

# SCENARIST®

THE PROFESSIONAL AUTHORING STANDARD



Sonic Scenarist® 4 brings Scenarist's proven performance and reliability to Blu-ray Disc and HD DVD, providing a comprehensive, professional authoring solution for the next generation of optical media. Offering maximum playback compatibility and complete cell-level control for both standard content and advanced interactivity, Scenarist 4 delivers unrivaled power and world-class results.

## INTRODUCING SCENARIST 4

Scenarist 4 is a comprehensive authoring system developed expressly to tackle the complex challenges of professional title creation for both Blu-ray Disc and HD DVD. Built to the same standards of performance and reliability that have made Scenarist the worldwide leader for commercial DVD authoring, Scenarist 4 delivers the in-depth, hands-on authoring power you need to develop highly-interactive titles that maintain maximum compatibility across the widest possible range of players.

Scenarist is the only authoring solution that prepares you fully for the future of optical media, positioning your facility to meet customer demand for both Blu-ray Disc (BD) and HD DVD. Scenarist 4's BD capabilities include complete support not only for HDMV (Movie Mode), but also for advanced interactive capabilities powered by the BD-J specification. For HD DVD, meanwhile, Scenarist 4 handles authoring for both Standard Content and iHD-enabled Advanced Content. When it comes to unleashing the full power of the next-generation formats, no other commercial authoring system comes close.

Built as a seamlessly-integrated suite of task-focused modules, Scenarist provides maximum workflow flexibility by supporting custom-tailored configurations to meet individual facility needs. It also integrates with Sonic's Hollywood-standard CineVision™ encoder, improving efficiency by exchanging asset metadata. And it's backed with SonicCare™ Support to ensure that questions or problems don't keep you from meeting your clients' deadlines.

Developed in collaboration with the Sonic HD Authoring Alliance (HDAA), a worldwide association of top authoring houses, Scenarist 4 was designed with and for the professional authoring community. Whether you're delivering stunning high definition linear video or enabling complex interactivity with seamlessly-integrated BD-J or iHD applications, Scenarist 4 provides comprehensive specification support and unique cell-level manipulation of parameter details. With Scenarist 4, you'll have both the control and the freedom to create distinctive, feature-packed titles that realize the full potential of the next-generation high definition formats.



LEARN MORE, BOOK A DEMONSTRATION, AND FIND YOUR NEAREST RESELLER AT:

[WWW.SONIC/COM/GO/SCENARIST](http://WWW.SONIC/COM/GO/SCENARIST)



## KEY FEATURES

### Blu-ray Disc and HD DVD Support

With comprehensive support for both Blu-ray Disc and HD DVD, Scenarist 4 delivers unrivaled versatility, positioning your facility for both next-generation formats.



### Advanced Interactivity

Scenarist 4 goes beyond standard content authoring, enabling the advanced interactive capabilities that give BD and HD DVD their unique appeal, including seamless menus over video, synchronized picture-in-picture bonus content, and built-in Internet connectivity.

### Hands-on Control

Scenarist 4's direct, cell-level authoring technology lets you take charge of the details with complete control over every aspect of your Blu-ray Disc and HD DVD titles.

### Flexible Workgroup Productivity

Scenarist 4's unique modular architecture is designed for custom workgroup configuration. You can perform multiple tasks at a single workstation or spread your process over several stations, ensuring a workflow that is as productive and profitable as possible.

### Built-in Graphics Editors

Scenarist 4's built-in Presentation and Interactive Graphics Editors offer powerful, convenient creation of pop-up menus, multi-page menus, and dynamic interactive content for BD. Scenarist 4 also includes the Scenarist Designer PS Plug-in for fast and efficient creation of BD menu assets in Adobe® Photoshop®.

### Extensive Parameter Legalization

Scenarist's built-in HD DVD legalization engine checks and double-checks every aspect of your title as you author, from the assets you import to the command sequences you generate. No other HD DVD authoring tool provides the same level of reassurance and player compatibility.

### StreamData™ Integration

Exchange key workgroup metadata – including chapter-point information and the server location of encoded media – for unsurpassed integration with Sonic's CineVision™ encoder.

### Proven Sonic Quality

Reliability and usability have made Sonic's Scenarist systems the clear choice of high-end authoring facilities around the globe, used to create the vast majority of the world's commercially-released DVDs. Scenarist 4 brings Sonic's proven strengths to HD.

