



Top Tips for Authoring DVD and Blu-ray Disc



Bruce Nazarian, MPSE, “the Digital guy”
CEO, Digital Media Consulting Group, Inc
President, IDMA/DVDA

Int’l Digital Media Alliance (IDMA) - DVD Association (DVDA)



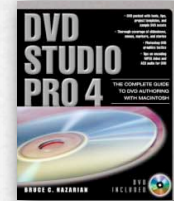
Housekeeping notes

- ◆ Please put Cel phones and pagers on “stun” (silent running)
- ◆ Try to hold questions until close to the end
- ◆ We’ll have time for Q ‘n A at the end of the preso.



About me

- ◆ Bruce Nazarian, MPSE, “the Digital guy”
- ◆ CEO, Digital Media Consulting Group, Inc.
- ◆ President, IDMA/DVDA (DVD Ass’n) 
- ◆ Author, “DVD Studio Pro 4 - Complete Guide”
- ◆ Webmaster, Recipe4DVD.com 
- ◆ Moderator, 2-pop.com DVD forum
- ◆ Frequent presenter at Trade Shows.





“Top Tips for DVD and BD”

- ◆ This session provides:
 - ◆ Some thoughts on DVD planning
 - ◆ Some thoughts on DVD encoding
 - ◆ Some thoughts on DVD design
 - ◆ Some thoughts on DVD workflow
 - ◆ Some thoughts on DVD Burning
 - ◆ Some basics on Blu-ray Disc authoring



Making Better DVDs

- ◆ You want to be more creative?
- ◆ You want to make better looking DVDs?
- ◆ You want to work more efficiently?
- ◆ You want to make a Blu-ray Disc?
- ◆ You're not sure how to begin w/BD?
- ◆ well... stay tuned ;-)



Some DVD planning tips

- ◆ Start here: “What does this disc do”?
- ◆ for example, a demo reel:
- ◆ Should display your work quickly
- ◆ Should have simple top-level menu nav
- ◆ A Contact info screen is a must
- ◆ Interactive? or Self-directing (Play All)?



Simple Demo reel Menu

Demo Reel: John Q. Editor

Play All Videos

Atlanta

Detroit

Oahu

Phoenix

San Francisco

Vegas

Contact: 323-555-1212

Preditorguy@gmail.com

Skype: Preditorguy

Facebook: Preditorguy - Twitter: Preditorguy



Some DVD design tips

- ◆ Think “Hollywood” in your DVD design
- ◆ Sizzle sells the steak - no boring DVDs
- ◆ Beautiful DVD menus add impact
- ◆ Respect **Action Safe** area for live matter,
- ◆ Respect **Title Safe** area for buttons
- ◆ For contact info, use a still frame



Title safe area

Demo Reel: John Q. Editor

Play All Videos

Atlanta

Detroit

Oahu

Phoenix

San Francisco

Vegas

Contact: 323-555-1212

Preditorguy@gmail.com

Skype: Preditorguy

Facebook: Preditorguy - Twitter: Preditorguy

good
design
layout



Great menus = great DVDs

Demo Reel: John Q. Editor

Play All Videos

Atlanta

Detroit

Oahu

Phoenix

San Francisco

Vegas

Contact: 323-555-1212

Preditorguy@gmail.com

Skype: Preditorguy

Facebook: Preditorguy - Twitter: Preditorguy

good
basic
design,

but
pretty
simple
and
boring



Great menus = great DVDs

Demo Reel: John Q. Editor



Atlanta



Detroit



Oahu



Phoenix



San Francisco



Vegas

Contact: 323-555-1212
Preditorguy@gmail.com
Skype: Preditorguy
Facebook: Preditorguy - Twitter: Preditorguy

better
design,
more
appealing



Great menus = great DVDs

best
design of
the three

**Demo Reel:
John Q. Editor**

Atlanta Detroit Oahu
Phoenix San Francisco Vegas

Contact: 323-555-1212
Preditorguy@gmail.com
Skype: Preditorguy
Facebook: Preditorguy - Twitter: Preditorguy



Some DVD encoding tips

- ◆ Good encoding means beautiful video
- ◆ A short project = lots of encode rate
- ◆ Use Dolby Digital sound to save space
- ◆ Create a bit budget to be sure you're right

- ◆ Typical encode rates: < 60 minutes, 8 Mbps
- ◆ 90 mins, ~6 Mbps; 120 mins, ~4.5 Mbps



DVD encoding:

- ◆ Mac: Compressor 3 for FCP/FCS; Adobe Media Encoder for CS4, also BitVice, Squeeze 5, Main Concept, even Toast 10 has MPEG2 encoding built-in.
- ◆ PC: many: Main Concept Encoder in Adobe Prod'n Suite CS4, SONY built-in encoder in Vegas, DVD Architect; Sonic Solutions/Roxio: Creator 2009, DVDit Pro HD, Canopus ProCoder...



