JENNIFER HAIN TEPER

The Preservation Self-Assessment Program:
A Tool to Aid in Preservation and Conservation Prioritization

INTRODUCTION

The Preservation Self-Assessment Program (PSAP) is an online tool created by preservation and conservation staff at the University of Illinois Libraries. With generous funding by the Institute of Museum and Library Services through a National Leadership Grant, we have worked to create a free, online assessment tool designed to assist collection managers at libraries, archives, and museums begin to understand, articulate, and prioritize the preservation needs of their collections even if they have little to no preservation experience. Currently, the PSAP encompasses the identification and assessment of textual, photographic, and audiovisual collections materials. We see this project not as a replacement for professional conservation/preservation consultants' assessment of individual items or collections, but offer that it can be used as a first step towards a more fulsome professional consultation, to define project scopes, or to justify funding for basic preservation efforts.

Although the PSAP has been designed as an assessment tool, it also contains significant educational components developed to assist non-specialists or novices in better understanding the preservation of the materials in their care. The program can be used on unprocessed collections as well as fully described materials, though paring preservation needs with institutional priorities is more effective when materials are fully described, of course. While the most meaningful results will be produced by using the PSAP to evaluate collections at an item-level, the PSAP can also be used to evaluate collections using sampling techniques (this approach is discussed in detail in the project user manual) so that only a portion of a larger collection need be inspected. The information generated from the PSAP, in the form of 1) individual preservation scores for items, 2) aggregate preservation overviews for collections, and 3) summary scores for institutional preservation practices and storage environments offers users quick, numeric, and graphic representations of the highest preservation needs in their collections, which can lead to more detailed assessment or review, consultations with professional conservation or preservation professionals, rehousing projects, or other preservation projects to improve long-term accessibility of materials.

SCOPE OF MATERIALS

The PSAP contains assessment guides for textual materials including books, printed documents, manuscripts, office reprographics, architectural reproductions, photographs and photoreprographics, and a wide variety of audiovisual formats. Our goal is to present a tool that offers "one stop shopping" for most libraries' and archives' collections, though some rarely held formats may be omitted (fig. 1).

HOW THE PSAP WORKS

The PSAP has been designed as a web application that is functional on both PC and Mac Platforms and can be used on desktop computers, tablets, and mobile smart phones. All data is stored and backed up at the University of Illinois, who is committed to long-term support of the project. Users request a logon and an institutional affiliation and once they are logged on, they enter information about their institutional practices, their repositories (various subject libraries within a larger organization, for instance), the locations where materials are stored or exhibited, their collections, and lastly the individual items within collections.

As institutions, repositories, locations, and resources (collections or items) are created, users are asked to enter limited descriptive information about each of these creations, so that they can be identified later. Repositories, locations, and collections are all saved and available to be selected as options for further entries once entered into the system. For collections or individual items, there is also a section of optional descriptive information that maybe used in place of a nonexistent catalog, inventory, or finding aid, thus also producing

