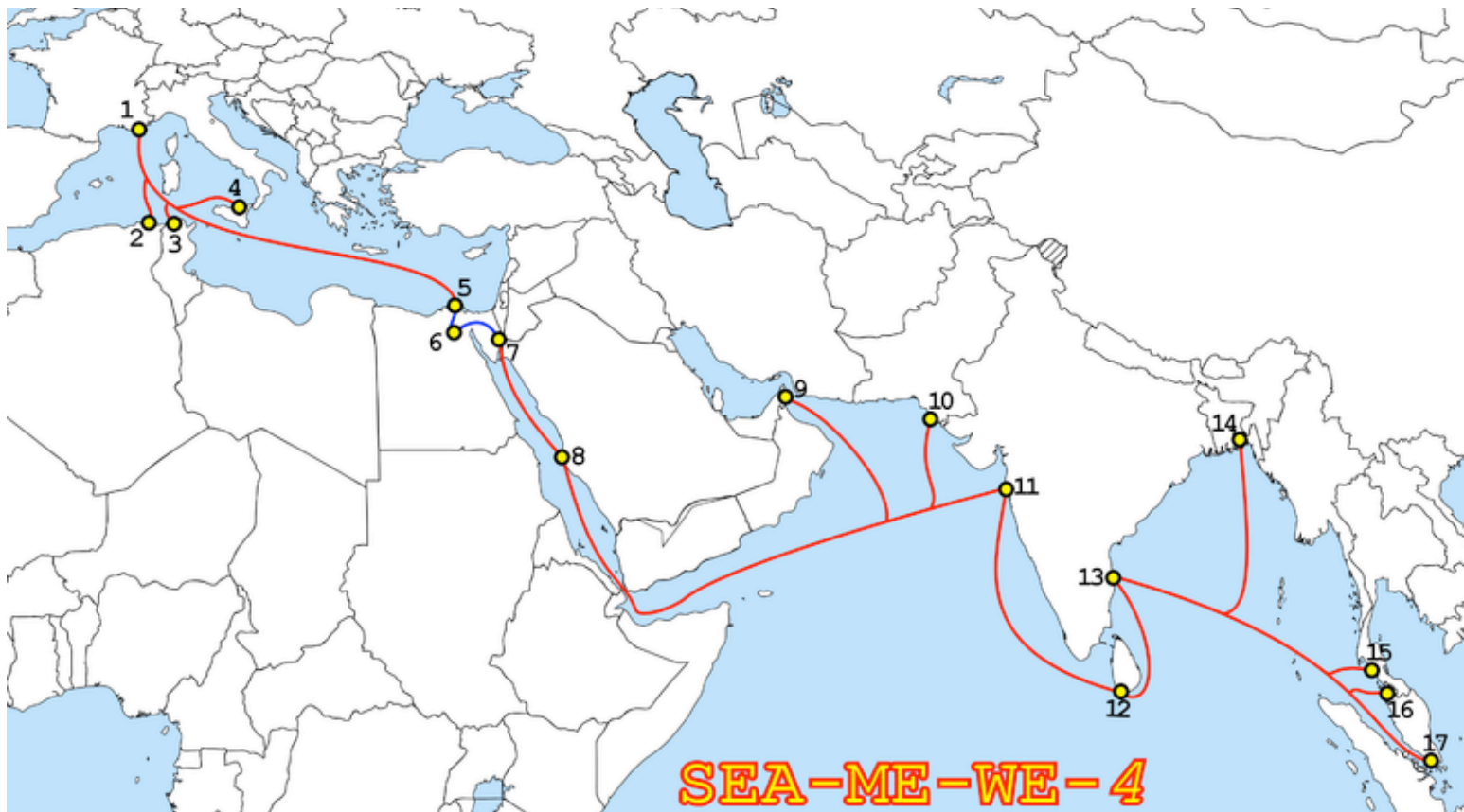# Portable IP address and Enterprise