

MMF ad hoc
Next Gen 100G Optics
Collated responses to questions on
MMF objectives

28th February

Jonathan King

Context and questions asked on reflector:

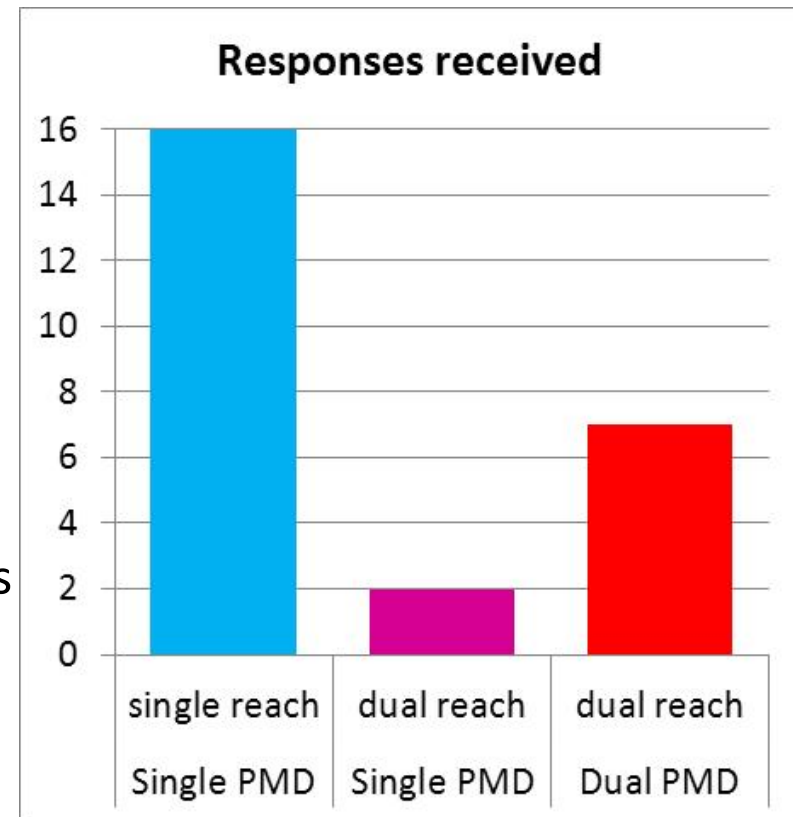
- In the next meeting (Tuesday 28th Feb), I'd like to see if we can finalize a strawman MMF objective. To that end I'll prepare a presentation which we can review during the call which will include a strawman objective for review on the call, together with an overview of how it addresses the 5 criteria – to help get the best starting point for that discussion I'd like to get your responses to the questions below:
- The strawman objective will follow the wording in Anslow_01_0112:

“Define a 4-lane 100 Gb/s PHY for operation over OM~~X~~ MMF with lengths up to at least Y m.”

