ITU Telecommunication Standardization Sector
Study Group 15
Experts Group for Video Coding and Systems
in ATM and Other Network Environments

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Source: Barry G. Haskell
Title : The MPEG Systems committee met in Lausanne, Switzerland on March 20-24
Purpose: Report

The main topic of interest to ITU-T was the Real Time Interface specification.

After many hours of discussion it became apparent that there were two very distinct clusterings of applications. One group of consumer equipment manufacturers did not believe that their products would often have to deal with very much delay variation, and therefore did not want a specification that required them to handle very much jitter.

The other (smaller) group of telecommunication equipment manufacturers had applications that would by necessity require the handling of not insignificant amounts of jitter.

The convenor had no wish to write two RTI specifications. Thus, the result of the meeting was a specification for a Real Time Interface for Low Jitter (RTI-LJ). A uuencoded WFW2.0 version of RTI-LJ CD is appended. Basically, the RTI-LJ allows for up to 25 microseconds of jitter (50 us peak-to-peak), regardless of bit rate.

The largest worry amongst the consumer equipment folks was the performance of a Phase Locked Loop that utilized only the PCRs. These may arrive at a rate as low as 10 Hz, which is rather low for rapid acquisition of a highly stable clock. They also indicated that a few extra kilobytes of memory was considered extremely expensive.

The telecom folks indicated they had no problems with 1 ms of jitter, but could probably live with a specification of a few hundred microseconds. However, in reality any equipment connected to ATM would have to be able to handle at least 1 ms of jitter. Also, in reality very few applications will be operating at the maximum bit rate, which means that buffers will be large enough to handle much more than the specified jitter. However, phase Locked Loops might need some help to enable rapid acquisition.

Private discussions broached the topic of whether the ITU-T should specify a Real Time Interface for "Normal Jitter" (RTI-NJ), perhaps as part of H.222.1. This could be patterened after the RTI-LJ with some of the parameters changed. However, the compliance part of RTI-NJ needs inprovement (or deletion if improvement is impossible).

I may put together a tentative RTI-NJ, plus some proposals for helping PLLs.

The remainder of the Systems meeting was devoted to Compliance.

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