DVD encoding:

Encoding

Project General Menu Track Alignment Text Colors Simulator Destinations Encoding

MPEG-2 SD MPEG-2 HD

Aspect Ratio: 4:3
 16:9

Start: 00:00:00:00 Drop Frame

Field Order: Auto

Mode: One Pass VBR

Bit Rate: 4.0 Mbps

Max Bit Rate: 7.0 Mbps

Motion Estimation: Better

Reset to Factory Defaults

Method: Background encoding
 Encode on build

Apply Cancel OK

Inspector

Name: Selected Target

Description: Fits up to 90 minutes...FF audio on a DVD-5

Encoder

File Format: MPEG-2

Extension: m2v Allow Job Segmenting

Stream Usage: SD DVD

Video Format Quality GOP Extras

Mode: Two pass VBR Best

Average Bit Rate: 6.2 Mbps

Maximum Bit Rate: 7.7 Mbps

Motion Estimation: Best

Allows up to 80 minutes/layer of video on DVD-5

Save As...





Apple Final Cut Workflow

- ◆ FCP/FCS workflow has end-to-end workflow:
 - ◆ Video Editing (FCP)
 - ◆ Encoding/Compression (Compressor)
 - ◆ DVD Authoring/Burning (DVD Studio Pro)
 - ◆ DVD Playback (Apple DVD Player)
 - ◆ viewed another way, it looks like this:



Apple Mac DVD Workflow

EDIT

ENCODE

AUTHOR

BURN

PLAY



FCP

Compressor

DVDSP

DVDSP

DVD Player





Apple Mac Blu-ray Workflow

EDIT

ENCODE

AUTHOR

BURN

PLAY



FCP



Compressor



Encore CS3



Toast 10



BD Player

no BD software
player for Macintosh





Adobe Premiere Workflow

- ◆ Adobe Prodn Suite has end-to-end workflow:
 - ◆ Video Editing (Premiere Pro)
 - ◆ Encoding/Compression (Media Encoder)
 - ◆ DVD Authoring/Burning (Encore DVD)
 - ◆ DVD Playback (Apple DVD Player)
 - ◆ viewed another way, it looks like this:



Adobe Mac/PC DVD Workflow

EDIT

ENCODE

AUTHOR

BURN

PLAY



Premiere Pro

Encore CS4

Encore CS4

Encore CS4

DVD Player





Adobe Mac/PC BD Workflow

EDIT

ENCODE

AUTHOR

BURN

PLAY



Premiere Pro

Encore CS4

Encore CS4

Encore CS4

BD Player

no BD software
player for Macintosh





Some DVD workflow tips

- ◆ Think like Henry Ford: - how can you create a faster/easier project workflow?
- ◆ Additional computers speed up your work.
- ◆ One computer = you're locked in
- ◆ Several computers = freedom to multi-task
- ◆ Use several machines on a local network
- ◆ let's explore this a little further:



Optical Disc Workgroup

Main System
Edit / Author



2nd System
Capture / Encode



3rd System
Build Output



4th System
Print/Dupe





Beauty is only one part

- ◆ How do you make your DVDs stand apart from others?
 - ◆ Great video, well-encoded
 - ◆ Solid, professional video editing (duh!)
 - ◆ Special features on the DVD
 - ◆ and.. thinking outside the box:

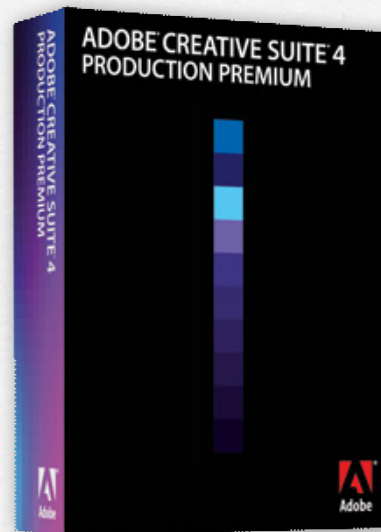


Some DVD enhancements

- ◆ Photo Album with music soundtrack...
- ◆ Mobile version of video for iPod,
- ◆ Mobile version of video for Cel phone,
- ◆ Still Pix show for iPod or Cel Phone?
- ◆ These things can be added to the ROM zone of an ordinary DVD or BD disc.



DVD Authoring tools





DVD/BD Authoring tools

- ◆ Mac: DVD Studio Pro, Encore DVD, Toast
- ◆ PC: Encore DVD, Sonic Scenarist, Roxio DVDItPro, Creator 2009, Sony DVD Architect, Ulead DVD Movie Factory



Authoring for DVD Burning

- ◆ DVD Studio Pro offers:
 - ◆ MPEG/AVC Encoding
 - ◆ Menu templates
 - ◆ Menu editor built-in
 - ◆ DVD/HD DVD authoring
 - ◆ DVD/HD DVD Disc Burning
 - ◆ Part of Final Cut Studio





Apple DVD Studio Pro 4



The screenshot displays the Apple DVD Studio Pro 4 interface. The main workspace shows a hierarchical menu structure:

- MainMenu** (Red box) is the central menu, containing a "HowItWorks" button and a "SPLASH SCREEN" button.
- SEG1** (Green box) is linked to the "HowItWorks" button.
- SEG2** (Yellow box) is linked to the "SPLASH SCREEN" button.
- SEG3** (Yellow box) is linked to the "MainMenu" button.
- SEG4** (Yellow box) is linked to the "MainMenu" button.
- Story 1** (Blue box) is linked to SEG1.
- Story 2** (Blue box) is linked to SEG2.
- Story 3** (Blue box) is linked to SEG3.
- Story 4** (Blue box) is linked to SEG4.

