

Computers and Color in Philately
Part 10: Additional Reading
John M. Cibulskis, Ph.D.
11/01/2023

Additional Reading

Color Models – Basic Definitions:

- [1] *Color model*. Wikipedia. https://en.wikipedia.org/wiki/Color_model (accessed 17 February 2017).
- [2] *Color Difference*, Wikipedia, October 24, 2015, https://en.wikipedia.org/wiki/Color_difference
- [3] *Color conversion math and formulas*, EasyRGB, 2014, <http://www.easyrgb.com/index.php?X=MATH&H=08#text8>
- [4] *sRGB*, Wikipedia, October 20, 2015, <http://en.wikipedia.org/wiki/SRGB>

Matching Colors to the Munsell Color Codes:

- [1] Kelly, Kenneth L. and Fred W. Billmeyer, Jr. 1981. *APS Manual for Determining Color Designations of Stamp Colors*. The American Philatelist, August: 708-717.

General Reference on Color in Philately:

- [1] White, R. H. 1979. *Color in Philately*. New York: The Philatelic Foundation.
 - [2] *Germany 1872-1900 A Philatelic & Postal History Handbook of Germany and her Colonies* by Darryl Hinton-Blaker, Album Publishing Company, Inc. Raleigh, North Carolina, USA
- A good discussion of the early German color varieties.

Bron-Kerbosch Algorithm:

- [1] Conte, Alessio. *Review of the Bron-Kerbosch Algorithm and Variations*. Available at University of Glasgow School of Computing Science. <http://www.dcs.gla.ac.uk/~pat/jchoco/cliقة/enumeration/report.pdf>

Definitions of Clique, Maximal Clique, Maximum Clique, as well as a concise list of basic graph theory definitions:

- [1] *Clique (graph theory)*, Wikipedia, April 11, 2017, [https://en.wikipedia.org/wiki/Clique_\(graph_theory\)](https://en.wikipedia.org/wiki/Clique_(graph_theory))
- [2] *Clique Problem* Wikipedia. https://en.wikipedia.org/wiki/Clique_problem (accessed 6 February, 2017).

An “anti-clique” is another name for an “independent set”. It is a set of vertices in a graph no two of which are adjacent. Alternatively, it is a clique in the complementary graph.

- [3] *Independent set (graph theory)* Wikipedia. [https://en.wikipedia.org/wiki/Independent_set_\(graph_theory\)](https://en.wikipedia.org/wiki/Independent_set_(graph_theory)) (accessed 12 April, 2017).

Histogram Comparison:

- [1] *Histogram Comparison*, OpenCV, http://docs.opencv.org/doc/tutorials/imgproc/histograms/histogram_comparison/histogram_comparison.html
- [2] Jon Hardeberg. *Acquisition et reproduction d'images couleur: approches colorimétrique et multispectrale*. Human-Computer Interaction. Telecom ParisTech, 1999. French. <tel-00005657> (Ph.D. Thesis)

Color Guides and Instructions for their use:

- [1] *Michel Color Guide*, Version 38. 2011 Schwaneberger Verlag GmbH.
- [2] *Stanley Gibbons Stamp Colour Key*. England: Stanley Gibbons Ltd.
- [3] *Wonder Color Gauge*. 1940. Los Angeles: Meghrig.
- [4] *The Philatelic Color Guide*. Hygrade Products.
- [5] *Scott Specialized Color Guides for United States Stamps*, Scott Publishing Co., 2005.
- [6] *A New Color-Naming System for Graphics Languages*, Toby Berk, Lee Brownston, and Arie Kaufman, Florida International University, May 1982, IEEE CG&A.

Papers from the German Postal Specialist:

- [1] *Analysis of Color Varieties Using Scanned Images* by John M. Cibulskis, German Postal Specialist, May 2015, Vol. 66 No. 5, Whole No. 720.

Color Oriented Papers from the Institute of Analytical Methods in Philately:

The full prints of the Seminar papers may be found at <http://analyticalphilately.org/>.

- [1] *Towards a Stamp-Oriented Color Guide: Objectifying Classification by Color*, John M. Cibulskis, Proceedings of the Second International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, November 17-18, 2015.

- [2] *Resolving the Scanner Dependency in Color Matching*, John M. Cibulskis, Proceedings of the Second International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, November 17-18, 2015.

One common feature of modern software plotting systems is they automatically scale. However, in comparing two plots, that re-scaling often hides the point that is trying to be made. I wrote the plotter software and embedded it into the program that calculates the cubics. When I generated the images, it did not occur to me to use a common vertical axis though I see now that it would make the differences clearer. On the other hand, it would cause some of the plots to be significantly "squished-down" to the bottom and not allow as much differentiation of the individual data points. I did not change the program.

- [3] *Shade Verifications Using Tonal Histogram Analyses*, Tim Lyerla, Proceedings of the Second International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, November 17-18, 2015.

- [4] *The Colors of the Germany Crown and Eagle Series: A Tutorial on the Objective Determination of Color Varieties*, John M. Cibulskis, Proceedings of the Third International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 12-15, 2017.

- [5] *The Use of Tonal Histograms for the Study of Stamp Shades*, Tim Lyerla, Proceedings of the Third International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 12-15, 2017.

