

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](http://www.blufocus.com)



# Welcome



- Introduction of **3D-Focus Webinar: Part 1 – Blu-ray**
- Submit questions via chat or email [3D-FocusWebinar@blufocus.com](mailto: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



A  
G  
E  
N  
D  
A

### 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. Chris Neely**

VP of Professional Group Operations



Chris Neely is Vice President of Operations for Sonic's Professional Products Group, the leader in digital media software. Prior to his current role, Chris was VP of European Operations which followed his time as VP of Product Development where he was chiefly responsible for defining Sonic's Blu-ray Disc encoding and authoring product strategy and development. In his current role, Chris coordinates Sonic's professional products operations including the planning, development and delivery of Sonic's range of DVD, Blu-ray Disc and CinemaNow production tools.

Before coming to Sonic, Chris was Director of Operations at InterActual Technologies since 2000 where he led the development of features that seamlessly connect Hollywood DVD-Video content with both Web- and high-end advanced interactive ROM-based bonus content. InterActual, the de facto standard for such features, was acquired by Sonic in 2004.

Chris regularly represents Sonic on technical standards and other complex issues relating to the production of DVD, and Blu-ray Disc titles.





# Introducing Sonic

- US company founded in 1980s from Lucas Film
- Global company with offices located around the world
- Our mission: To enable the creation and distribution of personal and premium content
- Enabling content owners and distributors to deliver premium content for over 15 years
- We enable format transition in the production industry
  - Compact Disc
  - DVD
  - Blu-ray Disc (to BD3D)
  - Digital Delivery

**SONIC**

**ROXIO**

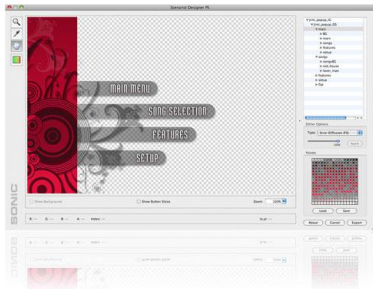
**ROXIO**  
**CinemaNow™**

**SONIC**

# SCENARIST®

## Powering Professional Blu-ray Disc Creation

1 Design



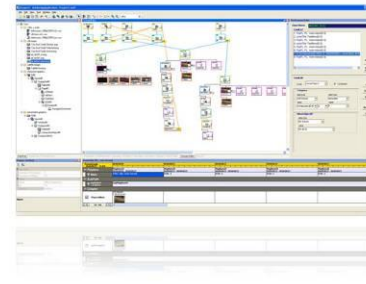
Scenarist Designer PS

2 Encode



Sonic CineVision

3 Create



Sonic Scenarist

4 Deliver



Scenarist QC

*Blu-ray*  
**3D**™

**SONIC**

# BD3D Overview

- BD3D specification finalized in Dec '09
  - 3D menu graphics
  - 3D video
  - 3D subtitles
- 3D players available in late 2010 (Profile 5)
  - Includes increase in data read speed to 72Mbps
  - HDMI 1.4
  - PS3 and other Sony players expected to receive firmware update in summer 2010
- Sonic working to enable BD3D production on professional systems

*Blu-ray*  
**3D**™



**SONIC**

# BD3D Creation: Encoding



CINEVISION™

- 3D Multiview Video Coding (MVC) approved
  - Extension to AVC, provides 1080p to each eye
  - Backwards compatibility with 2D players
- Production Considerations
  - 50% overhead anticipated to maintain picture quality due to view redundancy (e.g. 20Mbps 2D encode can be matched at 30Mbps for 3D)
  - Synchronization of two source files through encoding process
  - Intra-eye encoding considerations
  - QC hardware pretty advanced thanks to gaming

SONIC

# BD3D Creation: Encoding



**CINEVISION™**

- Sonic CineVision
  - Support for MVC encoding in addition to
    - AVC (H.264)
    - VC-1
    - MPEG-2
  - CineAgent remote encoding option
  - Integrated DVO processing from Digital Vision
  - Advanced segment re-encoding
  - Multi-take segment auditioning
  - Exacting control over encode parameters
  - QC to HD-SDI or HDMI monitor

**SONIC**

# BD3D Creation: Authoring

- Two approaches for 3D authoring:
  - 2D menu graphics
    - 2D graphics placed in 3D space with a depth value
    - Primarily for titles to feature 3D video
    - Enables legacy players to playback 3D (with firmware upgrade)
  - 3D menu graphics
    - Requires Profile 5 players
    - Menus, subtitles and graphics utilize full 3D space along with the video
    - Each graphical element can be positioned in 3D space



