

Syllabus

Overview

- Mystery #1: What Am Really Seeing When I "Zoom In"?** *page 4*
- Mystery #2: Why Do My Smooth, Seamless Screen Images Print Out Looking Grainy?** *page 9*
- Mystery #3: Why Does White Space in My Digital Painting Make My File Larger?** *page 15*
- Mystery #4: What Exactly Does "Size" Mean in the Digital Painting and Photo-Editing World?** *page 17*
- Mystery #5: What Resolution Should I Scan at and Why?** *page 20*
- Mystery #6: What Do Filters Really Do?** *page 23*
- Mystery #7: What is the Real Difference Between "Paint" and "Draw" Programs?** *page 29*
- Mystery #8: How Can I Combine the Best of Paint and Draw Techniques?** *page 33*
- Mystery #9: Why Do Color Printouts Look So Different From Color on the Screen?** *page 34*
- Mystery #10: Why Does an Image that Looks Fine on One Platform Often Look Too Light or Dark on Another?** *page 37*

Table of Contents

- slide #1* Why Does it Do That? 10 Mysteries of Computer Artmaking Revealed
- slide #2* Michael O'Rourke, *Icon #1*, 1987
- slide #3* Why These 10 Things?
- slide #4* Overview, part 1
- slide #5* Overview, part 2
- slide #6* Section 1: Digital Painting and Photoediting (2D Raster Graphics)
- slide #7* **Mystery #1: What Am Really Seeing When I "Zoom In"?**
- slide #8* Zooming In--Closer to What?
- slide #9* Where's the Pixel?
- slide #10* Abstract Image Pixel Values Brought to Life
- slide #11* The Power of the Pixel
- slide #12* Michele Turre, *Me, My Mom & My Girl at Three*, 1992
- slide #13* Alvy Says...
- slide #14* Back to Zooming
- slide #15* Aesthetic of the "Pixel"
- slide #16* Rita DeWitt, *Class of '97: Lily Alexande* , 1991
- slide #17* **Mystery #2: Why Do My Smooth, Seamless Screen Images Print Out Looking Gralny?**
- slide #18* Patterns of Black Areas Create Illusion of Grays
- slide #19* Printer Spots Are Made of Dots
- slide #20* Filling in the Dots

- slide #21* More Dots Per Spot = More Grays
- slide #22* Number of Grays vs. Resolution
- slide #23* Gray Levels vs Resolution
- slide #24* I Do Not Like Green Eggs and Ham
- slide #25* Standard halftone vs. Randomized Dot Placement
- slide #26* Hmm...I Think I Like Them
- slide #27* Taking advantage of the halftone process
- slide #28* Leon Harmon and Ken Knowlton, Mural, 1966
- slide #29* Ken Knowlton, Helen Keller in Simulated Braille, 1998
- slide #30* **Mystery #3: Why Does the White Space in My Digital Painting Make My File Larger?**
- slide #31* Joan Truckenbrod's Icon Perpetrators, 1997
- slide #32* Yikes! Equations
- slide #33* **Mystery #4: What Exactly Does "Size" Mean in the Digital Painting and Photo-Editing World?**
- slide #34* The Implications of File Size
- slide #35* Annabel Safire, two versions of *Holl* , 1998
- slide #36* Michael Wright, *ice G*, from the *G* series, 1999
- slide #37* Convenience and Aesthetics, a Size Case Study
- slide #38* Cynthia Beth Rubin, *Tnava Synagogue*, 1998
- slide #39* Richard Roseblum, *Black Ryder*, 1994
- slide #40* **Mystery #5: What Resolution Should I Scan at and Why?**
- slide #41* Scanning at Too Low a Resolution Causes Aliasing
- slide #42* Aliasing is Especially Problematic with Text and Other Fine Details

- slide #43** Single-Colored Areas and Gradients Require Less Resolution
- slide #44** The 2.5 X Rule
- slide #45** Examples
- slide #46** **Mystery #6: What Do Filters Really Do?**
- slide #47** What is a Filter?
- slide #48** A Simple Blurring Filter
- slide #49** A Less Simple Blurring Filter
- slide #50** A Sharpening Filter
- slide #51** Sharpening Example
- slide #52** Blurring Example
- slide #53** Finding Edges Example
- slide #54** Filter Shapes
- slide #55** Filter Applet
- slide #56** Section 2: Digital Design, Layout, and Illustration (2D Geometric Graphics)
- slide #57** Vera Molnar *Dialog Between Emotion and Method*, 1986
- slide #58** **Mystery #7: What is the Real Difference Between "Paint" and "Draw" Programs?**
- slide #59** Raster vs. Vector or Geometric
- slide #60** Selection in Paint vs. Draw Programs
- slide #61** Pros: Geometric Descriptions Can Be Easily Redefined but...
- slide #62** Cons: Geometric Descriptions Can't Be Smudged
- slide #63** Michael Holcomb, *Self Portrait*, 1994
- slide #64** Issues Raised by Computer Control of Shape Descriptions Continue to Inspire
- slide #65** Manfred Mohr *P-480/101011*, 1992

slide #66 Mystery #8: How Can I Combine the Best of Paint and Draw Techniques?

slide #67 Douglas Kornfeld, *Forest City Sculpture Festival*, 1997

slide #68 Mystery #9: Why Do Color Printouts Look So Different From Color on the Screen?

slide #69 Screen Colors vs. Printout Colors

slide #70 Additive and Subtractive Mixing Applets

slide #71 Screen Colors vs. Printer Colors

slide #72 RGB Gamut Grapher Applet

slide #73 Comparing Gamuts

slide #74 Mystery #10: Why Does an Image that Looks Fine on One Platform Often Look Too Light or Dark on Another?

slide #75 Who's Correct?

slide #76 Gamma Correction Problem Example

slide #77 The Solution?

slide #78 Conclusion

slide #79 Conclusion

slide #80 Many Thanks To

slide #81 James Faure Walker Quote