X379.2/87-142
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HSC Goals and Assumptions

HSC speeds of 50, 100, and 200 MByte/sec

HSC is a point-to-point interface

The interface will support network access

The standard will define a layered architecture

- OSI conformance not required
- Protocol ("link") layer
- Physical layer

Protocol layer

- Support efficient multiplexing (datagram)
- No specification of auto configuration
- Appropriate control signalling for physical serialization
- Support media length of about 2 km
- Minimize message latency

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Service Interface

- Data word widths: 16, 32, and 64 bits
- No specification of automatic word width configuration

Protocol Layer

- 40 nanosecond word timing
- Low raw error rate (10^{-15} to protocol layer)
- Low undetected error rate (10^{-21})
- Not designed for multidrop
- Copper interface to be standardized first
- Timing of fiber standard to be evaluated
- Half duplex data signals to be evaluated
- Copper media length > 25 meters

Principles

- K.I.S.S. (Keep it simple - stupid)
- Define minimum set of protocol - Physical interface definition

Current issues

Mail list currently 120 individuals, 80 companies

Three proposals

- Los Alamos HSC - Similar to original HSC proposal
- ENDL-HSC - Based on IPI protocol and TAXI chips
- IPI Wider-Wider / Faster-Faster

Working from top-down and bottom-up

- Defining goals
- Looking at implementation issues to meet proposed goals when using Los Alamos proposal

Several companies are prototyping the Los Alamos proposal