The interface includes a menu bar (File, Edit, Project, Arrange, Format, View, Window, Help), a toolbar with icons for menu and track management, and a sidebar with a "By Type" tree view. The right-hand side features a "Palette" with various menu templates (Brush Cover, Brush Detail, Brush Index, City Cover) and a "Disc" settings panel for configuring DVD standards, streams, and remote control options.



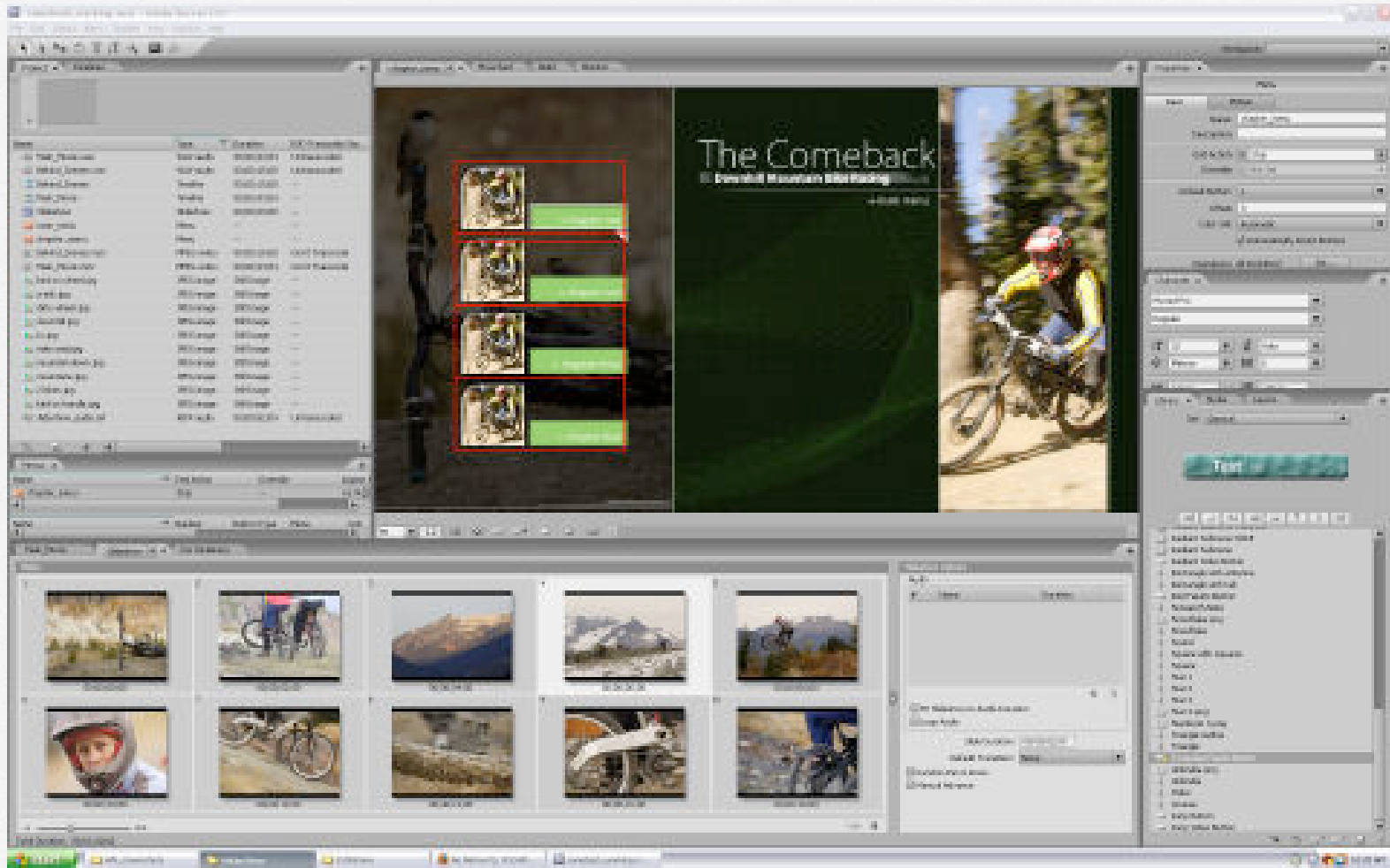
Authoring for BD Burning

- ◆ Adobe Encore CS4 offers:
 - ◆ MPEG/AVC Encoding
 - ◆ Menu templates
 - ◆ Menu design (PS)
 - ◆ BDMV authoring
 - ◆ Blu-ray Disc Burning
 - ◆ Publish to the WEB w/Flash Video!





