

10GbE - OC-192 Serial Framing Proposal

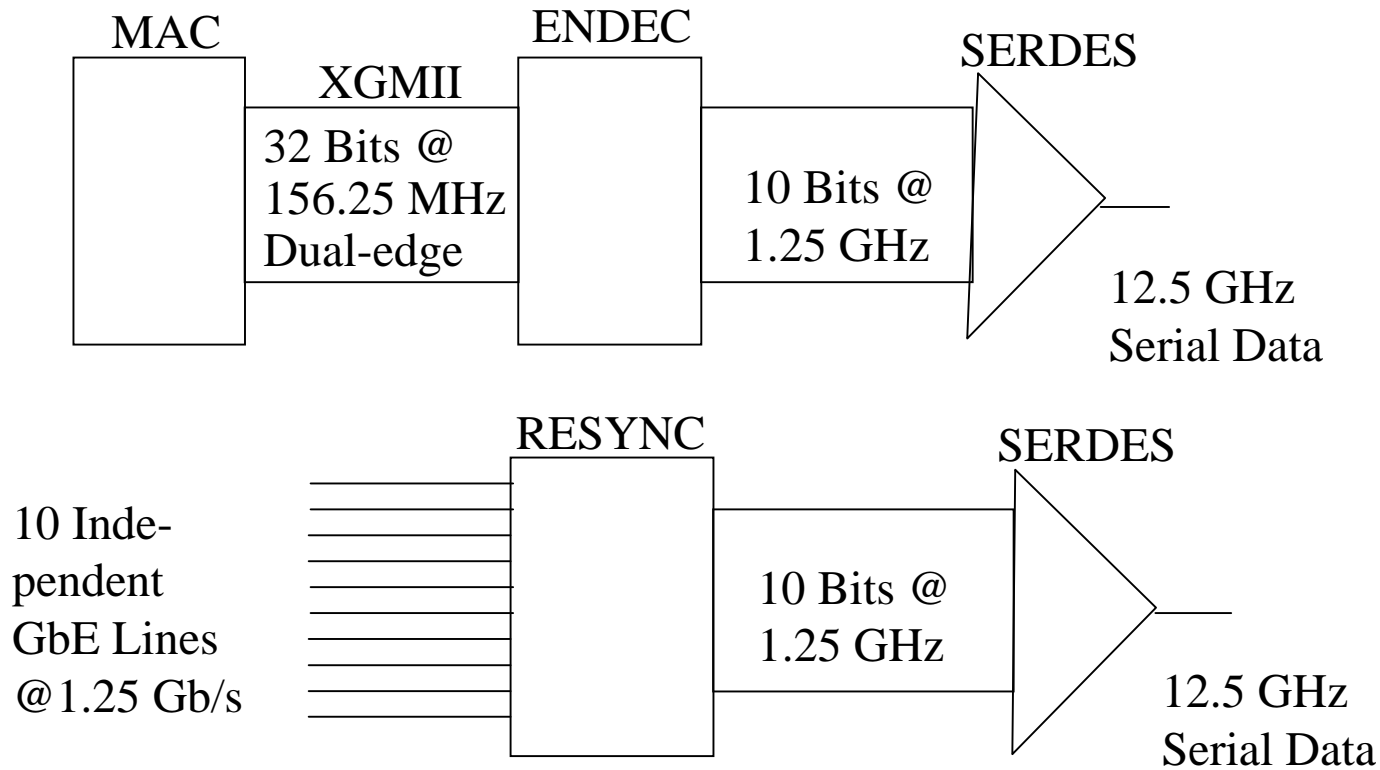
**Presentation To IEEE
November 9, 1999**

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Vitesse's First 10GbE Proposal



