Why we need a 10Gigabit Copper Link

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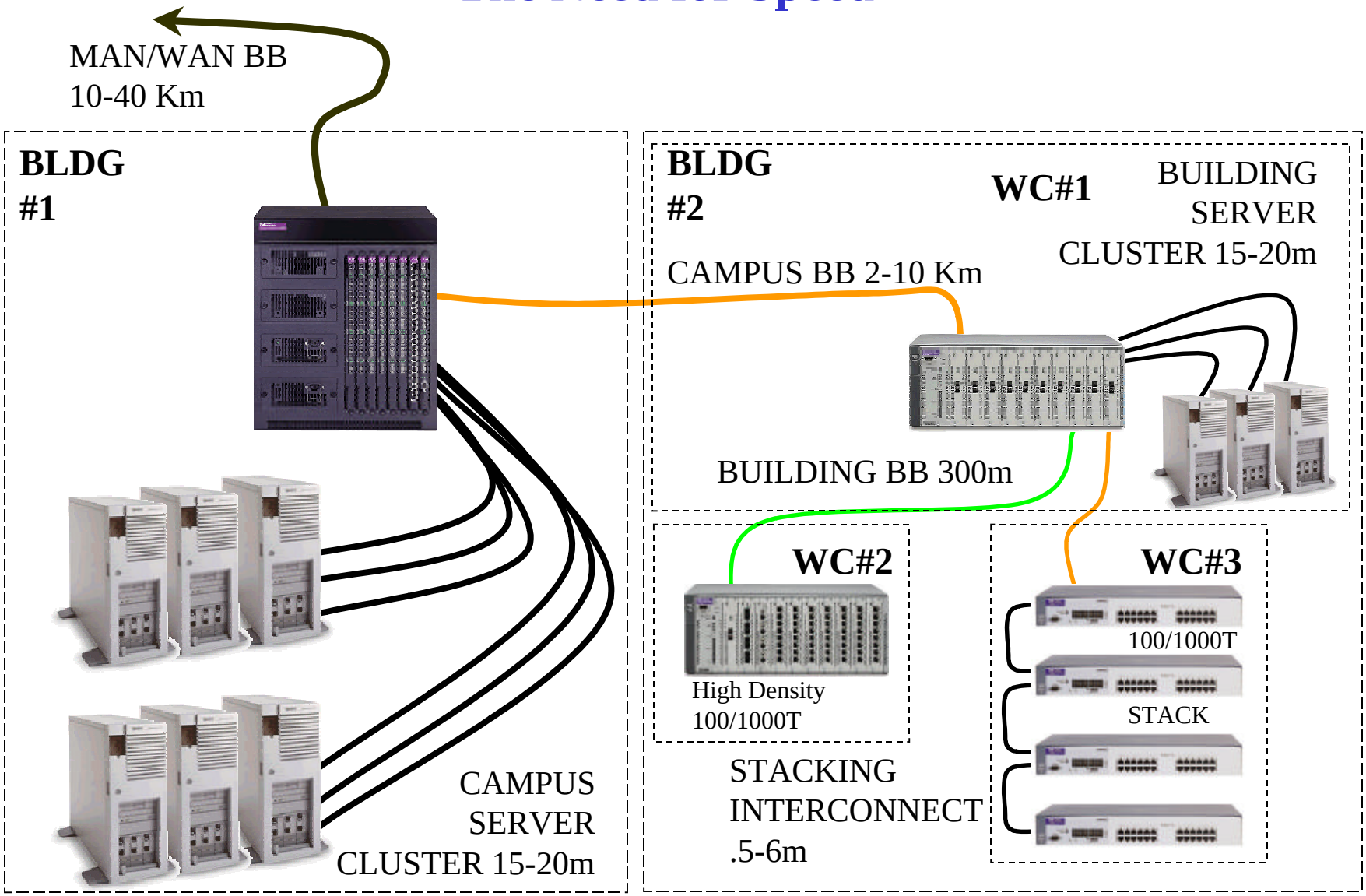
Network Architectures

"The Need for Speed"



Link Requirements

for 10 Gigabit Ethernet

Long Haul (MAN/RAN) Link

- ✓ Extend Ethernet across cities/regions
- ✓ Lower cost solution than ATM

Campus Backbones

- ✓ 2-10 Kilometer range for campus
- ✓ Demands lower cost than LH solution

Perhaps these can be solved with one PHY

Building Backbones

- ✓ 200 - 500 meter range for buildings
- ✓ Supports smf & mmf
- ✓ Demands lower cost than CB solution

Wiring Closet/Server Cluster Interconnect

- ✓ 10-20 meter range for clusters
- ✓ Supports Copper
- ✓ Demands lower cost than FO solution

Shifting Markets

Create Shifting Needs

10 Gigabit Copper links will be needed

- ✓ To aggregate 1000BASE-T links
- ✓ To provide LOW COST connectivity between boxes
- ✓ To provide LOW COST connectivity to servers/SANs
- ✓ To support multi-vendor connectivity

10 Gigabit Copper links should

- ✓ Operate at distances up to 15m or 20m
- ✓ Cost 2-3 times 1000BASE-CX
- ✓ Leverage the proposed “serial/HARI” interface
- ✓ Utilize available connector and IC technology
- ✓ Be available within HSSG schedule

Standardization

There is strong support in this group for Cu

- ✓ 67% voted to create an objective
  - Not enough to pass technical vote, but clearly popular
- ✓ A standard link will ease multi-vendor connectivity for the customer
  - Meeting customer needs should be our first objective

There is strong industry interest in 10Gig Cu

- ✓InfiniBand is developing a 4x serial spec based on HARI. We can leverage this for 10Gig Ethernet.

A copper PMD can be developed in parallel

- ✓ Cu Ad Hoc can meet to develop PMD
- ✓ Cu Ad Hoc can present solution for HSSG approval
- ✓ Cu Ad Hoc will not impede HSSG progress