(recap) Challenges in creating Autonomic Control Plane (ACP) in Layer-2 Software Defined Networks (SDN)

SDN managed Layer-2 networks have multiple, redundant links between routers.
- loops may be present, to be resolved by SDN controller
Background on LLDP

- many issues
- many found solution gross
- we found we could make it work, but it required additional fabric configuration which defeated point of using this
Step back: define problem

1) The encapsulation should be capable of transferring full-size (1280 byte) IPv6 packets.

2) The encapsulation should not be confused with standard unicast IPv6 Ethernet encapsulation using EtherType 0x86DD.

3) Even when in a very primitive "default" or power-on configuration, a switching fabric should never forward frames received on one port to any other port.

4) It should be possible to send these frames from the forwarding engine to some control plane system for specific processing.  
   1) (When doing so, the physical port number needs to be associated with the frame.)

5) It should be possible for control plane daemons to send frames for transmission on any port, and to that port only, even if that port is part of a larger layer-2 domain.
What we would like from the WG

- do you think that this is a problem worth solving?
- if so, then this becomes an IPv6-over-FOO document
  - would like to ask the WG to refer this document to the IETF/IEEE coordination group for advice
  - document might have to go 6man or ???
Thank You!