Streaming Protocol Status

- The FC-AV document defines three types of streams for class 2, 3 &4:
  - Asynchronous
  - Available Bit Rate
  - Real-Time Stream
- Push and Pull models are not yet defined in the FC-AV document.
- Work done to date concentrates on the Transport layer (Bent's contribution), & the presentation layer (The container proposal).
- Work is needed at the Application / Command level.

Interest in Real Time Streaming is on the rise

- Prisa Networks reports considerable interest from Post House clients on streaming of both compressed video and un-compressed over Fibre Channel.
- Comments from Chris Kantarjiev of SGI also indicate strong interest (see next slide).
- Formats of interest are SMPTE 259, DVC Pro, MPEG, MJPEG and HD formats.
- Fibre Channel is in a position to address this in a better manner than Gigabit Ethernet at this time.
- Two models are discussed:
  - If port cost is considered high, use of Class 4 is essential or alternatively the Class 2& 3 time slot streaming model developed by Bent Stoevhase.
  - If port cost is considered low, then dedication of ports is a viable option

Post house requirements according to Chris Kantarjiev

- Post houses spend a lot of time doing what they call traffic management - scheduling the time they need to copy data to/from the main repository (either disk or VTR) onto the DDRs in a suite, and then back off it later, after the session is done. That's often time that the suite can't be rented.
- I believe strongly that the future lies with centralized disk farms playing across high speed nets direct to the displays in the suites - the bits don't ever hit the local disk. In the FC world, this *could* be done with network attached disks, but I don't think that customers will go for that in the long run, because it requires too many operating systems to support a particular file system style. Instead, we're going to see players and editing tools that use some sort of standardized streaming protocol for playback.
- We've (SGI) been building this kind of stuff in demo mode for a couple of years. Right now, customers tend to use 100bT or ATM because they're willing to trade lower cost for lower quality. Post houses don't like low quality, and they don't like compression. And even compressed, HD and film resolution data won't make it across ATM - not at the quality that's needed for production (playout is a different matter).
- I don't know that FC-AV will make an immediate impact in standard res video post; the current methodology is pretty well ingrained. But as people move up to HD, they're going to have to find new ways of working. That's the opportunity for high speed streaming protocols.

What needs to be done

- Clearer definition of application requirements.
- Protocol development at the higher layers for seamless application interfaces.
- Development of features such as Object type negotiation in protocol form.