Switched CCNx

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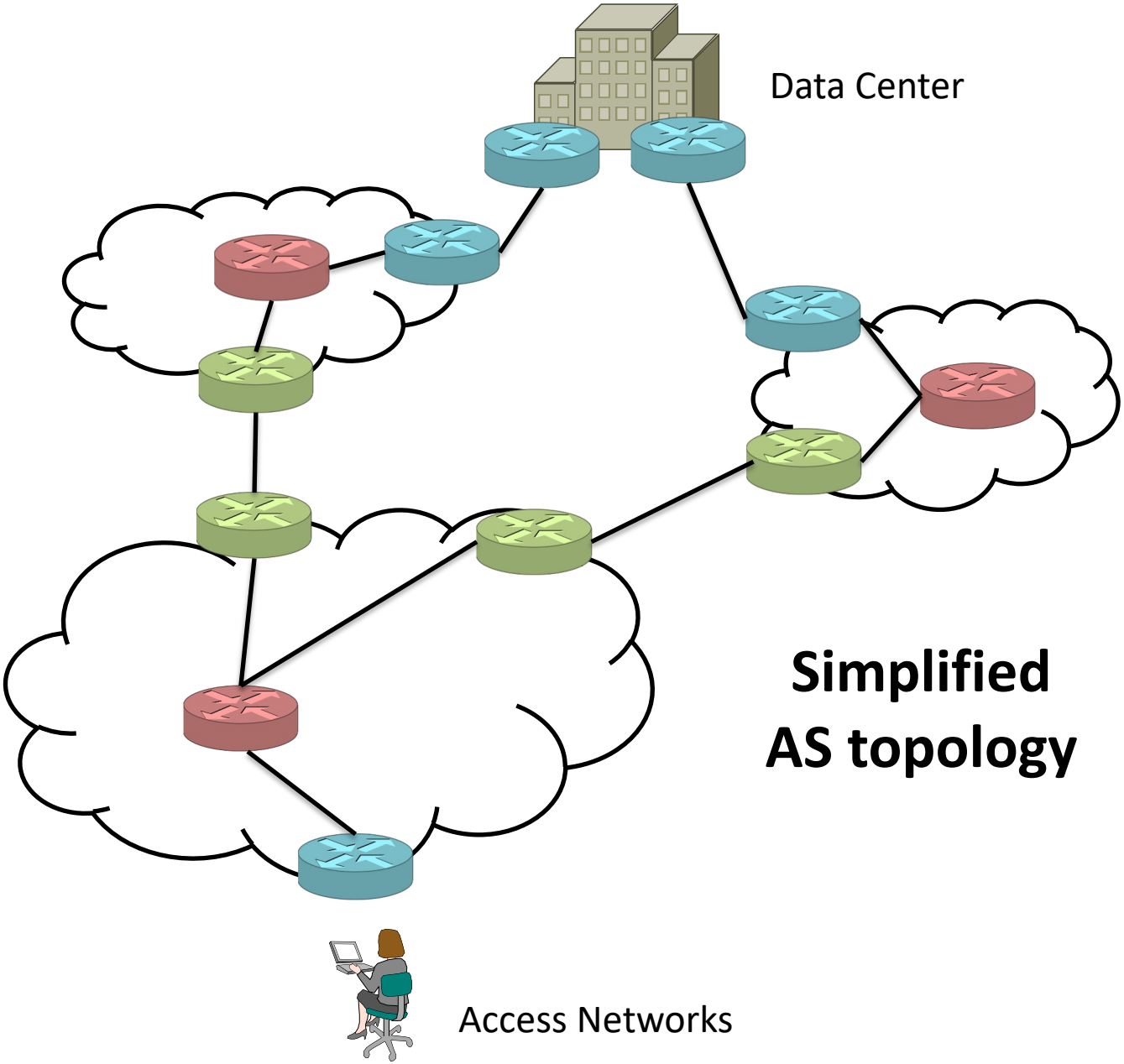
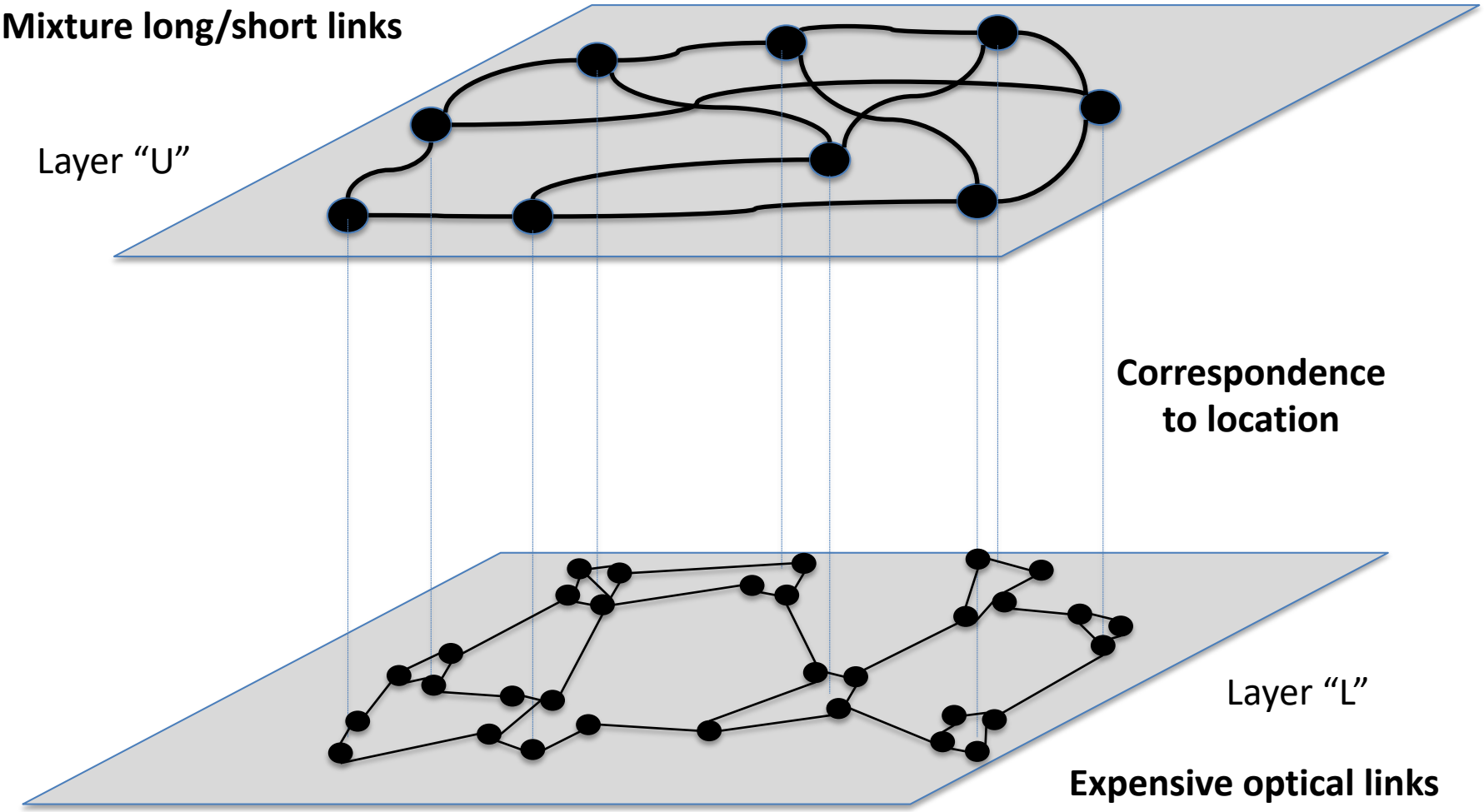
