



NORTEL



Very High Throughput WLAN

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BUSINESS MADE SIMPLE





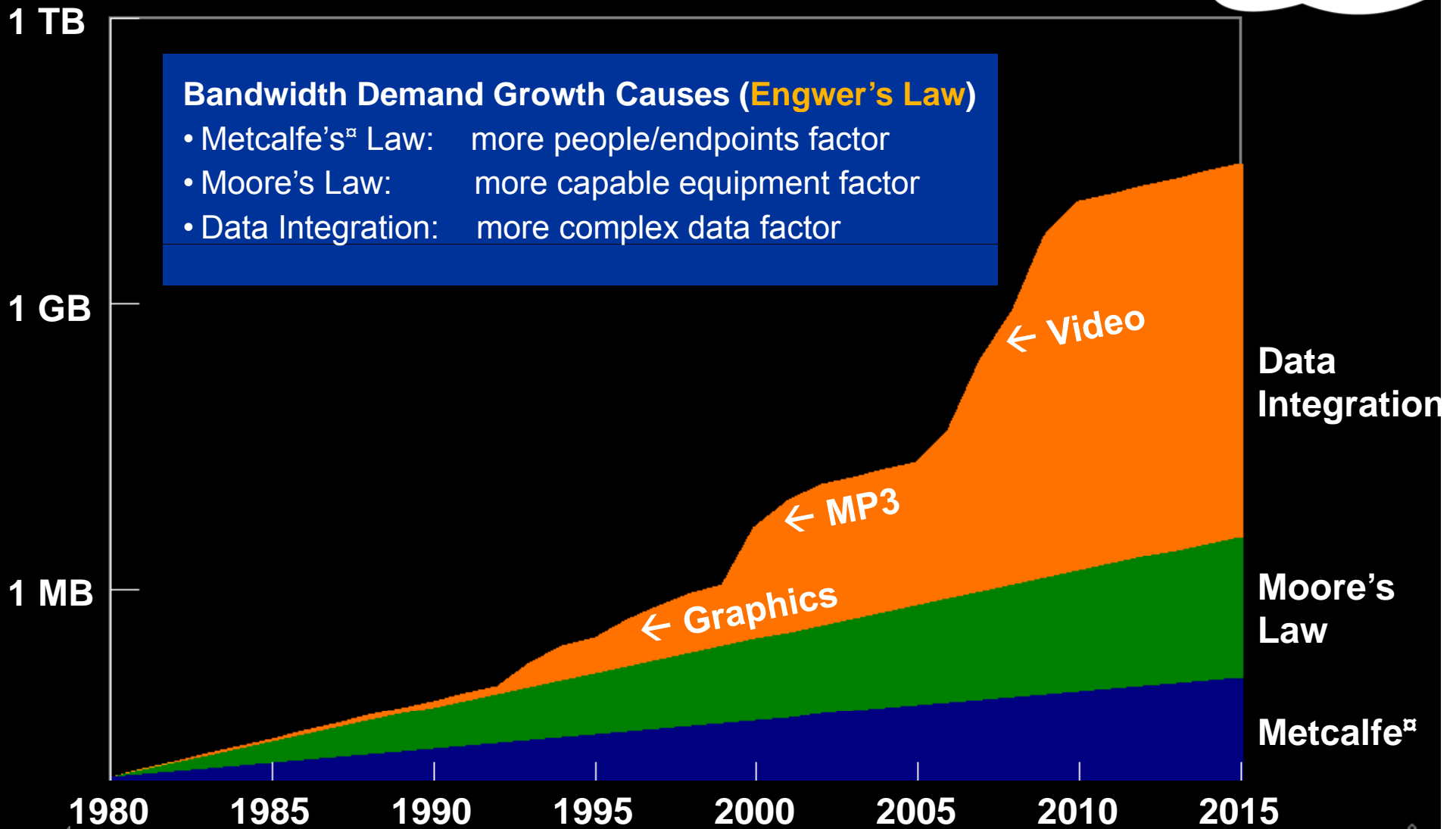
Outline

- Bandwidth Demand Forecast/ Impact
- WLAN Next Steps
- 802.11 VHT
 - Status
 - Technology
 - Directions



Per User Bandwidth Needs

Forecasted Peak Data Unit Size





Bandwidth Demand Impact

- Edholm's Law:
 - telecommunication data rates are increasing due to new technology developments
 - wireless lags wireline
 - applications transition to wireless when the bandwidth requirements are met
 - application use proliferates due to the increased ease of access/ mobility
- See tinyurl.com/2vxgeg



