CORNING

MMF Objectives & Bit Rate/Reach Gaps

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IEEE Next Generation 100Gb/s Optical Ethernet Study Group

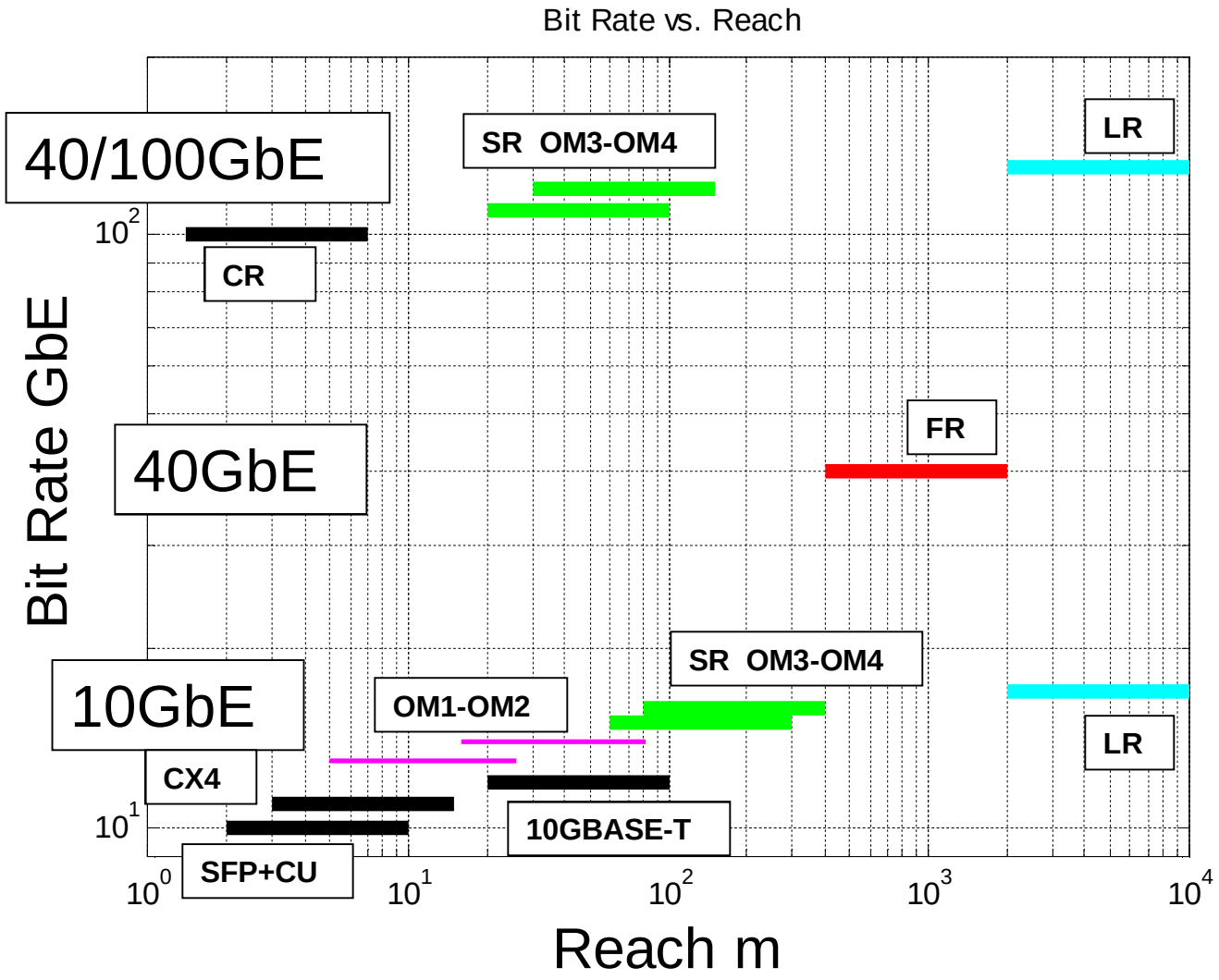
Summary

The gap between Copper and SMF cost & performance justifies two MMF objectives, a short length on focused on cost and a long length one focused on performance.

