Advanced Users Workshop

# PREPARING DIGITAL IMAGES FOR PUBLICATION

UCLA Molecular Biology Interdepartmental Graduate Program May 14, 2008

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#### Topics

Working in Photoshop: Follow-up from Session 1

Color Management Concepts

Getting Good Images from Microsoft Office

Image Integrity

## Photoshop basics

- Resolution
- Resampling
- Effective resolution
- Saving to formats
- Compression
- Color Management

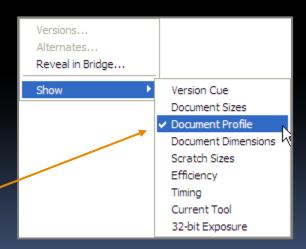
#### Color management concepts

- Profiles
- Color Settings
- Working Spaces
- Color Management Policies
- Managing Files
- Assign to Profile vs. Convert to Profile\*

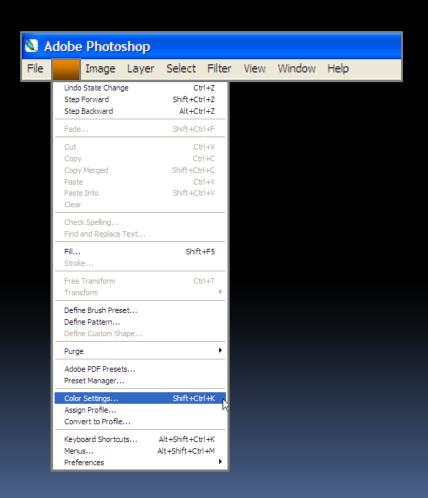
#### Profiles

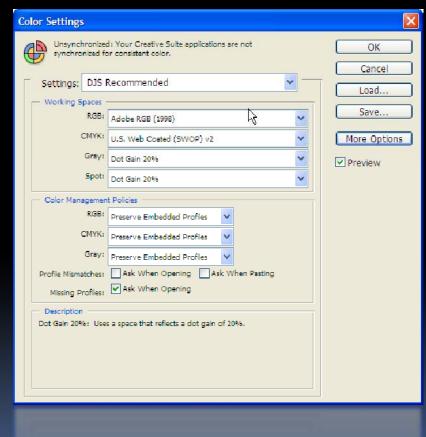
 Display profiles by default by selecting "Document Profile" in the picture menu





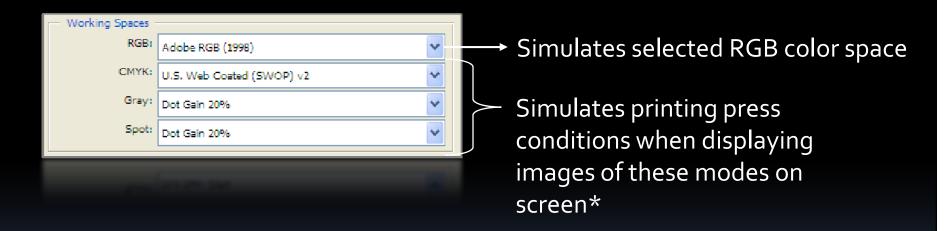
## Color settings





#### Working spaces

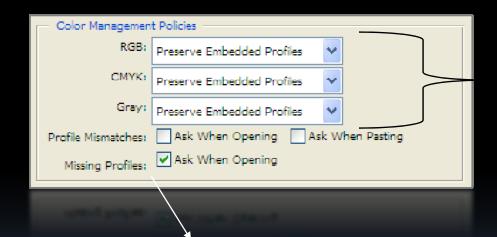
Default working spaces will be used whenever an image with NO attached profile is opened.



\* Accuracy of simulation on screen is dependent upon calibration of the monitor

#### Color management policies

Default working spaces will be used whenever a image with no attached or tagged profile is opened.