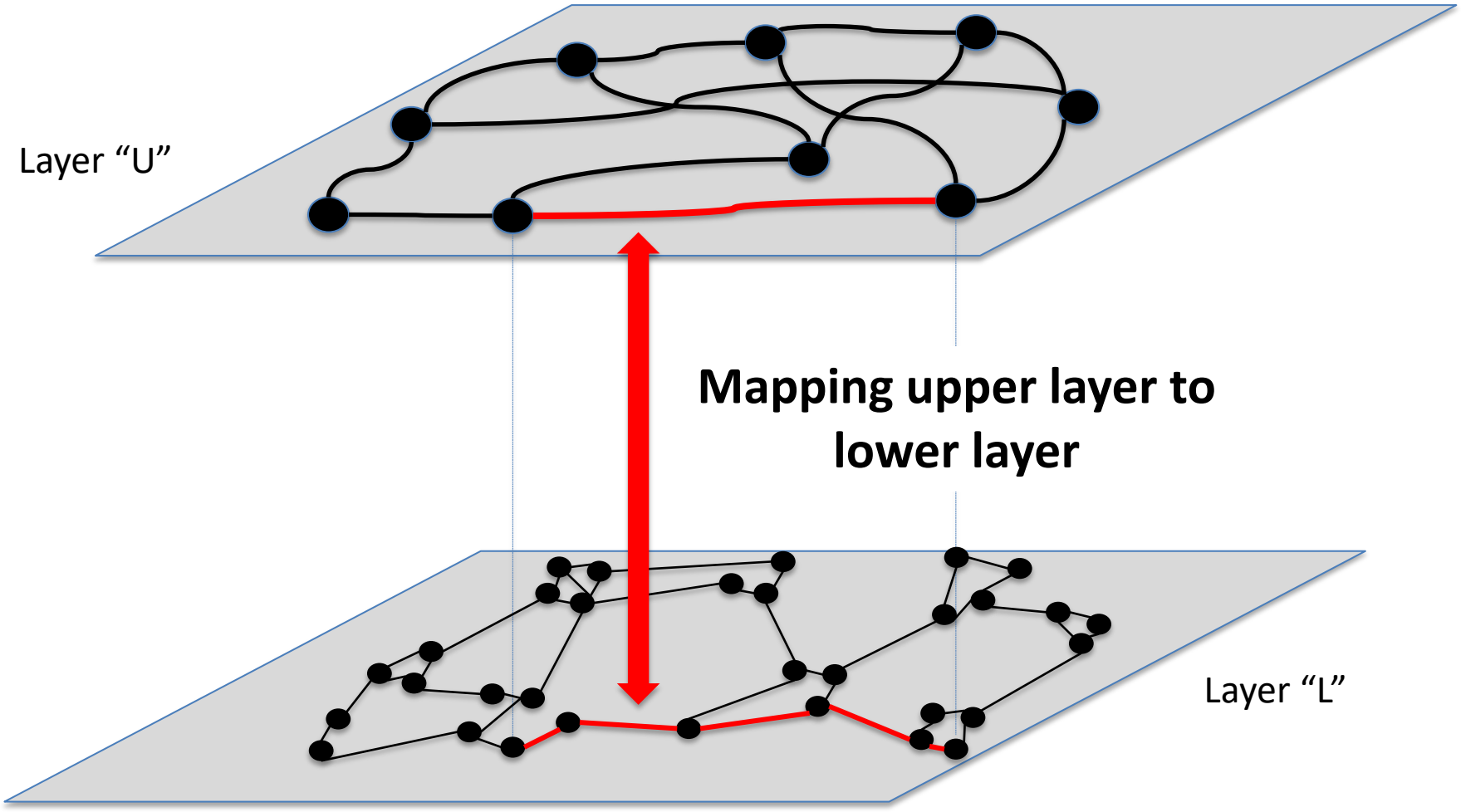
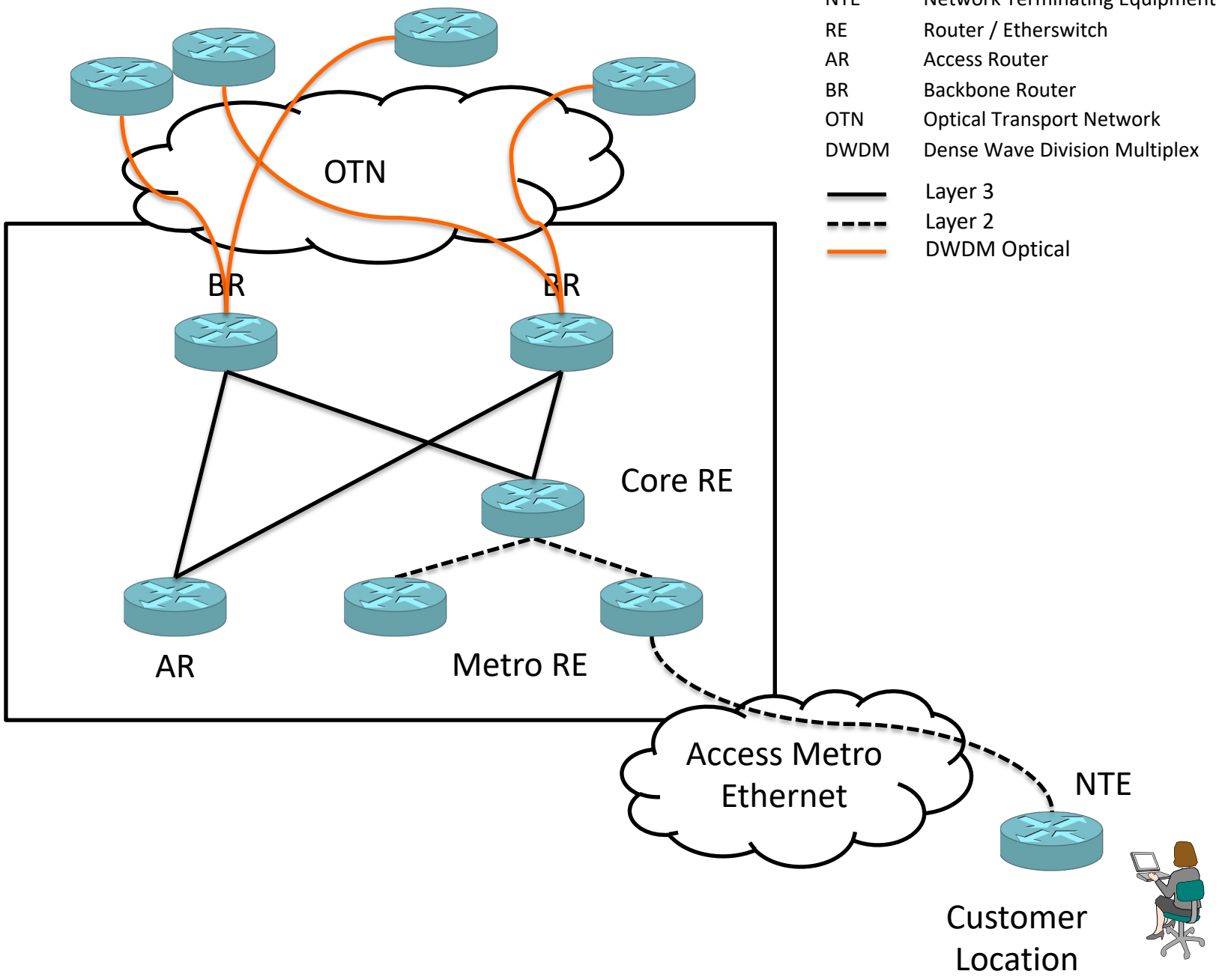
Oct 13, 2015


