

Flexilink

for broadcasters

All the advantages of networking without the disadvantages of IP

Internet Protocol was developed by and for IT people, and provides the service they require, which is to carry bursts of data at unpredictable times and deliver it with high accuracy, with timing being very much a secondary consideration. Using it for live audio and video, where timing is the most important consideration, requires careful configuration of the network by skilled operators.

Flexilink provides two kinds of service: the "synchronous" service for AV packets, which provides routes with guaranteed throughput and latency; and the "asynchronous" service for IT packets, which uses all the capacity not occupied by AV packets.

At Nine Tiles we have been creating networking systems since 1981, and all were designed to be easy to set up and use. At a time when other systems required users to type in hexadecimal numbers, we allowed equipment to be addressed by name or by its location in the network. We also regarded the provision of useful diagnostic information as important, for instance giving information on the location of cable or equipment faults.

Each port on a Flexilink switch auto-detects whether it should use the Flexilink frame format or legacy IP-over-Ethernet, and configures itself accordingly. This allows migration from an all-IP system via one with "islands" of Flexilink technology to an all-Flexilink network with both Flexilink and IP edge devices.

The switching technology used in Flexilink is designed for efficient implementation in today's electronics, with the optimum division of labour between dedicated logic circuits and software running on a CPU (which, like ease of use, is something Nine Tiles has specialised in since 1981). This makes Flexilink switches less power-hungry and less expensive than IP switches with an equivalent level of functionality.

The technology has been prototyped on the Aubergine platform, and switches will be available from 2015 in various configurations with 1Gb/s and 10Gb/s ports and a total throughput of up to 128Gb/s. The control and signalling protocols are standardised in IEC 62379.

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