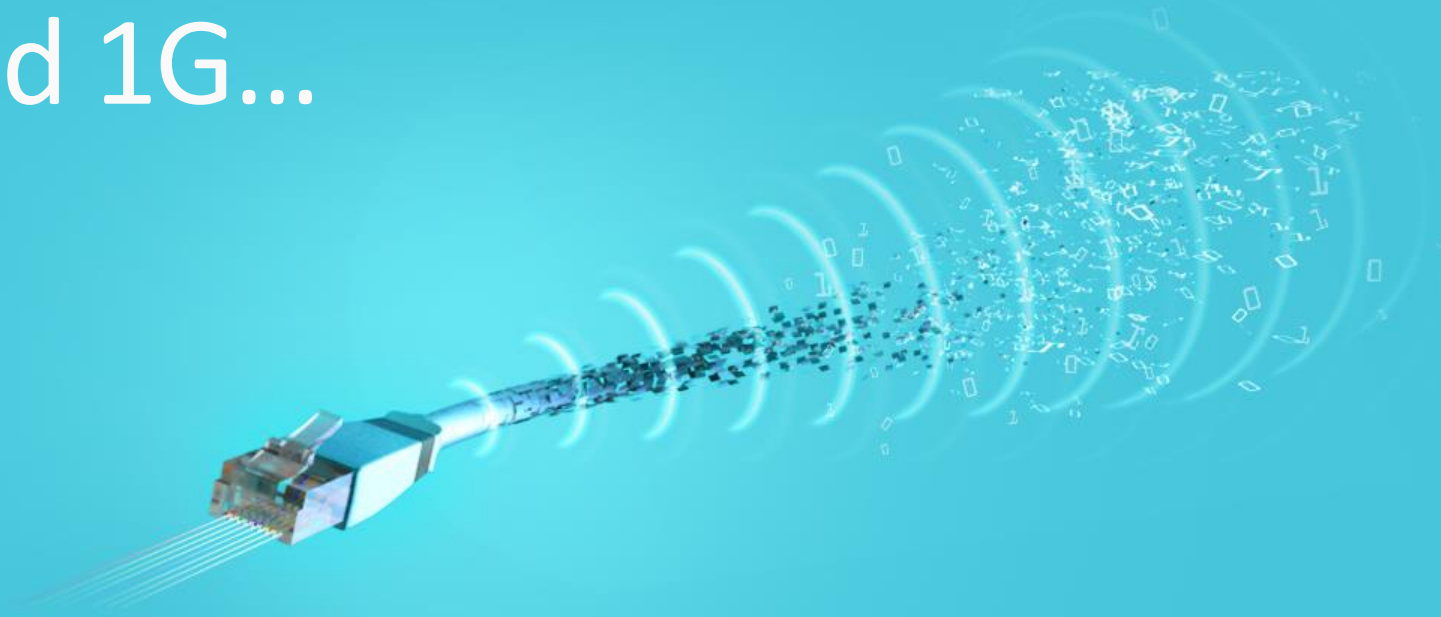
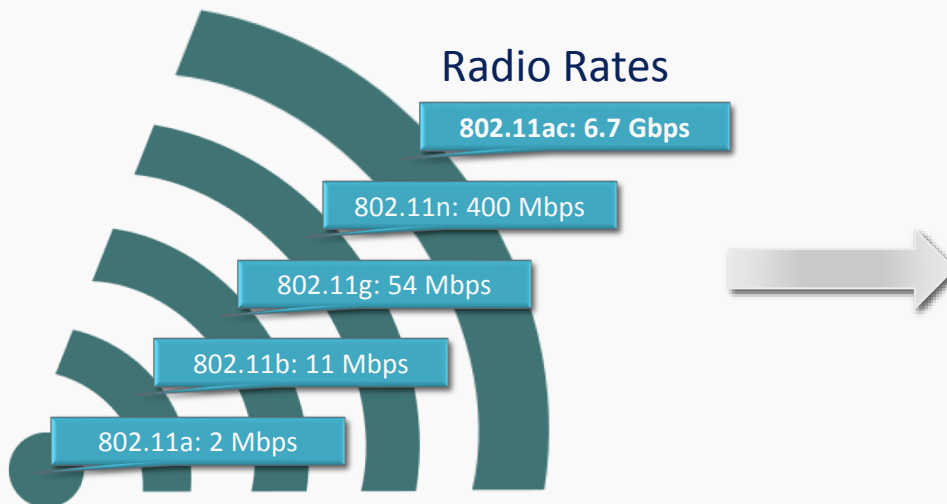


Enterprise Networks Beyond 1G...



