

Comments on presentation by Kasyapa Balemarthy et al.: “Fiber modeling resolution and assumptions: analysis, data, and recommendation”

Main points

1 Modesolver

As a point of information, we confirm that the 108-fiber model uses the same modesolver as for the previous 81-fiber releases. This has been independently verified by many users. For example within 10GBASE-LRM, RSoft and Optium, who use independent modesolvers, reported at Ottawa in September 2004:

“RSoft simulations for 3 different fiber models ... gave very good agreement with Cambridge model – both for non-scaled index profiles (scaling factors are within 3-5% errors) and for scaled index profiles.”

“Finally, the overall good agreement between RSoft/Optium and Cambridge simulations will stimulate us to go on with further simulation studies of various task of interest for 802.3aq group.”

2 Implementation of the 108-fiber model

It appears that the authors are not following the implementation procedures for the 108-fiber model, as recommended in [1]. It is clear that they at least use **different MPD assumptions, different scaling procedures** and a **different material dispersion parameter**. It is therefore not surprising that different results, which we do not believe to be correct, are achieved.

3 Further assistance

We have already supplied feedback and clarification to the authors and we would be happy to provide further assistance to them to enable the 108-fiber model to be implemented in the recommended manner.

[1] J. D. Ingham, R. V. Penty and I. H. White “Statistical modeling of multimode-fiber links: a supplement to the information provided in the release note of 12 October 2004 in relation to Release 1.2 from the University of Cambridge,” distributed as part of CamMMF1p2.zip.