Data Center
Simplified
AS topology
Access Networks

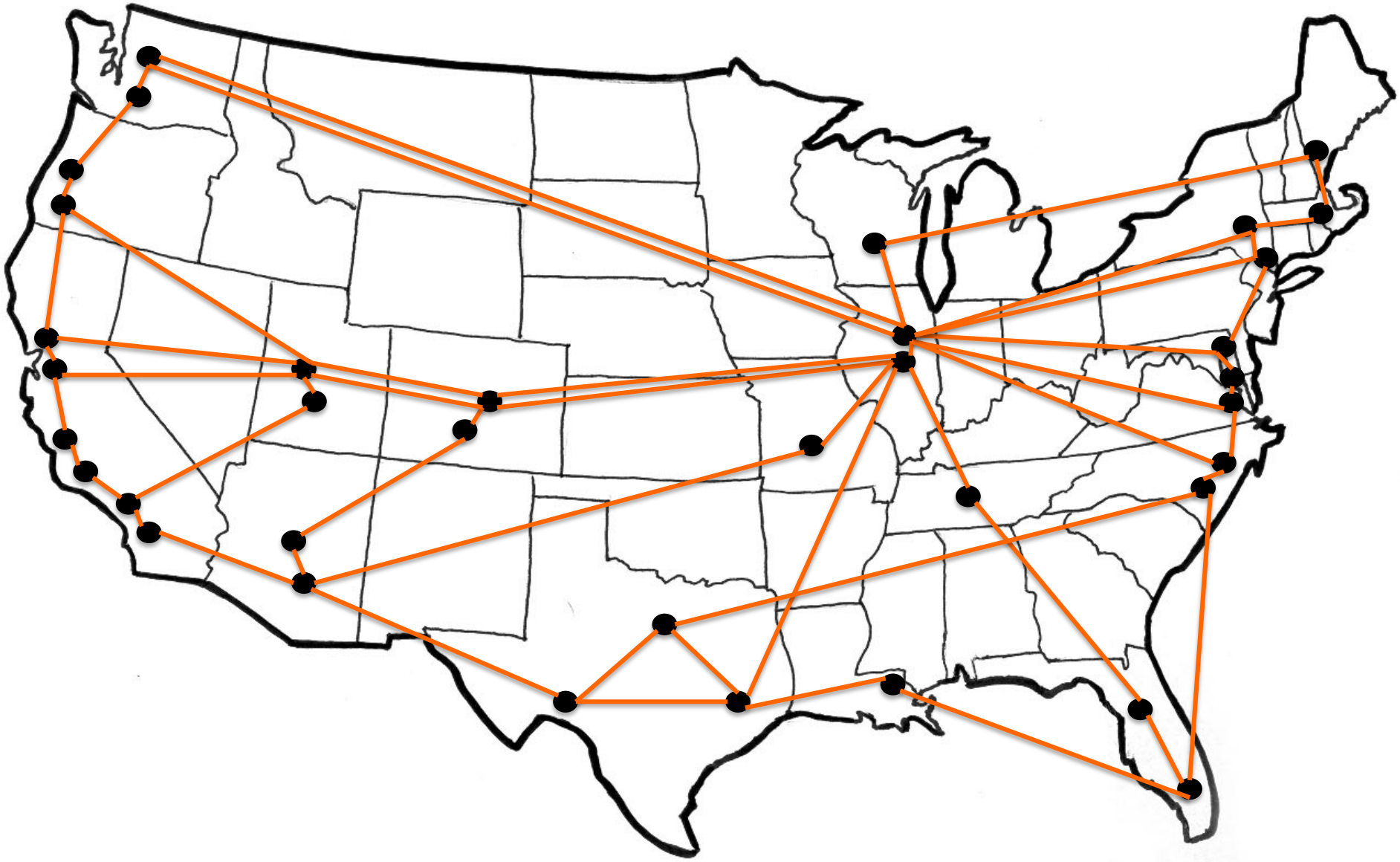
Multiple edge-diverse paths
Fewer nodes
Mixture long/short links

