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DCBX – building on Joe's proposal

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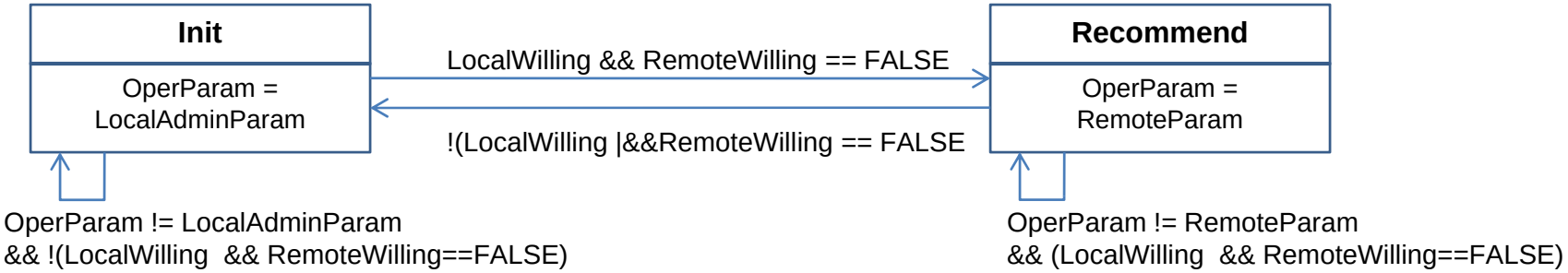
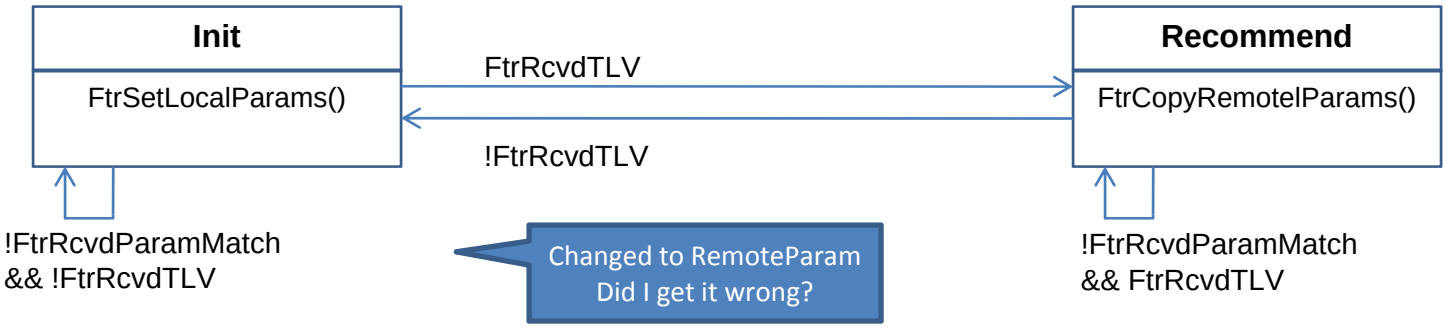
DCBX Proposal from Joe

- **Proposal from Joe Pelissier:**
  - http://www.ieee802.org/1/files/public/docs2009/az-pelissier-dcbx-framework-0309.pdf
- **Works well**
- **Few suggestions**
  - Editorial generalizations
    - to allow definition of single SM in 802.1Qaz
    - 802.1Qbb (PFC) and 802.1Qaz (ETS) can provide functions that are invoked in common state machine
  - Adding “Ready” state – important for End Stations
    - Need to decide when DCB feature can provide indication to applications (e.g. FCoE, iSCSI) that link provides desired characteristics and on which priorities etc.

Editorial generalization



- **FeatureRcvdTLV:**
  - Rcvd TLV from peer,
    - (LocalWilling && RemoteWilling == FALSE) for symmetric TLV: defined in 802.1Qbb
    - (LocalWilling && RV == TRUE) for asymmetric TLV: Defined in 802.1Qaz
- **FtrRcvdParamMatch:** Rcvd TLV from peer, OperParam == RemoteParam
- **OperParam = LocalAdminParam: FeatureSetLocalParams:** both in 802.1Qbb and az
- **OperParam = RemoteParam: FeatureCopyRemoteParams:** both in 802.1Qbb and az



Need “Ready” state

- “Ready”: When received acceptable configuration from peer
- “Both Ready” : When confirmed that peer is “Ready” too
- When end station reaches “Both Ready” – it can announce availability of “reliable link” for ULP (e.g. PFC agreement can start FCOE functionality)

