



## VSS H264/AVC and MVC Encoding for 3D Applications

### Overview

3D Video is quickly becoming the hottest application of 2010. As consumers have become accustomed to HD Video, the Consumer Electronics industry as well as Content and Service Provider industries have found their next upgrade feature: 3D Video. Multi-View Coding (MVC) Encoding has become the first 3D specific video standard adopted by the Blu-ray industry. With the strength of Consumer Electronics Industry behind MVC playback support, there is little doubt that MVC will become the 3D standard of choice for Broadcast and Internet Streaming applications.

### MVC Encoding for 3D Blu-ray Authoring Applications

NetBlender and VSS have teamed up to bring to market worlds first MVC offline encoder for Professional Blu-ray Disc Authoring. NetBlender DoStudio MVC (3D) Encoder is essential in both Hollywood Movies on Blu-ray as well as distribution of 3D HD video content in Commercial and Scientific applications.

### Blu-ray 3D Applications

- Feature Film
- 2D Catalogue conversion to 3D
- 3D kiosks and museum installations.
- 3D dailies and internal review copies
- Corporate and Medical
- Sporting and other events

### Select DoStudio 3D Features

- MVC Encoder Accepts QT, AVI, YUV RAW and soon DPX and MXF
- Full 3D BDJO Support
- 2X Faster than real-time MVC Encoding
- Z-Depth Support
- Re-use 2D DoStudio Projects
- PSDs
- Audio
- 3D Multiplexing and Formatting for Replication

To inquire about NetBlender DoStudio MVC (3D) Encoder please contact NetBlender at:  
TEL: 703.260.1400  
Email: Sales@NetBlender.com

### MVC (3D) Encoding for Real-Time Streaming Applications

With the success of 3DBlu-ray launch many consumers are able to purchase 3D capable playback equipment like 3D Blu-Ray Players, 3D TVs, 3D Projectors, and PC with NVIDIA 3D Vision capabilities. All these playback devices have one thing in common, they all support playback of 3D content in MVC format, enabling a huge consumer install base for streaming of MVC (3D) content over the internet.

3DStreamer™ is VSS' real-time MVC encoding and streaming product being exhibited for the first time at IBC2010. The product, initially released for Windows only, takes 3D source content, encodes it into MVC format and streams it over IP in real-time. Source content can be left and right eye video files or MS DirectShow compatible hardware 3D capture devices. The bit rate, encapsulation and IP sending functionality is fully configurable to suite customer requirements. Thus, the generated MVC stream can be received by PC software players like VideoQ or ArcSoft TotalMedia Theater as well as dedicated players like Blu-ray CE players and other 3D capable set top boxes. In addition to 3DStreamer™, VSS is planning a 3D (MVC) professional streaming player framework to be offered to commercial vendors of 3D payout appliances based on Windows and Linux. For more details please contact VSS.

### 3D Content Capture and Ingest

While MVC is the format of choice for distribution of 3D content to consumers, AVC-I is the preferred format for capturing 3D original content. 3D content for post-processing, editing and archiving is best implemented by encoding left and right eye streams separately into AVC I-frames only format at high bit rates. For more details on this product please see VSS AVC-I Hardware Encoder data sheet.

### 3D AVC Encoding for Broadcast

As many broadcasters rush to join the 3D video revolution, they are faced with the limitations of their delivery systems and install base of consumer set top boxes. Thus, the first phase of 3D broadcasts is limited to half resolution per eye AVC video. Still, this is good enough to deliver a 3D experience to broadcast customers. To support this 3D requirement, VSS has introduced Side-by-Side and Top-and-bottom 3D capability into its AVC encoding products. Depending on customer applications, VSS can offer 3D AVC Encoder SDK for Windows, Linux or Mac. VSS also has a live streaming middleware product called VSS Streaming Pack which can accommodate 3D AVC, see VSS Products data sheet for more details.