Inter-AS routing

AS1

AS2

Forward Table

AS3
Intra AS protocol
RIP - routing information protocol
- distance vector
- cost is 1 (hops)
- $\infty = 16$ hops
- DV's sent every 30 sec
  → up to 25 subnets
- link "dead" if no message in 180 sec.
- application level process updates forward tables
  routed (route-d)
- UDP packets daemon
OSPF - open shortest path first
- link state (Dijkstra’s)
- each router has “map” of the network
- IP packets
Hierarchical OSPF

Boundary Router

Backbone routers

subnet

subnet

subnet

border area router
Inter-AS routing - BGP

Border Gateway Protocol

AS - send routing PATHS

eBGP (external)

iBGP (internal)

AS # 16 bits

~ 40,000 used