



empowering your content



*The scalable, low bit-rate
proxy browse platform*



SpectreView™

*IPV...
empowering your content*

IPV has a respected name in the professional broadcast market, due to its innovative, pioneering products and depth of expertise in low bit-rate video solutions over IP networks.

IPV are at the leading edge of providing advanced technology for use within the latest file-based broadcast systems.

Today's challenges are to provide multiple users on either PC or Mac with rapid and efficient access to media assets at their desktop computer whilst maintaining VTR performance for the smooth transport, editing and manipulation of media ensuring tasks are streamlined and productivity increased.

As early as 1997 IPV pioneered a massive change in workflow for both News and Sports, giving journalists frame-accurate live access to incoming video content at their desktop, ensuring late breaking stories are instantly aired in a true collaborative IT networked environment.

All operations including research, development, manufacture, sales and marketing are based at the company's headquarters in Cambridge UK.

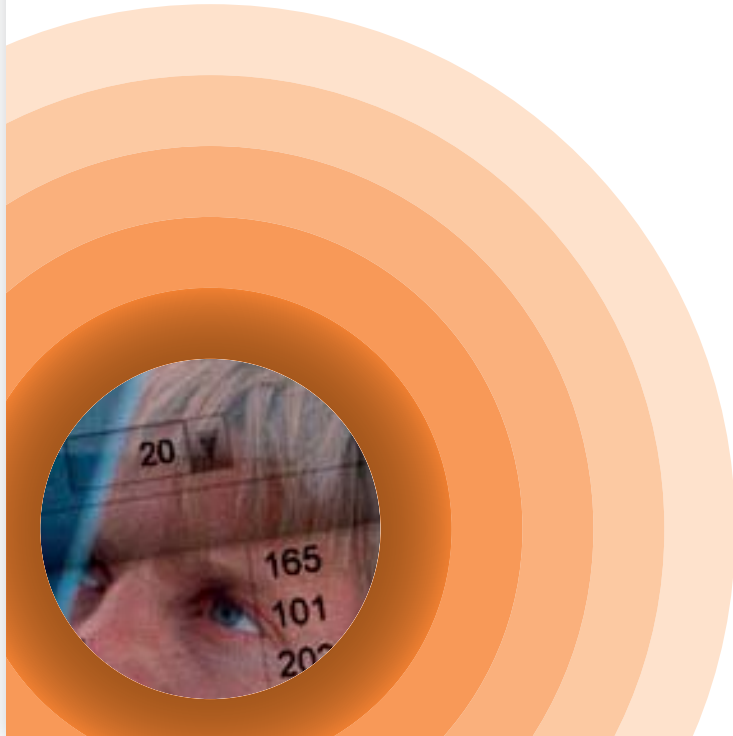


SpectreView, the production browser system that lets you call the shots

IPV's **SpectreView** products enable our development partners to provide advanced low bit-rate proxy browse solutions for use within newsroom, scheduling, automation, media asset management and subtitling or captioning environments. The **SpectreView** platform offers a complete range of products that enable media to be ingested from both a video or file-based sources and then streamed to a large number of users, within a powerful, efficient and scalable architecture emulating true VTR performance at the desktop.

Today's news editing, scheduling or asset management world of software driven broadcast systems, requires users to be able to view multiple video assets in order to achieve a desired workflow. Ordinarily delivering high resolution video to multiple users in a desktop environment is limiting, if not almost impossible, due to the volumes of data, time available and functionality required. IPV invented the concept of '**shadow browse**', where an exact low bit-rate copy of the original high resolution video media is created and is used in parallel with the original video asset.

This concept enables hundreds of users to access video assets using powerful tools, from their desktop PC's, with a minimum of infrastructure and using standard IT hardware. Any changes, editorial decisions or additions to the shadow browse asset are reflected precisely back to the high-resolution asset minimising the costly movement and data handling of the original media.



Taking Control with SpectreView

No longer confined to just the Newsroom, **SpectreView** is integrated within the products of our wide and respected partner base, improving choice for best-in-breed applications, whilst reducing risk and reliance on a single source solution.