NBASE-T Alliance Overview

WiFi Market Trends



- Payload bandwidth for 802.11ac is up to 5Gbit/s
- Several Wave 1 products are in the market touting >1G bandwidth
- Wave 2 products will be in the market next year

Gigabit Bottleneck



WiFi > 1G



Cat 5e Cables

Limited to 1G!



- Existing Gigabit infrastructure is insufficient to handle .11ac deployment
- Gigabit Ethernet has been around since 1999 and has now become the bottleneck
- Market needs PHY technology to support >1G over existing cables

Solution

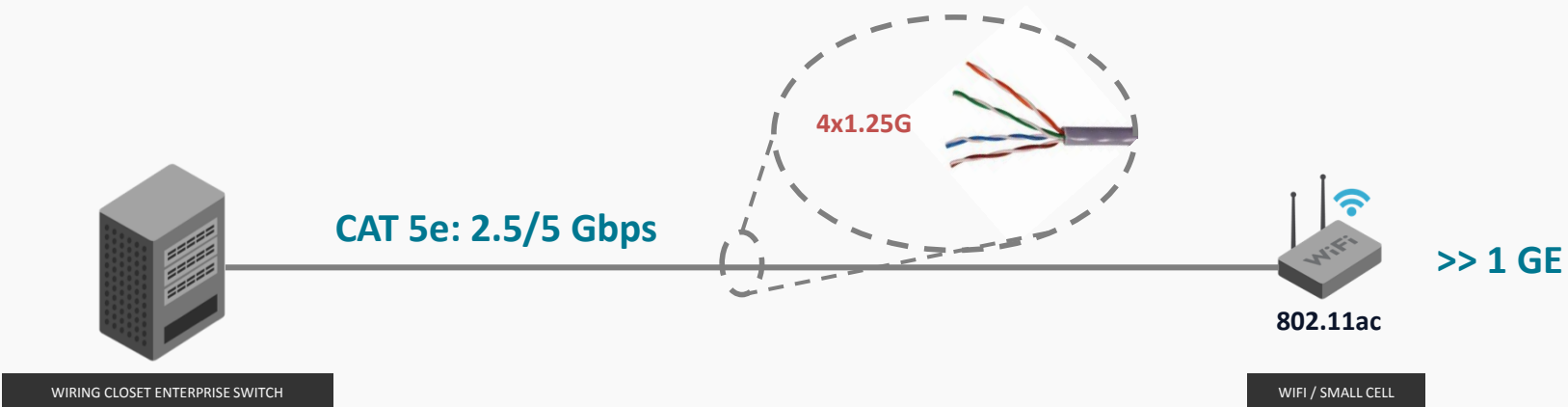


NBASE-T

**NBASE-T enables the upgrade of the
Enterprise infrastructure by
up to 5x the speed
without replacing a single cable**

What is NBASE-T

- NBASE-T is a game-changing technology allowing enterprise networks to evolve beyond 1G
- NBASE-T enables data rates of 2.5 and 5 Gbit/s on 100m of legacy cables
- NBASE-T supports all PoE standards up to 60W



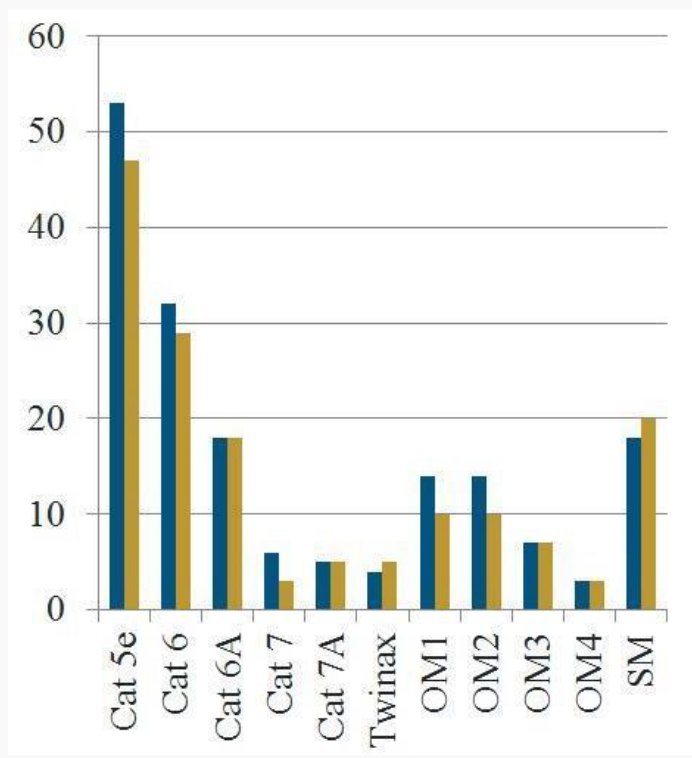


Why Not Use 10GBASE-T?