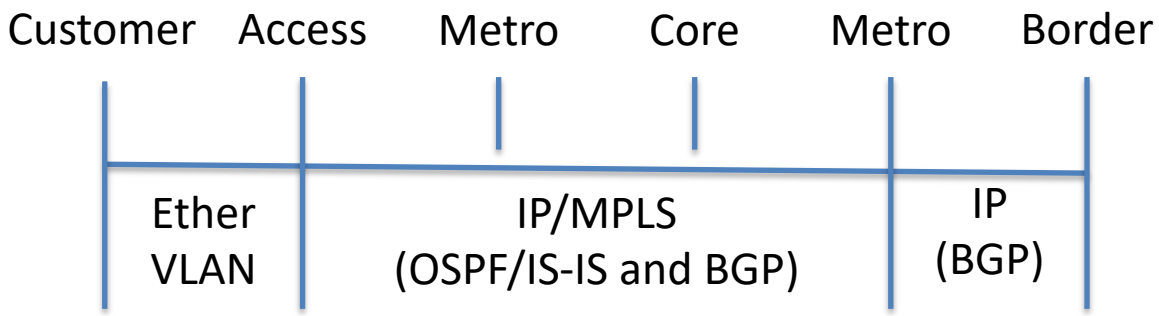


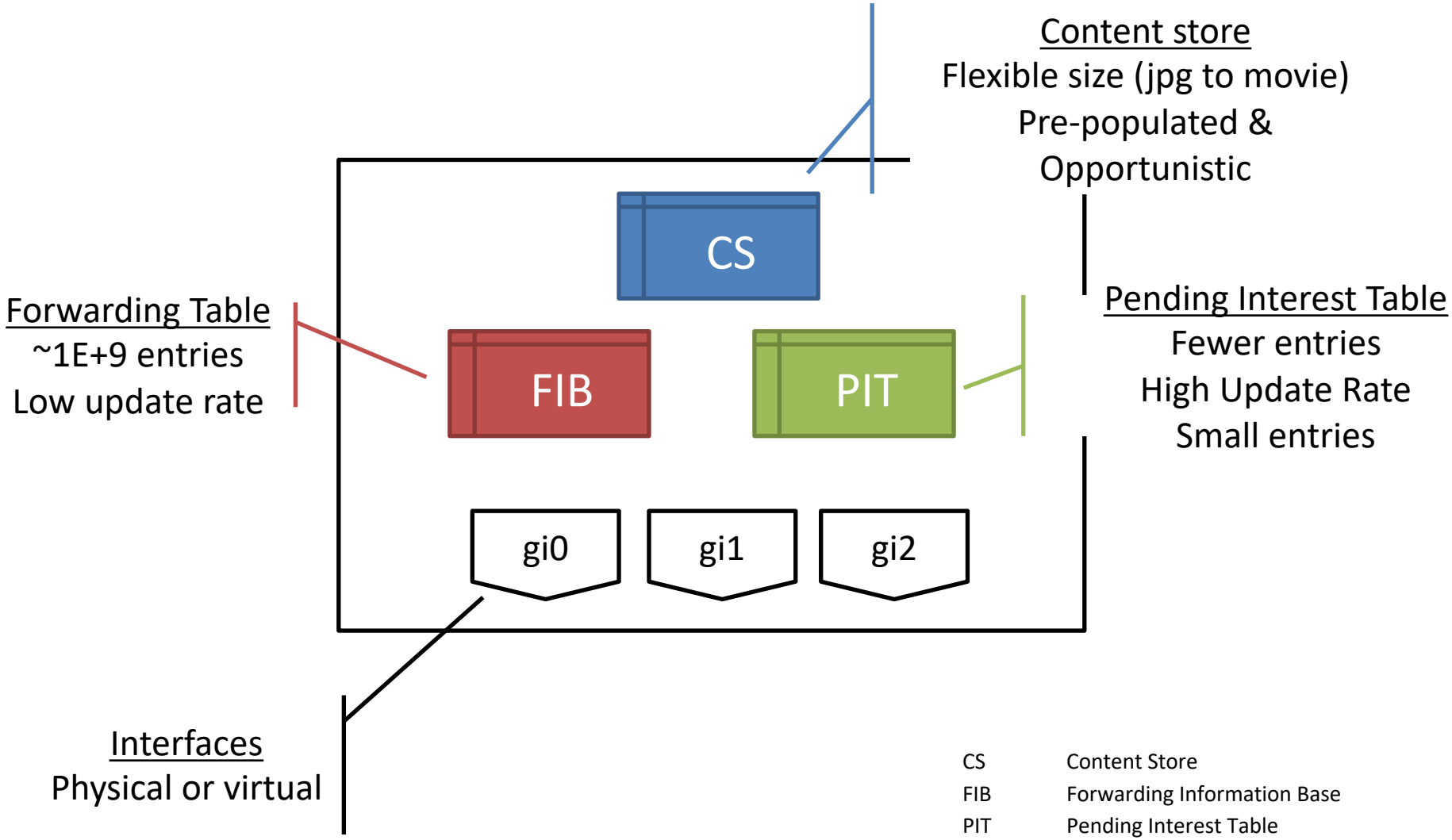

Layer “U”
Mapping upper layer to lower layer
Layer “L”

