Proposed outline of Task 4 group Telecon 9/10
Goal:

1. To compare the tolerance to the connector offset of different launch conditions
   - § To quantify how launch conditions effect the impulse responses and PIE metrics
   - § To understand how launch conditions and link performance are effected through the Task 2 defined link

2. To identify a restricted index profile set(the worst case fiber set) for each considered launch conditions

3. To specify a TP2 optical launch profile which enables the maximum number of solutions (modified encircled flux?)

Activities

Definitions:

1. Define conditioned launch for 1300nm transmission on MM fiber
   1) offset launch
   2) center launch
   3) vortex?

   The parameters include the size of the beam, the encircled flux distribution if it is possible and so on
2. Fiber length 220 m vs 300 m
   Suggest proceeding with both fiber lengths
3. Connector offsets in the link
   1) Suggest using 7, 7 and 4 um proposed by Task 2
   2) To address the dynamic variation caused by temperature, polarization or mechanical perturbation, suggest including the rotation of polarization in the simulation

Simulation Activities:

1. Scaled Cambridge Modeling
   Link without connectors
   - To study the optimized beam size for each launch condition. This information will be helpful for TP2 to specify the launch profile
   - To compare the pulse response of different launch condition and corresponding PEI metrics. This information will be helpful to identify the worst set of fibers for each launch

   Link with connector
2. Monte Carlo simulation

Presentation:

Comparison of different launch conditions using CDF of PEI_L and PEI_D metric (please reference Bhoja_1_0704 from Portland meeting)
- no connector link
- task 2 link
- tolerances

Output:

1. use Cambridge data format
2. or distribution families of pulse shape directly