

# 1394b Working Group

## Santa Cruz, CA      February 9, 1998

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Bill Northey    Secretary    northewa@bergelect.com

### Agenda

- Review and approval of last meeting's (January) minutes; summary follows:
  - Need for more system makers to attend
  - Scope of work approved
  - Request for cable detect pin in 6 ckt I/O added to scope
  - Keying for Beta, Bi-lingual, etc. issue for 1394b WG
  - Chair/secretary to create physical layer chart - informational
  - Al Kelly and Bob Gannon to propose test methodology for bulk cable testing
  - Chuck Brill to propose an EMI/RFI test for review
  - Proposal to have off-cycle meeting passed with the preference on the East Coast, West Coast, Midwest. Chuck Brill offered to host one in Cupertino and Harrisburg
  - Presentations:
    - Al Kelly preliminary results on PTFE cable for higher speeds
    - Bill Northey to propose changes to contacts at February meeting

**\*\*Motion by Max Bassler, Second by Mike Brown to accept minutes.  
Unanimous vote to accept.**

- New items
  - Presentations Planned
    1. Dave Brunker - Cable Assembly Testing for 1394a:
      - Dave's presentation was representative of what is happening in 1394a . This is a stepping stone; additional changes would need needed to accomodate the characteristics of p1394.b
      - Mike Brown suggested that there should be an additional test based on testing cross talk while the power pair is active (cross talk from powered pairs to the inner shields during speed signalling). Al Kelly suggested to add lay length twist per inch for cable components to specification (Bob Gannon to provide reference to appropriate ASTM standard).
    2. Al Kelly + Bob Gannon - Bulk Cable Testing Methodology
      - Al and Bob presented a status report on their Annex K test methodology. They asked for feedback on several items including eye pattern testing with floating or grounded shields and Defining a

position on the number of waveforms. They will be in the future making a proposal on the bulk cable testing which includes sample length and cable preparation. Dave Bruner suggested that a Galvanic connection of the shield to ground would not be desirable, and that a defined network might be preferable. Mike Brown felt that a long length of cable (greater than 4.5m) might be preferable since it could give a greater sampling. He also suggested that in a cable test, grounding all shields and the power pairs may provide a very consistent test. Mike Brown suggested that between pair skew would be a useful test as well. He also suggested that we look at what Fibre Channel has done and leverage from it as they have already done much similar work.

3. Bill Northey - Proposed Changes to 1394-95 Connector Contacts  
BERG feels that there are some changes that can be made to the contacts that will not affect backward capabilities. Bill recommends that Section 4.2.1.1.1. paragraph 2 to remove the Hetzen stress feature and make the top of the radius on the contacts to be the landing zone. Some confusion exists, Bill went to a diagram of the PCB socket. Bill proposes that no normal force be called out, let the performance be the test. Several people don't want this not to include normal force. There are some feeling to have an alternate design rather than removing the Hertzian feature. The proposal is to open up for some people to develop alternate connectors. Dave Bruner made a point that we went from this geometry originally. Bill is really pushing that only the landing zone has changed. John Hill brought up that many interoperability features must be proven with this proposal before it can be considered. Bill promised to continue to bring more data to support his proposal. Everyone agreed that more information will be needed. Mike Brown suggested that all connector makers should be sure that all their ideas and current products will work with competitors. BERG feel confident that this can be done to meet the needs of 1394b

- Develop ongoing action items
- Next meeting March 17, in Tempe, AZ