FADGI Program: Impacts and Benefits

Activity	Working Group	Description	Calendar	Who Contributes*	Impact at LC	Impact Elsewhere	Next Steps
Performance metrics for digitization devices and production	Still Images	Digital imaging performance: includes conceptual framework; targets, metrics, and measurement tools; and the "star rating" structure provided in the general guideline listed at the bottom of this table. Initial development in consultation with the Metamorfoze project (Nat'l Library and the Nat'l Archives, Netherlands), now moving into ISO standards development.	2007 initiate; 2011 star ratings; 2015-16 revisions and ISO work	• Library of Congress: TechPol, P&P, G&M • NARA • FADGI expert consultant	LC has adopted aspects of the digital imaging guidelines and has implemented the "star ratings" for internal work, vendor-produced work, and the acquisition of new equipment. The tools are developed to serve LC needs and also shared with the federal (and beyond federal) preservation community.	Many cultural heritage institutions as well as the vendor community have implemented the guidelines including the star ratings. For example, the National Agricultural Library and the Smithsonian Anthropological Archives engaged the FADGI expert consultant at their expense to implement the work at their institutions, and these engagements extend the development of the overall effort. The metrics in the FADGI set are one important input into a new ISO standards activity, intended to produce an international standard on imaging performance for the cultural heritage community.	Next steps include image science research to support revision and improvements of the metrics and tools; expansion to cover transmissive material. OpenDICE image conformance tool being tested; will be shared with the FADGI community when ready. FADGI leadership and expert consultants participate in the new ISO standard-development effort in 2015-16.
	Audio-visual: recorded sound	Guideline for audio A-to-D converters and report on interstitial errors (device failure to write audio files correctly); proof-of-concept activity for test measurement to be followed by working-system development.	2010 initiate; 2011-12 initial guideline and reports; 2014-15 device testing; 2016 approved guidelines and specification	• Library of Congress: TechPol, Packard Campus, AFC • NARA • FADGI expert consultant	Initial device testing at the Packard Campus and AFC identified correctable issues with audio workstation capture configuration; follow-up in 2013 with new equipment; additional field testing in 2015	Initial device testing at NARA identified correctable issues with audio workstation capture configuration and workflows. Testing in 2015 at NARA, Smithsonian, and Voice of America provide useful advice to participants. Work directed impacted performance testing work in Audio Engineering Society (AES).	Continued development on testing the performance of audio reformatting systems will contribute to more stable archival quality audio files. Proof of concept systems expected to evolve into working systems that can be more widely shared.
Embedded metadata	Still Images	Includes the TIFF header specification, followed by explorations of broader embedded metadata applications.	2009 initiate; 2010 and following, background-level activity	• Library of Congress: TechPol, P&P, G&M • Smithsonian Institution (initial version of broad approach)	The TIFF guideline was tailored to serve LC digitizing projects and implemented for outsourced scanning; in the process of being implemented for in-house scanning. The resulting guideline has been shared via FADGI and has been adopted elsewhere.	The Smithsonian Institution Embedded Metadata Working Group developed a broader embedded metadata guidelines in April 2010; published at the FADGI Web site in 2012. Both the TIFF and the broader guideline are being used as models by other agencies, including NARA.	Continue background effort at LC to develop a broader approach for embedding metadata in still images; some interest in applicability of XMP standard; outcome will be productive for parallel efforts in FADGI.
	Audio-visual: recorded sound	Includes specification for file "headers" and development of an open source tool (BWF MetaEdit) to support metadata capture and management.	2009 initiate; 2012 revised guideline; 2009-12 tool available and revised	• Library of Congress: TechPol, Packard Campus, AFC • NARA • Smithsonian Institution Archives • FADGI expert consultant	The Packard Campus has implemented the BWF MetaEdit tool. Both the BWF MetaEdit tool and the guideline are in use at AFC.	BWF MetaEdit and the metadata guidelines are heavily adopted in the audio preservation community. Federal agencies such as NARA (including the nation-wide Presidential Library system), National Park Service and Smithsonian Institution Archives are active users. Non-federal implementers include such diverse institutions as Stanford University Libraries, Cornell University Lab of Ornithology, Philadelphia Orchestra, WNYC Public Radio, Tate Modern gallery, National Library of Denmark and New Zealand Film Archives. BWF MetaEdit is open source (on SourceForge) and the tool has been downloaded more than 31,000 times.	The tool and specification are stable. Future work on the tool includes bug fixes and additional features.
	Audio-visual: motion picture film	Investigation of embedded metadata needs and tool options for the DPX header for scanned motion picture film	2016 initiate	• Library of Congress: TechPol, Packard Campus, AFC, VHP • NARA • Smithsonian: National Museum of African American History and Culture, OCIO/DAMS repository group	Practices are still emerging for scanning motion picture film so the Packard Campus and AFC have the defined need to develop usable guidelines and tools for essential embedded metadata.	Federal agencies, including NARA and the Smithsonian, requested that FADGI begin this investigation to facilitate their own workflows and products.	Draft guidelines for embedded metadata will be authored by the Working Group and revised based on internal and public feedback. Additional topics will follow, including possible development of open source tools for batch embedding.
