ANY – MPLS NETWORK INTERWORKING in ITU-T SG13

(Pseudo Wire Emulation)

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ATM-MPLS Network Interworking

Provides network interworking between ATM cells or AAL5 frames with MPLS:

- Cell mode Encapsulations, two types:
 - One-to-one
 - N-to-one

Applicable to both PVCs and SVCs

- Frame mode encapsulation, two types:
 - AAL5 PDU
 - AAL5 SDU



Illustration of One-to-one mode



Illustration of N-to-one mode (VCCs & VPCs don't get mixed into one interworking LSP)



ATM-MPLS interworking functional groups (cell mode)

0) 1										2									3								
0 1	23	4	5	6	7 8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
MPLS transport label= PSN Transport Header in PWE3																												
Interworking label=Pseudo Wire Header in PWE3																												
Res		Ler	ngth	า		Sequence Number										V	Re	es		PTI		С						
ATM Payload (48 octets)																												

One-to-one mode encapsulation format

0	1	2	3								
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5	6 7 8 9 0 1 2 3 4 5 6 7	890	1							
MPLS transport label= PSN Transport Header in PWE3											
Interworking label=Pseudo Wire Header in PWE3											
Reserved	Length	ength Sequence number									
VPI		VCI									
ATM Payload (48 octets)											
VPI		VCI									
ATM Payload (48 octets)											
N to one made an encludion formet											

N-to-one mode encapsulation format

ITU-T work on Voice Services over MPLS

- Three possible technical approaches are currently under discussion for transport of Voice Services over MPLS
 - Voice over AAL2 over MPLS
 - I.366.2 Voice Trunking Format over MPLS (based on ITU-T Recommendation I.366.2 adapted for MPLS)
 - Voice over IP over MPLS
 - Voice (directly) over MPLS (MPLS Forum IA 1.0)
- Draft Recommendation Y.1261 (formerly Y.vompls) has been just consented (1st step of approval process) in Geneva (2 weeks ago)
 Provides service requirements and architecture for transport of voice services over MPLS (no choice among possible approaches)
- More progress on Y.vsmpls (formerly Y.protocol X)

All referenced ITU-T documents can be found at:

http://www.itu.int/itu-t/studygroups/com13/ip/sg13-ietf-ftp.html

Please note that to have access to this site you should register with ITU-T.