

Digitization for Preservation Reformatting

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Abstract

In the future, appropriate analog materials are or will not be available for reformatting historical photographs, and digitization will become a common approach for all preservation reformatting. This paper will provide an overview of a range of technical issues and imaging approaches that should be considered when planning to use digitization for preservation reformatting.

This paper is the result of work done by experts who first met in April of 2005 to begin an effort to draft guidelines for preservation reformatting of photographs using digitization. The aim of the meeting was to convene a high-level set of practitioners, with a best practices document and possible tools for implementation as potential eventual outcomes. One priority was to address gaps in specific technical areas and work towards developing consensus within the broader community on appropriate approaches for digitizing photographs, including capture device performance, tone and color reproduction, spatial and signal resolution, etc. Discussions centered around characteristics and properties of originals, what essential characteristics need to be maintained for preservation purposes, big-picture tradeoffs between technical quality, longevity, affordability, functionality, sustainability, commitment to maintain resources, etc., and the differences between "practical" approaches (done today with existing equipment) and "ideal" approaches (highest information capture possible and the scientifically best methods of imaging).

The outcome of the meeting is a draft framework defining five information capture levels (Current Practices - basic, intermediate, advanced, and Emerging Practices – basic and new approaches) for preservation digitization of photographs. Each level represents a significant increase in the amount of information captured, an increase in the accuracy of the information, and a shift to alternate image states and new technical approaches. Specific technical parameters are addressed for each level, including source assessment, capture device performance, image state (output or input referred), imaging environment, color mode and encoding, signal and spatial resolution, rendered tone reproduction, rendered density range, colorimetry, quality control, compression, and image processing. This paper will provide an overview of the concepts and specifics developed as a result of these activities.

Author Biography

Steven Puglia has worked as a Preservation and Imaging Specialist at the US National Archives and Records Administration for 18 years. Currently, Steve manages the Digital Imaging Lab in the Special Media Preservation Lab within Preservation Programs. Steve has a background in photography, and began his career in preservation as a technical photographer at NEDCC duplicating historic negatives. Steve has 15 years experience working with digital imaging, and has been working on several IT development efforts over the last 5 years including digital asset management.

Erin Rhodes has worked as a Digital Imaging Specialist in the Special Media Preservation Lab at the US National Archives and Records Administration for over 4 years. Prior to coming to NARA, Erin worked on several digital imaging projects at the University of Chicago Library and on the Colorado Digitization Project. Erin has a background in preservation and attended the Preservation and Conservation Studies program at UT-Austin.