UTP Cable	IEEE 10G Spec
CAT 5/5e	N/A
CAT 6	55 meters
CAT 6A	100 meters
CAT 7	100 meters

**>85% of WW installed base is
Cat 5e/6 up to 100 meters**

**10GBASE-T cannot work over
vast majority of installed base**

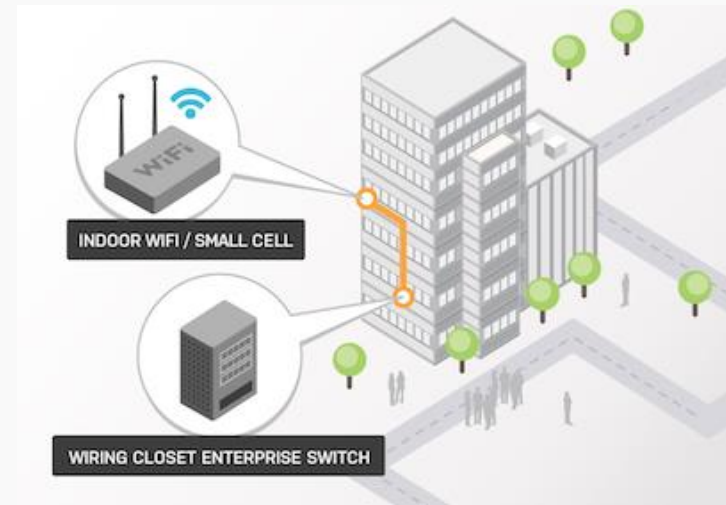


Source: Cable and Install Magazine (Feb 2014)

What About Pulling Second Cable?

Infrastructure upgrade involves

- New cable runs, including labor: average **\$300 per cable**
- Link Aggregation issues



Case study: College Campus

- 1,000 Access Points

TOTAL COST: \$300k!!!



NBASE-T Alliance Objectives

- Purpose of the Alliance is to provide a platform for the industry to facilitate wide deployment of NBASE-T technology and products
- The Alliance will perform the following functions
 - Marketing
 - PR, Trade shows
 - Education
 - Case studies, white papers, FAQ etc.
 - Standards body liaisons
 - Coordinate with IEEE on standardization topics



NBASE-T Alliance Structure

	Promoter	Contributor	Adopter
Eligible for BoD seat	x	x ¹	
Approval of Alliance Specifications	x		
Access to the Alliance Specifications	x	x	x
Participate in Work Groups	x	x	
Chair of Work Groups	x	x	
Listed as Participant on web site	x	x	x

¹ One seat reserved for the Contributors Group, in effect 1 year after incorporation. Contributor representative is elected by the Contributors



Member Companies

Promoters



Contributors



Adopters





Officers

- Chair person
 - Peter Jones, Cisco
 - Email: petejone@cisco.com
- President
 - Kamal Dalmia, Aquantia
 - Email: kamal.dalmia@aquantia.com
- Secretary
 - Curtis Pulley, Xilinx
 - Email: curtis.pulley@xilinx.com
- Treasurer
 - Joe Byrne
 - Email: Joseph.Byrne@freescale.com



FAQ

- What is the corporate structure of the NBASE-T Alliance
 - The Alliance is incorporated in Delaware as a not-for-profit organization
- Who can join the NBASE-T Alliance?
 - Any company can submit an application to join the Alliance. There are three levels of participation: Promoter, Contributor and Adopter. Please read the Bylaws for more details
- What are the yearly fees?
 - Promoter: \$20k
 - Contributor: \$10k
 - Adopter: \$5k
- What is the Alliance IP policy?
 - The NBASE-T Alliance has adopted an IP Rights (IPR) Policy that is consistent with the industry standard practice used by organizations such as IEEE. Under the Alliance IPR, a Participant agrees to grant to other Participants a license to its Necessary Claims, under Reasonable And Non-Discriminatory (RAND) terms. Please read the IPR Policy for more details
- For more information, please contact the alliance at Info@nbaset.org



Summary

MOBILE IS EXPLODING, DRIVING BANDWIDTH DEMAND UP TO 5 GIGABIT IN ACCESS POINTS

THE WIRED INFRASTRUCTURE, BUILT ON LEGACY COPPER CABLING, IS CURRENTLY STUCK AT 1 GIGABIT

- NBASE-T is a game changing technology allowing a 5x upgrade in network connectivity speed on legacy Cat 5e and Cat 6 cables
- Enables unabated roll-out of 802.11ac WLAN infrastructure with zero change to cabling



THANK YOU!