### Designed with the Industry, for the Industry

Scenarist 4 was developed in collaboration with the HD Authoring Alliance (HDAA), the worldwide association of top DVD authoring houses dedicated to facilitating the rollout of titles for the Blu-ray Disc and HD DVD formats.



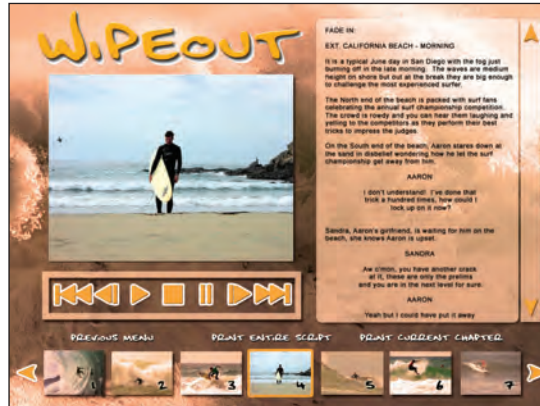
### SonicCare™ Support

Sonic's highly-qualified team of product specialists provide unmatched expert support for professional users. Fighting down-time with timely answers and thorough service, SonicCare helps keep you on target for on-time delivery.



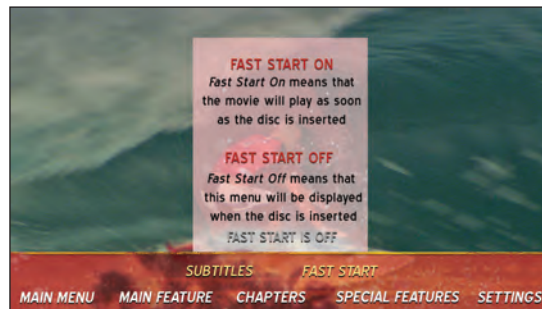


## Advanced Interactivity



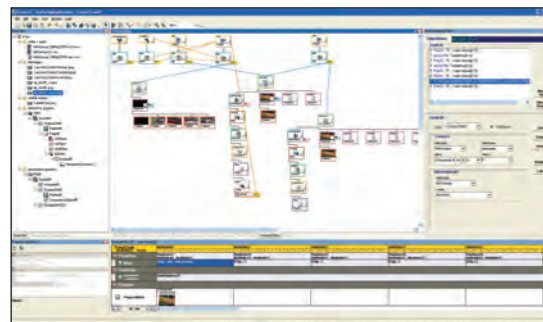
Scenarist unlocks the Advanced Interactive capabilities of the next-generation formats enabling a wealth of compelling interactive features including script-to-screen and interactive picture galleries.

## Seamless Movie-centric Experience



The next-generation formats offer a seamless menu-over-video experience so that you never have to leave the main feature.

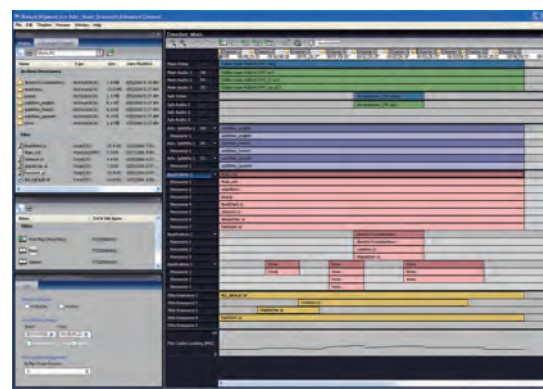
## Blu-ray Disc Authoring



Scenarist provides unrivaled access to the HDMV Blu-ray Disc specification.



## HD DVD Advanced Content Authoring



Scenarist's unique Advanced Content Timeline enables you to accurately position Advanced Content Applications and track the status of the player buffer to ensure flawless playback.