Multihoming Benefit
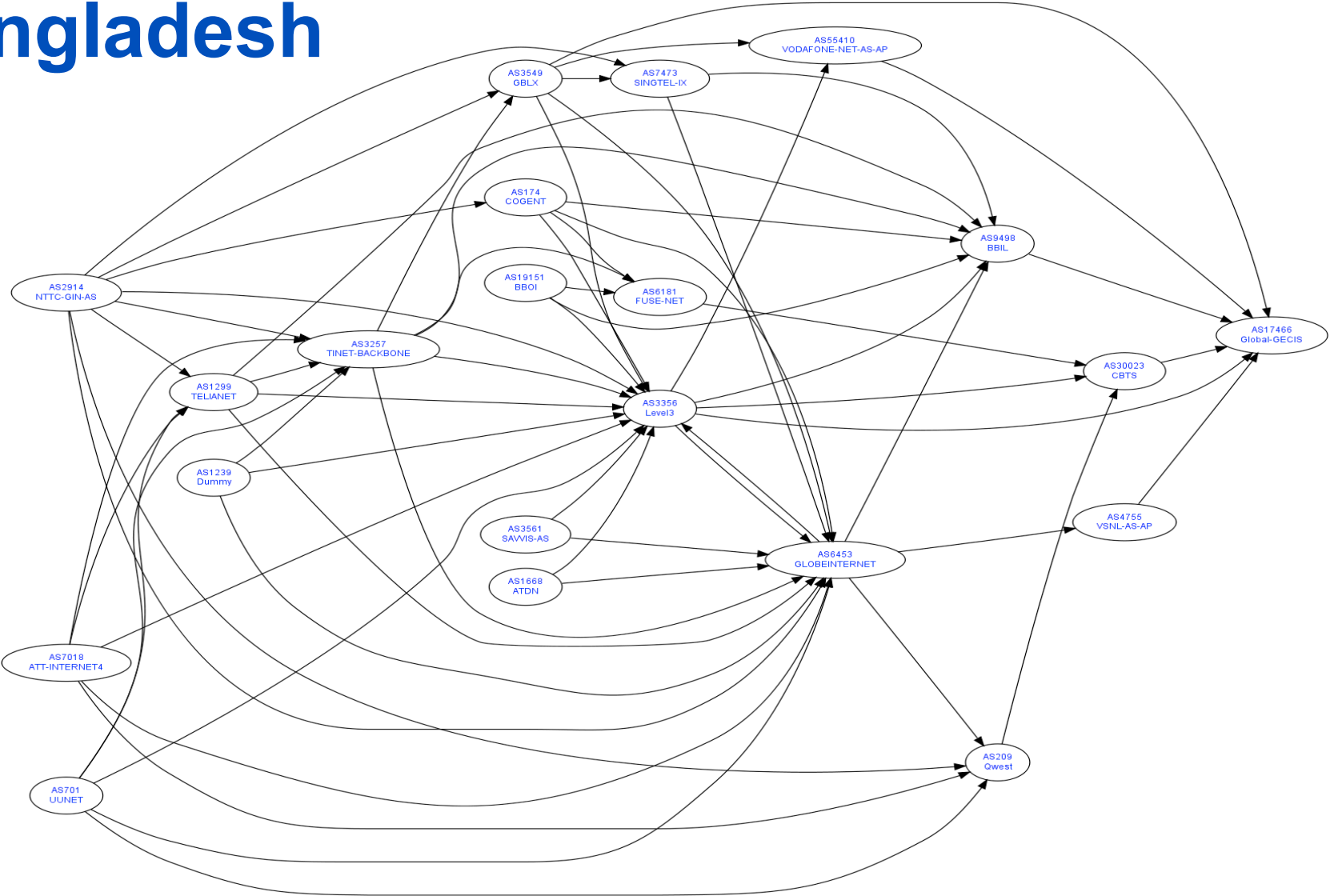
APNIC Presentation