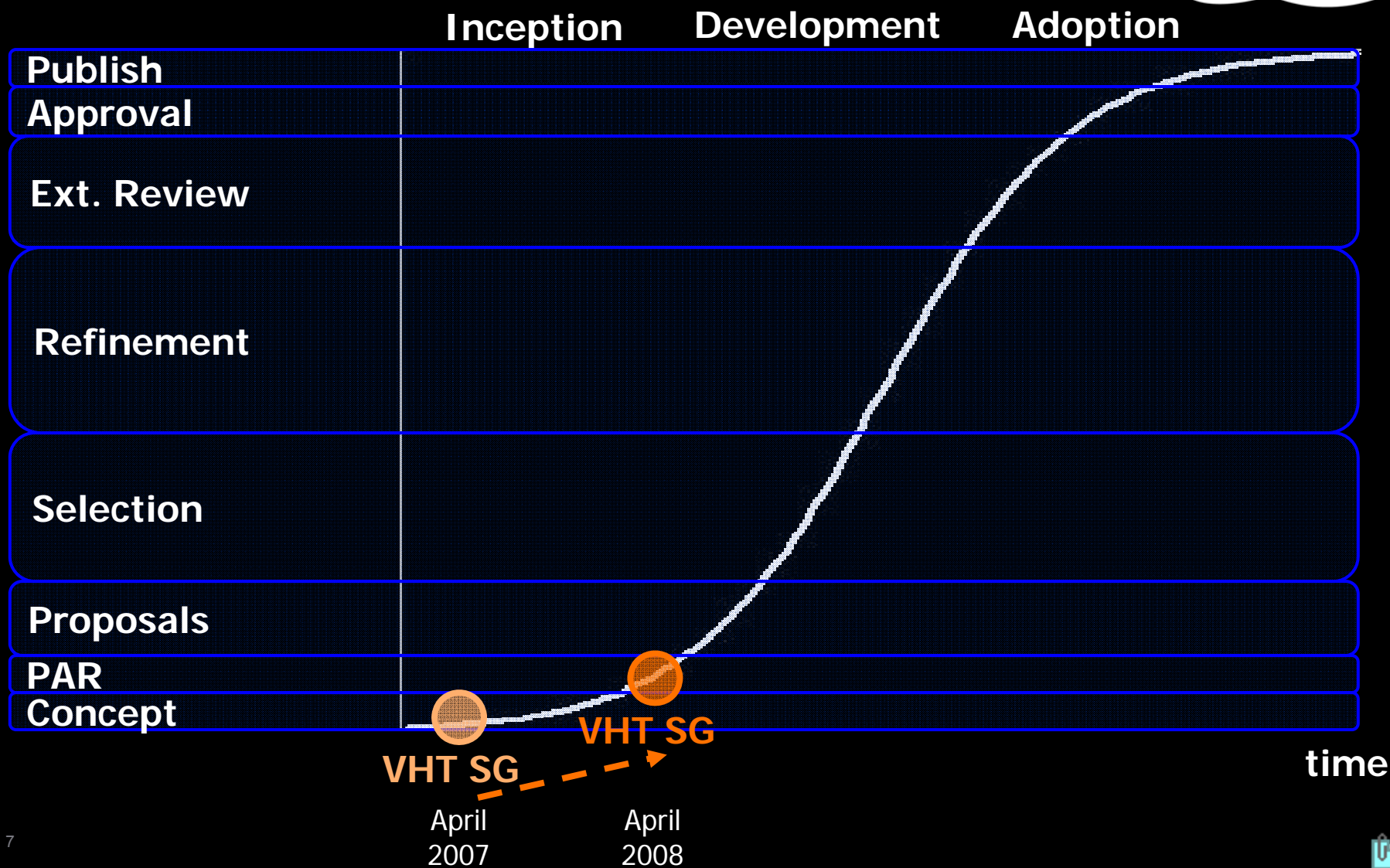
WLAN Next Steps

- 802.11n
 - The 802.11n throughput advancement is substantial
 - Shared 802.11n link = 150 Mb/s / 15 users \equiv 10 Mb/s
 - But, Engwer's Law indicates that users need more bandwidth
- ... 802.11 Very High Throughput (VHT) Study Group





