

UK Broadcaster Channel 4 Encodes for VoD, Mobile and More with StreamZ

by Andy Bell, VoD Project Manager, Channel 4 (UK)
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Channel 4 has just ordered eleven new upgrades for our Digital Rapids StreamZ encoders, together with another StreamZ encoder. In total we now have twenty three StreamZ encoders, sixteen of which are used for Video on Demand (VoD), and seven of which are used for other services, including mobile TV and streaming.



The main customers for the VoD services are Virgin Media, BT Vision and Homechoice, along with Channel 4's own 4oD PC-based Internet service. BT Vision & Homechoice utilise ADSL broadband circuits to offer their customers both access to large amounts of Channel 4's TV transmission and an archive service for content that has been previously transmitted. Once the content has been transcoded by the StreamZ units, it is combined with metadata and sent to the VoD service providers to offer to the end user.

Virgin Media, BT Vision & Homechoice offer a huge library of movies, comedy, music and kids' shows from numerous content providers. Channel 4 has negotiated a dedicated area called 4 on Demand. These systems offer consumers the ability to either 'Catch Up' on shows that were transmitted through the week or watch a choice of Channel 4's most popular series previously transmitted.

Working closely with the major service providers, we have been using the ATEME standalone encoder in conjunction with StreamZ for pre-processing material. The ATEME software runs on Windows based server systems. While they work well together, Channel 4 is currently beta testing a new version of StreamZ which has been customised to directly incorporate ATEME video encoding technology. This move will simplify the transcoding architecture and increase the speed of file generation. The introduction of the ATEME technology to the StreamZ is a key development for Channel 4, as it enables us to utilise the MPEG4/AVC/H.264 format that is now becoming widely introduced by the service providers.

With the installation of the StreamZ we currently have the capacity to transcode approximately 10,000 files per month. These are primarily offline file-based transcodes using 50Mbps MXF source media. Basically, the format chain is from tape to intermediate file (MXF) and then to the final file format required by the platform. Channel 4 also transmits content simultaneously for our digital channels, together with providing real-time clips taken from the transmission stream and delivered to 3G platforms for mobile services.

The User: Channel 4, United Kingdom

The Challenge: high-volume encoding for VoD, mobile TV and more

The Solution: StreamZ

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capture

encode

deliver

"...we trust [Digital Rapids] to provide flexible, reliable technology, a broad suite of codecs and good support."

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The StreamZ encoders are real workhorses and were used for eight programmes a week of Big Brother, encoding a mixture of live and non-live material for VoD, streaming and mobile operations for Virgin, BT and 4 on Demand.

Channel 4 has a long history of co-operation with Digital Rapids, whom we trust to provide flexible, reliable technology, a broad suite of codecs and good support. We sometimes also have special requirements and integration needs and Digital Rapids are really good at accommodating these within a short timescale.



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One of the key advantages as far as Channel 4 is concerned is the fact that the StreamZ units can be operated remotely. The scheduling system triggers StreamZ to start operating and tells the units the location of the requisite files, which the StreamZ finds and transcodes. As far as we are aware the fact that this is completely automatic, with no manual intervention, is something unique to Channel 4.

Multiple ingest modes (50Mbps I-frame MXF MPEG-2 and MPEG-1) are available, which can be transcoded to Windows Media (WM9), MPEG-2 and soon MPEG-4. The service providers receive an output file that is generated from broadcast quality 50Mbps MPEG-2.

Channel 4 utilises a Metastorm E-Works workflow management system providing transcode business process management. The system can send material to service platforms up to seven days in advance of transmission, with an embargoed output date.

StreamZ has been instrumental in enabling the fast deployment of VoD for Channel 4. We've had aggressive target dates to launch multiple platforms within six months and this was achieved thanks to the reliability and capability of the StreamZ units.

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