

## Proposal for Clause 60 Jitter Table

Table 60-10 contains four TBD entries. I propose the values shown in bold type in the following table to replace the TBDs.

| Reference Point | Total Jitter                         |             | Deterministic Jitter |             |
|-----------------|--------------------------------------|-------------|----------------------|-------------|
|                 | UI                                   | ns          | UI                   | ns          |
| TP1             | 0.09                                 | 0.72        | 0.05                 | 0.40        |
| TP2 and TP3     | Use TDP methodology in Clause 60.8.9 |             |                      |             |
| TP4             | <b>0.51</b>                          | <b>4.04</b> | <b>0.305</b>         | <b>2.36</b> |

These values were derived from the FDDI jitter values at TP4 with the following additional considerations.

1. Many of the clock recovery modules on the market at this time use single edge clock recovery. This makes the units more sensitive to duty cycle distortion than those clock recovery units using dual edge clock recovery.
2. The use of the 4B/5B code with lasers introduces additional duty cycle distortion in the transmitted signal due to base line wander.
3. The presence of DC cancellation circuits in the receivers introduces additional duty cycle distortion at the receiver output when used with the unbalance 4B/5B code.

The presence of these effects was allowed for as follows.

1. The clock recovery jitter allocation was changed as follows:
  - SAE and Clock DDJ was reduced from 1.5ns to 1.2ns
  - Clock RJ was reduced from 1.8ns to 1.2nsThese changes are thought to be consistent with present silicon capabilities
2. The random jitter contribution at the output of the receiver was reduced from 2.27ns to 1.68ns. This is equivalent to a sensitivity loss of approximately 1.5dB. With the modest sensitivity requirements of this clause, this is felt to be tolerable.
3. The deterministic jitter allocation was made consistent with the maximum results of measurements of a number of receivers when excited with the Base Line Wander test pattern of Clause 60.8.1.