Proposed TLV Change

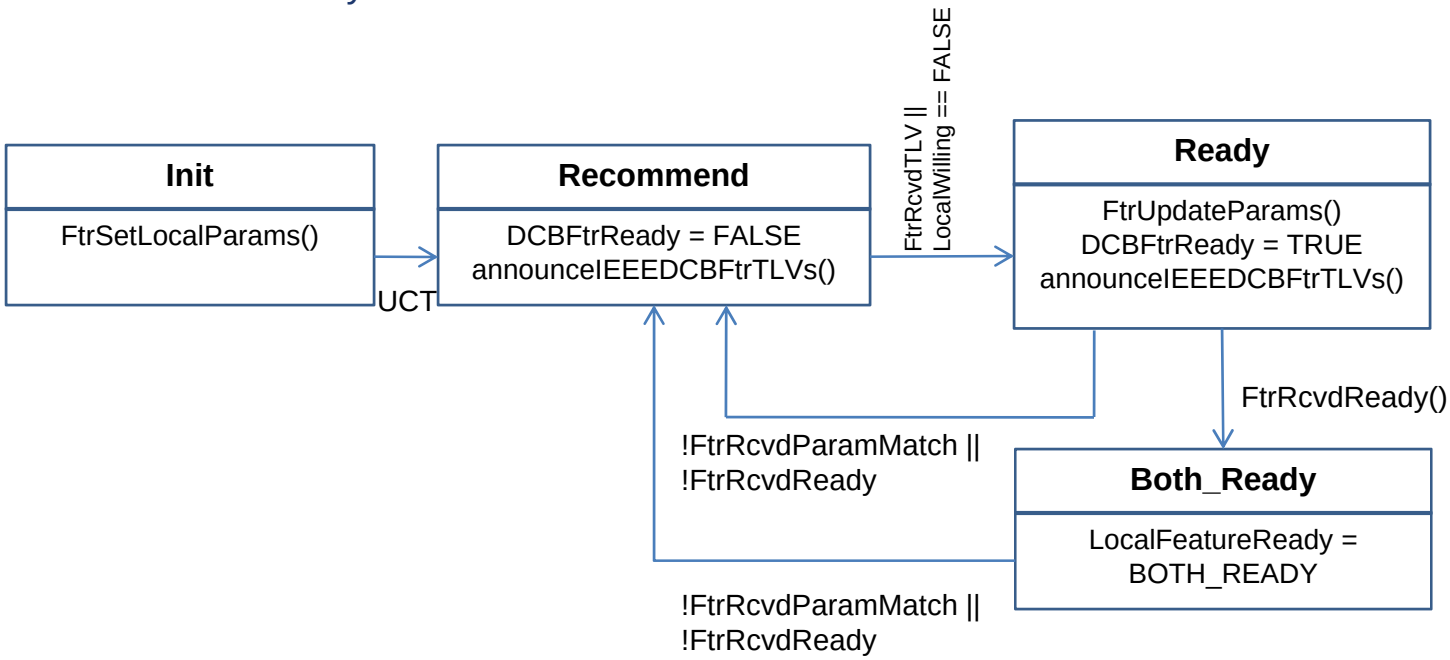
- **Add "Ready" bit in Configuration TLV**

TLV Type =127	TLV Info String Len=17	802.1 OUI 00-80-C2	802.1 Subtype = 9	Reserved	Willing	Priority Assignment Table	Priority Group Configured Bandwidth Table
7 bits	9 bits	3 octets	1 octet	7 bits	1 bit	4 Octets	8 Octets

TLV Type =127	TLV Info String Len=17	802.1 OUI 00-80-C2	802.1 Subtype = 9	Rsvd	**Ready**	Willing	Priority Assignment Table	Priority Group Configured Bandwidth Table
7 bits	9 bits	3 octets	1 octet	6 bits	**1 bit**	1 bit	4 Octets	8 Octets

Changed SM with “Ready” & “Both Ready”

- **Functions:**
  - FtrUpdateParams(): if (LocalWilling == TRUE) FtrCopyRemoteParams(); else {}
  - FtrRcvdReady(): RemoteReady == TRUE
  - announceIEEEDCBFtrTLVs(): Update local LLDP MIB to send update to peer
- **Variables:**
  - LocalFeatureReady: Indication to local entity whether feature is ready
- **LLDP variable:**
  - DCBFtrReady

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