SpectreView consists of a suite of hardware and software products, providing a complete platform for the capture,

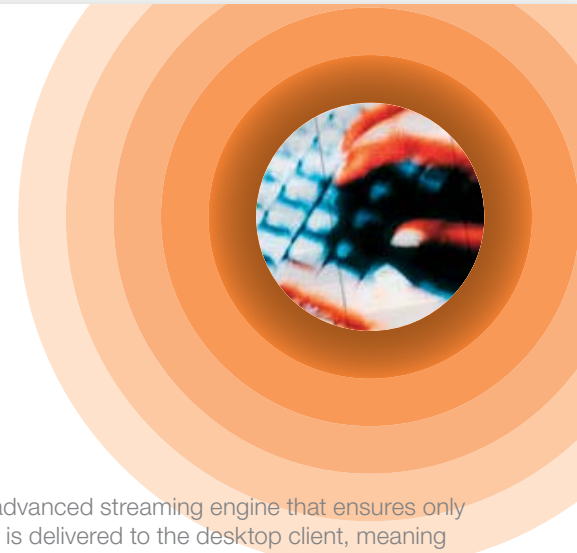
distribution and manipulation of low bit-rate copies of broadcast quality video and audio source material. It is unique in embedding the associated LTC and VITC timecode data with guaranteed 1:1 correlation of the source material. **SpectreView** captures the low-resolution browse material to a **Browse Server** (SV Server) in real-time, using an IPV encoder or an IPV transcoder.

This shadow video material can then be browsed over a LAN on standard IT platforms. All the features required to browse, edit material or review editorial content are available as part of the **SpectreView** toolkit, typically provided within one of IPV's partner's applications.

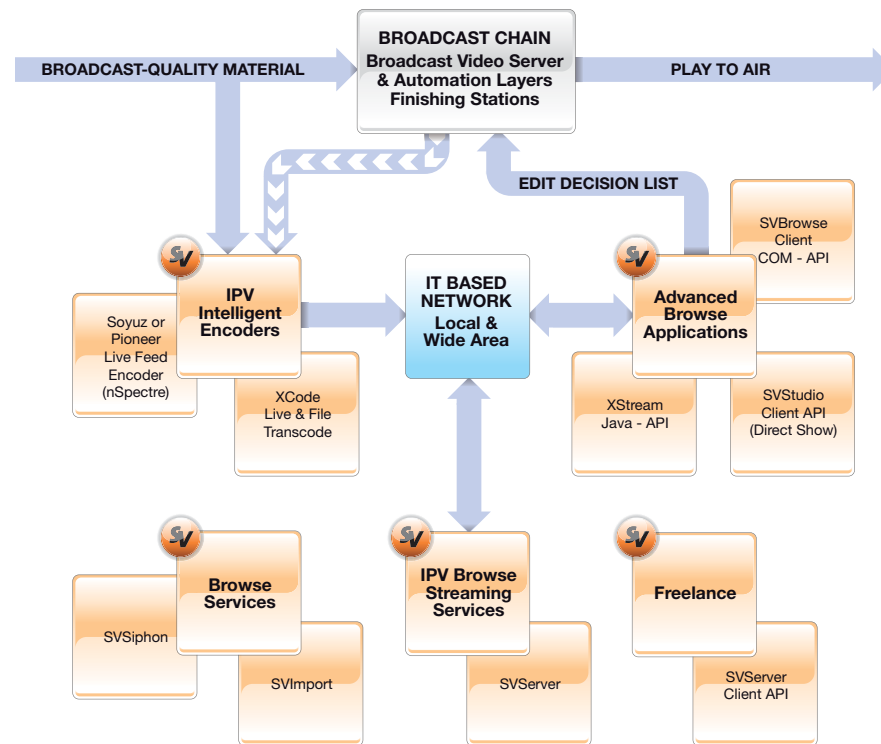
SVServer is an advanced streaming engine that ensures only the required data is delivered to the desktop client, meaning many hundreds of users can work simultaneously with the same material in a collaborative environment. In a multiple audio environment the SV Server ensures that only the required audio track(s) are delivered to the client, again minimising network traffic.

SVServer provides access to live incoming feeds and archives. Multiple compressed formats are added seamlessly onto a common timeline with frame accurate manipulation of media, maintaining essential features such as true frame-accurate video/audio scrub, Fast Forward and Fast Rewind of up to 64 times, Seek on Timecode and Shot Change indexing.

