

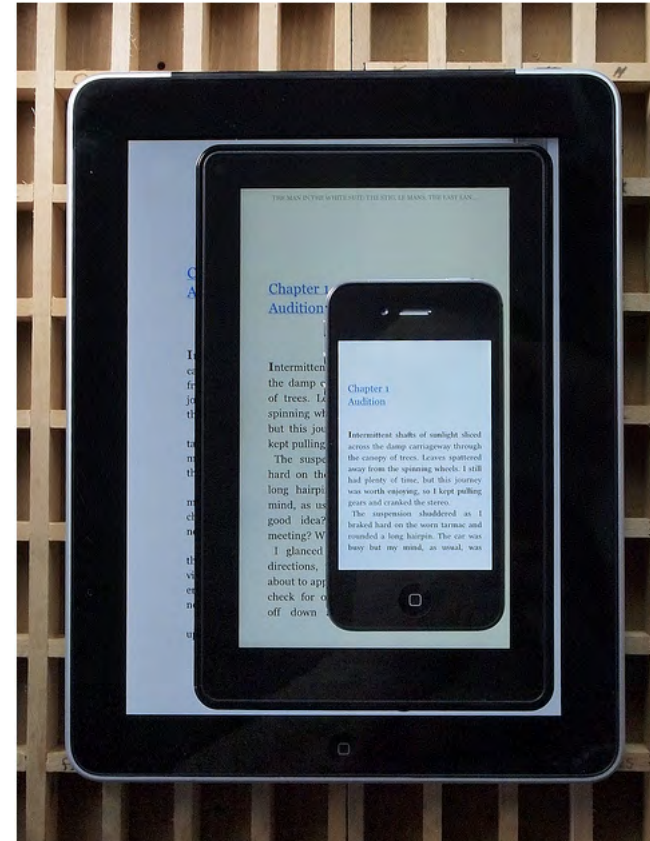


Color Considerations for Digital Publishing

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All about the EcoSystem



- It's more important than ever to keep source materials in their original format
 - Especially keeping your raster images in RGB!
- The ability to work in multiple colorspaces is important
 - Especially if you are **bringing in advertisements** or other material that may have originated as "print-based"
- The ability to choose the output format (even at the page level) can enable higher-fidelity publications.

Screen vs. Print – some interesting things you might not know...

- Using a very dark gray type instead of black is sometimes easier on the eyes.
 - Even switching to a #999999 gray on a white background can make a world of difference in preventing eye strain in your readers.
 - Going for too light and too low a contrast can have the opposite effect and make it harder to read (i.e. don't use a #333333 gray on a white background).

Verdana 11 point, Black

Class aptent taciti sociosqu ad litora torquent per conubia nost inceptos himenaeos. Duis rutrum turpis sit amet libero. Sed vul fringilla nunc. In hac habitasse platea dictumst. Aliquam a lacu commodo scelerisque. Vestibulum rutrum ante ac arcu.

Verdana 11 point, Dark Gray

Class aptent taciti sociosqu ad litora torquent per conubia nost inceptos himenaeos. Duis rutrum turpis sit amet libero. Sed vul fringilla nunc. In hac habitasse platea dictumst. Aliquam a lacu commodo scelerisque. Vestibulum rutrum ante ac arcu.

Verdana 11 point, Medium Gray

Class aptent taciti sociosqu ad litora torquent per conubia nostr inceptos himenaeos. Duis rutrum turpis sit amet libero. Sed vul fringilla nunc. In hac habitasse platea dictumst. Aliquam a lacu commodo scelerisque. Vestibulum rutrum ante ac arcu.

Verdana 11 point, Light Gray

Class aptent taciti sociosqu ad litora torquent per conubia nost inceptos himenaeos. Duis rutrum turpis sit amet libero. Sed vul fringilla nunc. In hac habitasse platea dictumst. Aliquam a lacu commodo scelerisque. Vestibulum rutrum ante ac arcu.

More about text & colors

- Beware of using a dark background with white type.
 - If you're determined to use a combination of dark background and light text, decrease the contrast. Use a #333333 gray type on a black background, or even a #999999 background.

