Goal

• Create a 5 to 10 node testbed
  – Shared by researchers working on SAM protocols
  – Sites distributed globally
  – Use low-cost hosts with freely available virtualization software to provide isolated experimentation

• Why not use PlanetLab?
  – Could use PL for overlay nodes (see Phase 2 slide later)
  – But PL nodes don’t seem to support native multicast
Initial Locations

- Princeton, NJ, USA
- Hamburg, Germany
- Stirling, UK
- Swansea, UK
- Tokyo, Japan (WIDE?)
- Washington, DC, USA

- Once initial set is working, we can incrementally add other sites
Site Configuration

- Could run “private PlanetLab” node software
- AMT software
  - http://cs.utdallas.edu/amt/
- An XCASTv6 stack is available for Ubuntu
- Overlay (determined by researcher)
  - OverlayWeaver
  - P2P-SIP
- Multiple Guest User Accounts
Integration Scenario for G-Lab

• Hamburg is collaborating in Germany-funded national multicast-capable testbed
• Could provide large scale “multicast island” (e.g., 170 nodes)
• Approach
  – Hamburg provides GW from SAM Testbed to G-Lab network for sourcing and receiving multicast streams
Phase 2: Hybrid ALM trees with 100s of nodes

- Once experimental configuration is operating, we can scale up by deploying an overlay on PlanetLab
- Hybrid SAM experiments using SAM testbed and PL
Next Steps

• Agree on approach
• Identify core group of participating researchers
  – Participating researchers need to be affiliated with a node in the testbed
• Need a volunteer to coordinate
Q&A

• More details about experiments would be good for community to see where this can be used
  – A good demo application

• GENI tie in
  – GEIN is a federated testbed, e.g., including EMuLab, Tokyo CoreLab as leaf testbeds
  – How to include a new SAM Testbed into GENI
    • Contact Aaron @ GENI