Scenario

- Home users with Network Address Translation
- TCP-based P2P or VoIP application
- Avoid manual configuration
- UPnP signaling not always available

Approach

- Use capabilities of existing Application-Level Gateways
- Plain TCP sockets
  1. Imitate FTP (or IRC) session with rendezvous server
  2. Relay connection request to peer
  3. Connect

Demo

- NTALG framework with visualization
- Connection types: Direct, FTP ALG, IRC ALG
- Lab setup with 15 home NAT routers
- 80% success probability (with reversal)