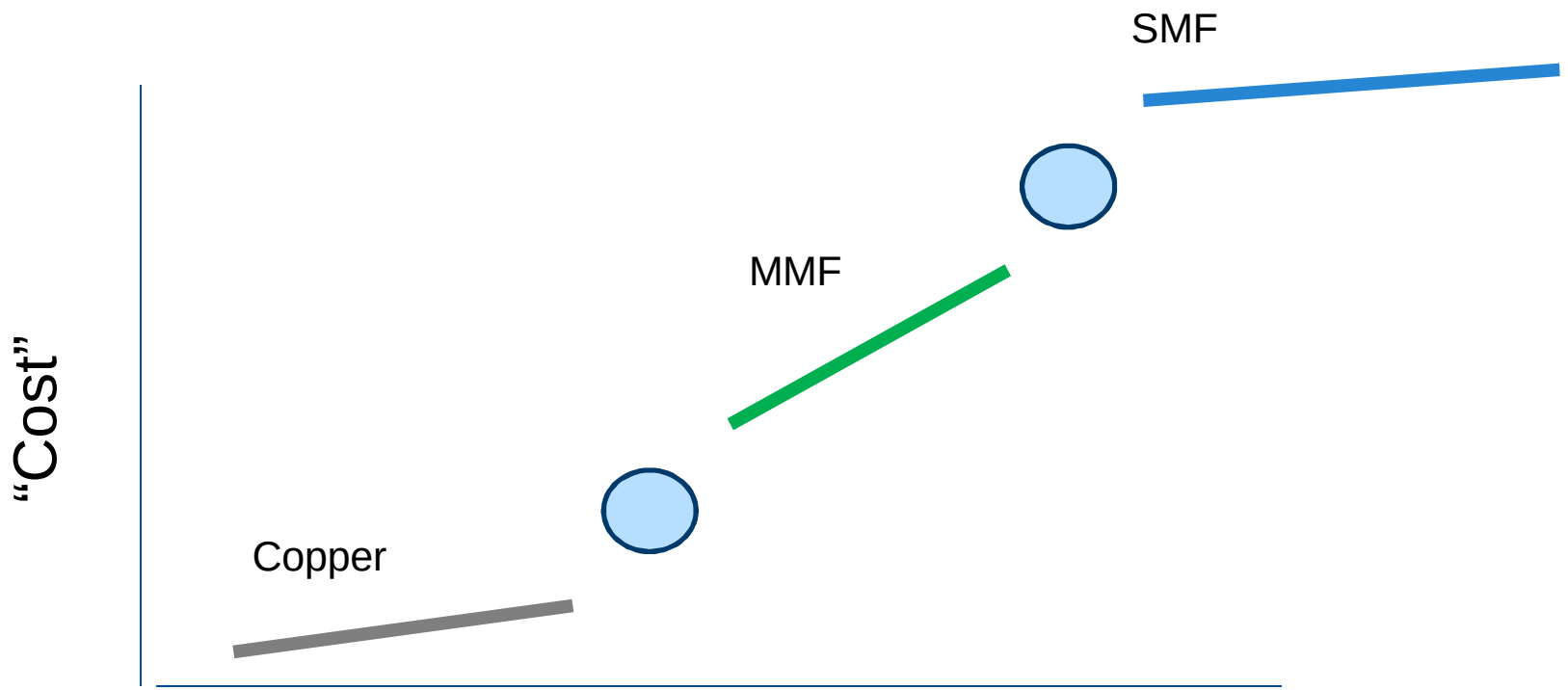
Bit Rate vs. Reach for various Ethernet PMDs

The bars represent 1.0*reach & 0.2*reach

MM fills a gap between SMF



MMF fills a gap in Cost and Performance.



"Performance" ~ Reach at a given data rate

Conclusions

Two MM PMDs/reach objectives are logical and required –

One for cost – minimize cost with reach >3x copper

One for reach – maximum reach within cost budget set by SMF alternative.

Consistent with kolesar_1_0312 –
30m-40m OM3 and 150m OM4
The OM3 target distance can be shortened to 20m if it helps cost.

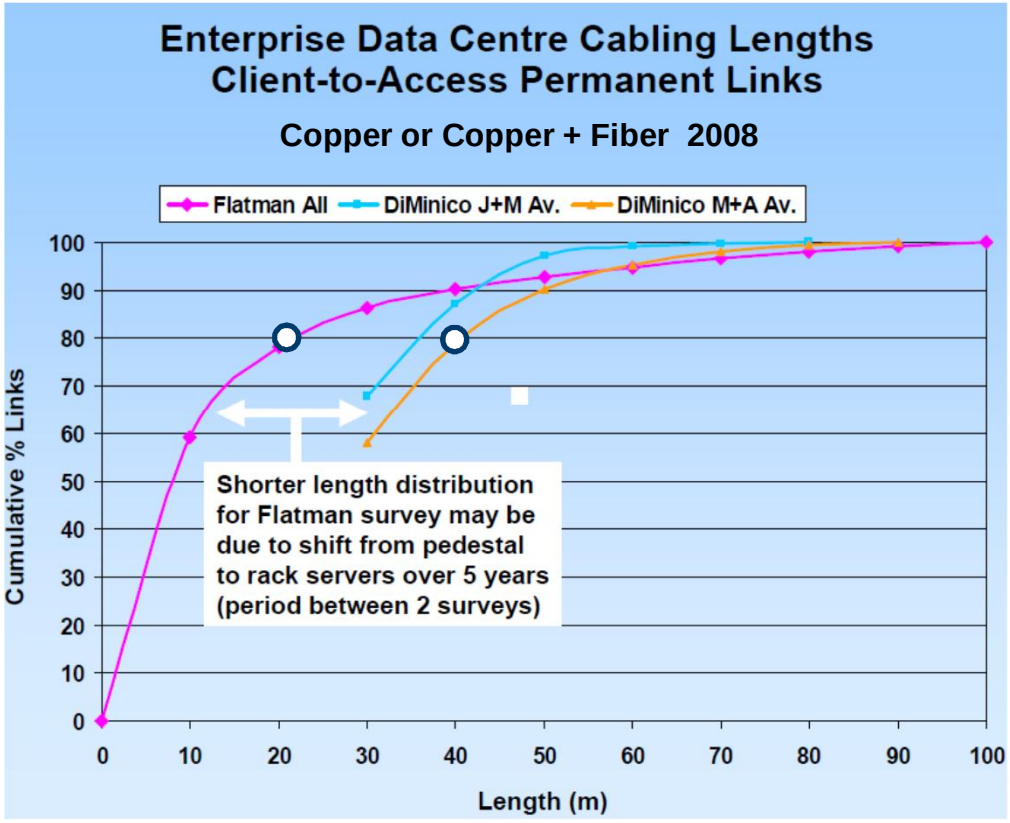
Backup Slides

Questions?

Length Distribution & Interoperability

http://www.ieee802.org/3/ba/public/jan08/index.htm/flatman_01_0108.pdf
http://www.ieee802.org/3/hssg/public/nov06/swason_01_1106.pdf

1. **Some IEEE length distributions combine copper and fiber – MMF is already replacing a different PMD.**
2. **Length distributions in Data Centers <u>and</u> HPC shift to longer lengths if the media supports this.**



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