May 25, 2013. CTO forum, Dhaka, Bangladesh.

APNIC

How It Change the Perspective?


SEA-ME-WE-4

APNIC

Improve Internet infrastructure in Bangladesh

Improve Internet infrastructure in Bangladesh

- Service provider
  - Strong presence in global routing domain with their own AS number
  - Dynamically reroute traffic by multihoming
  - Able to do destination based traffic analysis
  - Plan for traffic exchange through peering and transit

- End user
  - Happy user experience ☺
  - Lower cost ☺

- Enterprise network
  - Happy user experience ☺
  - Lower cost ☺
  - Network operational scalability !!!!☹!!!!

What Is Multihoming?
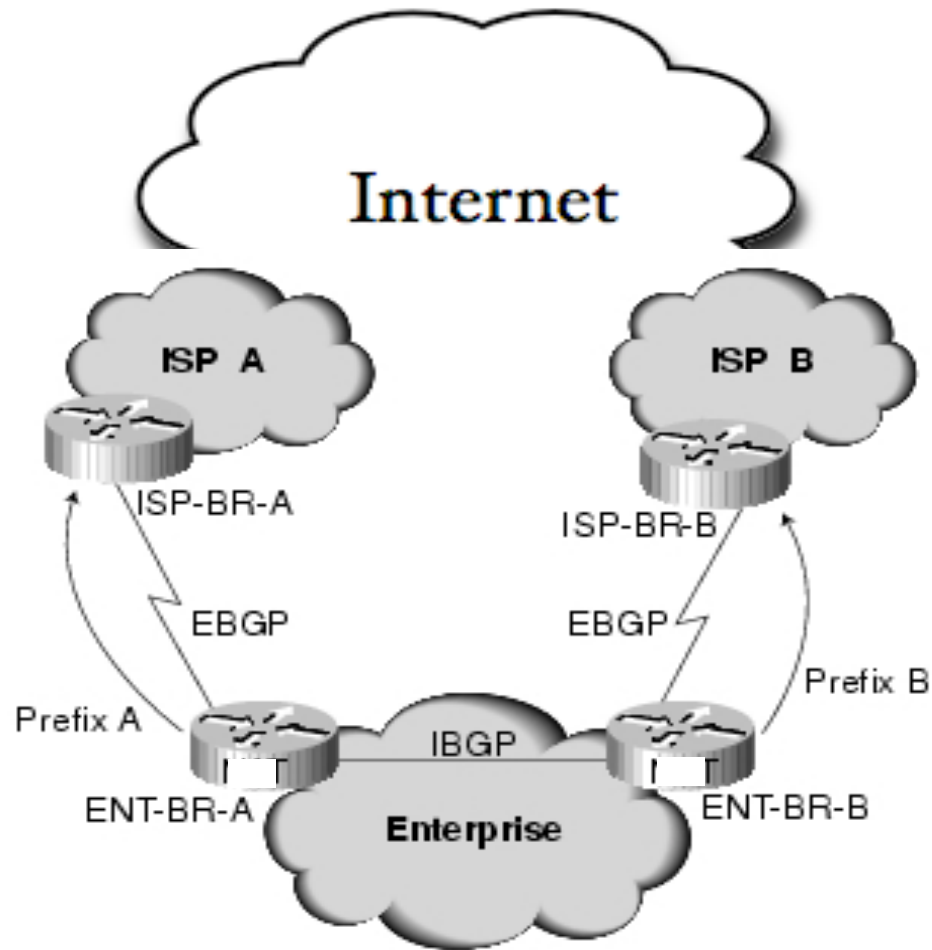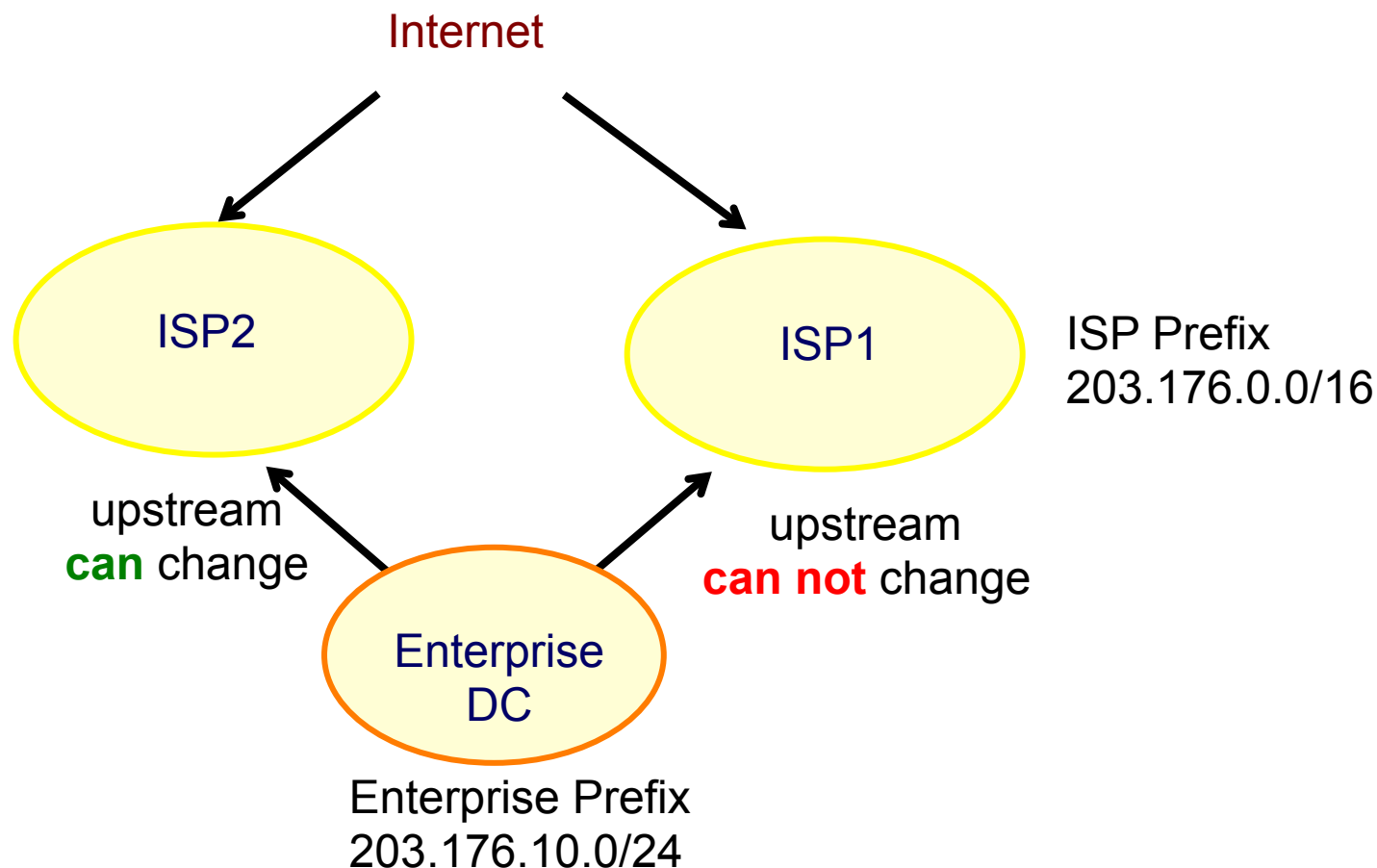
Multihoming Benefit

