LSoE
Link State over Ether

draft-ietf-lsvr-lsoe-01.txt
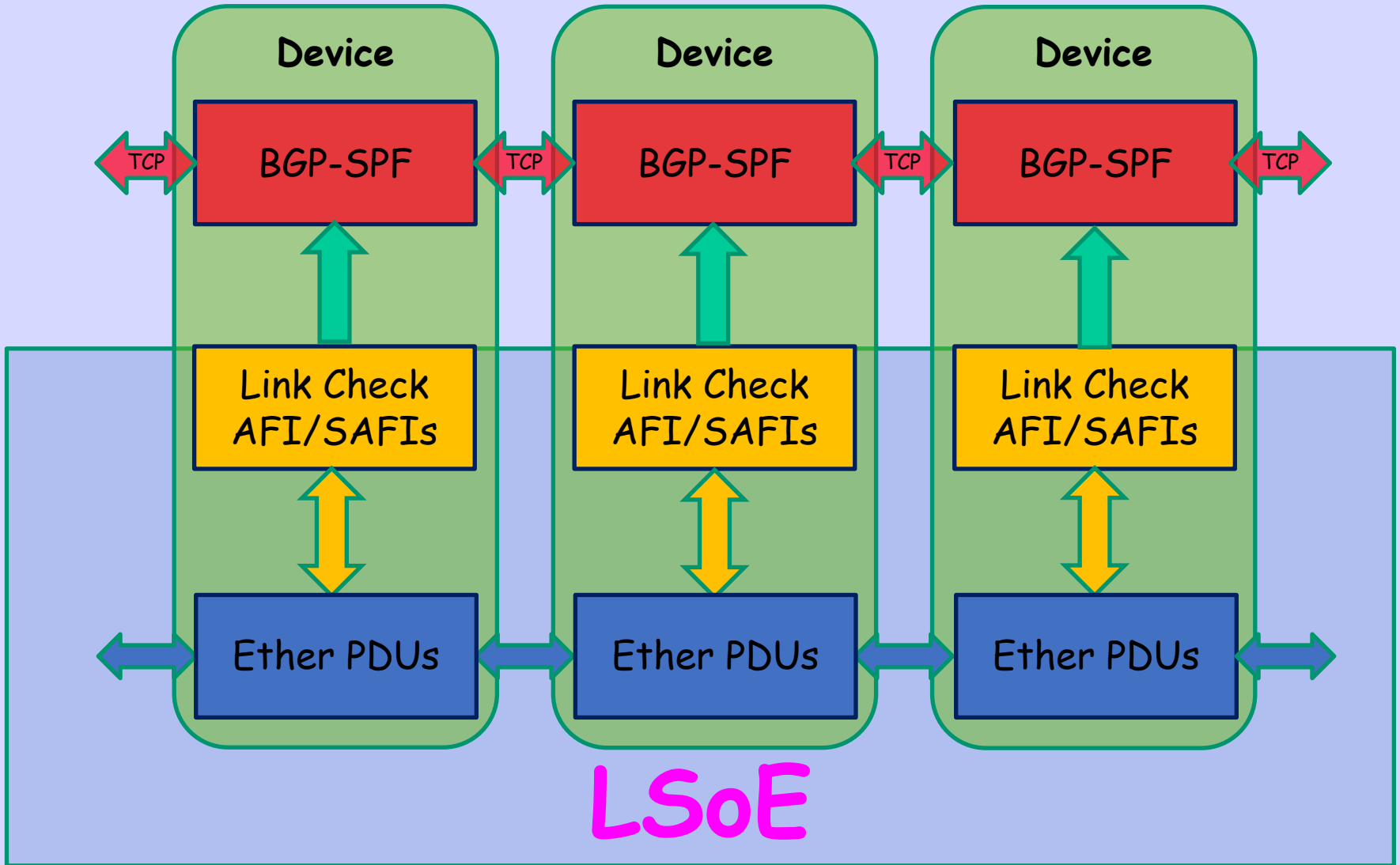
LSVR WG

2019.03.28

randy@psg.com, sra@hactrn.net, keyur@arrcus.com

Thanks to
John Scudder, Rob Austein, Neeraj Malhotra, Larry Kreeger, Paul Congdon, and others, it is now much more mature

Remember the Goal

Link-Layer Topology Discovery and Liveless for LSVR / BGP-SPF

Just a Reminder

You Read the Draft

So What's New?

