

PE-MTU signaling

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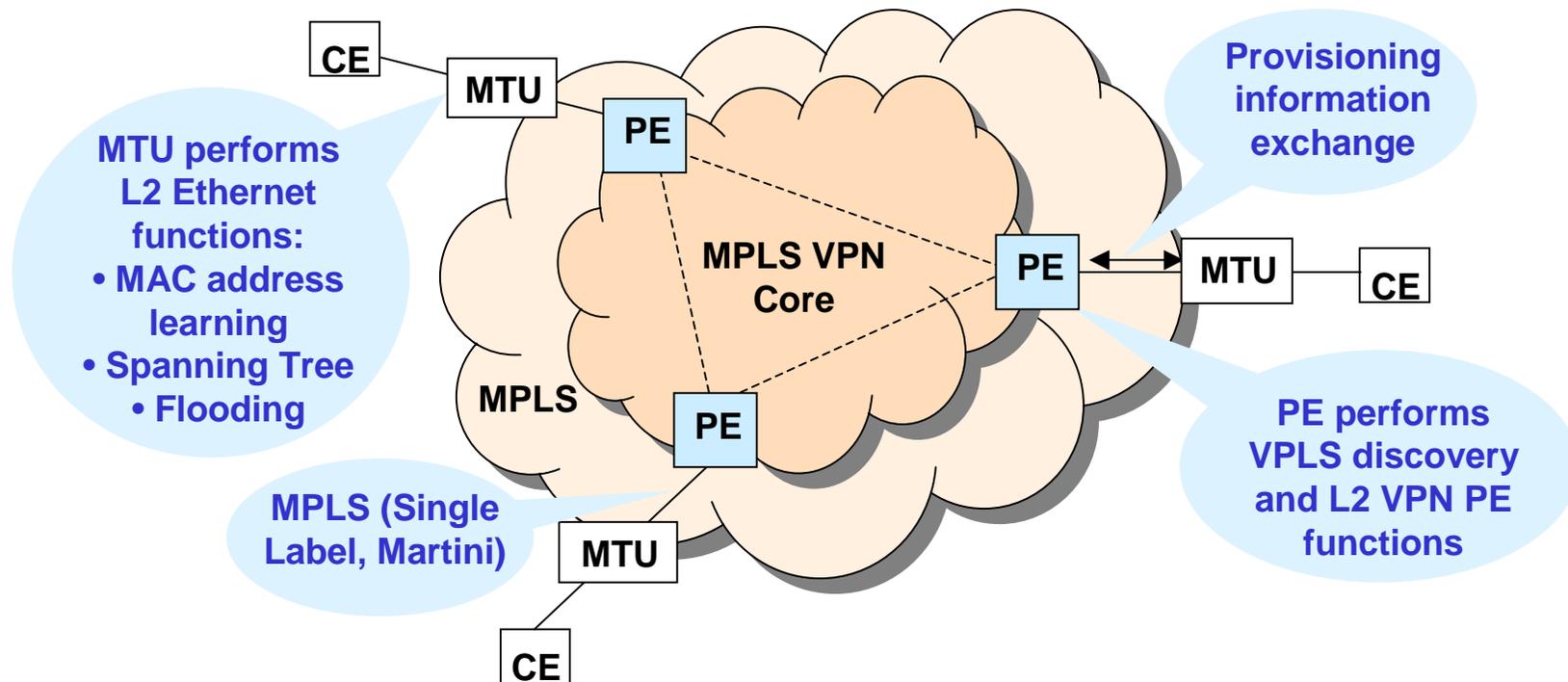
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Problem Scope & Solution

- D VPLS & H VPLS require PE <-> MTU to exchange label and configuration information
- Draft specifies details for LDP as signaling protocol



Information Elements

- MTU FEC element to carry VPLS Id

MTU Type (8)	H(1)	Reserved(7)	Site Identifier(16)
VPLS Identifier (Most significant 4-bytes)			
VPLS Identifier (Least significant 4-bytes)			

- Label TLV to optionally contain Label range where each label denote remote site