- Link redundancy

- Service provider redundancy

- Reduce downtime

- Traffic load balancing

- Destination based traffic engineering

- Reduce cost by peering

- Network scalability

Enterprise Connectivity Options

- Option 1: Single home and non portable prefix
  - Enterprise is not APNIC member prefix received from upstream ISP

- Option 2: Single home and portable prefix
  - Enterprise is APNIC member receive allocation as service provider but no AS number yet

- Option 3: Multihome and non portable prefix
  - Enterprise is not APNIC member both prefix and ASN received from upstream ISP

- Option 4: Multihome and portable prefix
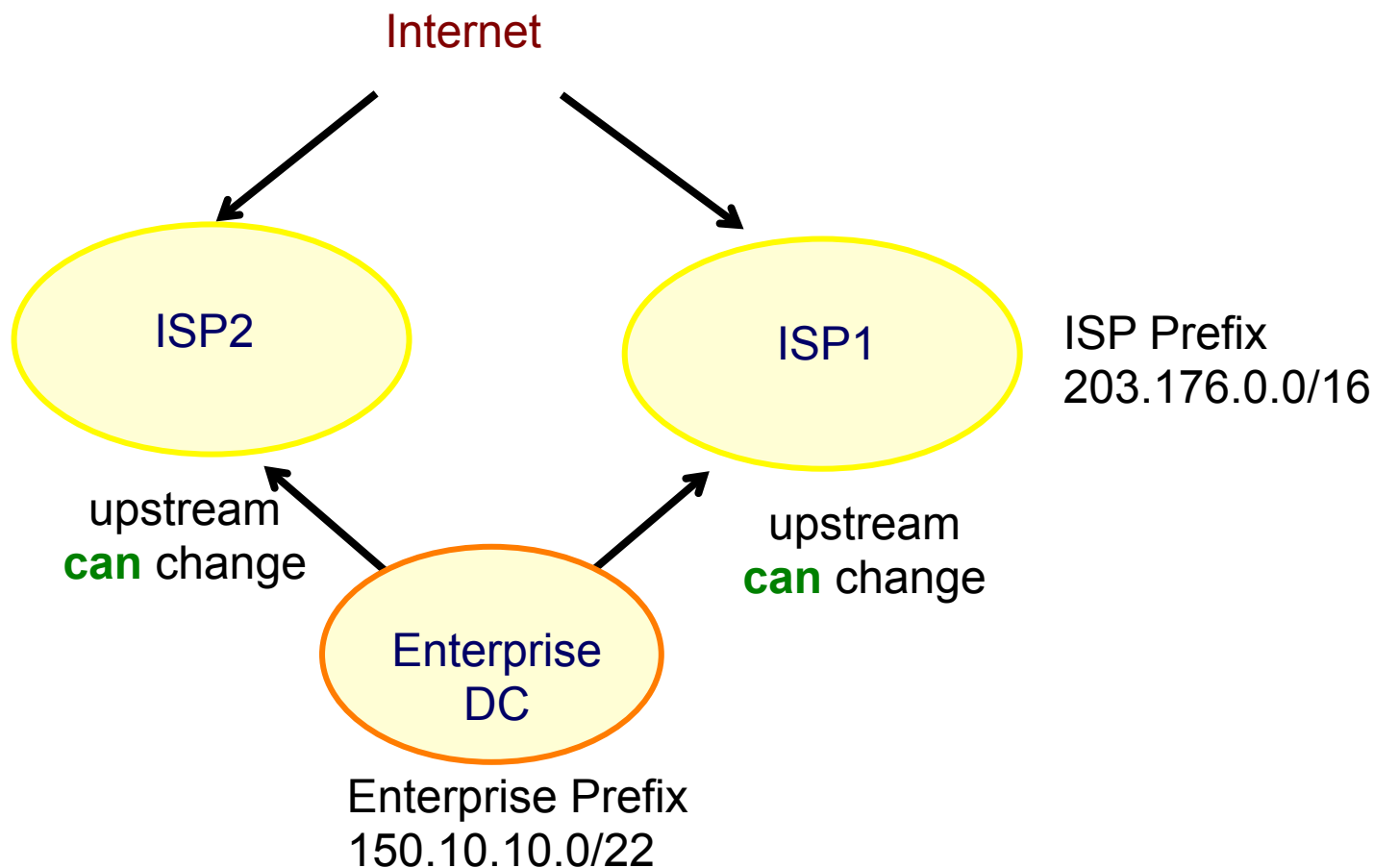 - Enterprise is APNIC member both prefix and ASN received from APNIC