Neeraj has Extended it

Always a Good Sign

draft-malhotra-bess-evpn-lsoe-00.txt

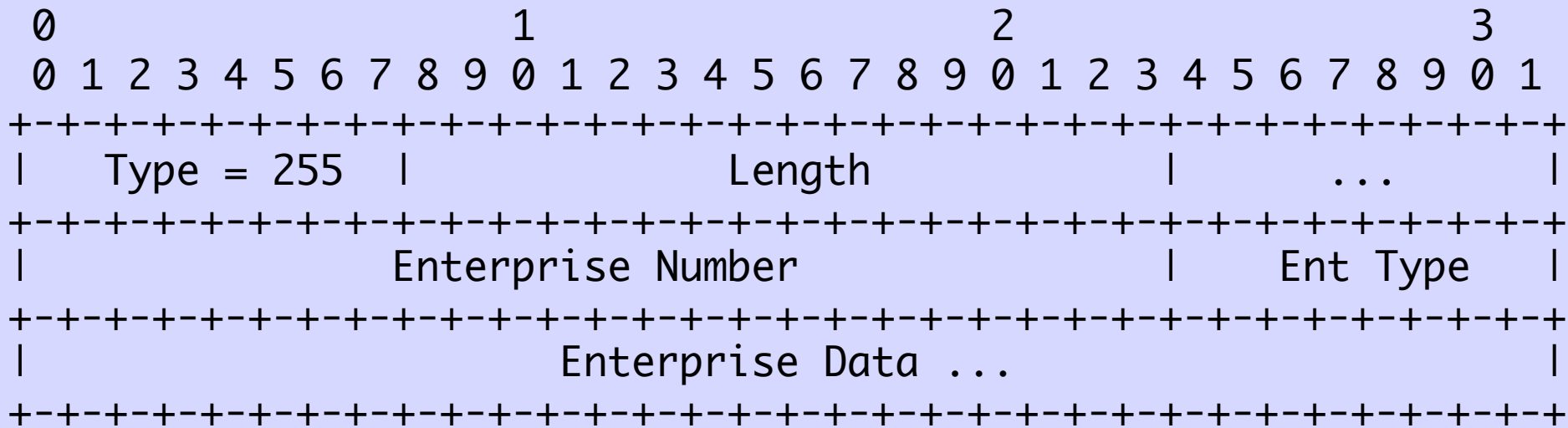# Devil is in the Details

Transport Layer to handle 64k octet PDUs is now Clearly Delineated.
We could raise this limit
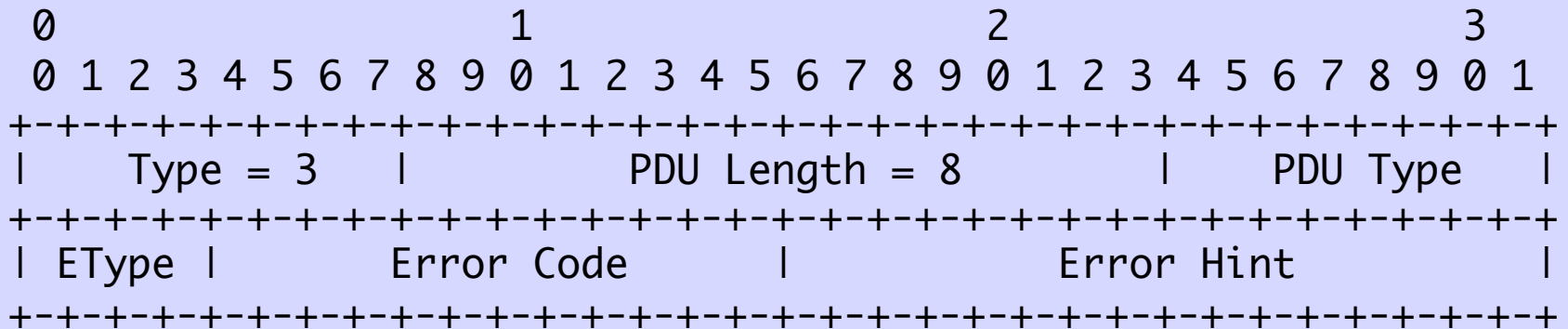evpn-lsoe is using in the extension for EVPNs

Duplicate Frame and PDU Detection

Retransmission on TimeOut for ACK

Vendor Extension

```
 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 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|   Type = 255  |              Length           |      ...      |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|             Enterprise Number                 |   Ent Type    |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                  Enterprise Data ...                          |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

Explicit ACK/ERROR

```
 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 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|    Type = 3     |       PDU Length = 8       |    PDU Type    |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
| EType |         Error Code      |             Error Hint      |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

EType, Error Code, Error Hint = 0   /* no error, just an ACK */

HELLO and KEEPALIVE are still separate

UniCast vs MultiCast & Separate Timers

Do we add some nice short signature (80 bits or so) to each PDU, validate, and raise an error?

The Law of Ethernet says MACs are unique and per interface
They seem not to be!
Need to accommodate?

😫🤮

jgs asked for a state machine

sra wrote one in
Python 3 ☺
same length as the spec
You wanted
denotational semantics?

☺

we're waiting for Keyur's OK to open source it

DRAFT NEEDS REVIEW

Would prefer to get volunteer reviewers without having to WGLC it