Verdana 12 point, white

Class aptent taciti sociosqu ad litora torquent per conubia
inceptos himenaeos. Duis rutrum turpis sit amet libero. S
fringilla nunc. In hac habitasse platea dictumst. Aliquam
ipsum commodo scelerisque. Vestibulum rutrum ante ac

Verdana 12 point, light gray

Class aptent taciti sociosqu ad litora torquent per conubia
inceptos himenaeos. Duis rutrum turpis sit amet libero. S
fringilla nunc. In hac habitasse platea dictumst. Aliquam
ipsum commodo scelerisque. Vestibulum rutrum ante ac

Verdana 12 point, white on dark gray background

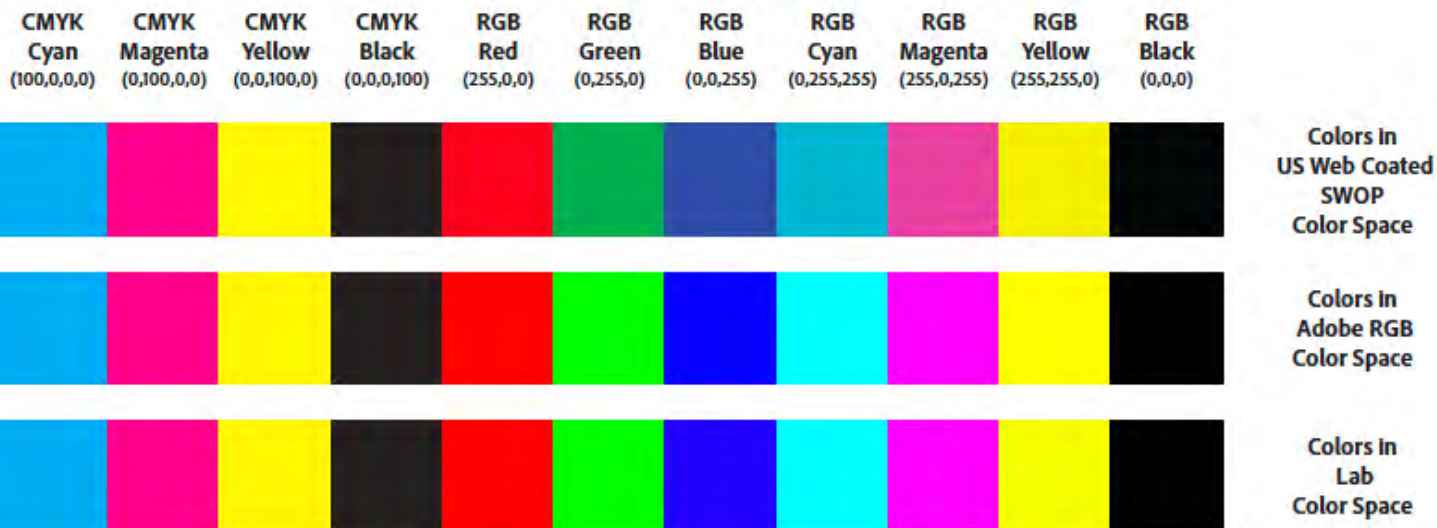
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ipsum commodo scelerisque. Vestibulum rutrum ante ac

- Open international standard (ISO 32000) with exceptionally high fidelity graphics and a rich color model
 - 11 different ways to represent color in PDF!
- Delivered to the end user as a document, book or publication, requiring a specialized reader (such as iBooks or Adobe Reader) to view.
- Support for long term archiving and printing

Spot Color		CMYK Color		Gray Scale	
PanPantone		C			0%
PanCoated		M			10%
PanUncoat		Y			20%
DIC		K			30%
Toyo					40%
Focaltone					50%
Trumatch					60%
Hexachrome					70%
Spot Blend					80%
					90%
					100%

