

BluFocus presents:
3D-FOCUS: Part I - Blu-ray
An Introduction to 3D
by Industry Experts

FOCUS

An ONLINE WEBINAR
March 4th, 2010
11:00am PST
www.blufocus.com



Welcome



- Introduction of **3D-Focus Webinar: Part 1 – Blu-ray**
- Submit questions via chat or email 3D-FocusWebinar@blufocus.com
They will be collected for the Q&A section at the end of all presentations.
- Please note that not all questions might be asked depending on number received.

ENJOY!! Let's begin!

Start time: 11:00 pst



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3D Overview

- THX – Rick Dean



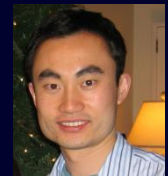
Video Encoding

- Sensio – Etienne Fortin
- TDVision - Manuel R. Gutierrez Novelo



3D Authoring

- Sonic – Chris Neely
- Netblender – Denny Breitenfeld
- Sony – John Ying & Rob Aubey



Content Creation

- Trailer Park – Curt Doty



Software/Hardware

- NVIDIA – Alex Soohoo



Accessories

- RealD – Matt Cowan
- XpanD – Ami Dror



3D Testing

- BluFocus/3D-Focus – Juan Reyes



3D Authoring



Mr. Denny Breitenfeld
Chief Technology Officer



Denny Breitenfeld is NetBlender's Chief Technical Officer. He brings a wealth of knowledge about the HD DVD & Blu-ray specifications and practical experience bringing the high definition projects to successful completion.

NetBlender was founded in March 2005 by a team of DVD industry veterans with particular expertise in the area of network-connected convergent media. The founders had spent a decade developing technologies to satisfy the needs of their productions, which were primarily web-enabled DVDs for the education and museum marketplace.

We are excited about the creative possibilities that Blu-ray offers, so we're innovating practical, professional Blu-ray solutions to help creative developers like you take advantage of this new format..



Introduction to Blu-ray Disc 3D Authoring



Introduction

- About NetBlender
 - Build feature rich easy to use Blu-ray Authoring and Encoding tools.
- Overview
 - Stereoscopic Types
 - Encoding for 3D
 - Multiplexing supports
 - HDMV and BD-J Menus
 - Authoring workflow



Stereoscopic 3D Modes

- Stereoscopic B-B
 - Uses only the base view MPEG-4 MVC to blend the video output to create a 3D presentation.
- Stereoscopic B-D
 - Uses both the Base view and the Dependent view of the MPEG-4 MVC stream to create a 3D presentation.



Encoding for 3D

- Encoding for 3D only uses MVC which is based on the MPEG-4 AVC specification.
- Creates two mvc files, one for the right and one for the left eye.
- 1920x1080 @ 23.978 fps progressive
- 1280x720 @ 59.94 fps progressive
- 1280x720 @ 50 fps progressive



Multiplexing for 3D Supports

- Multi-angle
- Picture in picture
- Dynamic stereoscopic display of text based subtitles
- Trick play
- Stereoscopic B-D Presentation (two planes)
- Stereoscopic B-B Presentation (one plane)



HDMV 3D Menus

- Supports both B-B and B-D
- Same graphic requirements for 2D
- Access to new player registers
- Supported by all Profile 5 players (3D BD Players)



BD-J 3D Menus

- Supports both B-B and B-D
- Same graphic requirements for 2D
- Access to new player registers
- New Java API's for drawing in 3D space.
 - Not the same as a 3D rendering engine or JAVA 3D.
- B-B supported by all Profile 5 players.
- B-D not supported on the PS3.



3D Authoring

- Encode your assets
- Determine 3D Stereoscopic Mode
- Pick between BD-J or HDMV
- Design your graphics
- Determine subtitle display options
- Test



Authoring Workflow

- Encode your audio video assets
- Determine your Presentation display mode
 - Two planes B-D
 - One plane B-B
- Create graphics for the display mode
- Write custom java code if you choose BD-J
- Test



Conclusion

- Blu-ray 3D authoring isn't too difficult
 - With good planning
 - With quality Encoding and Authoring tools
 - With a solid test plan which tests the BD-Title on several CE and soft players
- Questions

