

Meeting Notes: 12/18/06

Attendees:

Last	First	Employer	Affiliation	12/18/2006
Alping	Arne	Ericsson	Ericsson	Y
Anslow	Pete	Nortel Networks	Nortel Networks	Y
Chang	Frank	Vitesse	Vitesse	Y
Clairardin	Xavier	Kotura	Kotura	Y
Cole	Chris	Finisar	Finisar	Y
Dallesasse	John	Emcore	Emcore	Y
Dhamejani	Suveer	Tyco Electronics	Tyco Electronics	Y
Dove	Daniel	Dove Networking	ProCurve Networking by HP	Y
Dudek	Mike	Picolight	Picolight	Y
Duelk	Marcus	Lucent	Lucent	Y
Fischer	Thomas	Siemens	Siemens	Y
Green	Larry	Ixia	Ixia	Y
Jaeger	John	Infinera	Infinera	Y
Jiang	Wenbin	JDSU	JDSU	Y
Lingle	Robert	Ofsoptics	Ofsoptics	Y
Miao	Tremont	Analog Devices	Analog Devices	Y
Patel	Sashi	Foundry	Foundry	Y
Pepeljugin	Petar	IBM	IBM	Y
Song	Steve	Exelight	Exelight	Y
Tatah	Karim	Cray	Cray	Y
Traverso	Matt	OpNext	OpNext	Y
Tsumura	Eddie	Exelight	Exelight	Y

Discussed the new table additions and corrections made since last teleconference;

Discussed Chris Cole Presentation;

10G Rows:

Matt: Discrete devices available, extrapolation not necessarily valid

For example, EMLs tend to be larger, take up more wafer space

Chris: Another thing not captured, 10G DML @ 1550 not considered in green but maybe we should take it off the study list because hard to build as monolithic array

Xaviar: Would like to avoid taking things off at this point. Would like to present work showing it's a viable alternative.

Chris: DML at 1550 gonna work at 40k?

Xaviar: Objective is 10K, we need to keep. Not captured, whether CWDM or DWDM in that column.

Mike D: CWDM being considered for all or just 1310?

Chris: Does not address this distinction. Slide 4 addresses some of this, but slide 3 is trying to capture wavelength and transmitter type. This table does not capture "optimum" or "implementation complexity".

20G Rows:

Chris discusses his perspective. Nobody argued with his position that 20G 10K DML not possible.

50G Rows:

General: Would be nice to have 40K and 10K leverage common approach. Green applied where it appears to be possible.

Marc Lucent: Main objective regarding DQPSK at 50 / 1310 is dispersion?

Chris: Yes, the implementation for 50G 1550 looks large and therefore does not seem LAN oriented. At 1310 makes better sense.

Marc: For 40Km, 1550, might make better sense for this longer reach.

Chris: Yes, the breakpoints for 10G are 1310 DML and 1550 EML, so this is consistent. For us, its possible to set the breakpoint at 40-80Km. Question is, do we really want to add the cost of this technology for 40Km.

Marc: Chromatic dispersion your primary concern?

Chris: Looking forward to presentations on this subject.

Robert Lingle: Main Point to have a pluggable in a small form factor and dispersion compensation may prohibit this.

Chris, yes.

Peter: Do you see an activity to standardize a form factor for a module?

Chris: yes. Likely done outside IEEE.

Peter: Would larger group oppose having different form factors?

Matt: With regard to 20/25G DML, been looking at 1310...wonder, at 10K, what were the dispersion numbers that led you to your conclusion?

Dan: My notes missed some of the content on this part..it was pretty dense..sorry;

Chris: Is there a breakpoint between 20G and 25G on DML?

Chris: Could provide an EML spec as long as it was possible to reduce cost in future.

Frank: We are dealing with tech feasibility, we need to consider cost too. For example, with 25G, you cannot do arrays, it creates a big cost issue.

Chris: yes, this is accurate. We need an economic feasibility table.

Discussion of page 4:

Copying conclusions from page 3 and modified format to make things more visible;

Why did 1550 get eliminated? Concluded DMLs in the timeframe not feasible due to dispersion.

This conclusion has been challenged and presentations may come in to address that.

For EML 20G 40Km is not leveragable.

Matt: Agrees with earlier comment to allow for 1st gen to focus on EML with longterm DML targets... maybe able to collapse rows 2,3 and 4,5 together.

Chris: Would be good to come up with an approach that allows this to happen.

Chris: We can add to the format additional proposals per email and discussion.

Mike: Is the intent of the cooling and grid columns to be 1 for 1 across?

Chris: If no cooling, drift will be larger and thus they should be cited independently.

Chris: Semi-cooling is less precise than cooling, but offers a lower cost means..for example heating to ensure minimum temps are eliminated.

Amendment:

John Dallesasse: As a side note, there were a few comments regarding the implications of using the CWDM grid (20 nm spacing) for an uncooled DML that I made that were not captured in the minutes. The main issue is manufacturing tolerance for the laser center wavelength under nominal conditions when the wavelength shift with temperature ( $\sim 0.1$  nm/C) is considered. You basically use up your passband with thermal shift and don't have room for either test guardbanding or normal manufacturing variation in the laser wavelength.

Since our specifications drive yields, which ultimately affect economic feasibility, I thought that the comments were pertinent.

No more comments on presentation. Some discussion on the upcoming meeting and it was stated by the chair that we should build presentations for January's interim rather than divide our attention on another phone conference.

Teleconference closed.