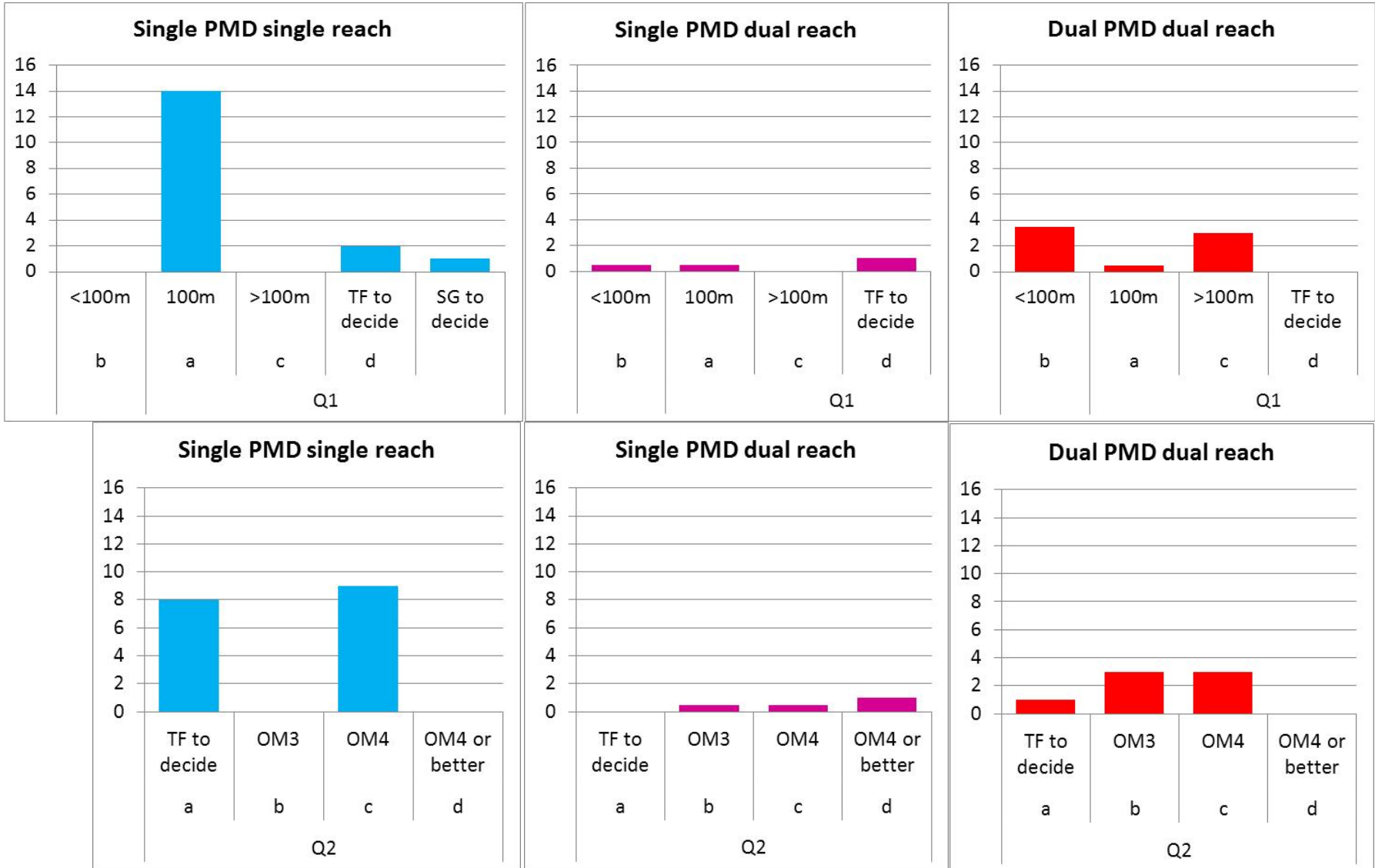
- 1) A reasonable MMF reach objective (i.e. the value of Y) would be
 - a) 100m
 - b) Significantly less than 100m (what reach?)
 - c) Significantly more than 100m (what reach ?)
 - d) decided in the task force
- 2) The MMF type should be
 - a) decided in the task force
 - b) OM3
 - c) OM4
 - d) at least as good as OM4

Responses overview

- 26 people responded – thank you !
 - about half had additional comments
 - 1 person objected to the objective following the wording in Anslow_01_0112
- 17 people responded to questions on the single PMD, single reach objective
- 2 people supported a single PMD, dual reach objectives
- 7 people (27%) supported a dual PMD with different reach objectives
 - one optimized for low cost, one optimized for long distance



Responses detail



Comments received

- 7 people suggested or supported dual MMF PMDs, dual reach objectives
 - 1 objective optimized for low cost
 - 1 objective optimized for long reach
 - 5 supporting 50m OM3, 150m OM4
 - 1 supporting >10m on MMF and >100m on MMF
 - 1 supporting a range of 30-70m OM3 and 100m OM4
- 2 people suggested adding a 500m SMF objective
- 3 people wanted to define the reach in the task force, with lowest cost as motive
 - 1 person felt the study group should do more work to decide the reach
- 1 person suggested that the Task Force should define reach and MMF type
- 1 person said that if, to meet a 100m objective, FEC were forced inside the PMD, then they would prefer two reach objectives, 1 with FEC and 1 without FEC

Likely most popular objectives

Single PMD single reach objectives:

- “Define a 4-lane 100 Gb/s PHY for operation over OM4 MMF with lengths up to at least 100 m.”

Or (slightly less popular)

- “Define a 4-lane 100 Gb/s PHY for operation over MMF (to be decided by the task force) with lengths up to at least 100 m.”

Dual PMD, dual reach objectives:

- “Define a 4-lane 100 Gb/s PHY for operation over OM4 MMF with lengths up to at least 150 m” and “Define a 4-lane 100 Gb/s PHY for operation over OM3 with lengths up to at least 50 m.”

Thanks !