



TRILL Core IDs

Joe Touch

Postel Center Director
USC/ISI

Research Associate Professor
USC CS & EE/Systems





Disclaimer

- IDs are pre-drafts
 - Not yet submitted (will be ASAP when open)
 - Please wait to cite
 - Editor list may change
 - All text in both docs is new
 - All text in both docs is based on prev ID, paper
 - Co-editors need to decide if they *want* to be listed (on this version)
 - All contributors will be credited in ACKs



Purpose of this Talk

- Discuss the split
- Discuss the structure of the docs
 - Scope of the docs
 - Issues to highlight in each doc

*Please: discuss the content per se
only after we agree on scope and structure*



Document 'Split'

- Core:
 - Problem & Applicability (JT et al., Eds.)
 - Rbridge Architecture (JT et al., Eds.)
 - Rbridge Protocol (al., Eds.)
- Others:
 - Routing protocol(s) and issues
 - Routing requirements (Grey et al., Eds.)
 - Tunneling protocol(s)
 - PWE (Bryant et al.)



Core Document Scope

- Problem and Applicability
 - Defines the problem
 - Few assumptions about the architecture and protocol
 - Allows for alternate solutions
 - Applicability needs to refer to existing/proposed solutions
 - Informational
- Rbridge Architecture
 - Describes structure of proposed solution
 - Allows for alternate implementations (protocols)
 - Informational
- Rbridge Protocol
 - Specifics of a particular solution
 - Standards-track



Preliminary Question

- RBridge or TRILL?
 - Is trill enough in filenames for WG?
 - Which to use for doc titles/text?
 - Is trill the problem and rbridge the arch/protocol?



Problem and ...

- Problem
 - Inefficient paths, convergence of routing, robustness of routing
 - NOT scale, node motion, data/control security
- Properties
 - Zero config, loop free, ST management, VLAN
 - ?Multiple attachments
 - Optimizations, equivalence
 - Internet architecture support/impact



...Applicability

- Solve the problems
- Should better describe limits/caveats:
 - How many 'solutions' per segment?
 - System is entirely within one segment
- Discuss issues not addressed
- (unify terminology with arch.)



Architecture

- Terminology
- Rbridge device
 - CFT, CTT tables
- Functional description
 - Autoconfig, node discovery, tunneling, ingress/egress, forwarding, broadcast, internal routing (CFT, CTT)
 - External protocols (BPDU in/out)



Issues

- Case in favor – 802.1D, D++, etc.
 - Needs to define a problem to be solved
 - Problem should be ‘timeless’
 - But description can refer to current practice
- How much solution to include in P&AS?
 - Right now limited to properties, applicability
 - If general overlay not hinted at, what’s left to say?



Issues (2) – P&AS

- Convergence
 - Is encapsulation enough?
 - What startup delays?
 - Is splitting edge STPs required?
 - What is impact?
- How much to discuss other sol's
 - STP variants
 - Non-TTL loop avoidance (path trace)



Issues (3) – Arch.

- Node discovery
 - (needs to be populated)
 - Will this solve the multi-rbridge issue?
- Protocols for CFT/CTT
 - One protocol or two?
 - How to limit size of CTT?
- BPDU interaction
 - (the three cases)



Issues (4)

- Need for participation
 - I'm just the *editor*
 - Need supporting text, figs, refs where you agree
 - Can remove what is not desired



IANA Issues

- P&AS: none
- Arch: none
- Protocol
 - New ethernet protocol value for tunnel (?)
 - New ethernet protocol value for control packets (discovery, routing)