Adobe Encore CS4





Authoring for BD Burning

- ◆ Roxio Toast 9.02 offers:
 - ◆ MPEG 2/4 Encoding
 - ◆ SD, HD templates
 - ◆ Simple BD authoring
 - ◆ Blu-ray Disc Burning
 - ◆ BD on DVD-R Burning!
 - ◆ Can burn BDMV folder to BD, DVD





Roxio Toast 10



BD5 MPEG2.disc

Blu-ray Video: BDS MPEG2 4 items - 00:19

Video

- DVD-Video
- Blu-ray Video**
- VIDEO_TS Folders
- VIDEO_TS Compilation
- BDMV Folder
- AVCHD Archive

Options

Menu Style: Warp

Auto-play disc on insert

Play all items continuously

Encoding: Automatic Custom

Video: MPEG-2, 10.0 Mbps (16.0 Mbps max)

Audio: Dolby Digital 192 kbps

More

Thumbnail	Title	Date	Duration	Video	Audio	Action
	golden wheat	Sat, Aug 19, 2006	00:04	DVCPRO HD 720p60, 960 x 720, 23.98 fps	None	Edit...
	japanese garden	Sat, Aug 19, 2006	00:05	DVCPRO HD 720p60, 960 x 720, 23.98 fps	None	Edit...
	Golden Gate cars ws	Sat, Aug 19, 2006	00:05	DVCPRO HD 720p60, 960 x 720, 23.98 fps	None	Edit...
	beach magic hour	Sat, Aug 19, 2006	00:05	DVCPRO HD 720p60, 960 x 720, 23.98 fps	None	Edit...

Add Remove Save As Disc Image

roxio HI-dt-st DVDRW GWA4080MA 23.4 MB on 1 disc Space Remaining: 4.36 GB DVD



Authoring for BD Burning

- ◆ Roxio DVD it Pro HD offers:
 - ◆ Encoding
 - ◆ Menu design
 - ◆ BDMV authoring
 - ◆ Blu-ray Disc Burning
 - ◆ BD CMF Mastering





Roxio DVDIt Pro



Boston Demo Project 2.dvd.dv1* - DVDIt Pro

File Edit View Window DVD Menu Simulate Burn Window Help

Project

- Menus
 - Intro to Main Menu (First Play)
 - Main Menu Loop
 - Main Menu to Chapters Transition
 - Chapter Menu Loop
 - Chapters to Main Transition
 - Drag media here to create menu
- Titles
 - 1080 Boston Movie
 - HD Slideshow
 - Drag media here to create title
- Playlists
 - Drag titles here to create playlist

Preview

Main Menu

- Play 1080i Movie
- Audio 2
- Subtitles
- Chapter Menu
- HD Slideshow

Palettes

Templates Images Media Buttons Frames

Show All

- Architectural (HD) - Wide
- Butterfly Wide
- Onemontage Wide
- Contemporary Blue Wide
- Contemporary Green Wide
- Corporation Blue Wide
- Evening Wedding Wide
- Filmstrip Wide
- Global Blue (HD) - Wide
- Mountain Moon (HD) - Wide
- Rust (HD) - Wide
- Stationary Wedding Wide