Pluses

- Easy SerDes Design
- Best Fit with 8b/10b
- One Size Fits All

Minuses

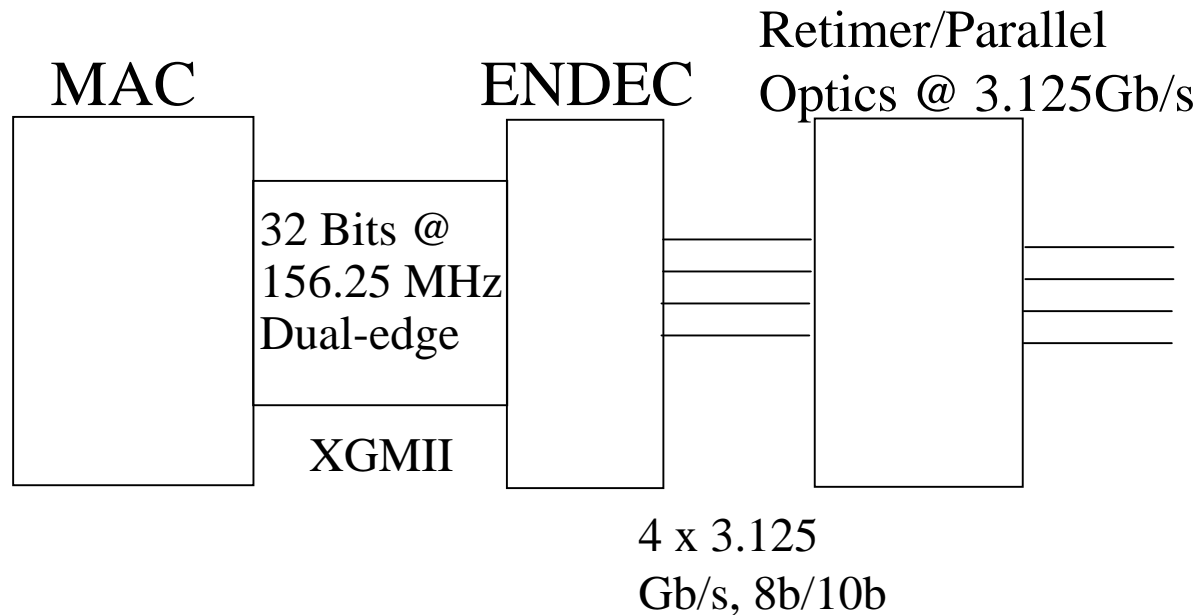
- Higher ASIC Pin Count
- Sync Bus Speed Pushes CMOS Limit
- LAN & WAN Needs Diverge

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10GbE Parallel Optics Option



Pluses

- CMOS-Compatible
- Low-cost For Short Distances
- VCSEL Optics

Minuses

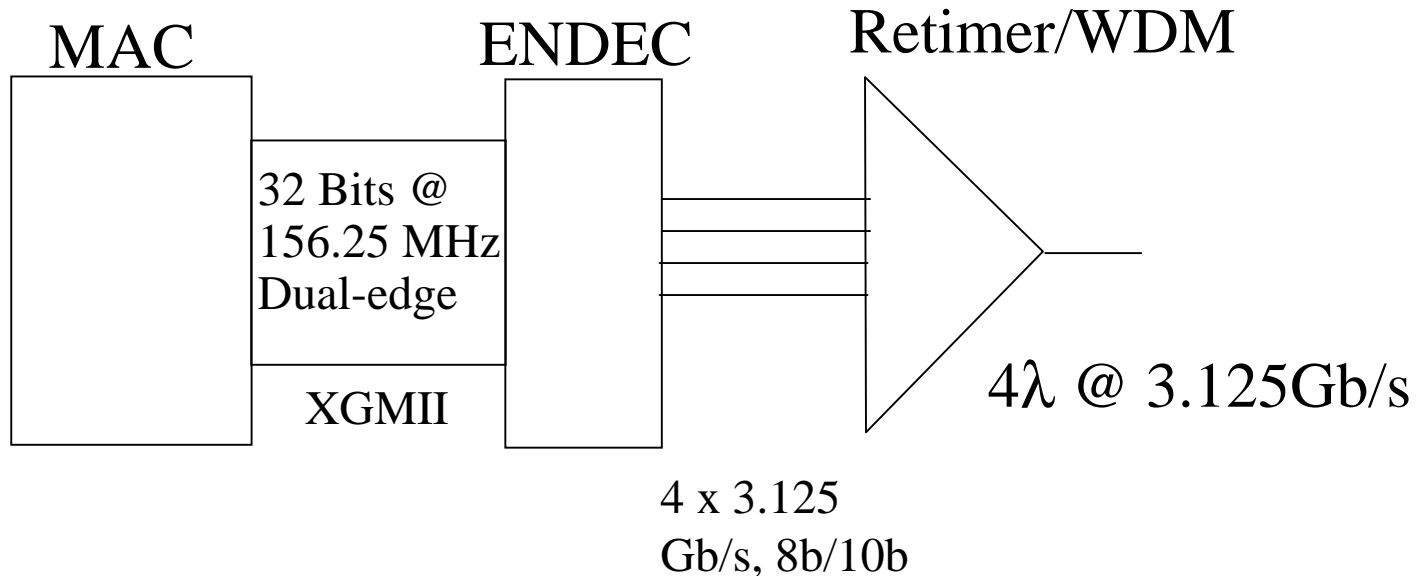
- High Signal Skew
- Higher Cost For Long Distances
- Single Point Of Failure