- [6] *A Quantitative Color Analysis of the US 3c 1861 Issue*, Jannie Hofmeyr, Proceedings of the Fourth International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 20, 2020.

- [7] *1894 and 1895 Series First Bureau Postage Due Stamps: Questions of Color, Fluorescence, and Early Use*, Harry K. Charles, Jr., Ph. D., Proceedings of the Fourth International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 20, 2020.

- [8] *Single Pixel Colorimetry and Optical Densitometry in Philately*, Robert W. Hisey, Ph.D., Proceedings of the Fourth International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 20, 2020.

- [9] *Colour Analysis Using a Scanner for Newfoundland's 1939 Royal Visit Stamp*, Anthony Thompson, Proceedings of the Fifth International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 10, 2023.

- [10] *What Shade is your Stamp: An Analysis of the Problem of Shades Based on the U.S. 1861 3 cent Stamp*, Jan Hofmeyr, Proceedings of the Fifth International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 10, 2023.

- [11] *Color Analysis and Microfade Testing of the 1918 Curtiss Jenny U.S. Airmail Stamp*, Thomas

Lam, Susan Smith, Scott Devine, and Edward P. Vicenzi, Proceedings of the Fifth International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 10, 2023.

[12] *Analysis of ink bleeding in Newfoundland's 1939 Royal Visit stamp – unexpected findings*, Anthony Thompson, Proceedings of the Fifth International Symposium on Analytical Methods in Philately, The Institute for Analytical Philately, October 10, 2023.

Basic Mathematical Terms:

[1] *Algebra*, Thomas W. Hungerford, 1974, Holt, Rinehart and Winston, Inc., U.S.A.

[2] Swamy, M. N. S. and K. Thulasiraman. 1981. *Graphs, Networks, and Algorithms*. New York: John Wiley & Sons.

Scanner Calibration:

These papers may be found on the internet with a simple search.

[1] *Acquisition and Reproduction of Color Images: Colorimetric and Multispectral Approaches* by Jon Y. Hardeberg, Ph.D.

[2] *Color Management for Color Facsimile*

Jon Yngve Hardeberg, Francis Schmitt, Ingeborg Tastl,

Hans Brettel and Jean-Pierre Crettez

Date for this version: March 27, 1997

[3] *Acquisition et reproduction d'images couleur : approches colorimétrique et multispectrale*
Ph.D. Thesis

Jon Hardeberg

[4] *Epson Professional Imaging Color Management Guide*

© 2011 Epson America, Inc. 1/11

[5] *Novel scanner characterization method for color measurement and diagnostics applications*

Bong-Sun Lee, Raja Bala, Gaurav Sharma

a Thomson Corporate Research, Indianapolis, IN 46290;

b Xerox Imaging and Services Technology Center, Webster, NY 14580;

c University of Rochester, Rochester, NY 14627

[6] *TWO APPROACHES IN SCANNER-PRINTER CALIBRATION: COLORIMETRIC SPACE-BASED VS. "CLOSED-LOOP"*.

V. Ostromoukhov, R.D. Hersch, C. Pe'raire, P. Emmel, I. Amidror

Swiss Federal Institute of Technology (EPFL)

CH-1015 Lausanne, Switzerland

[7] *INNOVATIONS IN 3-D COLOUR LUTS FOR DISPLAY CALIBRATION*

Charles Poynton, Joel Barsotti

1 Simon Fraser University, Toronto, Canada,

2 SpectraCal, Seattle, U.S.A.

[8] *High-Resolution Structured Light Range Scanner with Automatic Calibration*

ALEXANDER M. BRONSTEIN, MICHAEL M. BRONSTEIN,

EYAL GORDON, RON KIMMEL

August 4, 2003

[9] *Colour Scanning Calibration – a Comparison of Different Methods*

Kristoffer Sokolowski

TRITA-NA-E03128

[10] *Color Management Technology for Workstations*

This paper was presented at Sun Expo '92, Manchester, U.K. on September 10, 1992.

Charles A. Poynton, 1992/09/01 Sun Microsystems, Inc.

[11] *Targetless Scanner Color Calibration*

Gaurav Sharma

Digital Imaging Technology Center, Xerox Corporation, Webster, New York
[12] *The Seventh Color Imaging Conference: Color Science, Systems, and Applications*
Target-less Scanner Color Calibration

Gaurav Sharma

Digital Imaging Technology Center, Xerox Corporation
MS0128-27E, 800 Phillips Rd, Webster, NY 14580

Email: sharma@wrc.xerox.com

[13] *COLOR CALIBRATION OF SCANNERS USING POLYNOMIAL TRANSFORMATION*

Ibrahim Yilmaz a, I.Oztug Bildirici b, Murat Yakar b, Ferruh Yildiz b

a Afyon Kocatepe University, Faculty of Engineering, 03200 Afyon, Turkey – iyilmaz@aku.edu.tr

b Selcuk University, Faculty of Engineering and Architecture, Department of Geodesy &

Photogrammetry Engineering,

42075 Konya, Turkey – (bildirici, yakar, yildiz)@selcuk.edu.tr

Commission V, WG V/1

[14] *Scanner Calibration: Comparison of Different Methods*

Sokolowski