

Update on Governance-Policy
Framework for Open LightPath
Exchanges (GOLEs) and Connecting
Networks

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Process

- Kick off meeting at Spring Internet 2 meeting
- Ongoing discussions at Terena meeting in Prague with DANTE, Internet 2, etc
 - Growing consensus and momentum towards OLE concept
- GLIF White paper
 - http://www.glif.is/publications/papers/20110519BStA_Open_Exchange.pdf
- CCIRN discussions in Iceland
 - Agreement that OLE in London a top priority
 - Ideally a Dante facility

What has been agreed upon so far

- An Open Exchange means “policy free”
 - No restrictions on who can connect and what type of traffic
 - No restrictions on technology (but recommended best practices)
- Non blocking as to how much bandwidth between connectors
 - Fiber patch panel is simplest configuration
 - Does not rule out “distributed open exchange” as long as policy on links separate issue and connectors can provide their own links
- Interconnection between OLEs independent of ownership of OLEs
 - Maybe multiple independent links

Governance does not mean central management or control

- Open Lightpath exchanges and interconnecting links will be a “federation” of exchange points and links
- Some links and exchange points may be dedicated to a federated common pool
- Some links may be dedicated to specific community or VO e.g. LHC
- “governance” in this framework refers to issues of policy of a federation of resources
 - Similar concept to Eduroam or Internet “governance”
- No central organization manages or controls Internet or Eduroam
 - Instead participants get together in technical and policy meetings to agree on how parties will interact to provide end to end solutions
 - Policy principles are agreement to support end-to-end principle, IPv6, etc

Governance Models for Interconnecting Pipes

- Self defined autonomous architecture
 - Internet IX model
 - Each user can bring as much bandwidth as they want to IX - not conditional on peering bandwidth
- Circuit quid pro quo model
 - Peers need to match each other in terms of lightpath bandwidth and agree to common signaling and handoff of lightpaths across OLE
 - Need to commit circuit bandwidth resources available to peers
 - In some cases may need end-to-end governance and management?
- LVO – “Lightpath Virtual Operator”
 - Peer network pre-commits bandwidth and switch/routing resources to third party
 - OpenFlow, UCLP, Greenstar, LHCONE?

Next steps?