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10GbE WDM Option



Pluses

- Low ASIC Pin Count
- Low Fiber Cost
- VCSEL Optics

Minuses

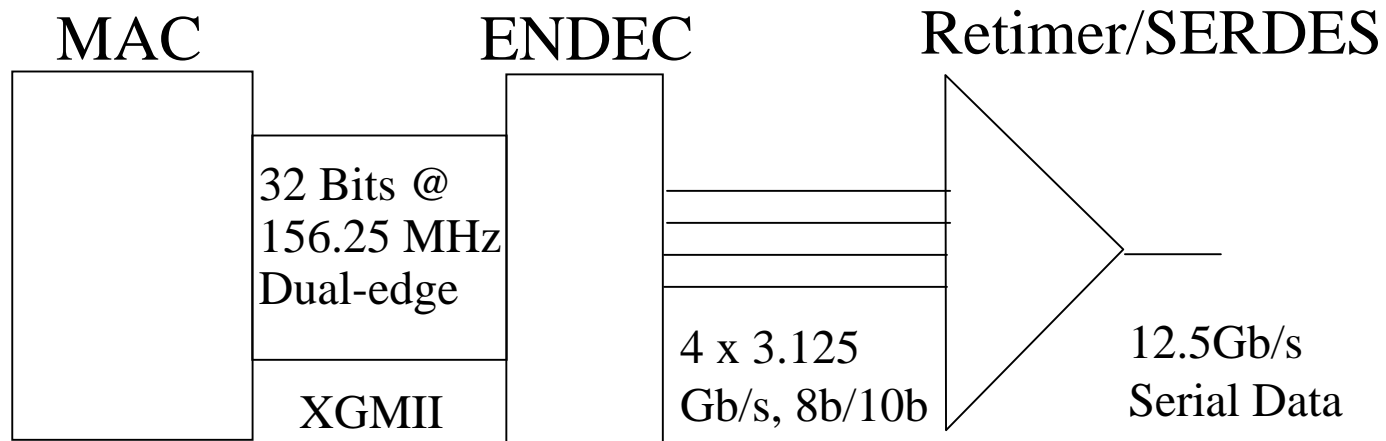
- High Signal Skew
- Multi-Vendor Availability???
- Single Point Of Failure



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10GbE Serial LAN Option



Pluses

- Low ASIC Pin Count
- Maximizes Intra-Board Distances
- Single Fiber & Source Required

Minuses

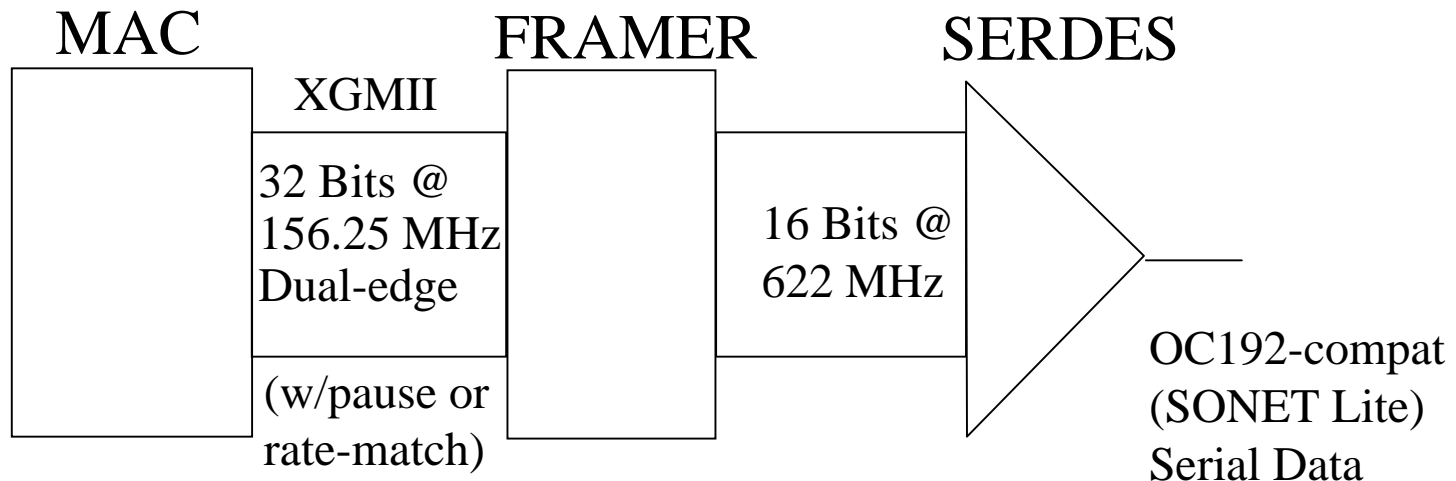
- High Serial Rate - Not CMOS
- Decode & Re-Encode Required
- Market Potential Unknown



