

# Gnutella Summary

- No servers
- Peers/servents maintain “neighbors”, this forms an overlay graph
- Peers store their own files
- Queries flooded out, ttl restricted
- QueryHit (replies) reverse path routed
- Supports file transfer through firewalls
- Periodic Ping-pong to continuously refresh neighbor lists
  - List size specified by user at peer : heterogeneity means some peers may have more neighbors
  - Gnutella found to follow **power law** distribution:

$$P(\#\text{links} = L) \sim L^{-k} \quad (k \text{ is a constant})$$