Multihoming Options

- Option 3: Multihome and non portable prefix

Internet

ISP2

ISP1

ISP Prefix
203.176.0.0/16

upstream
can change

upstream
can not change

Enterprise
DC

Enterprise Prefix
203.176.10.0/24

Multihoming Options

- Option 4: Multihome and portable prefix

Internet

ISP2

ISP1

ISP Prefix
203.176.0.0/16

upstream
can change

upstream
can change

Enterprise
DC

Enterprise Prefix
150.10.10.0/22

APNIC

Exchange traffic between networks

- Via Transit
  - Where networks will pay to send/receive traffic

- Through Peering
  - Networks will not pay each other to interchange traffic

- Works well if win win for both

- Reduce cost on expensive transit link

Peering VS Transit
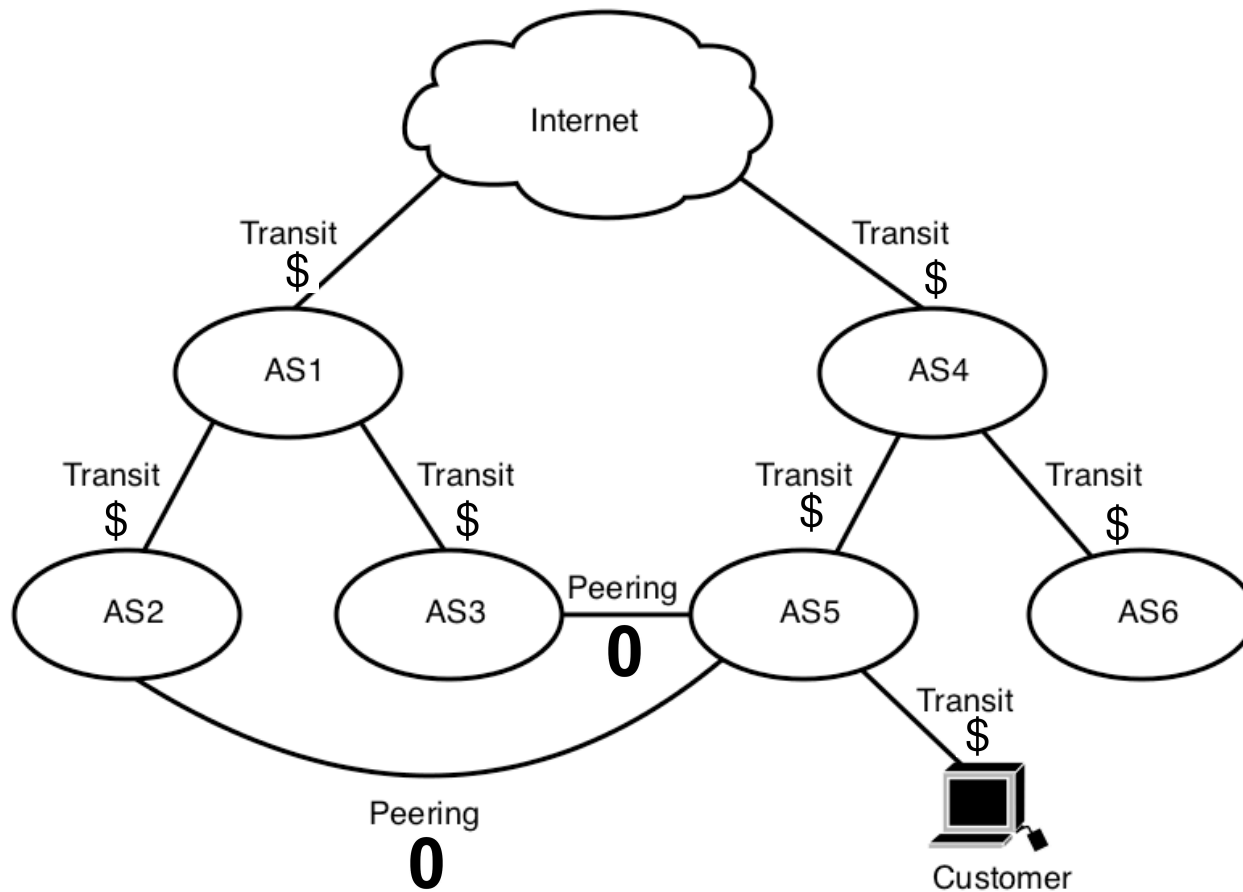
Last Slide….

- Portable address

- Portable AS number

- I am free to define my traffic routing policy

Thank You! ☺

APNIC