Fine Grained Labeling
Backward Compatibility

Donald E. Eastlake, III
Huawei Technologies
d3e3e3@gmail.com
Fine Grained Labeling

• Fine Grained Labeling provide 24-bit labels on TRILL data packets within a TRILL campus.
• On ingress, the VLAN of traffic is mapped to an FGL and on egress, an FGL is mapped to a VLAN.
• There are also provisions for priority at the FGL level.
FGL Standard

- Fine Grained Labeling was standardized in RFC 7172.

```
+-------------------------------------------+  
| TRILL Header                              |  
| +---------------------------------------+  
| | Initial Fields and Options             |  
| +---------------------------------------+  
| | Inner.MacDA | (6 bytes) |  
| +-----------------------------+           
| | Inner.MacSA | (6 bytes) |  
| +-----------------------+-----+           
| | Ethertype 0x893B | (2 bytes) |  
| +-----------------------+                 
| | Inner.Label High Part | (2 bytes) |  
| +-----------------------+                 
| | Ethertype 0x893B | (2 bytes) |  
| +-----------------------+                 
| | Inner.Label Low Part | (2 bytes) |  
| +-----------------------+                 

+-------------------------------------------+  
| Native Payload                            |  
```
Backwards Compatibility for Encoding

• If some TRILL switch ports use a different FGL encoding, there would be a problem if mixed ports were on a link using incompatible encodings.

• A bit can be allocated to indicate use of a variant encoding.
Backwards Compatibility for Encoding

- If two TRILL switches that both support FGL have ports on the same link but they use incompatible FGL encoding, then no adjacency would be formed. This is expected to be a rare condition.
END

Donald E. Eastlake, III
Huawei Technologies
d3e3e3@gmail.com