Timeline

00:00:00

Timeline: 00:00:00 00:00:12 00:00:24 00:00:36 00:00:48 00:01:00 00:01:12 00:01:24 00:01:36 00:01:48 00:02:00 00:02:12 00:02:24 00:02:36 00:02:48 00:03:00 00:03:12 00:03:24 00:03:36 00:03:48 00:04:00 00:04:12 00:04:24 00:04:36 00:04:48 00:05:00 00:05:12 00:05:24 00:05:36 00:05:48 00:06:00 00:06:12 00:06:24 00:06:36 00:06:48 00:07:00 00:07:12 00:07:24 00:07:36 00:07:48 00:08:00 00:08:12 00:08:24 00:08:36 00:08:48 00:09:00 00:09:12 00:09:24 00:09:36 00:09:48 00:10:00 00:10:12 00:10:24 00:10:36 00:10:48 00:11:00 00:11:12 00:11:24 00:11:36 00:11:48 00:12:00 00:12:12 00:12:24 00:12:36 00:12:48 00:13:00 00:13:12 00:13:24 00:13:36 00:13:48 00:14:00 00:14:12 00:14:24 00:14:36 00:14:48 00:15:00 00:15:12 00:15:24 00:15:36 00:15:48 00:16:00 00:16:12 00:16:24 00:16:36 00:16:48 00:17:00 00:17:12 00:17:24 00:17:36 00:17:48 00:18:00 00:18:12 00:18:24 00:18:36 00:18:48 00:19:00 00:19:12 00:19:24 00:19:36 00:19:48 00:20:00 00:20:12 00:20:24 00:20:36 00:20:48 00:21:00 00:21:12 00:21:24 00:21:36 00:21:48 00:22:00 00:22:12 00:22:24 00:22:36 00:22:48 00:23:00 00:23:12 00:23:24 00:23:36 00:23:48 00:24:00 00:24:12 00:24:24 00:24:36 00:24:48 00:25:00 00:25:12 00:25:24 00:25:36 00:25:48 00:26:00 00:26:12 00:26:24 00:26:36 00:26:48 00:27:00 00:27:12 00:27:24 00:27:36 00:27:48 00:28:00 00:28:12 00:28:24 00:28:36 00:28:48 00:29:00 00:29:12 00:29:24 00:29:36 00:29:48 00:30:00 00:30:12 00:30:24 00:30:36 00:30:48 00:31:00 00:31:12 00:31:24 00:31:36 00:31:48 00:32:00 00:32:12 00:32:24 00:32:36 00:32:48 00:33:00 00:33:12 00:33:24 00:33:36 00:33:48 00:34:00 00:34:12 00:34:24 00:34:36 00:34:48 00:35:00 00:35:12 00:35:24 00:35:36 00:35:48 00:36:00 00:36:12 00:36:24 00:36:36 00:36:48 00:37:00 00:37:12 00:37:24 00:37:36 00:37:48 00:38:00 00:38:12 00:38:24 00:38:36 00:38:48 00:39:00 00:39:12 00:39:24 00:39:36 00:39:48 00:40:00 00:40:12 00:40:24 00:40:36 00:40:48 00:41:00 00:41:12 00:41:24 00:41:36 00:41:48 00:42:00 00:42:12 00:42:24 00:42:36 00:42:48 00:43:00 00:43:12 00:43:24 00:43:36 00:43:48 00:44:00 00:44:12 00:44:24 00:44:36 00:44:48 00:45:00 00:45:12 00:45:24 00:45:36 00:45:48 00:46:00 00:46:12 00:46:24 00:46:36 00:46:48 00:47:00 00:47:12 00:47:24 00:47:36 00:47:48 00:48:00 00:48:12 00:48:24 00:48:36 00:48:48 00:49:00 00:49:12 00:49:24 00:49:36 00:49:48 00:50:00 00:50:12 00:50:24 00:50:36 00:50:48 00:51:00 00:51:12 00:51:24 00:51:36 00:51:48 00:52:00 00:52:12 00:52:24 00:52:36 00:52:48 00:53:00 00:53:12 00:53:24 00:53:36 00:53:48 00:54:00 00:54:12 00:54:24 00:54:36 00:54:48 00:55:00 00:55:12 00:55:24 00:55:36 00:55:48 00:56:00 00:56:12 00:56:24 00:56:36 00:56:48 00:57:00 00:57:12 00:57:24 00:57:36 00:57:48 00:58:00 00:58:12 00:58:24 00:58:36 00:58:48 00:59:00 00:59:12 00:59:24 00:59:36 00:59:48 01:00:00

Video: Boston_115E_1190_H301.m2v

Audio:

- A1 Boston_115.Doug.ac3
- A2 Boston_soundtrack.ac3

Menu Attributes

General Menu Effects

Display

Type: Motion Menu Scaling: Zoom

Start: 00:00:00 End: 00:00:28:07 Duration: 00:00:28:07

Subpicture

Color Set: Set 1 Subpicture Start: 00:00:00

Audio

File: main menu 2.wav

Fade In Fade Out

4.32 GB remaining DVD-9 (4,708) OpenDVD NTSC Last Saved: 8:40PM 7/23/2008



Authoring for BD Burning

- ◆ SONY DVD Architect 5 offers:
 - ◆ Encoding
 - ◆ Menu design
 - ◆ BDMV authoring
 - ◆ Blu-ray Disc Burning





Sony DVD Architect



Art of Motion.dar - Sony DVD Architect 4.0

File Edit View Insert Options Help

Preview Make DVD

Menu (Page 1)

Art of Motion.dar

- Menu
 - Menu (Page 1)
 - 1: History
 - 2: The Cars
 - The Cars (Page 1)
 - 1: Link - The Cars (Page 1)
 - 2: Indy Cars
 - 3: Stock Cars
 - 4: Can-Am Cars
 - 5: Retro Cars
 - 6: Link - The Cars (Page 1)
 - 3: The Track
 - The Track (Page 1)
 - 1: Link - The Track (Page 1)
 - 2: Daytona
 - 3: Local
 - 4: Madison State Street
 - 5: Link - The Track (Page 1)
 - Menu 1 (Page 2)
 - DVD Scripts
 - HR Code - Button

Button Properties

Transformations	Action
Media	Highlight
Navigation	Color Sets

Color Set 1 Custom

- Mode Specify colors
- 1: (fill color) [Color]
- 2: (anti-alias color) [Color]
- 3: (outline/background...) [Color]
- 4: (transparent color) [Color]

Color Set 2 Custom

- Mode Specify colors
- 1: (fill color) [Color]
- 2: (anti-alias color) [Color]
- 3: (outline/background...) [Color]
- 4: (transparent color) [Color]

Color Set 3 Project wide

- Mode Specify colors
- 1: (fill color) [Color]
- 2: (anti-alias color) [Color]
- 3: (outline/background...) [Color]
- 4: (transparent color) [Color]

Color Set 4 Project wide

Option for custom or project wide colors.