	Audio-visual: video	Development of metadata structure for reformatted video (may or may not be embedded); associated with a tool to support use with AVI files.	2012	• NARA • Library of Congress: TechPol • FADGI expert consultant (engaged by NARA)	The NARA-contributed technical metadata structure (reVTMD) will be modeled as an option in the MXF AS-07 specification, described below.	The toolset is adopted at NARA and other international cultural heritage institutions who work with AVI-formatted files. In use at MOMA and Harvard; Harvard shows interest in overseeing next-phase development.	Metadata structure refinement continues in other FADGI projects including MXF AS-07.
Format comparisons and related	Still Images	Multiple activities: extensive published comparison formats suitable for reformatting (digitization) including TIFF, JPEG 2000, JPEG (DCT), PNG, and PDF, and several subtypes. Also earlier explorations of JPEG 2000, including the summit conference.	2011 initiate and JPEG 2000 summit conference; 2014 comparison matrix published	• Library of Congress: TechPol, G&M • Government Printing Office • NARA • FADGI expert consultant	FADGI information provides guidance for digitization planning; use of TIFF continues with use of JPEG 2000 for access for maps, digital newspapers, and more generally in Project 1 Web pages.	Published comparison report consulted by many; also evidence of interest in JPEG 2000 reflected in attention paid to the 2011 Summit.	Continued implementation of JPEG 2000 for access and Web; Suitability of JPEG2000 as a master format for some applications being explored.
	Audio-visual: video	Published comparison of target formats for digitization of videotapes; analysis of issues regarding born digital video and DVD acquisition including case histories and high level recommended practices.	2012 initiate; 2014 comparison matrix and reports published	• NARA • Library of Congress: TechPol, Web Archiving, Packard Campus, AFC • Smithsonian: Institutional Archives and OCIO/DAMS Repository Group • NOAA • VOA • Contractor support (DVDs)	Several divisions will strongly benefit from the exploration of born digital formats; this can influence the selection of formats early in the lifecycle and contribute to preservation. Early impacts on preservation planning in the Veterans History Project and Web Archiving; supports the LC-wide Recommended Formats process.	Digitization comparison report widely read, special value in FADGI and also at universities with video collections. Digital video exploration and case history reports expected to inform decisions across the cultural heritage and government sector. Workflows at SIA were redesigned to align with the recommendations in the DVD report. Blog and Web traffic suggest high interest in these topics. Some specific follow-up from Senator Leahey's office.	Format comparison matrix will be reviewed and revised as needed. Work on born digital video will continue with the eventual goal of developing a guideline for best practice.
	Audio-visual: motion picture film	Develop a model SOW (with specification) for motion picture film scanning.	2013 initiate; 2015-16 report and guidelines published	• NARA • Library of Congress: TechPol, Packard Campus, AFC • NOAA • National Museum of Health and Medicine (NMHM)	Scanning motion picture film is still an evolving practice so the Packard Campus and AFC have the defined need to develop a model SOW for film scanning for both internal scanning project documentation and external vendor scanning projects.	Other federal agencies, including NARA, need to be able to articulate appropriate specifications for film scanning by both in-house labs and external vendors and look to LC to lead the exploration.	The draft SOW work will continue and will be vetted and published at the FADGI website. Additional topics will follow, including impact of ongoing AMPAS ACES project on color space.
Specification development	Audio-visual: moving image	MXF AS-07: a detailed formal specification for moving image content (first emphasis on video) under the auspices of AMWA, a broadcast industry trade association.	2009 initiate; 2012 approved as AMWA project; 2014-5 review version online; 2016 expected finalization	• Library of Congress: TechPol, Packard Campus • NARA • FADGI expert consultants • Via AMWA, input from industry, including the BBC, vendors, and commercial system manufacturers	Already MXF users, the Packard Campus will be an influential adopter of the tailored MXF specification and will benefit from the collaborative efforts with industry to create an actionable and achievable standard.	When published, the MXF specification will have a broad impact on the community both within the vendor space as well as the government/cultural heritage sector, including internationally, and with the commercial sector.	The MXF specification will reach a first level of conclusion as an AMWA Proposed Specification during 2016; interest in extensions and improvements will continue.
General guideline for digitization	Still Images	Initial FADGI general guideline exists as a unified document, with a parallel overview of categories and objectives; subsequent revision and improvement under way to create modular, online format. Guideline incorporates detail about performance metrics and testing as stated in first section of this document.	2007 initiate; 2010 first FADGI version; 2015-16 modular revised version under develop-ment	• Library of Congress: TechPol, P&P • NARA • Smithsonian • FADGI expert consultant	Provided a broad explanatory context for all still image scanning and introduces the "star rating" structure for imaging performance. Also introduces the concept of TQM quality management as a part of the Still Digitization Quality Management Program.	The foundation for the FADGI document is a 2004 document drafted and published by NARA, now extended and elaborated upon in FADGI-based work.	The 2016 Guidelines document will be finished in the next few months, incorporating new material from ISO standards under development. The document will be modularized for online presentation in 2016-17.
	Audio-visual	FADGI members participate in external guideline development for digitization of audio-visual material, especially through IASA; intermittent, low-level development as a background activity.	2012 and following, background-level activity	• Library of Congress: TechPol • Others to be enlisted, low level of activity due to lack of resources • FADGI expert consultants	Future impact.	Future impact.	To be developed

* The contributing agencies are listed according to their estimated level of effort. Most contributions are in-kind, i.e., staff time from the agencies.

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