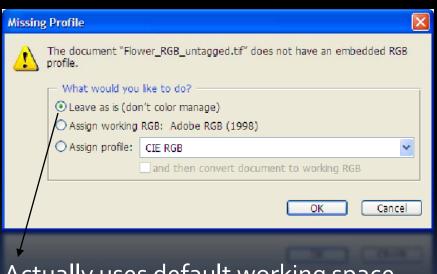


Ensures that embedded profiles are honored upon opening an image and used to display the image on screen – overrides the default working spaces

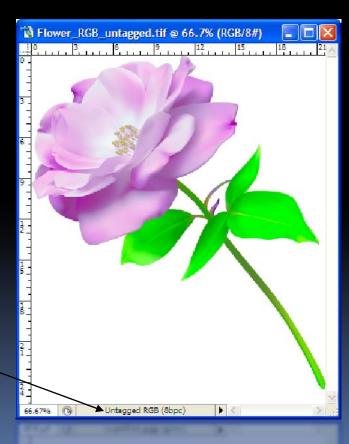
Notifies the user upon opening a file if the image does not have an ICC profile attached. Allows user to manage the file appropriately.

# Missing profile

Based on the color management policy settings, upon opening an untagged file the user will be prompted for direction.

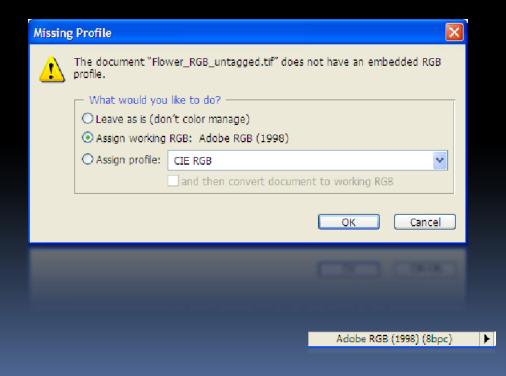


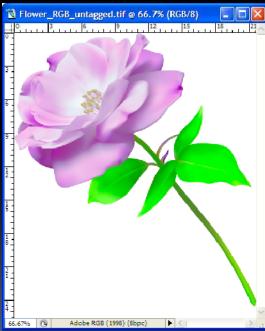
Actually uses default working space but will identify image as "Untagged"



#### Missing profile cont...

Based on the color management policy settings, upon opening an untagged file the user will be prompted for direction. Recommended direction is to assign to the working space only if you can't get a tagged version of the file!

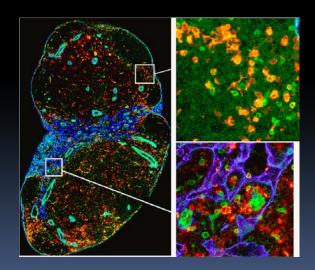




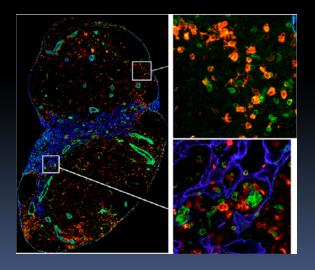
#### Assign to profile

Assign to profile maps the colors of the source file into the colors of the destination space with no compensation for differences – result is potential for color shift.

Profiles are important for accurate color representation!



Original Image with ICC Profile

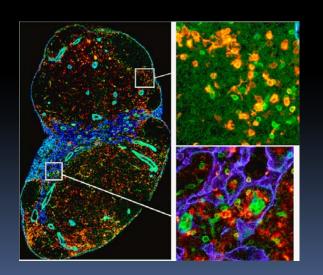


Untagged file opened with Adobe profile

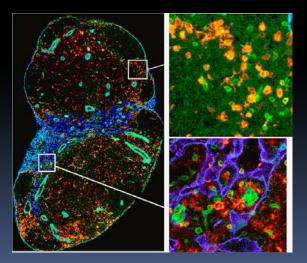
#### Convert to profile

Convert to profile maps the colors of the source file into the colors of the destination space AND compensates for the differences – result is NO color shift.

Extremely important when building multi-panel figures from a variety of figures! Each figure should be using the same profile when the multi-panel figure is built.