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10GbE WAN Interface Proposal A



Pluses

- Minimizes Logic Between XGMII & Serial
- Provides OC-192 Compatible Serial
- Single Fiber & Source Required

Minuses

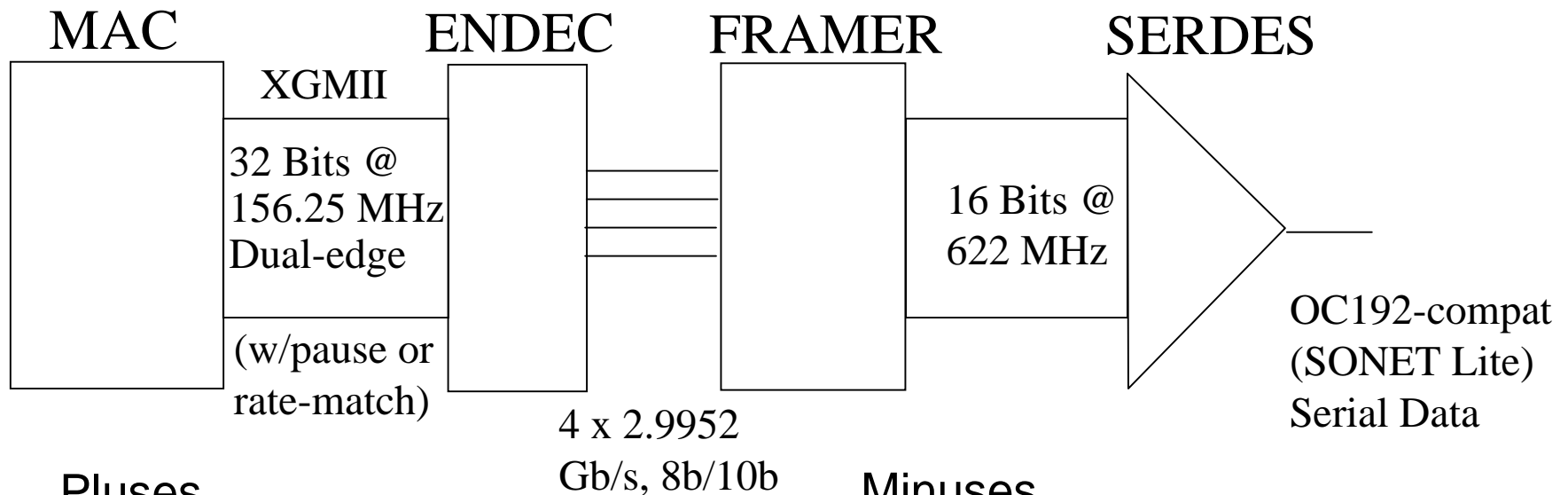
- High Pin Count ASIC
- Two Sync Buses Required
- Layout Difficulty



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10GbE WAN Interface Proposal B



Pluses

- Low ASIC Pin Count
- Maximizes Intra-Board Distances
- Single Fiber & Source Required
- Provides OC-192 Compatible Serial
- Multiple Vendors, Standard I/F's
- No Clock To ASIC
- Maximizes Use Of CMOS

Minuses

- Additional Logic Required



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