- *Increase network efficiencies by only delivering the necessary data on a per client basis*
- *Instantly change direction of the streaming server to support VTR performance at the desktop*
- *Advanced streaming technology ensures efficient data delivery to many hundreds of users*

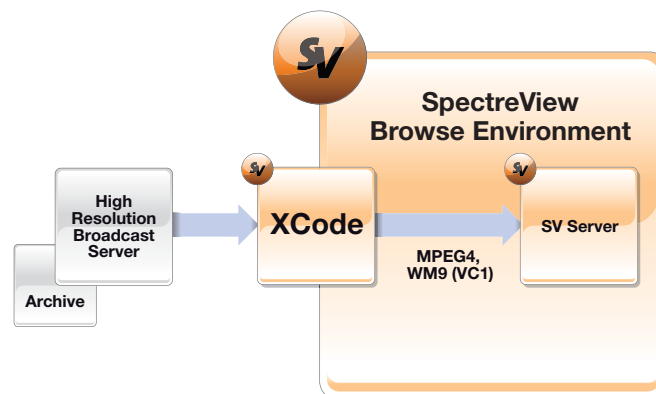


Typical SpectreView environment



SpectreView Products

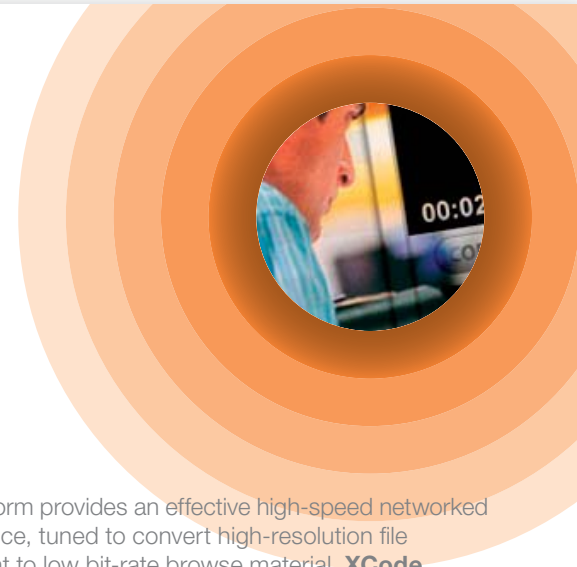
All **SpectreView** encoding and transcode products give frame-accurate instant access at the desktop to live incoming material. They eliminate lip-sync errors and optionally provide multiple audio track ingest, logo and timecode burn-in and scene change detection analysis.



The **XCode** platform provides an effective high-speed networked transcoding service, tuned to convert high-resolution file originated content to low bit-rate browse material. **XCode** combines multi-threaded, multi CPU platform in hybrid with IPV DSP technology, to provide the optimised platform to power IPV's core transcode software engine at unprecedented speeds.

IPV expertise in managing and manipulating instant access to video gives users unhindered live access to the browse media even during the transcode conversion process itself.

In addition to media transcoding, powerful IPV DSP technology enables a number of key functions to be carried out during the process, without slowing down the high-speed transcode. These include scene detection, logo and timecode burn-in, VBI cropping and closed-caption metadata ingest. **XCode** also performs additional services, to enable tasks such as the embedding of new additional audio tracks within an existing browse asset as well as multi-clip media flattening.



Interfaces and Objects

The SpectreView SVAPI is implemented using the Microsoft Component Object Model (COM) where each interface is implemented as a COM interface.

The XStream API is a Java based abstraction above the core COM based API, or Quick Time on the MAC platform, maintaining consistency across web based applications for simple view, Mark-in and Mark-out type applications to multi-clip timeline playback of prepared clip lists.



