

Progressing Source Routing for VLANs

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Why?

- ◆ HSTRA feels this is important
- ◆ Allows HSTR to be used as a backbone for other LAN types
- ◆ Preserves 802.5's position in the bridging world



Game Plan

- ◆ Form study group at March '98 meeting
 - Appoint task force leader (until July)
- ◆ Obtain PAR
- ◆ Finish text by end '98
 - Initial ballots in 802.5
 - Final ballot of all 802.5 and 802.1
- ◆ LMSC ballot closes by March '99



PAR for 802.5y

- ◆ Wordsmith and approve in March '98
- ◆ Submit to SEC by end of May '98
- ◆ SEC Approval in July '98



Technical Content

- ◆ Source Route Forwarding Rules
 - Choices will have to be made
- ◆ Pruning explorer paths into Transparent domain
 - Development of George Duane's presentation



SR Forwarding Rules - The problem

- ♦ Aim: restrict traffic belonging to a VLAN to segments in that VLAN ('security')
- ♦ Aim: preserve SR's ability to load-share through a mesh
- ♦ These aims conflict.



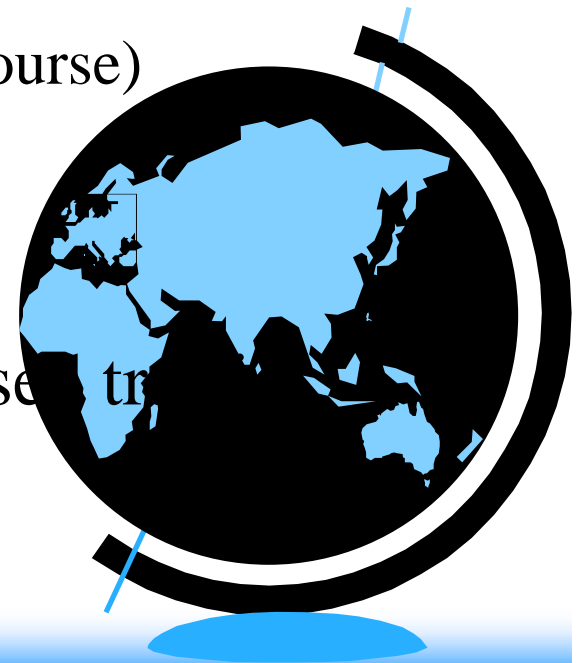
SR Forwarding Rules - The options

- ◆ Option 1: Ignore the Egress List when forwarding an SR frame
 - This was the IBM proposal
- ◆ Option 2: Obey the Egress List when forwarding an SR frame
- ◆ Option 3: Redesign GVRP to look for short paths



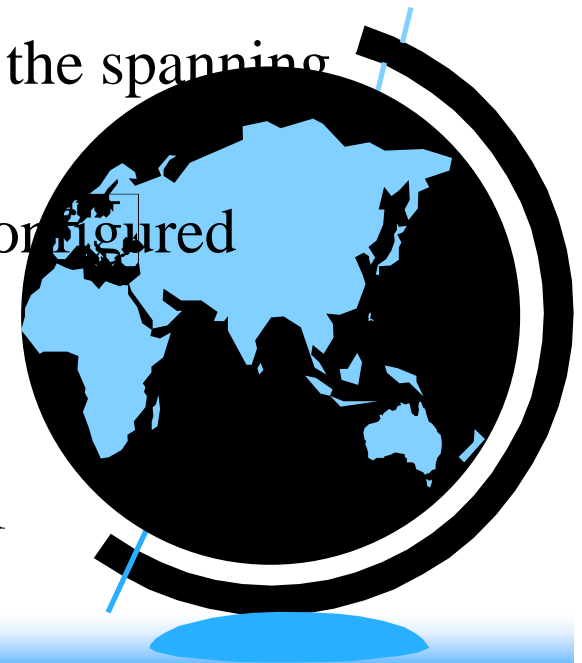
SR Forwarding Rules - Option 1

- ◆ Ignore the Egress List when forwarding an SR frame
 - Both All Routes Explorers and Specifically Routed Frames
 - ◆ (STEs follow the spanning tree, of course)
 - Allows use of meshed links
 - Breaks the ‘security’ aim
 - Could limit to individually addressed traffic



SR Forwarding Rules - Option 2

- ◆ Obey the Egress List when forwarding an SR frame
 - Allows use only of meshed links belonging to the VLAN
 - ◆ Autoconfigured VLAN route lies on the spanning tree (GVRP)
 - ◆ Any other routes would have to be configured manually or automatically
 - Preserves the ‘security’ aim
 - ◆ More likely to be acceptable in 802.1



SR Forwarding Rules - Option 3

- ◆ Redesign GVRP to look for short paths
 - Preserves ‘security’ aim
 - Allows (unspecified) diversity of links
 - Oh yeah? Who’s going to do that?



Which option to choose?

- ◆ Obeying the Egress List fits in better with 802.1Q
- ◆ Mitigating the loss of load-sharing
 - 802.1's Multiple Spanning Tree proposal may help
 - LAN aggregation
 - Could ultimately look at a topology discovery method to allow automatic configuration of VLAN meshes

