

# Objective for Next Generation 100GbE Optical Interfaces SG with scope expanded to include 40GbE

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# Introduction

Despite not being directly covered in the CFI, there has been some discussion of the possibility of including an objective to develop a PHY for 40GbE over 40km of SMF in the output of the *Next Generation 100GbE Optical Interfaces* Study Group.

Unfortunately, this would involve a change in scope of the Study Group from covering 100GbE Optical Interfaces only to covering both 40 and 100 GbE interfaces (as did the P802.3ba Task Force).

This contribution discusses what the possible objective might be in order to understand what questions need to be answered before a request to widen the scope of the Study Group could be made and a suitable additional objective could be agreed.

# Supporters for adding 40km 40G SM objective

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# 40G over 40km Single-mode fibre

If the scope of the Study Group were to be widened to cover 40GbE, then a possible objective could be:

- Define a 40 Gb/s PHY for operation over at least 40 km of SMF

Questions that need to be answered:

- Would the addition of an objective as above be compatible with the expected activity of a *Next Generation 100GbE Optical Interfaces* Task Force?
- Technical and economic feasibility of transmitters and receivers suitable for operation at 40G over 40km of SMF
- Is there a Broad Market Potential for this interface?

Thanks!