Original Image with ICC Profile



Untagged file opened with Adobe profile

#### Microsoft Office

- Most journals DO NOT accept files in MS Word, PowerPoint, or Excel
- Printing to PDF is the best method for handling non-standard formats\*

http://dx.sheridan.com/guidelines/main.html

How to create a Prepress Quality PDF with Microsoft Office Applications

<sup>\*</sup> Assumes author has started with high resolution images embedded in application file

#### Tips for Microsoft Office

- Artwork placed within any MS Office application should be of acceptable minimum resolution
- 300 ppi for halftones
- 1000 -1200 ppi for line art
- 600-900 ppi for combinations

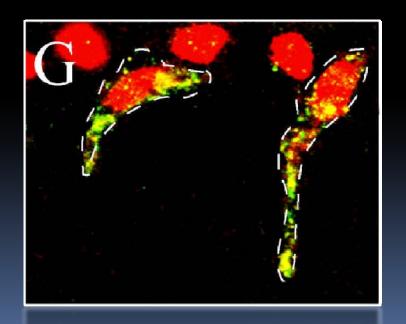
#### Tips for Microsoft Office

- When inserting pictures, be sure to select "insert" and not "insert link"
- Insert link does not properly embed the hi-res image into the MS Office file
- Use standard fonts and embed when possible
- Don't save a TIFF or JPEG from PowerPoint!

# Image Integrity Integrity in Science 16

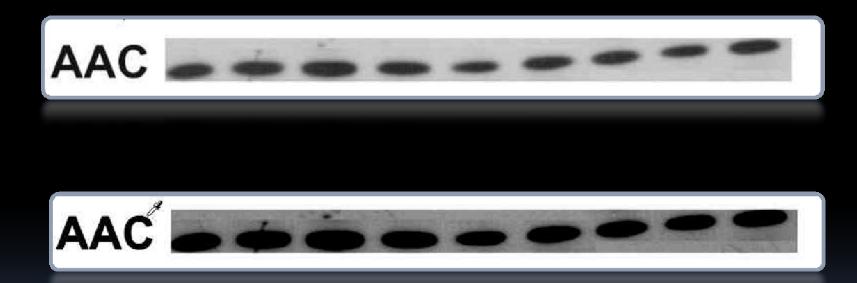
## Image Integrity

 Detecting image manipulation through the use of image editing software and investigative techniques

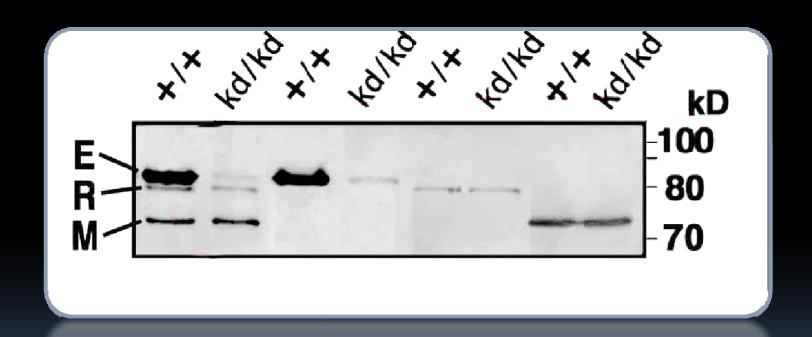




# Image Integrity



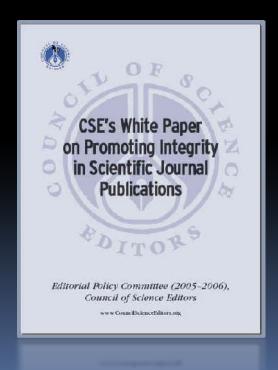
# Image Integrity



#### Guidelines

 Promoting Integrity in Scientific Journal Publications

http://www.councilscienceeditors.org/editorial\_policies/whitepaper/pressrelease.cfm



#### Guidelines

- No specific feature within an image may be enhanced, obscured, moved, removed, or introduced
- Adjustments of brightness, contrast, or color balance are acceptable if they are applied to the whole image and as long as they do not obscure, eliminate, or misrepresent any information present in the original

#### Guidelines

- The grouping of images from different parts of the same gel, or from different gels, fields, or exposures must be made explicit by the arrangement of the figure (eg, dividing lines) and in the text of the figure legend.
- If the original data cannot be produced by an author when asked to provide it, the acceptance of the manuscript may be revoked

#### More information available

#### http://dx.sheridan.com/



#### Presentation available at:

Site: ftp.dartmouthjournals.com

Username: digexp

Password: 619exp