No text selected

00:00:25.29

Video

Transformations

Audio

Timeline Playlists Compilation

Hit Code - Button

#	Command
1	if (GPRMS = 0) then GPRM = 3072
2	if (GPRMS = 1) then GPRM = 6144
3	if (GPRMS = 2) then GPRM = 5120
4	if (GPRMS = 3) then GPRM = 2048
5	if (GPRM != SPRMB [highlighted butto
6	GPRMS = GPRMS + 1
7	if (GPRMS < 4) then GotoLabel 'Jump B
8	GPRM0 = GPRM0 8192

Restart:

Disc Space Used: 261.0MB



Authoring for BD Burning

- ◆ ULEAD DVD Movie Factory 6 offers:
 - ◆ Encoding
 - ◆ Menu templates
 - ◆ Simple BD authoring
 - ◆ Blu-ray Disc Burning





Ulead DVD Movie Factory 6



Add media:

Edit media:

- Edit Room...
- Join/Separate Video...
- Multi-tim Video...
- Edit Subtitle...
- Add/Edit Chapter...
- Export Selected Clips
- Create menu
- Use first clip as introductory video

Video Player:

00:01:14.292

Project Timeline:

- HD DVD
- DVD
- VCD
- SVCD

DVD - 4.7G | 2:22:18.00 | 18 Sec | 4.58 (4.70) GB

Next Close



Small Production Publishing

- ◆ Many disc printer/recorders support DVD AND Blu-ray disc
- ◆ Primera Bravo SE Blu -->
- ◆ CD/DVD/BD Publisher
- ◆ \$2,995
- ◆ 20 disc capacity
- ◆ 2X write speed
- ◆ 1 Recorder capacity
- ◆ 4800x1200 dpi printer
- ◆ Mac, Windows software
- ◆ Burn 20 DVD-R / BD-R/RE in batch
- ◆ Integral printer to make disc face art





DVD top tips summary

- ◆ Graphic design is a key - sizzle sells!
- ◆ Menu nav efficiency is very helpful
- ◆ Add-ons for extra value (iPod movies, pix)
- ◆ Simple. fast workflow makes your life easier
- ◆ Networked computers wrangle more data
- ◆ Centralized storage means less in/out
- ◆ Don't forget to archive!



and now...

- ◆ Everyone's hot topic:





Some general BD issues

- ◆ Confusion - what IS this format, anyway?
- ◆ How do I make them on a Mac?
- ◆ How do I make them on a PC?
- ◆ What software do I need?
- ◆ What hardware do I need?
- ◆ What else do I need to know?



The Path to Blu-ray!





Where to begin?

BD-R/RE

\$



BD-ROM

\$\$\$\$\$\$\$

choose a path...



Path 1 - Blu-ray Recordable





Path 2 - Blu-ray Replication



you may not need this...



Authoring for BD Burning

- ◆ Simple to do
 - ◆ affordable for both Mac and PC
 - ◆ includes software encoding
 - ◆ no AACCS needed to burn discs, so...
 - ◆ no license needed to burn discs
 - ◆ no license fees needed to burn discs



Authoring for BD Burning

- ◆ What you need:
 - ◆ Authoring Software
 - ◆ Blu-ray Burner (or DVD burner)
 - ◆ BD-R/RE recordable media
 - or
 - ◆ DVD-R recordable media





General BD info:

- ◆ Three player “profiles” so far:
 - ◆ Profile 1.0 - basic player
 - ◆ Profile 1.1 - adds Pic in Pic
 - ◆ Profile 2.0 - adds network connectivity, “BD Live”, other advanced interactivity functions using BD-J programming
- ◆ Authoring for lower profiles is easy



Simple BD authoring:

 Roxio Toast 10 w/ BD/HD plugin

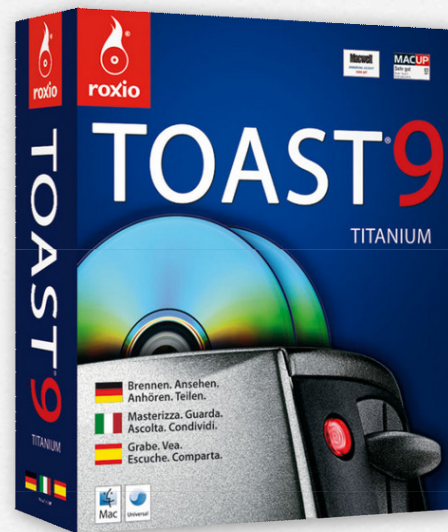
 Roxio Creator 2009

- ◆ Offers drag-and-drop authoring
- ◆ Background encoding in MPEG-2, AVC
- ◆ Simple themed menuing
- ◆ Very fast to burn a one-off disc
- ◆ Can create a Blu-ray disc on DVD-R!



