StreamWorks—Live and On-Demand Audio/Video Client Software. (Xing Technology Corporation, San Luis Obispo, California, 1996.) Internet version—FREE.

In just four years the Web has gone from an arcane province of a few cognoscenti to the preferred method of information delivery for thousands of academic institutions, businesses and organizations. Since the beginning, Web browsers have had the capability to download audio and video files which could then be played by helper applications. But one of the hottest areas of product development for the Web today involves live and on-demand delivery of audio and video files.

In plain English, this means that sound and video clips can be heard and seen while they are being transmitted, either live or from a file, without waiting for huge files to download. One of the products that promises this miraculous performance is StreamWorks, by Xing Technology. The StreamWorks network architecture allows delivery of content to multiple simultaneous users over local as well as wide area networks, using international standards-based components. It employs Unix and Windows NT servers, TCP-IP connections, MPEG video and audio compression, and HTTP-HTML client server communication.

The Xing Technology Corporation server offers live radio station feeds as well as pre-recorded music selections at 8.5, 24, 56 and 112 kbs (kilobits per second). The lower rates are for users with 9600, 14.4 or 28.8 baud modems, and the 56 and 112 kbs rates are for ISDN or T-1 lines. There are also sample video clips for ISDN, and NBC video clips at all rates. Other publicly accessible StreamWorks servers include the University of Nebraska, UNC Chapel Hill, and several servers in Finland.

To evaluate network software properly, one must consider 1) platform capability; 2) type of connection; and 3) a comparison with similar products, if possible. The platform used in reviewing StreamWorks is an IBM-compatible 486-66 MHZ with 16 MB of RAM, 540 MHZ hard drive, and a Proaudio 16 sound card. The network connection is a university-based T-1

line. Direct comparisons will be made to RealAudio, and a third, unevaluated realtime video/audio product is Vosaic by the makers of the Mosaic web browser. So with all the preliminaries aside, we come to the essential question: how does it look and sound?

At the higher transmission rates, the stereo sound is impressive equal to CD quality. The lower rates are on the level of AM radio quality. The only drawback is that at times of high usage on your Internet connection, some information is lost. StreamWorks seems to handle this by maintaining sound quality but allowing dropouts in the sound. It is possible that a Pentium machine or its equivalent in other platforms would perform better in this respect than the 486 used in this review.

By comparison, RealAudio tends to diminish sound quality but maintains the integrity of the sound stream. For video, playback is at compressed video rates of 30 frames per second at best, and usually slower than that. Again, loss of information causes dropouts or pauses in the delivery of the video signal. A faster platform might improve this performance as well, but on the terms of this review the audio capabilities of StreamWorks are more pleasing and immediately useful than the video. Still, with the dizzying pace of technological progress in the past few years, StreamWorks and its competitors can be expected to address these problems and offer high quality realtime audio and video over the Web in the near future.

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