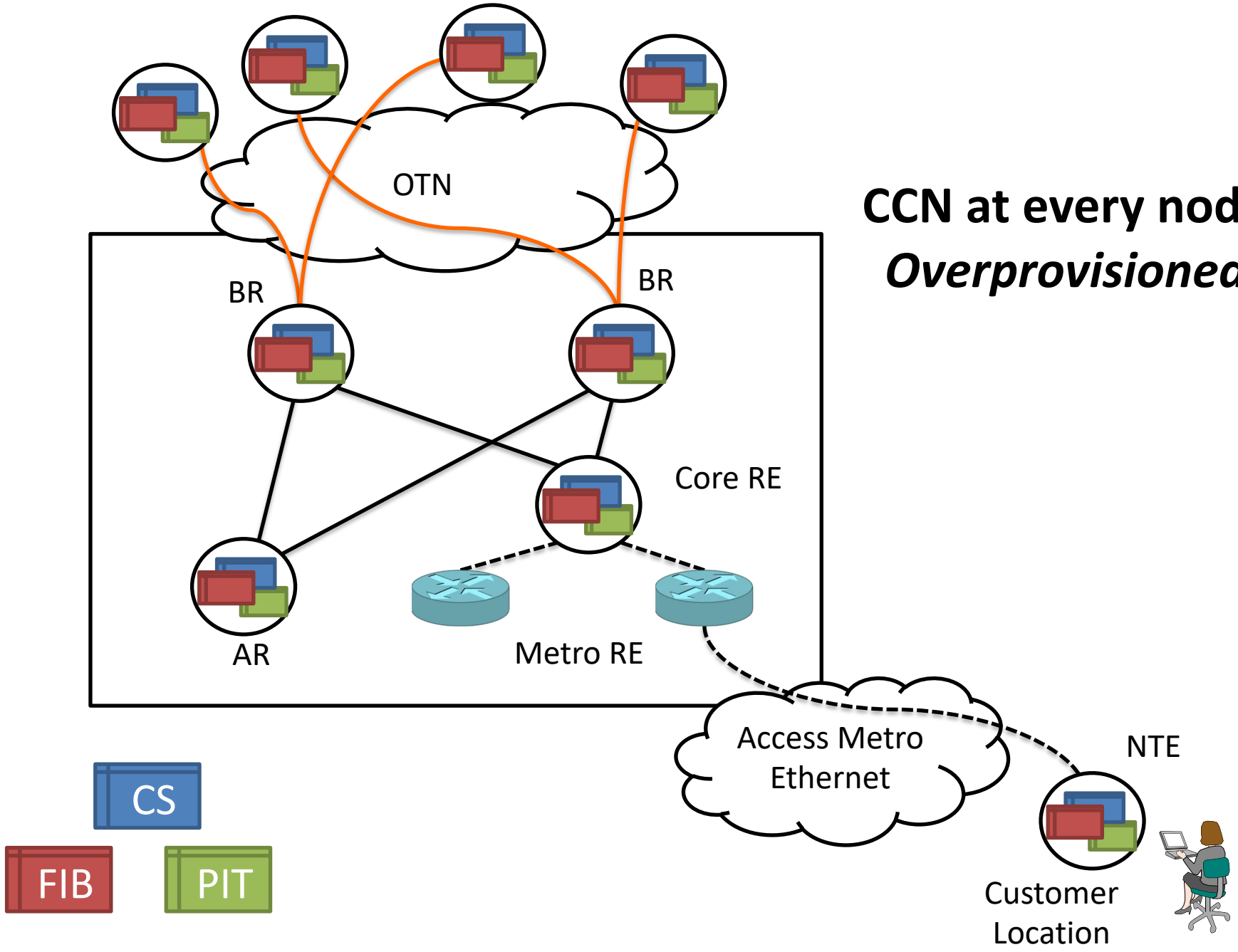

NTE Network Terminating Equipment
RE Router / Etherswitch
AR Access Router
BR Backbone Router
OTN Optical Transport Network
DWDM Dense Wave Division Multiplex
Layer 3
Layer 2
DWDM Optical
OTN
BR
BR
Core RE
AR
Metro RE
Access Metro Ethernet
NTE
Customer Location

Example Routed Core Links




Customer
Access
Metro
Core
Metro
Border
Ether
VLAN
IP/MPLS
(OSPF/IS-IS and BGP)
IP
(BGP)