802.11 VHT Status



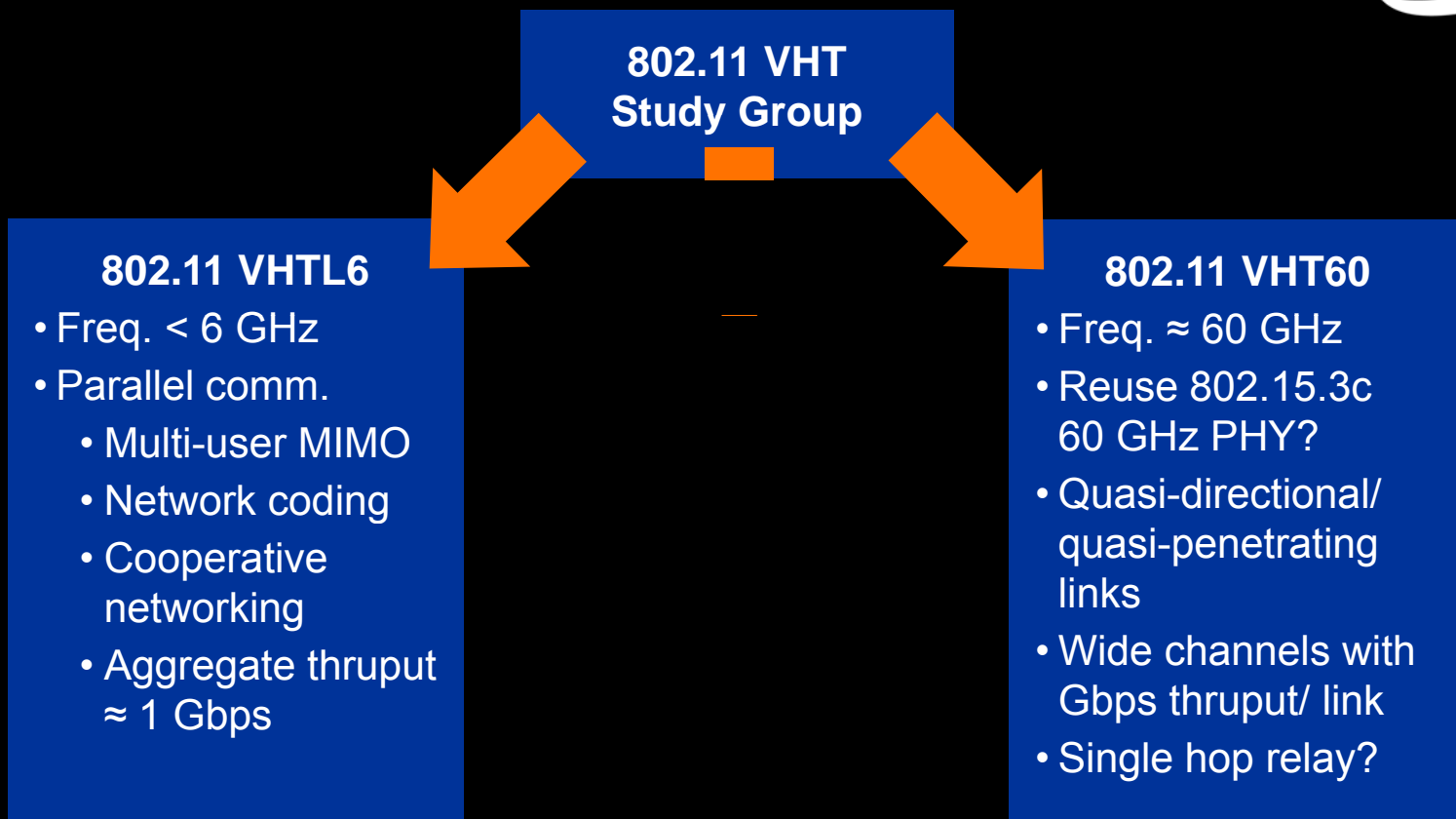


Technology For VHT WLAN

- Baseline
 - more antennas, wider channels, more complex modulation and more streams; new frequency bands
- Advanced Coding
 - FEC/ LDPC
 - Network coding
 - Interference Cancellation Coding
- Advanced Parallel Communications
 - Multi-user MIMO
 - Cooperative Wireless Networking
 - Single Hop Relay



802.11 VHT Directions





Summary

- Bandwidth demands continue to increase
- WLAN technology is evolving to meet those needs
- 802.11 VHT WLAN access → **Unwired Enterprise**



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