Roxio Toast 10...

- ◆ Toast 10 works basically the same way as Toast 9, (but no longer has HD DVD).





Roxio Toast 10



- ◆ Toast 10 offers:
 - ◆ MPEG 2/4 Encoding
 - ◆ SD, HD templates
 - ◆ Simple BD authoring
 - ◆ Blu-ray Disc Burning
 - ◆ BD on DVD-R Burning!
 - ◆ Can burn BDMV folder to BD & DVD!





Toast 10: Blu-ray Video



BD5 MPEG2.disc

Blu-ray Video: BD5 MPEG2 4 items - 00:19

Thumbnail	Title	Date	Duration	Video	Audio	Action
	golden wheat	Sat, Aug 19, 2006	00:04	Video: DVCPRO HD 720p60, 960 x 720, 23.98 fps	Audio: None	Edit...
	japanese garden	Sat, Aug 19, 2006	00:05	Video: DVCPRO HD 720p60, 960 x 720, 23.98 fps	Audio: None	Edit...
	Golden Gate cars ws	Sat, Aug 19, 2006	00:05	Video: DVCPRO HD 720p60, 960 x 720, 23.98 fps	Audio: None	Edit...
	beach magic hour	Sat, Aug 19, 2006	00:05	Video: DVCPRO HD 720p60, 960 x 720, 23.98 fps	Audio: None	Edit...

Options

Menu Style: Warp

Auto-play disc on insert

Play all items continuously

Encoding: Automatic Custom

Video: MPEG-2, 10.0 Mbps (16.0 Mbps max)

Audio: Dolby Digital 192 kbps

More

Add Remove Save As Disc Image

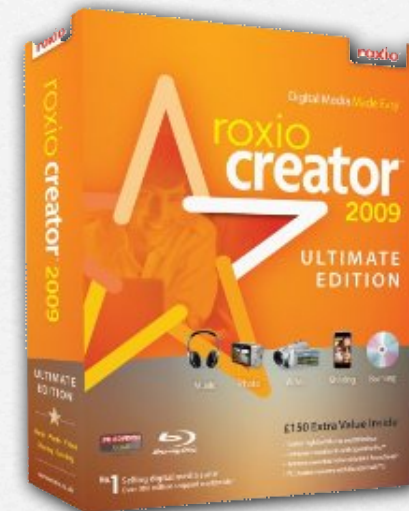
roxio HI-dt-st DVDRW GWA4080MA 23.4 MB on 1 disc Space Remaining: 4.36 GB DVD



Roxio Creator 2009



- ◆ Roxio Creator 2009 offers:
 - ◆ Encoding
 - ◆ Menu design
 - ◆ BDMV authoring
 - ◆ Blu-ray Disc Burning
 - ◆ BD burning to DVD-R





Roxio Creator 2009



Roxio Videowave

File Edit Production View Tools Help


Add Content:

- Add Photo/Video
- Add Background Audio
- Add Text Effect
- Add Overlay
- Add Video Effect
- Add Transition
- Apply Transition Theme

Tools:

- Show Media Selector

Preview - Blur Light (Length: 00:01:24,19)



00:02:36,12

Media Selector

Video

File Name	Fi...	Date C...	Attribu...
123456.	94..	04.07.2..	00:03:...
DIVX_A.	67..	04.07.2..	00:02:...
MY MO..	36..	04.07.2..	00:01:...
MY MO..	38..	04.07.2..	00:01:...

6 Items Total

Production Editor: Timeline - Production Length: 00:12:06,23

Storyline **Timeline** Show/Hide Tracks Internal Tracks

00:02:15,10 00:03:00,01 00:03:45,05 00:04:30,08 00:05:15,12 00:06:00,03 00:06:45,07 00:07:30,1

Video DIVX_... ShortTitle.wmv MY MOVIES Extra 1.av MY MOVIES Extra 1...

Native

Music 03 - MOR Easy Listening Slow Dance Ballad MP3

Fx 1 Blobs Blur Light

Ovl 1



BDMV - Blu-ray Disc Movie

- ◆ Puts High-Def video on BD, or BD on DVD
- ◆ Creates simple DVD-like titles (no BD-J)
- ◆ Great format for in-house, one-off use
- ◆ What to use:
 - ◆ Toast 10 (Mac), Creator 2009 (PC)
 - ◆ Encore CS3/4 is perfectly fine
 - ◆ Sonic DVDItPro makes BD CMF



BD Small Production Flow

- ◆ Many disc printer/recorders now support Blu-ray disc
- ◆ Primera Bravo SE Blu -->
- ◆ CD/DVD/BD Publisher
- ◆ \$2,995
- ◆ 20 disc capacity
- ◆ 2X write speed
- ◆ 1 Recorder capacity
- ◆ 4800x1200 dpi printer
- ◆ Mac, Windows software
- ◆ Burn 20 BD-R at a time





BD Duplication Services

- ◆ Not as available as DVD duplication, BD duplication IS becoming available, BUT
- ◆ Disc prices are *STILL* high, ex:
 - ◆ 1-499 BD: \$38.20 each
 - ◆ 500-999 BD \$37.30 each
- ◆ Cost of blank media is still the difficulty; as media becomes cheaper, costs will drop.