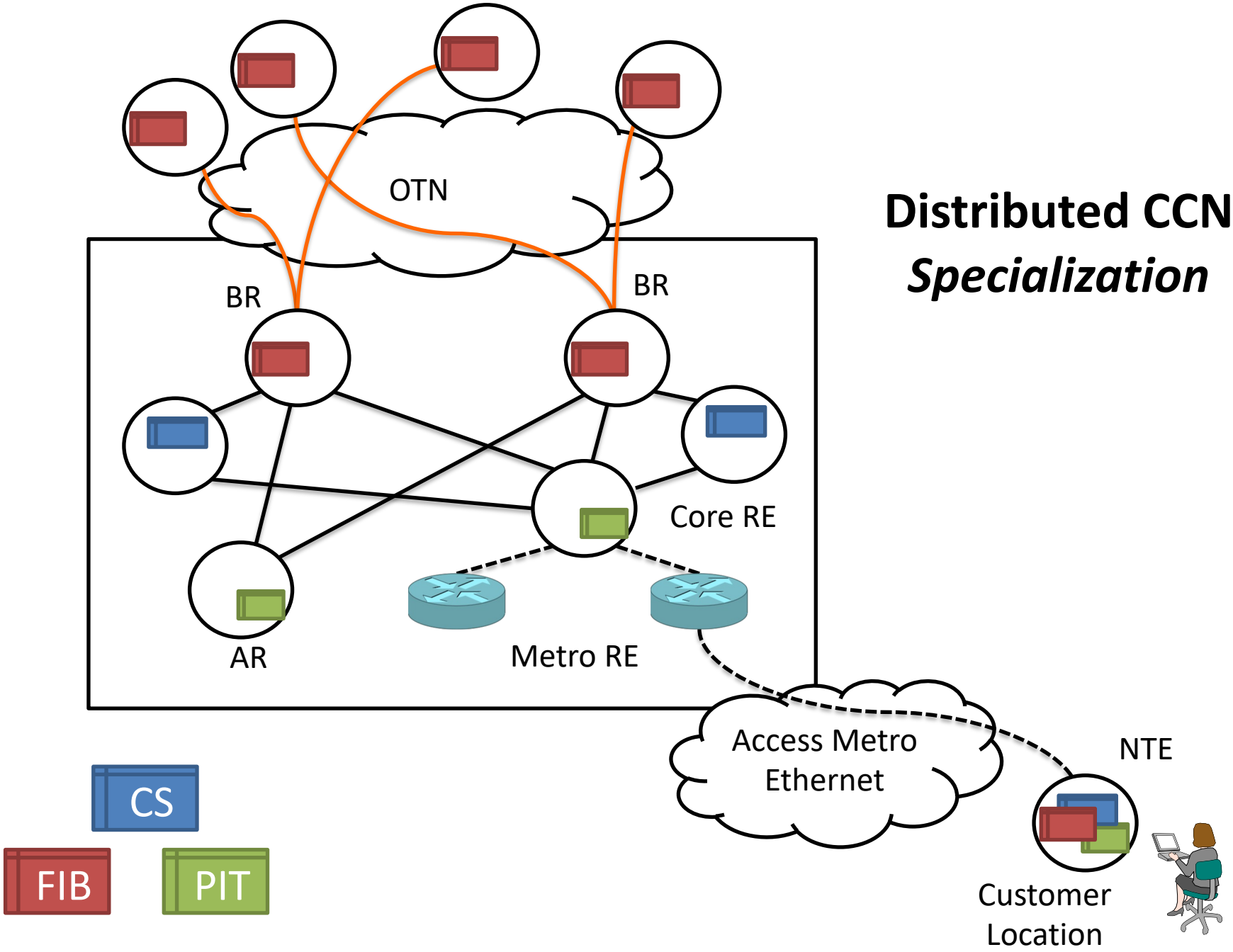

Content store
Flexible size (jpg to movie)
Pre-populated &
Opportunistic
CS
Forwarding Table
~1E+9 entries
Low update rate
FIB
PIT
Pending Interest Table
Fewer entries
High Update Rate
Small entries
gi0
gi1
gi2
Interfaces
Physical or virtual
CS Content Store
FIB Forwarding Information Base
PIT Pending Interest Table