A sample set of “patches” to demonstrate color quality on devices

Simple Color Space Demonstration



Original – Adobe RGB Color Space

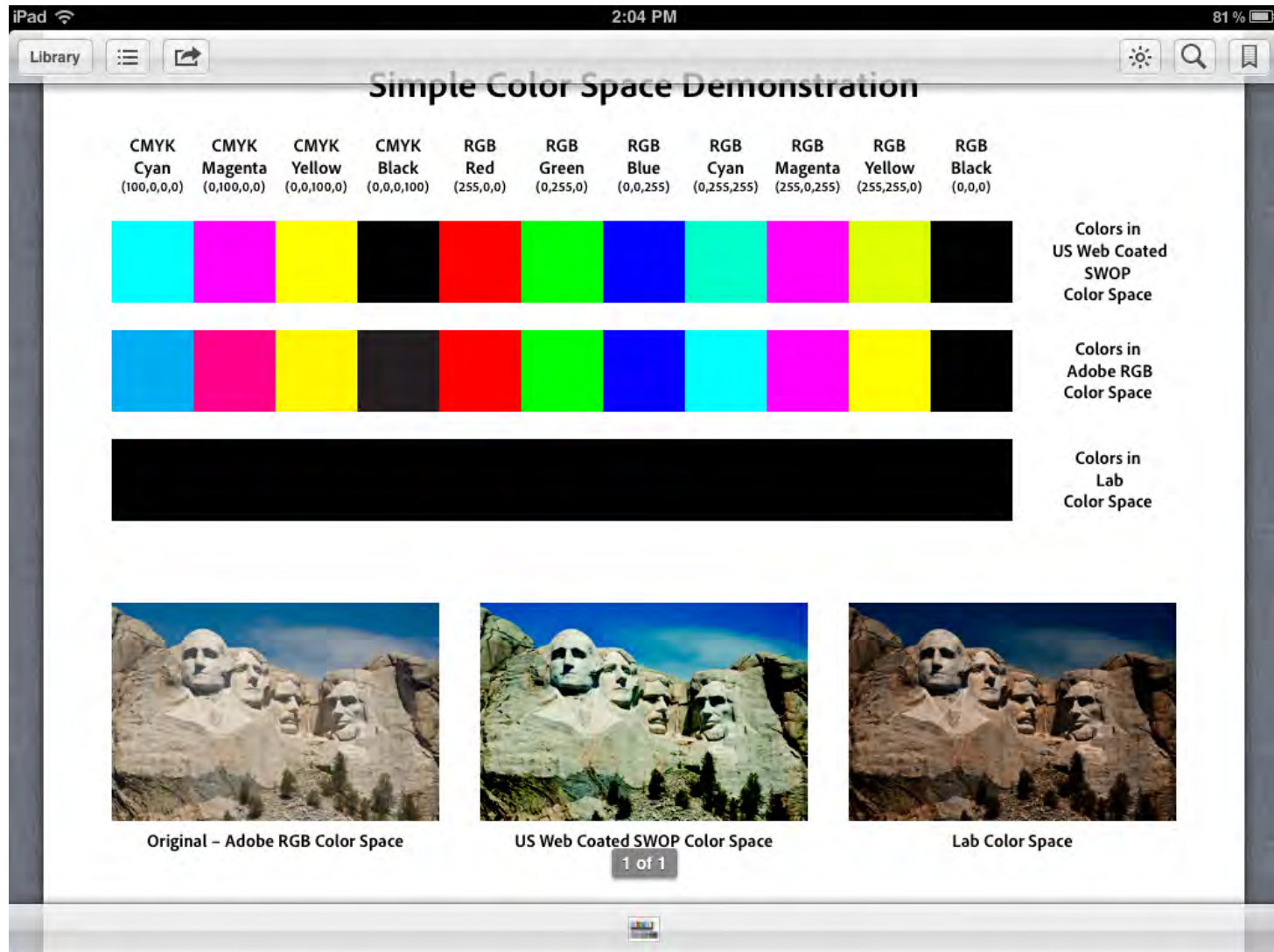


US Web Coated SWOP Color Space

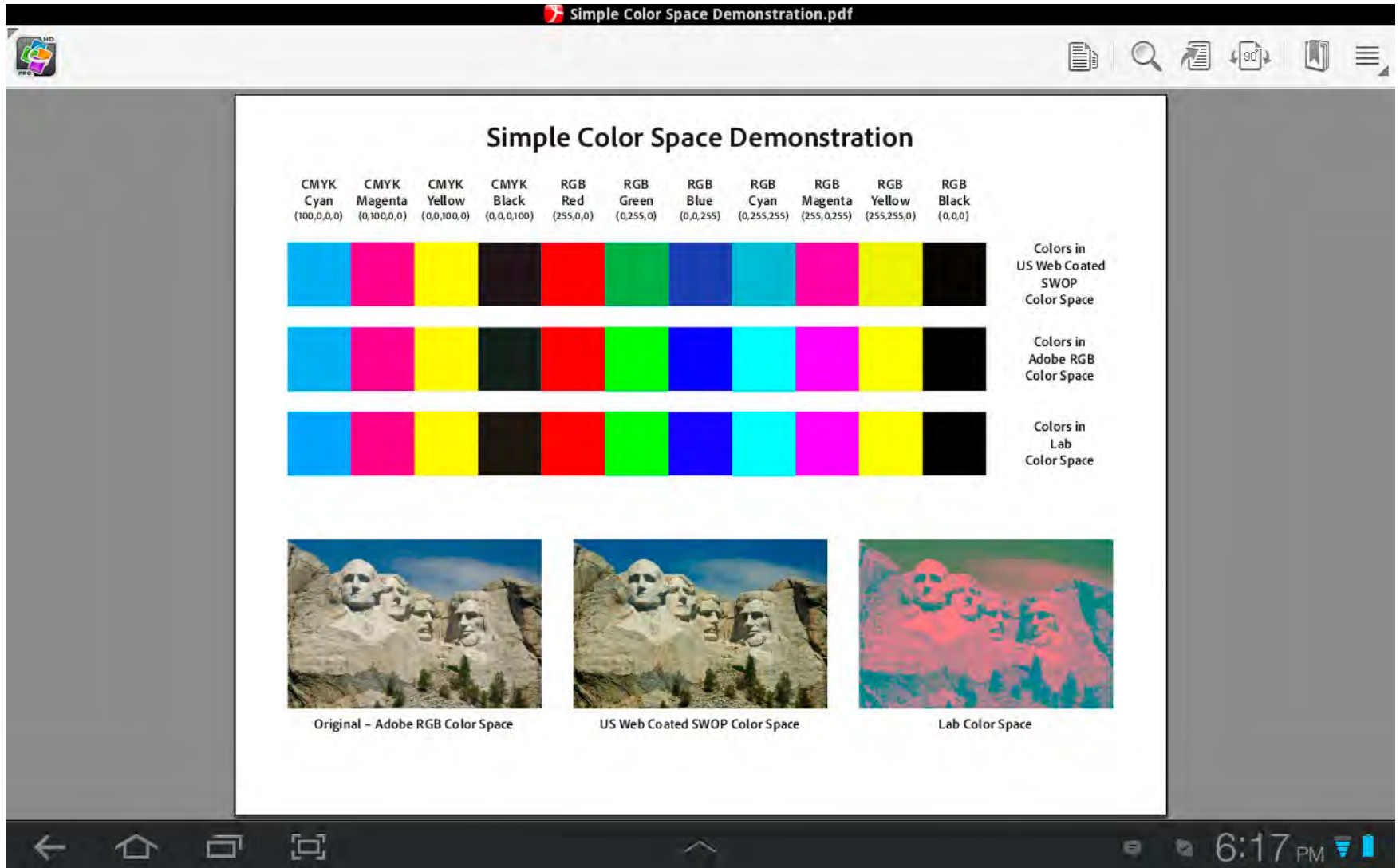


Lab Color Space