BD-R media costs

Brand	R/RE	Layers	Speed	Cost
Verbatim	BD-R	1	2X	\$16.99
Verbatim	BD-RE	1	2X	\$19.99
Panasonic	BD-R	1	2X	\$17.49
Panasonic	BD-R	2	2X	\$49.99
Sony	BD-R	2	2X	\$31.99
Sony	BD-R	1	2X	\$16.99



Path 2 - Blu-ray Replication



not simple, not cheap...



BD Replication

- ◆ Authoring for replication
- ◆ Licensing and other fees
- ◆ Replication
 - ◆ Current Status
 - ◆ Fees and prices



Authoring for Replication

- ◆ The total solution will require:
 - ◆ Encoding
 - ◆ Menu design
 - ◆ HDMV authoring
 - ◆ BD-J authoring
 - ◆ Emulation
 - ◆ Verification



Authoring for Replication

- ◆ Choose from:
 - ◆ Sony Blu-print
 - ◆ Sonic Scenarist
 - ◆ NetBlender -DoStudio



Replication Licensing Issues

- ◆ AACCS (content protection)
- ◆ BDA (Blu-ray Disc Ass'n)



AACS Licensing

- ◆ Advanced Access Content System
 - ◆ Content protection
- ◆ *Required* for Blu-ray Replication
- ◆ Costs:
 - ◆ \$3,000 one time up front payment
 - ◆ \$1,300 per project (per title)
 - ◆ \$500 is to generate content certificate
 - ◆ \$800 is media key
 - ◆ ~\$200 - miscellaneous costs
 - ◆ \$.04/disc (paid to replicator, then passed through)
- ◆ Bottom line: “ouch!”



BDA Licensing

- ◆ With No license:
 - ◆ Can't use BD logo on product or marketing materials unless replicated at licensed replicator
- ◆ With a Free license:
 - ◆ Use BD logo, but not Region Protection Code logo
 - ◆ Not listed as licensee on association web site
 - ◆ http://www.blu-raydisc.info/license_app/lla_apps.php
- ◆ Content Participant Agreement -Light (\$500/year)
 - ◆ Use RPC code, but no third party beneficiary rights
 - ◆ Listed as licensee on association web site
 - ◆ http://www.blu-raydisc.info/license_app/cpalight_apps.php
- ◆ Content Participant Agreement (\$3000/year)
 - ◆ http://www.blu-raydisc.info/license_app/cpa_apps.php
- ◆ For more information:
 - ◆ <http://www.blu-raydisc.info/index.php>



Replication

- ◆ Deliver to replicator in Cutting Master Format
 - ◆ Tape, Hard disk, or via Internet (FTP)
 - ◆ No delivery on BD-recordable
- ◆ AACIS license required!



BD-R/RE Summary

PROS

- ◆ Accessible Authoring tools
- ◆ Inexpensive to create a master
- ◆ Inexpensive to duplicate titles in low quantities
- ◆ NO AACS license required!

CONS

- ◆ Playback incompatibilities exist
- ◆ Can't use full BD capabilities
 - ◆ BD-Live connectivity Online
- ◆ Expensive to Produce in quantity
- ◆ Generally cannot replicate masters produced with low-cost authoring tools



BD Replication Summary

PROS

- ◆ Most compatible discs
- ◆ Can use full BD features
- ◆ Copy protection (FWIW)
 - ◆ AACCS
 - ◆ BD+
 - ◆ BD Mark

CONS

- ◆ Uses expensive authoring tools
- ◆ Expensive to Produce small quantity
- ◆ AACCS license required!!



Q n A time

- ◆ And now... have any questions?



For More Information:

- ◆ www.Adobe.com - Encore CS4 information
- ◆ www.Sonic.com - Scenarist BD info
- ◆ www.Roxio.com - Toast 10 info, forums
- ◆ www.Recipe4DVD.com DVD, BD info
- ◆ www.IDMADVDA.org - trade ass'n
- ◆ www.blu-raydisc.info - license info, apps
- ◆ www.AACSLA.com - AACSLA licenses, fee info



Thanks...

- ◆ Many thanks to Jan Ozer, who spent a great deal of time collecting the information used in this presentation.
- ◆ Much additional information can be found in the BD FAQ at www.emedia.com
- ◆ More info in Blu-ray Disc Demystified from Jim Taylor, Michael Zink, Charles Crawford, and Chris Armbrust.