## SPECIFICATIONS

### Blu-ray Disc Authoring Specifications

#### Video Codec Support

AVC (H.264) Main/High Profiles, Levels 3, 3.1, 3.2, 4, and 4.1;  
VC-1 Advanced Profile, Levels 2 and 3; MPEG-2

#### Audio Codec Support

DTS®, DTS-HD, Dolby® Digital, Dolby Digital Plus, Dolby TrueHD,  
Linear PCM (WAV 48kHz, 16-bit)

#### Still Image Support

PNG (256-color, .png), TIFF (.tif), JPG (.jpg), BMP (.bmp)

#### Font Support

Open Type Fonts (.oft)

#### Subtitle Support

Presentation graphics, Text subtitles, Sony BND subtitle format

#### Menu Support: HDMV Movie Mode

- Page in and out effects
- Pop-up interactive menu graphics
- 'Always-on' interactive menu graphics
- Out-of-mux interactive graphics
- Animated buttons
- Button effects
- Button sounds

#### Graphics Preparation

- Scenarist Designer PS (Photoshop® Plug-in)
- Photoshop CS support
- Automated 8-bit graphics optimization
- Automated PNG creation (from layered Photoshop files)
- XML export to Scenarist

#### Specification Support: HDMV Movie Mode

- BD Specification 1.0 Support
- Profile 1 Support
- 999 Supported Movie Objects
- 9 video angles
- 999 Play items per Playlist
- 32 Button States per Button Overlap Group
- 256 Button Overlap Groups per page

- 1001 Titles
- 2000 Playlists
- 4096 GPR Registers
- Graphics stream support
- Slideshow support (MPEG-2 still encoder included)

#### Specification Support: BD-J

- BD-J Object placeholder creation
- BD-J Object Export<sup>1</sup>
- BD-J placeholder creation<sup>1</sup>
- JAR placeholder creation<sup>1</sup>
- XML BD-J Title importing (exported from Scenarist BD-J)<sup>1</sup>
- Scenarist HDMV XML support<sup>1</sup>
- BD-J title multiplexing and emulation<sup>1</sup>
- Sample code templates<sup>1</sup>
- JAR file signing<sup>1</sup>
- BD-J debug cycle (disc image)<sup>1</sup>
- Third-party Java IDE support<sup>1</sup>
- Built-in Xlet validation<sup>1</sup>
- Xlet to JAR conversion<sup>1</sup>
- BD-J titles export<sup>1</sup>

#### Content Protection

- AACS Support

#### BD-ROM Simulation and Emulation

- HDMV Emulation
- BD-J Emulation
- MPEG-2 video support
- Audio support
- 9 video angles
- Subtitle text support
- Chapter navigation
- Button sound support
- Graphics stream support

#### Output Options

- Sony CMF (Cutting Master Format)

<sup>1</sup>Scenarist BD-J authoring option required



## SPECIFICATIONS

### HD DVD

#### Authoring Specifications

##### Video Support

- Supported codecs: AVC (H.264) Main/High Profiles, Levels 3, 3.1, 3.2, 4, and 4.1; VC-1 Advanced Profile, Levels 2 and 3; MPEG-2 Main Profile, Levels Main and High
- Supported resolutions: 1920 x 1080 (HD), 1440 x 1080 (HD), 1280 x 1080 (HD), 1280 x 720 (HD), 720 x 480 (SD), 704 x 480 (SD), 352 x 480 (SD), 352 x 240 (SD), 720 x 576 (SD), 704 x 576 (SD), 352 x 576 (SD), 352 x 288 (SD)
- Supported frame rates: 25 fps, 29.97 fps, 50 fps<sup>3</sup>, 59.94 fps<sup>3</sup>
- Supported aspect ratios: 16:9, 4:3 (Pan Scan)<sup>4</sup>, 4:3<sup>4</sup>

##### Audio Support

- Supported codecs: DTS<sup>®1</sup>, DTS-HD<sup>1</sup>, Dolby<sup>®</sup> Digital, Dolby Digital Plus, Dolby TrueHD, Linear PCM (WAV 48kHz, 16-bit)<sup>1</sup>, MPEG-1<sup>1</sup>, MPEG-2<sup>1</sup>
- Supported sampling frequencies: 48 kHz, 96 kHz<sup>5</sup>, 192 kHz<sup>5</sup>
- Supported bit depths: 16-bit, 20-bit<sup>5</sup>, 24-bit<sup>5</sup>
- Supported channel configurations: 2.0, 5.1, 7.1<sup>5</sup>, 10.2<sup>5</sup>

##### User Interface Features

- Drag-and-drop HD DVD authoring
- Timeline title track
- Drag-and-drop command authoring<sup>1</sup>
- Tree view project overview
- Copy and paste command scripts<sup>1</sup>
- Copy and paste PGC and button commands<sup>1</sup>

