I am not a photographer.

ONE LIBRARIAN’S JOURNEY TOWARD UNDERSTANDING FADGI, IMAGE QUALITY, AND DIGITIZATION BEST PRACTICES

SHANNON WILLIS, UNIVERSITY OF NORTH TEXAS
FADGI Guidelines

New draft published in 2015

Approved version in 2016

<table>
<thead>
<tr>
<th>Measurement Parameters</th>
<th>± 9 count levels ≤ 8</th>
<th>± 6 count levels ≤ 5</th>
<th>± 3 count levels ≤ 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tone Response (OECF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Luminance)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Balance</td>
<td>± 6 counts levels ≤ 6</td>
<td>± 4 counts levels ≤ 4</td>
<td>± 3 counts levels ≤ 2</td>
</tr>
<tr>
<td>Error (Luminance)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illuminance Non-Uniformity</td>
<td>&lt;5%</td>
<td>&lt;3%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Color Accuracy (Mean ΔE2000)</td>
<td>&lt;8</td>
<td>&lt;5</td>
<td>&lt;3</td>
</tr>
<tr>
<td>Color Channel Misregistration</td>
<td>&lt;.80 pixel</td>
<td>&lt;.50 pixel</td>
<td>&lt;.33 pixel</td>
</tr>
<tr>
<td>MTF10 (10% SFR)</td>
<td>sampling efficiency &gt; 70% and SFR response at half sampling frequency &lt; 0.4</td>
<td>sampling efficiency &gt; 80% and SFR response at half sampling frequency &lt; 0.3</td>
<td>sampling efficiency &gt; 90% and SFR response at half sampling frequency &lt; 0.2</td>
</tr>
<tr>
<td>MTF50 (50% SFR)</td>
<td>50% of half sampling frequency: [25%,85%]</td>
<td>60% of half sampling frequency: [35%,75%]</td>
<td>50% of half sampling frequency: [45%,85%]</td>
</tr>
<tr>
<td>Reproduction Scale Accuracy</td>
<td>+/- 3% of AIM</td>
<td>+/- 2% of AIM</td>
<td>+/- 1% of AIM</td>
</tr>
<tr>
<td>Sharpening (Maximum MTF)</td>
<td>&lt;1.2</td>
<td>&lt;1.1</td>
<td>≤1.0</td>
</tr>
<tr>
<td>Noise ΔL* St. Dev (Luminance)</td>
<td>&lt;5 count levels &lt; 3</td>
<td>&lt;4 count levels &lt; 2</td>
<td>&lt;3 count levels &lt; 1</td>
</tr>
</tbody>
</table>
What do I do?

• How does one follow these guidelines?
• How do other people follow the guidelines?
• Do they follow the guidelines?
• What tools and resources do they use?
• How do others approach cultural heritage digital imaging?
Internal Grant

• Funded site visits to digitization institutions across the country
• Split into East and West coast trip
• The best-of-the-best, and company
East Coast

• Northwestern University
• Crowley Company
• Library of Congress
• Smithsonian
• University of Maryland
• New York Public Library
• Metropolitan Museum of Art
• Yale University
• Harvard University
• Massachusetts Institute of Technology
• Boston Public Library
West Coast

• Stanford
• University of California at Berkeley
• San Francisco Public Library
What I learned

General Trends and Big Takeaways
Calibration, Verification, and Quality Assurance

- Software
  - BasICColor
- Targets and Color bars
- Frequency of calibration and verification
Cameras over Scanners
Skilled over unskilled staff
FADGI—Do you care?

Meh.

Guideline, not a rulebook.
Capturing the best image with resources available

Trends, and useful ideas, but no “one” way.
After this . . .

Know a lot more

Good ideas for how to move forward with FADGI compliance

Far more professional connections to answer questions going forward

Better equipped to make practical changes and suggest realistic improvements
Shannon.Willis@unt.edu

Digital Projects Lab Manager, University of North Texas