Fine Grained Labeling

draft-ietf-trill-fine labeling-02.txt

Donald E. Eastlake 3rd
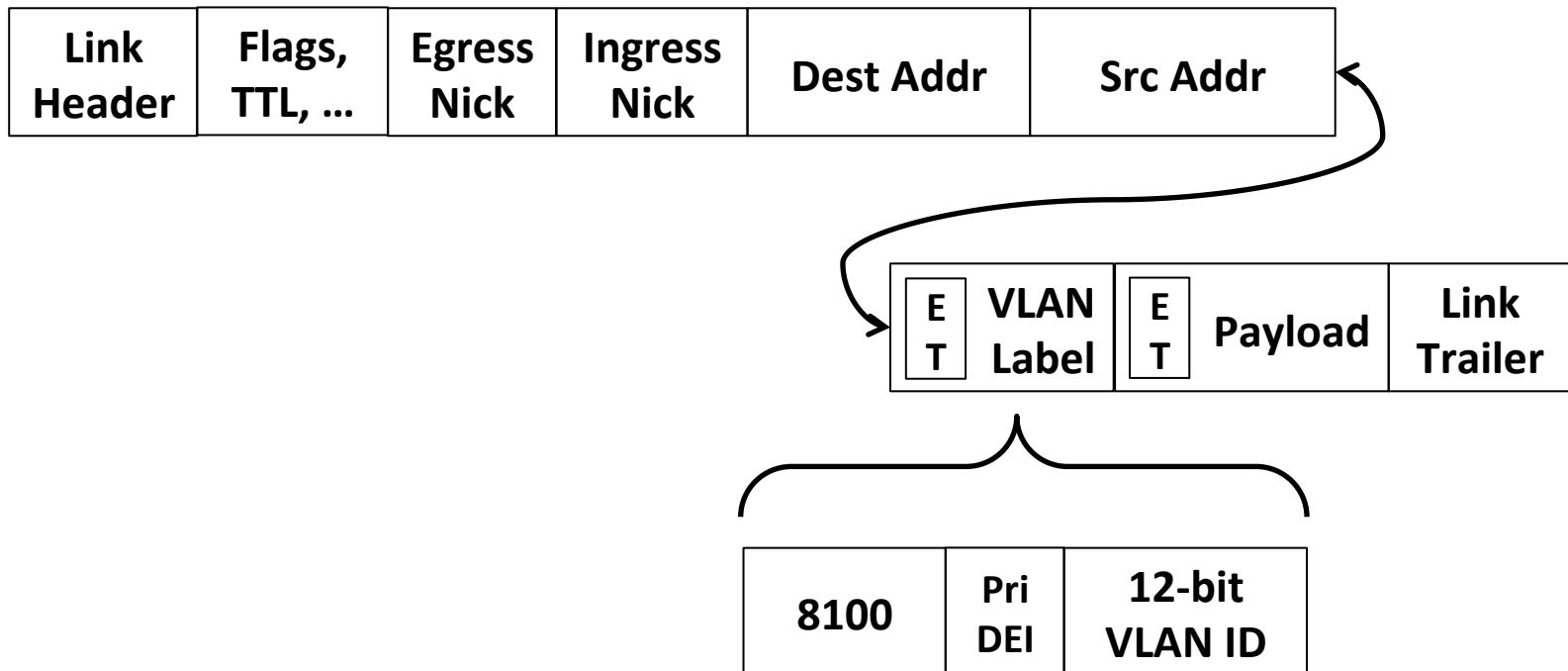
Huawei Technologies