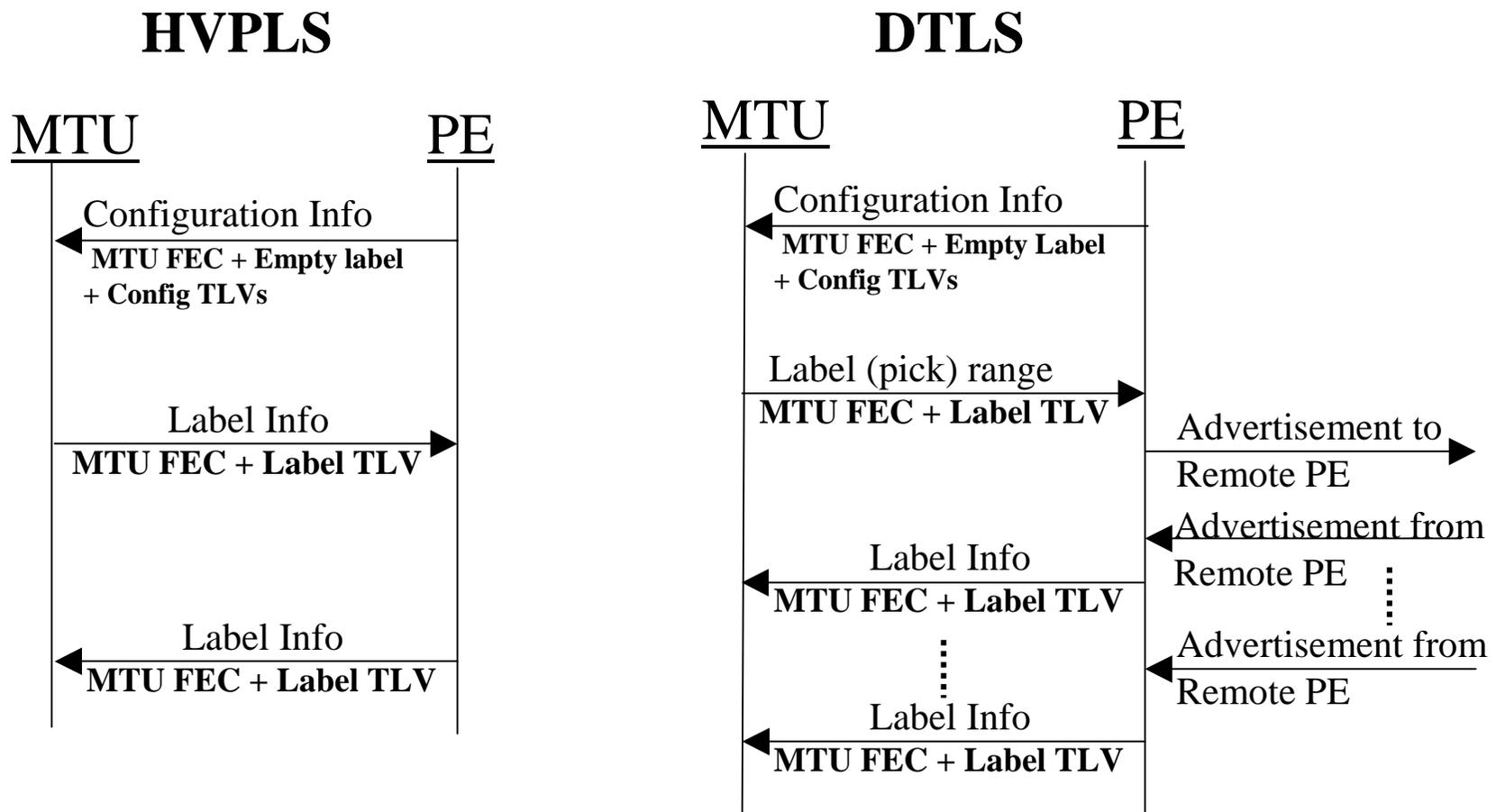
U	F	Label Type	Length
Label Base			
Optional	Remote Site Type	Length=2	Remote Site ID Base
	Label Size Type	Length=2	Label Size

Information Elements

- Configuration TLV - Hierarchical

	U	F	Config Type	Length = Total	
	U		Port Config Type	Length	
			Reserved	MTU Unit#	MTU Slot#
			MTU Port#	MTU Channel#	
Optional	U		Logical Port Config Type	Length	
	T		Customer Delimiting Tag (Ex. VLAN Tag)		
Optional	U		Logical Port Bandwidth Type	Length	
			Bandwidth Value		
Additional Port Configuration TLVs					

Information Exchange



Operations

- MTU receive MTU FEC + Config info
 - Create a Logical Bridge instance and add interfaces into this logical bridge
 - Provide Label range to PE
- PE send/receive VPLS info from Remote PE
 - Send corresponding Labels to MTU
- MTU receive Label information from PE
 - Create logical interface for each label and add it to the logical bridge instance identified by MTU FEC
 - Start modified learning/forwarding on logical interface

Pending Issues

- DTLS uses Labels in ‘bidirectional’ fashion while LDP traditionally distributes two unidirectional labels. Can bidirectionality requirement be dropped from DTLS?

Conclusion

- Draft addresses important requirement for Decoupled VPLS and Hierarchical VPLS models
- Draft should be adopted as work item