SCENARIST®

SONIC

# BD3D Creation: Authoring

- Sonic Scenarist
  - 3D graphic creation
  - 3D authoring (BD-J and HDMV)
  - Spec-level control
  - Accelerated multiplexing
- Production Considerations
  - Backwards compatibility to 2D players
  - Additional QC (must QC both 2D and 3D)
  - Less room for features
  - Increased production time



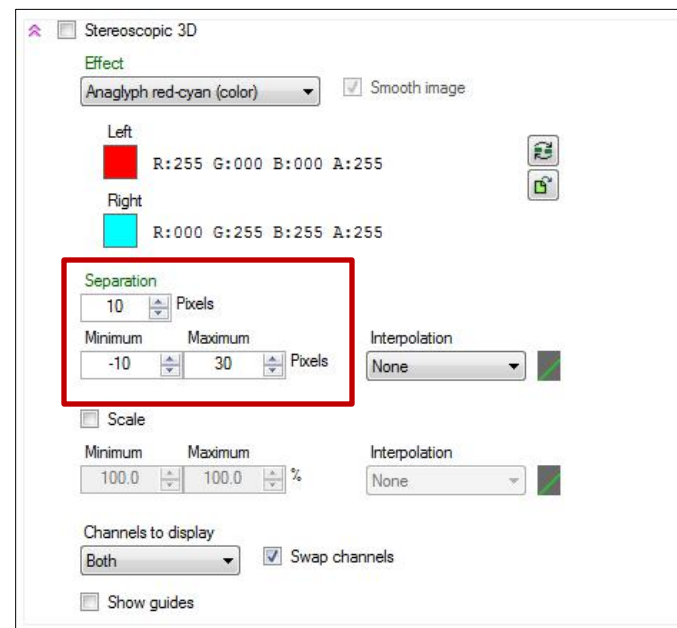
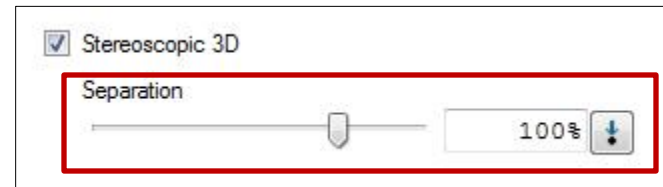
SCENARIST®

SONIC

# BD3D Creation: Subtitling

- Two approaches to subtitling
  - 2D subtitles with depth (z) value
  - 3D subtitles
- Production considerations
  - Subtitle creation the same as 2D although each subtitle, or group of subtitles, will have a depth value
  - Min/max depth values will be used for subtitling projects
  - QC simple and relatively cheap
- Lemony Subtitler
  - 3D-ready
  - Features multiple 3D preview choices

Tres mil millones de vidas humanas finalizaron el 29 de agosto de 1997.



LEMONY

SONIC

# BD3D Creation: QC

- Scenarist QC
  - 3D support
  - Based on popular CinePlayer playback framework
  - Detailed player configuration
  - Log filtering and break pointing
- Production Considerations
  - Extensive QC of 3D material creates concerns for eye strain
  - Different display technologies for 3D
    - Polarizing glasses, active shutter, etc.
  - New hardware required
    - Gaming has already beaten a path for 3D hardware
    - Graphics cards are quite affordable



SCENARIST® QC

SONIC

# BD3D Creation: Summary

- As with all format transitions, Sonic will enable content distributors and production facilities to take advantage of the 3D opportunity
- Complete workflow support for 3D production
  - Menu design
  - Encoding
  - Authoring
  - Subtitling
  - QC

# More Information

- Free Sonic White Papers
  - Comprehensive set of primers for BD title creation
  - Technical specifications and capabilities
  - [www.sonic.com/go/papers](http://www.sonic.com/go/papers)
- Free Training Sessions
  - Open to the entire industry
  - Hands-on Scenarist BD training
  - Hosted at Sonic Europe, Soho
  - Email: [training@sonic.com](mailto:training@sonic.com)
- Free Sonic Webinars
  - <http://www.sonic.com/about/events/seminars.aspx>
- Free Product Evaluation Program
  - Two week evaluation of any Sonic product