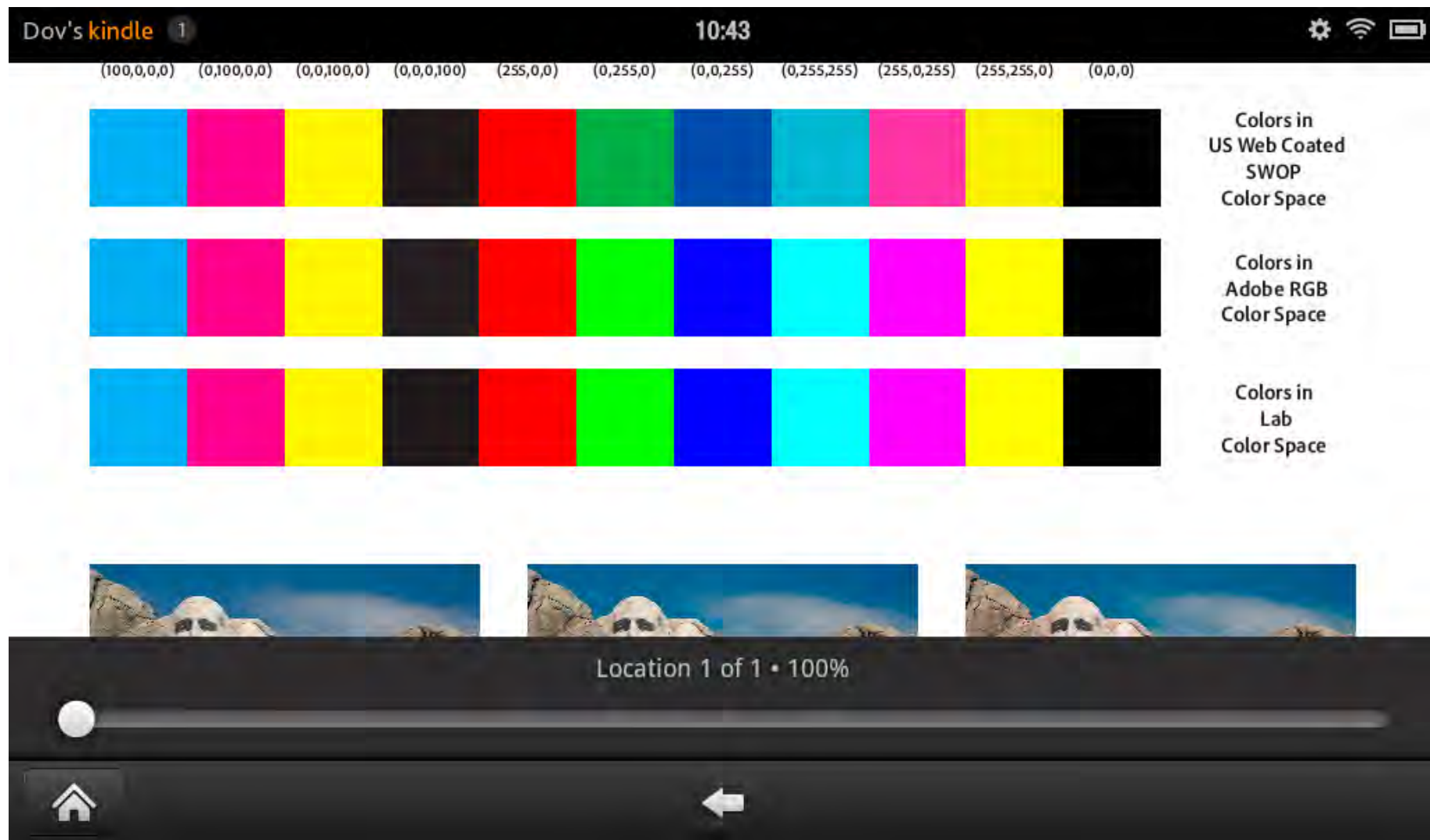
Apple iBooks (iOS)



QuickOffice (Android)



Kindle Fire



iPad10:27 PM98%

HomeSimple Color Space Demonstration.pdf

CMYK Cyan (100,0,0,0)	CMYK Magenta (0,100,0,0)	CMYK Yellow (0,0,100,0)	CMYK Black (0,0,0,100)	RGB Red (255,0,0)	RGB Green (0,255,0)	RGB Blue (0,0,255)	RGB Cyan (0,255,255)	RGB Magenta (255,0,255)	RGB Yellow (255,255,0)	RGB Black (0,0,0)	
											Colors In US Web Coated SWOP Color Space
											Colors In Adobe RGB Color Space
											Colors In Lab Color Space