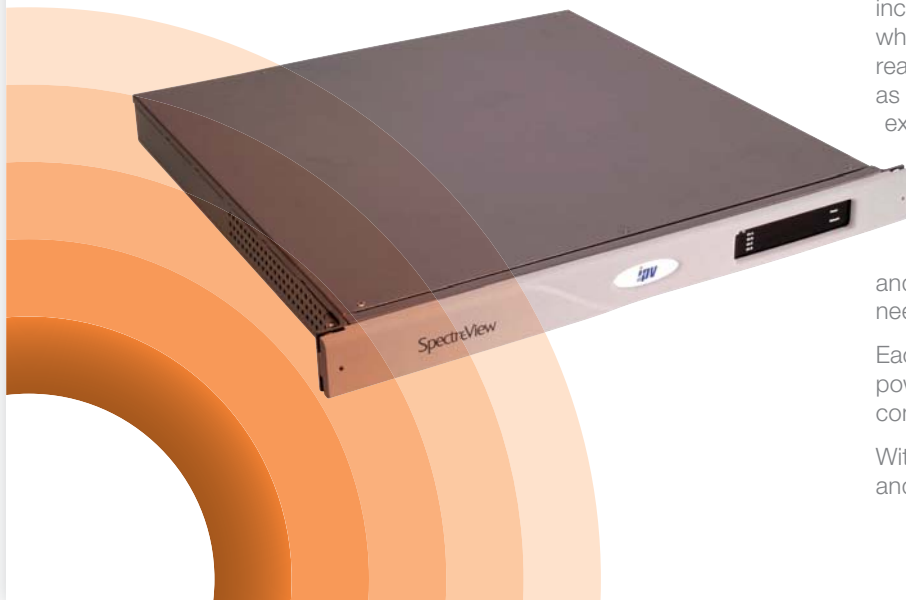


The XCode transcode appliance acts as a network resource and when working with other SpectreView components provides:

Dual transcode into, MPEG2, MPEG4 or VC-1 (Windows Media)
SpectreView browse formats at up to four times real-time.

- *Multi-channel transcode performance*
- *Multi-channel ability to add, edit or stack additional audio tracks in multilingual environments*
- *Integration with 3rd party broadcast server and archive media formats*
- *Streaming technology provides access to low bit-rate browse media during transcode process*
- *Multi-channel scene change detection analysis*
- *Multi-channel logo and timecode burn-in and overlay*
- *Multi-channel ability to flatten browse media assets from a SpectreView timeline EDL*
- *Multi-channel transrating of clips for content repurposing at different bit-rates*
- *Multi-channel additional services for timecode, audio, closed caption and metadata embedding*
- *VBI cropping and data extraction*
- *Control via API or simple integration via a 'watch folder'*

nSpectre Encoders



As well as needing good visual quality low bit-rate browse media, in an efficient file size with the appropriate resolution, including multiple track audio, the provision of accurate metadata within the media file is provided to preserve important information such as timecode, scene change information subtitle and closed captioning.

The **nSpectre** range of multiple-channel encoders are in use with over 400 TV stations world-wide and have defined the benchmark in browse media encoding for broadcast applications.

Using industry standard codecs, **nSpectre** encoders always provide perfect timecode synchronisation, ensuring frame accuracy, and no audio drift, even on extremely long encode tasks. Timecode breaks and discontinuities are fully supported including the ability to stream content to desktop browse clients whilst the encoding is taking place. **nSpectres** analyse video in real-time, to extract scene change data which is then embedded as metadata within the file. This gives a desktop browse user, for example, the ability to search a video asset for cuts.

Control is via a rich API interface that enable the **nSpectre** to be used within a wide range of IPV partner applications for a variety of demanding tasks including News, Asset Management, Sub-titling, Automation, Editing and media repurposing, in fact wherever broadcast professionals need exact and live access to manage and manipulate content.

Each encoder is based on a rugged rackmount chassis and is powered by a Linux platform. The web browser provides simple configuration.

With an **nSpectre** to provide conversion from SDI to MPEG4 and WMVC1 there is a IPV solution to meet your needs.

- *Guaranteed no audio drift ensuring accurate Audio and Video synchronisation at all times*
- *Support and manage multilingual applications via Multiple Audio track support*
- *Guaranteed frame accuracy for instant seek and true scrub via Integrated Timecode capture, including Time of Day, LTC, DVITC; internal counters with seeded offsets*
- *Use the same encoder for desktop browse, logging or external displays with encoding in QSIF, SIF and SD (PAL and NTSC) resolutions*
- *Capture closed caption and remove the need for external data base management via VBI data capture*
- *Instantly navigate around the media on the desktop via real time Shot Change Analysis*
- *Avoid unauthorised media usage by real-time Logo burn-in during encode*
- *Remove record drop outs on poor quality inputs*
- *Fully upgradeable via software for future codec support and file types*
- *Start work at the desktop instantly via Live access to recording files during encoding*

nSpectre Pioneer

SDI input, 2 or 4 channel, WMVC1 or MPEG4 encoder, QSIF, SIF or full scale PAL/NTSC (D1), up to 4 mono channels of audio per encode channel, separate LTC inputs ensure frame accuracy, optional support for wide screen signalling and closed caption.

nSpectre Soyuz

SDI input, 2 or 4 channel, WMVC1 or MPEG4, QSIF, SIF or full scale PAL/NTSC (D1), with advance pre-filtering, up to 8 mono channels of audio per encode channel, optional Wide Screen Signalling and closed caption capture, separate B&B VITC inputs ensure frame accuracy.



More information

Call or e-mail IPV to find out more about how we can empower your digital media.

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