

FAST 20 SCSI DEVICE CAPACITANCE VALUE

- **TWO VALUES FOR THE MAXIMUM CAPACITANCE AT THE FAST 20 DEVICE CONNECTOR ARE PRESENTLY UNDER DISCUSSION --- 20 pF AND 25 pF**
- **THE 25 pF VALUE IS THE SAME AS FOR SCSI-2 AND SCSI-3 SPI: IT IS ALSO THE VALUE USED FOR ALL SINGLE ENDED FAST 20 TEST RESULTS TO DATE**
- **THE 20 pF VALUE IS BEING CONSIDERED BECAUSE IT WILL GIVE MORE NOISE MARGIN IF ALL (OR MOST) DEVICES ON THE BUS USE IT**
- **THERE IS SIGNIFICANT DISAGREEMENT WITHIN X3T10 ON THE VALUE TO BE USED FOR FAST 20**
- **THIS IS THE ONLY AREA OF THE FAST 20 DRAFT SPECIFICATION WHERE ANY DISAGREEMENT PRESENTLY EXISTS**

FAST 20 SCSI DEVICE CAPACITANCE VALUE THE CASE FOR 25 pF

- **SINCE ALL EXISTING SCSI-2 AND SPI DEVICES MUST MEET THE 25 pF VALUE ONE MAY CONFIGURE ANY SCSI SYSTEM USING THE PRESENT FAST 20 RULES WITHOUT REGARD FOR THE MIX OR PLACEMENT ON THE BUS**
- **25 pF PRESERVES THE PRESENT COST STRUCTURE IN THE SILICON, BOARDS, AND SWITCHABLE TERMINATORS**
- **ANY CHANGE FROM 25 pF WILL INVALIDATE THE PRESENT FAST 20 CONFIGURATION RULES**
- **NOT ACCEPTING THE 25 pF VALUE WILL DELAY BOTH IMPLEMENTATIONS AND THE FORWARDING OF THE FAST 20 DOCUMENT**
- **IT WILL REQUIRE LARGE DECREASES IN CAPACITANCE (PROBABLY TO AROUND 10 pF) TO ACHIEVE THE INCIDENT WAVE SWITCHING REQUIRED FOR LONGER BUS LENGTHS AND FULL SPI LEVEL DEVICE COUNTS**

FAST 20 SCSI DEVICE CAPACITANCE VALUE THE CASE FOR 20 pF

- **20 pF WILL INCREASE THE NOISE MARGIN WITH THE PRESENT FAST 20 RULES**
- **IT MAY BE POSSIBLE TO ACHIEVE MARGINAL INCREASES IN DEVICE COUNT FOR FAST 20 (KEEPING EVERYTHING ELSE AS IS)**
- **20 pF ENCOURAGES ALL SCSI IMPLEMENTATIONS TO USE LOWER CAPACITANCE -- WHERE ADOPTED MORE ROBUST OPERATION IS EXPECTED**
- **IF THE 20 pF VALUE IS REQUIRED, BACKWARDS COMPATIBILITY IS STILL MAINTAINED IF THE PRESENT FAST 20 CONFIGURATION RULES ARE USED**
- **NEW, MORE RELAXED, CONFIGURATION RULES FOR FAST 20 MAY BE POSSIBLE**

SOME OPTIONS

- **ACCEPT THE 25 pF VALUE AND GET ON WITH FORWARDING THE DOCUMENT (AN ANNEX WILL EXPLAIN THE BENEFITS AND COMPLEXITIES OF USING LOWER VALUES)**
- **AS ABOVE BUT WITH THE 20 pF VALUE INSTEAD OF THE 25 pF VALUE (NO OTHER WORDING CHANGES IN THE FAST 20 DOCUMENT) AND FORWARD THE DOCUMENT**
- **ACCEPT THE 20 pF VALUE AND DEVELOP NEW CONFIGURATION RULES FOR PURE FAST 20 SYSTEMS**
- **ACCEPT THE 20 pF VALUE AND DEVELOP NEW CONFIGURATION RULES FOR MIXED FAST 20 AND SCSI-2/SPI SYSTEMS**