) contiene un Protocol Field lungo 16 bit utilizzato per identificare a quale protocollo appartiene il pacchetto incapsulato.

I valori nell'intervallo da 0xxx a 3xxx identificano il protocollo di livello network, mentre i valori da 8xxx a Bxxx identificano i datagram appartenenti al Network Control Protocol (NCP) associato, se esistente.

La tabella A.9 riporta i valori attualmente assegnati.

0001 to 001f	reserved (transparency inefficient)
0021	Internet Protocol
0023	OSI Network Layer
0025	Xerox NS IDP
0027	DECnet Phase IV
0029	Appletalk
002b	Novell IPX
002d	Van Jacobson Compressed TCP/IP
002f	Van Jacobson Uncompressed TCP/IP
0031	Bridging PDU
0033	Stream Protocol (ST-II)
0035	Banyan Vines
0037	reserved (until 1993)
00ff	reserved (compression inefficient)
0201	802.1d Hello Packets
0231	Luxcom
0233	Sigma Network Systems
8021	Internet Protocol Control Protocol
8023	OSI Network Layer Control Protocol
8025	Xerox NS IDP Control Protocol
8027	DECnet Phase IV Control Protocol
8029	Appletalk Control Protocol
802b	Novell IPX Control Protocol
802d	Reserved
802f	Reserved
8031	Bridging NCP
8033	Stream Protocol Control Protocol
8035	Banyan Vines Control Protocol
8037	reserved till 1993
80ff	reserved (compression inefficient)
c021	Link Control Protocol
c023	Password Authentication Protocol
c025	Link Quality Report
c223	Challenge Handshake Authentication Protocol

Tab. A.9 - PPP DLL Protocol Number.

A.9 ADDRESS RESOLUTION PROTOCOL

Il protocollo ARP ha diversi parametri di cui i due principali sono: Operation Code (tab. A.10) e l'Hardware Type (tab. A.11).

1	REQUEST
2	REPLY

Tab. A.10 - ARP Operation Code.

1	Ethernet (10Mb)
2	Experimental Ethernet (3Mb)
3	Amateur Radio AX.25
4	Proteon ProNET Token Ring
5	Chaos
6	IEEE 802 Networks
7	ARCNET
8	Hyperchannel
9	Lanstar
10	Autonet Short Address
11	LocalTalk
12	LocalNet (IBM PCNet or SYTEK LocalNET)
13	Ultra link
14	SMDs
15	Frame Relay
16	Asynchronous Transmission Mode (ATM)

Tab. A.11 - ARP Hardware Type.

A.10 X.25 TYPE NUMBERS

IL CCITT ha definito i due bit più significativi del campo "Call User Data" nel modo descritto in tabella A.12.

00	Used for other CCITT recommendations (such as X.29)
01	Reserved for use by "national" administrative authorities
10	Reserved for use by international administrative authorities
11	Reserved for arbitrary use between consenting DTEs

Tab. A.12 - Bit MSB di CUD.

Ha inoltre definito i valori di CUD riportati in tabella A.13.

01	PAD
C5	Blacker front-end descr dev
CC	IP
CD	ISO-IP
DD	Network Monitoring

Tab. A.13 - Valori di CUD.

BIBLIOGRAFIA

- [1] J. Reynolds, J. Postel, "RFC 1340: Assigned Nuber", July 1992.
- [2] IBM, "Token-Ring Network: Architecture Reference", Pub. No. SC30-3374-01, second edition, August 1987.