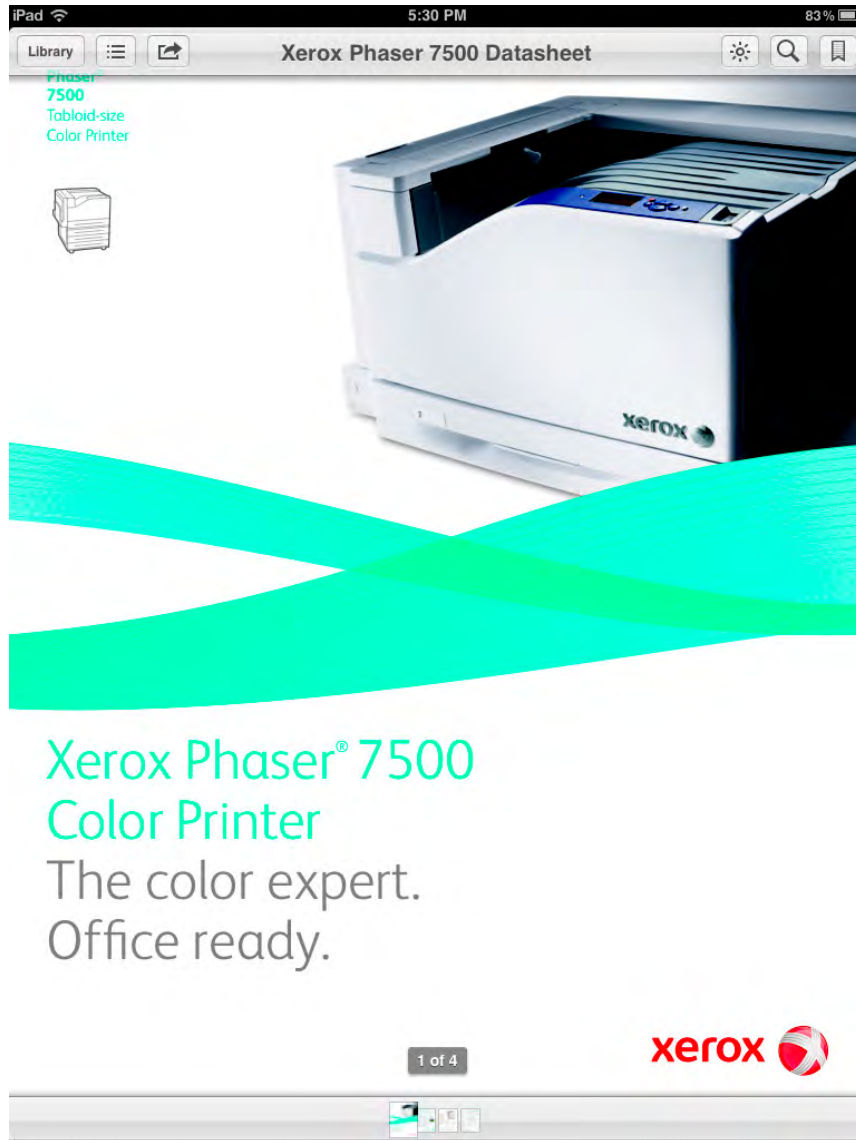
Original – Adobe RGB Color Space

US Web Coated SWOP Color Space

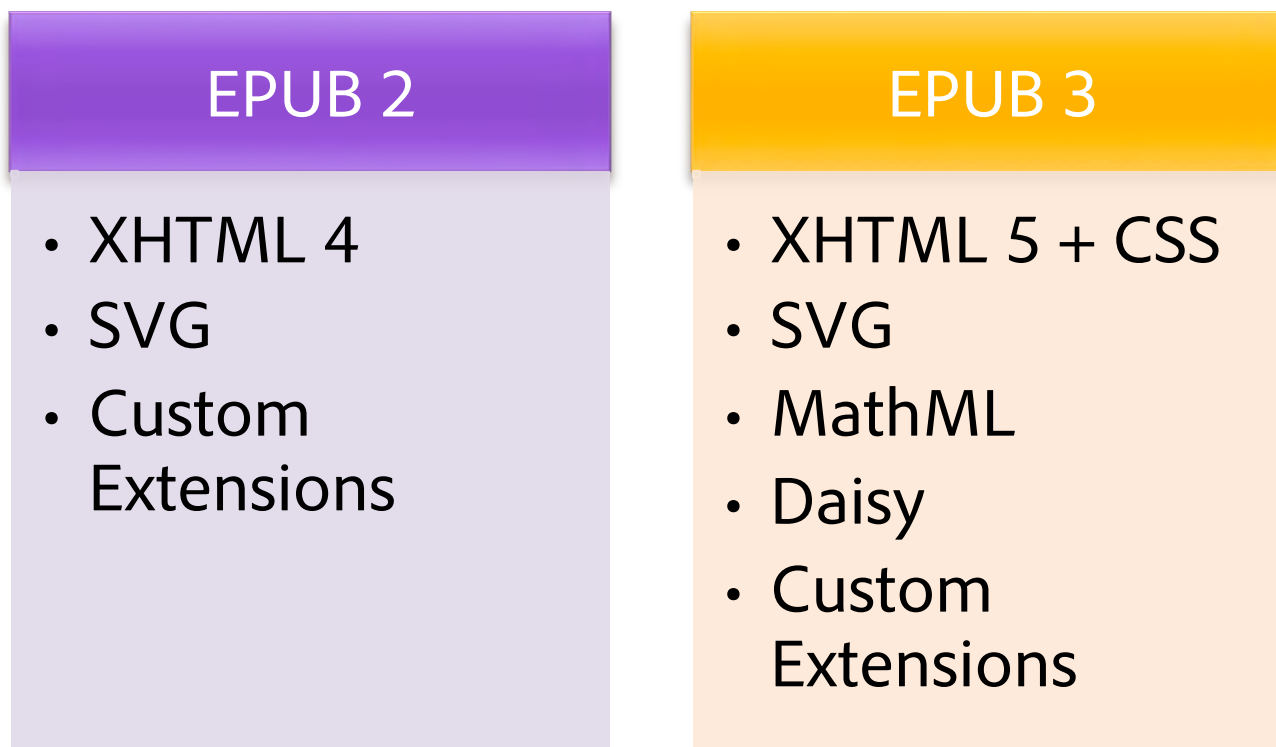
Lab Color Space

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How about a real-world example?



- Open international standard (IDPF) for how to utilize ZIP file compression and container technology to package up standard web platform content
- Delivered to the end user as a book or publication, requiring a specialized reader (such as iBooks) to view.