##### Specification Support: HD DVD Standard Content

- HD DVD Standard Content Specification 1.0 Support
- Video track support
- Slide Show support
- Still Show support
- 8 audio streams per video angle
- 32 subpicture streams per video angle
- Support for 9 video angles
- Seamless and non-seamless multi-angle support
- 511 Video Title Sets per disc
- 511 titles per disc
- 1023 commands per PGC
- 8 commands per cell
- Seamless cell command execution
- Access to all 64 16-bit General Parameter Registers (GPRMs)
- Comprehensive scripting support

- GPRM bitwise operation support
- Conditional navigations based on GPRM value
- Access and control over resume command and permission
- Chapter point insertion
- Drag-and-drop chapter positioning
- Timeline scrubbing support
- StreamData™ support (import chapter points directly from Sonic CineVision™)
- Video trimming
- Audio and subtitle sync control
- Seamless layer break control
- Complete user operation control (enable/disable remote control buttons)
- Set audio and subpicture stream availability per title
- Parental block support

##### Subtitle Support

- Subtitle script and images support
- Manually type subtitles
- Closed Caption (Line 21) support

##### Menu Support

- Virtually unlimited number of menus per disc
- 48 buttons per menu
- 8 commands per button
- Still menu support (with or without audio)
- Motion menu support
- 256-color menu buttons
- Delayed button start
- Early button end
- Forced selection button control
- Forced activated button control
- Navigation timeout
- Numerical key selection control
- Button number offset control
- Layered Photoshop® file support

##### Specification Support: HD DVD Advanced Content

- HD DVD Advanced Content Specification 1.0 Support
- 999 Titles per project
- 1 EVOB per title
- 1 main video angle
- 8 main audio streams
- 1 sub video stream
- 8 sub audio streams
- 1 advanced stream containing up to 299 application tracks,



## SPECIFICATIONS

- 299 application clips, unlimited application resource tracks, and unlimited resource clips
- 32 advanced subtitle tracks containing up to 299 advanced subtitle clips, unlimited advanced subtitle resource tracks, and unlimited advanced subtitle resource clips
- 99 title resource tracks containing up to 99 title resource clips
- File cache loading monitor
- Chapter point insertion
- Stream language setting

### Advanced Content Application Support

- Advanced Subtitle
- Manifest
- Markup
- Style
- Animated Styles
- Script
- Font
- Supported image formats: JPEG, PNG, MNG, Capture Image Format (CIF)
- Audio effects
- Secondary E-VOB and TMAP
- Pre-archived Content

### Content Protection

- AACS Support

### Output Options

- Built-in project legalization
- Enhanced HD DVD creation (include ROM data)
- Manually control physical positioning of content on disc
- Dual layer support<sup>1</sup>
- Layer break position control<sup>1</sup>
- Opposite (OTP) and Parallel (PTP) track path support<sup>1</sup>
- Jacket Picture support<sup>1</sup>
- Text Data support<sup>1</sup>
- HD DVD Volume
- HD DVD Disc Image<sup>6</sup>
- PlantDirect™ Image<sup>6</sup>
- Category 3 Disc Output<sup>6</sup>

### Device Support

- Dual Layer Drive Support (DVD+R9)
- DVD+R/RW
- DVD-R/RW
- CD-R/RW

- HD DVD-R/RW
- DLT

### Simulation and Emulation

#### Standard Content

- Non-multiplexed software simulation
- Multiplexed hardware emulation
- Skip to next command (for command script debugging)
- Audio stream switching
- Subtitle stream switching
- Player language support
- GPRM and SPRM status display
- User operation simulation
- HD-SDI output to external video monitor (requires NVIDIA Quadro FX 4500 SDI GPU, not included)

#### Advanced Content

- Multiplexed software emulation of HD DVD Advanced Content Volumes
- Audio stream switching
- Subtitle stream switching
- HD-SDI output to external video monitor (requires NVIDIA Quadro FX 4500 SDI GPU, not included)

<sup>1</sup> Standard Content authoring only

<sup>2</sup> Advanced Content authoring only

<sup>3</sup> HD resolutions only

<sup>4</sup> SD resolutions only

<sup>5</sup> Codec dependent

<sup>6</sup> Using Scenarist Standard Content Authoring

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