giX Gigabit Interface

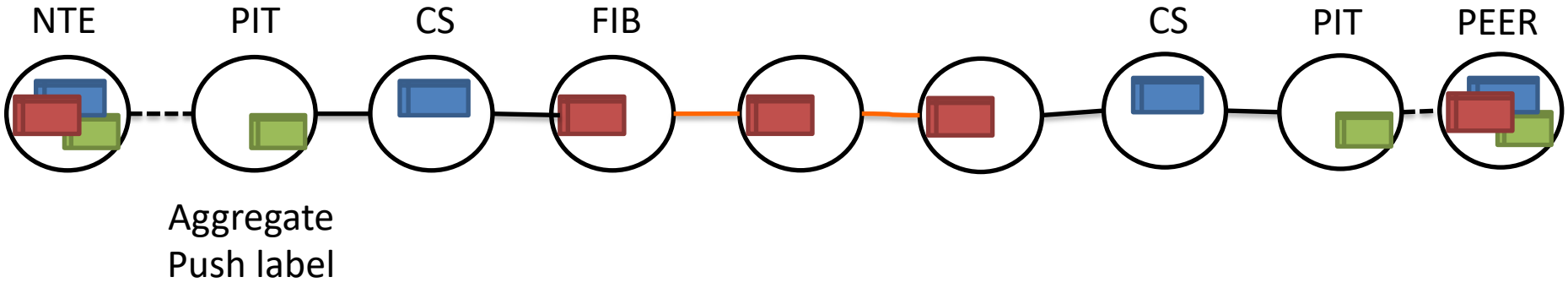


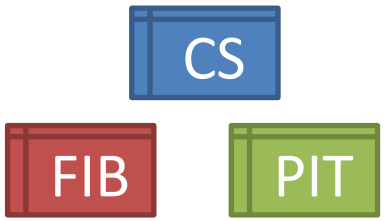
CCN at every node

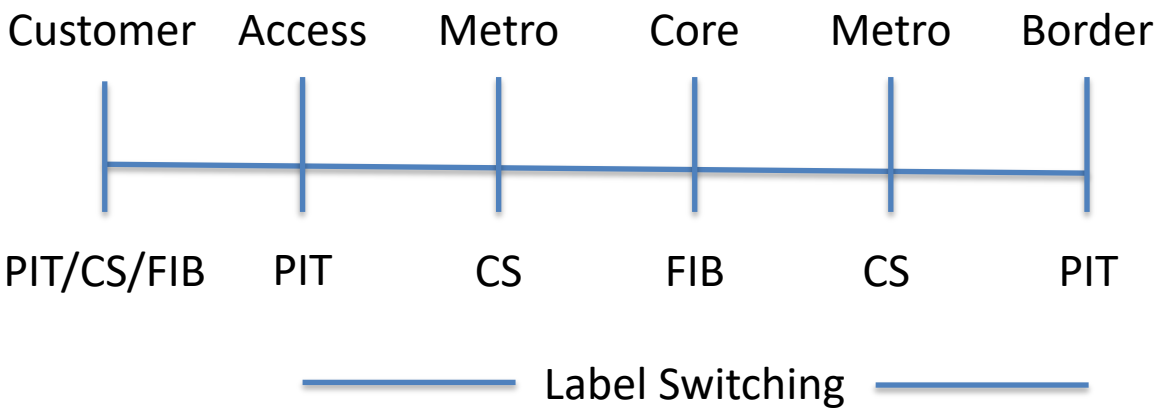
Overprovisioned

Distributed CCN
Specialization




NTE
PIT
CS
FIB
CS
PIT
PEER
Aggregate
Push label


CS
FIB
PIT


Customer
Access
Metro
Core
Metro
Border
PIT/CS/FIB
PIT
CS
FIB
CS
PIT
Label Switching