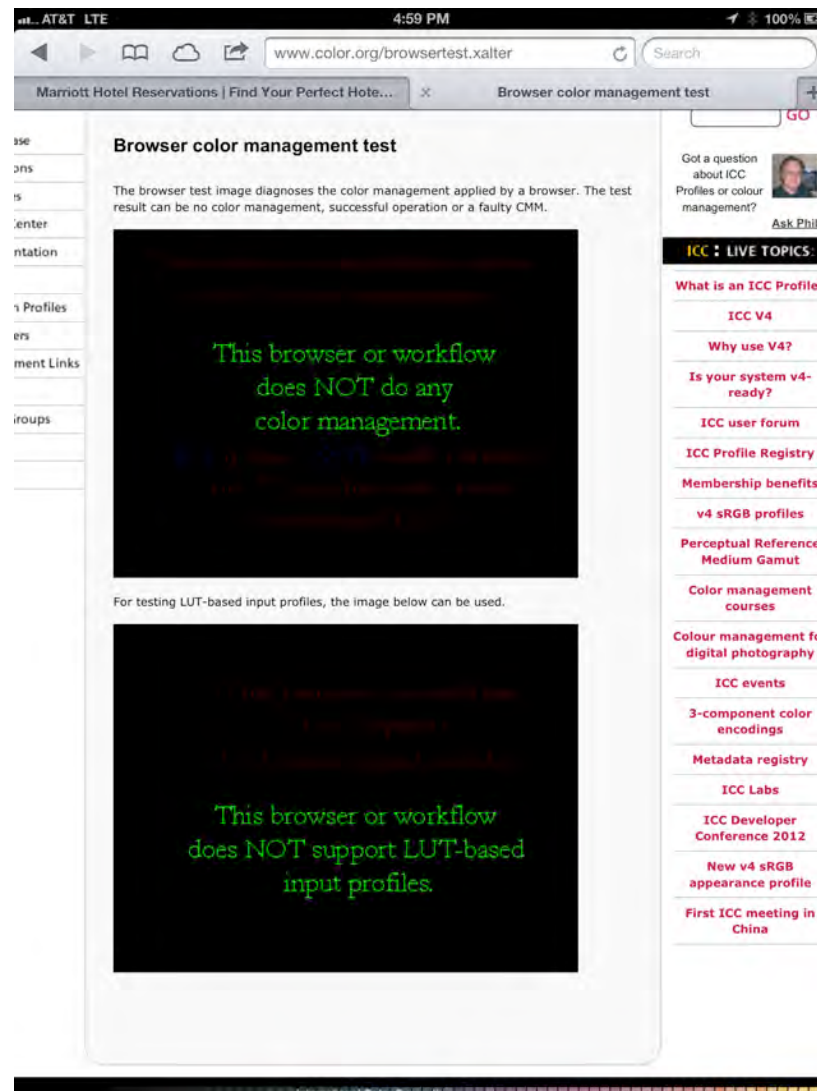


Color & the “Web Platform”

- Four Key Technologies for 2D content
 - HTML + CSS + Canvas + SVG
- sRGB(A) is the core basis for rendering
- Beyond that – NO CONSISTENCY!
 - The same image with an embedded profile can be loaded in four three different ways with three different looks! (and still be perfectly valid)
 - No way to match text to images, based on a profile
 - Limited methods for matching vector data to images, based on a profile
- And there is still Video & 3D coming....



HTML Viewing (WebKit for iOS or Android) isn't any better ☹



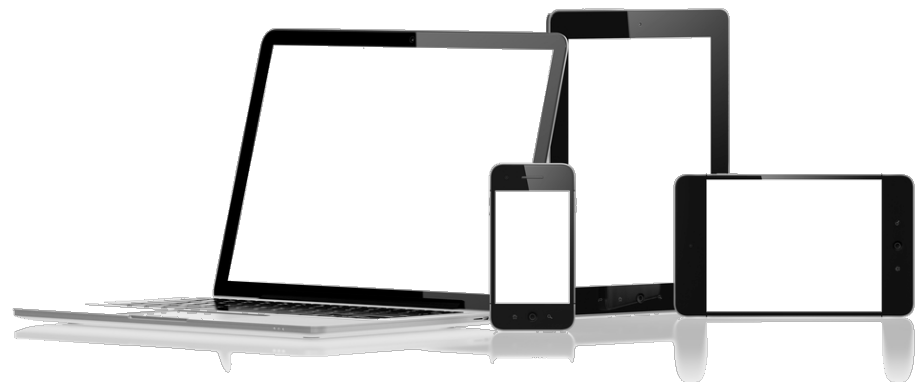
File Formats - .folio (and similar)

- .folio (and related formats used by other digital publishing tools) are all proprietary variations on the ZIP file compression and container technology
- Within a .folio file are all the digital assets (both static and dynamic) represented in standard formats
 - PDF
 - HTML (or even EPUB)
 - JPEG or PNG
 - MP3 & MP4 (for audio & video)
- To the end user, the deliverable is a custom application for a particular tablet platform!
 - Although may also now be an “issue” on a “newstand”



Mobile Devices

- Mobile devices use screens that cannot be calibrated
 - and are not consistent
- The hardware & the OS's do not include native Color Management
 - OS-provided format handling (eg. PDF and HTML) is limited and most applications aren't willing to burden users with it (in size and performance)
 - Some PDF readers are increasingly able to do reasonable approximations of non-RGB color, but native iOS PDF display does not.
 - HTML viewing is (potentially) even worse, since you cannot use your own "engine" and must utilize only the WebKit implementation provided.



Conclusions

- Your **output format choice and its viewer is extremely important** in obtaining acceptable color.
- You should be sure to force (or leave) **source content to sRGB**
 - Let smart authoring tools (such as InDesign) handle the heavy lifting.
- When authoring, **try to use ICC profiles that simulate** the sRGB-like nature of devices
 - <http://indesignsecrets.com/downloads/forcedl/iPad.icc>



Adobe