d3e3e3@gmail.com

Fine Grained Labeling

- Current protocol data frame:
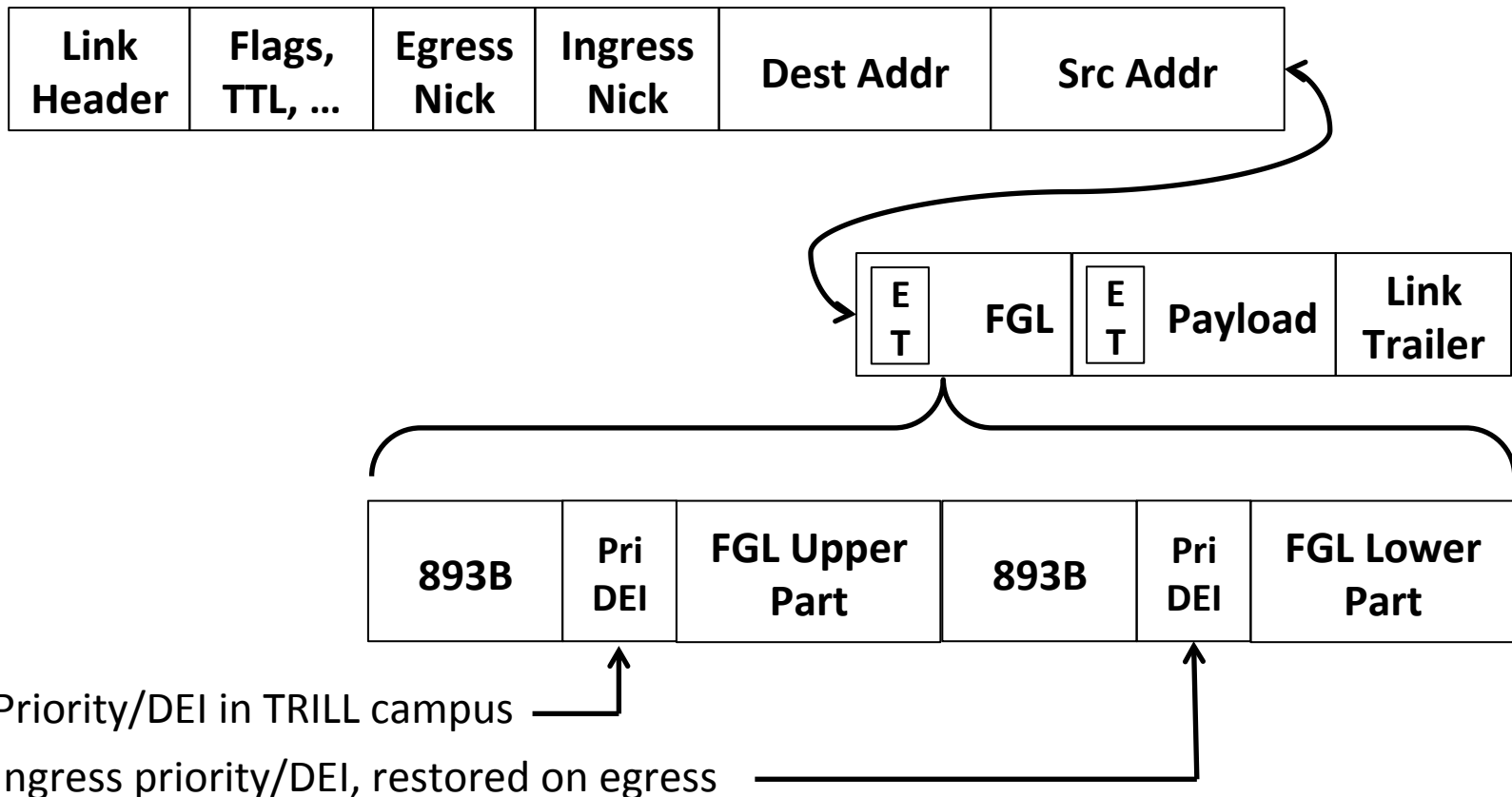
Link Header	Flags, TTL, ...	Egress Nick	Ingress Nick	Dest Addr	Src Addr

ET	VLAN Label	ET	Payload	Link Trailer

8100	Pri DEI	12-bit VLAN ID

Fine Grained Labeling

- Multi-tenant applications require substantially more than the $2^{**}12 - 2$ isolatable data labels provided by VLANs

- Alternatives for expansion were presented at IETF-84 in Vancouver with a request to contact the authors of the draft.

Fine Grained Labeling

- Consensus among those who contacted the authors:

Link Header	Flags, TTL, …	Egress Nick	Ingress Nick	Dest Addr	Src Addr

E T	FGL	E T	Payload	Link Trailer

893B	Pri DEI	FGL Upper Part	893B	Pri DEI	FGL Lower Part

Priority/DEI in TRILL campus

Ingress priority/DEI, restored on egress

Fine Grained Labeling

- Design is
  - Incompatible with VLAN label only TRILL switches even if they are used only in the transit role. Such switches will discard or mishandle an FGL packet.
    - draft-ietf-trill-fine-labeling-02.txt assumes the intent is for the TRILL campus to be fine grained labeling aware and data isolates any VLAN only TRILL switches.
  - Compatible with much existing hardware.
  - Compatible with the structure of the fine grained label since the initial personal draft July 2011.

Fine Grained Labeling

- One suggested change received in hallway conversation at this IETF meeting:

  - Limit fine grained labels to >4096 to avoid collision with VLAN ID numbers for transition scenarios.

- Such a change seems unnecessary since the fine grained labels in use can be administratively restricted.

END

Donald E. Eastlake 3rd

Huawei Technologies

d3e3e3@gmail.com