Class	Format Family	Formats Included
Audiovisual	Wire Recordings	(same)
	Grooved Media	Plastic and Wax Grooved Cylinders; Aluminum, Lacquer, Shellac and Vinyl Phonographic Records
	Audio Tapes	1/4" Open Reel, 1/2" Open Reel, 1" Open Reel, 2" Open Reel, 8-Track, Compact Cassette, Continuous Loop Cartridge (Cart), Digital Audio Tape (DAT), Digital Compact Cassette (DCC), Microcassette
	Motion Picture Film	8mm, 9.5mm, 16mm, 35mm, Super 8mm
	Video Tapes	1/2" Open Reel, 1" Open Reel, 2" Open Reel, Betacam/Betacam SP, Betacam SX, Betamax, D-1, D-2, D-3, Digital Betacam, DVCam, DVCPro, HDCam/HDCam SR, HDV, MiniDV, U-matic/U-matic SP, VHS, Video8/Hi8
	Optical Recordings	Compact Disc (CD), DVD, LaserDisc (LD), MiniDisc (MD)
Bound Materials	Binding Types	Accordion, Double Fan Adhesive (DFAB), Perfect, Punch-and-Bind, Spiral, Stab, Stapled, Through-the-Fold, Oversewn
	Board Types	Paperboard, Wood
	Covering Materials	Cloth, Leather, Paper, Parchment, Tawed Skins
	Ink Types	Ball-Point Pen, Carbon Black Inks, Colored Pencil, Copying Pencil, Dye-Based Inks, Felt-Tip Pen/Marker, Graphite, Iron Gall Ink, Pigment-Based Inks, Typewriter Ribbon, Wax-Based Pencil/Crayon
	Paper Types	Acid-free/Rag, Coated, Wood Pulp/Newsprint, Proprietary Papers, Tracing/Transparent
Flat Paper	Architectural Reproductions	Aniline, Blueprint, Diazo, Electrostatic, Ferro-Gallic, Gel-Lithograph, Hectograph, Photostat, Van Dyke, Wash-Off
	Office Copy/Printing (Reprographic) Processes	Carbon Copy, Carbonless Copy (NCR), Color Photocopy, Copybook/Roller Copy, Diazo Print, Diffusion Transfer, Dual Spectrum, Electrofax, Electrostatic Copy (Xerox), Impact Print, Inkjet Print, Laser Print, Lithograph/Office Lithograph, Photostat, Spirit Duplicate, Stencil Copy, Thermal Print (Thermofax), Typography
Photographs	Cased/Direct Photographs	Ambrotype, Daguerreotype, Tintype
	Monochrome Photographic Print	Albumin, Carbon, Cyanotype, Gelatin POP, Glossy Collodion, Matte Collodion, Platinum/Palladium, Salt, Silver Gelatin DOP
	Color Photographic Prints	Chromogenic Color, Color Carbro, Dye Transfer, Silver Dye-Bleach
	Instant Photos	Black-and-White, Color
	Negatives	Albumen Glass, Chromogenic Color, Collodion Glass, Gelatin Glass, Silver Gelatin
	Slides/Transparencies	Glass Autochrome, Glass Black-and-White, Plastic Black-and-White Film, Plastic Color Film
	Digital Prints	Inkjet, Laser
	Microformats	Mixed Aperture Card, Paper Microcard, Paper Microprint, Plastic Microfiche, Plastic Microfilm
	Photomechanical Prints	Collotype, Gravure, Letterpress Halftone, Offset Lithography, Woodburytype

Fig. 1. Range of formats covered by the PSAP

searchable (and exportable) descriptive metadata about the materials assessed.

While we cannot estimate how much time each evaluation could take a user, we have made every effort to minimize our questions to the very most critical in order to evaluate preservation effectively. Our goal has been that each item takes only a few minutes from start to finish once users are comfortable with the interface and their most common formats.

ASSESSMENT LEVELS

There are three different levels at which assessment questions are asked—institution, location, and resource/item. The institutional assessment asks questions about institutional practice related to policies, use and access of collections, disaster planning, and collections care and works independently of the rest of the PSAP scoring process, resulting in an institutional "preservation savviness" score. The assessments for location and individual resources, however, work together to develop the PSAP preservation score. For assessing your location, you will be asked about the temperature and relative humidity in the space where materials are stored or exhibited long-term, as well as fire and water protection in that space. Questions for item assessment vary depending on format, but generally revolve around a visual inspection of materials noting any damage and/or deterioration, as well as its frequency of use and uniqueness.

IDENTIFICATION TOOLS

Perhaps one of the most valuable aspects of the PSAP is the Format ID Guide (https://psap.library.illinois.edu/format-id-guide), or FIDG for short. The FIDG is a visual resource that helps users identify the format of material they want to assess. Materials are broken down into broad categories (for instance photographic prints, cased/direct photographs, negatives, or transparencies) and then each format has a page with extensive photographic references, description of the visual appearance of the material, material composition, standard deterioration pathways, historical background, and ideal storage and display recommendations. Many thanks to all who helped by contributing images to this part of the project, most importantly the Image Permanence Institute, who allowed us to use many of the images from the Graphics Atlas project for the photographic section of the FIDG (http://www.graphicsatlas.org/) (fig. 2).

SCORE GENERATION

As you assess your materials in the PSAP, you will receive a score which combines the information that you entered for the specified location an item resides in as well as the format's inherent vice and current condition. You can view a score summary for an individual item by clicking on the "score summary" tab of the individual item, once the assessment is complete. Scores are generated to give a final value between 0 and 100, where 0 is the lowest possible score and 100 is the highest possible score. Note that scores of 0 and
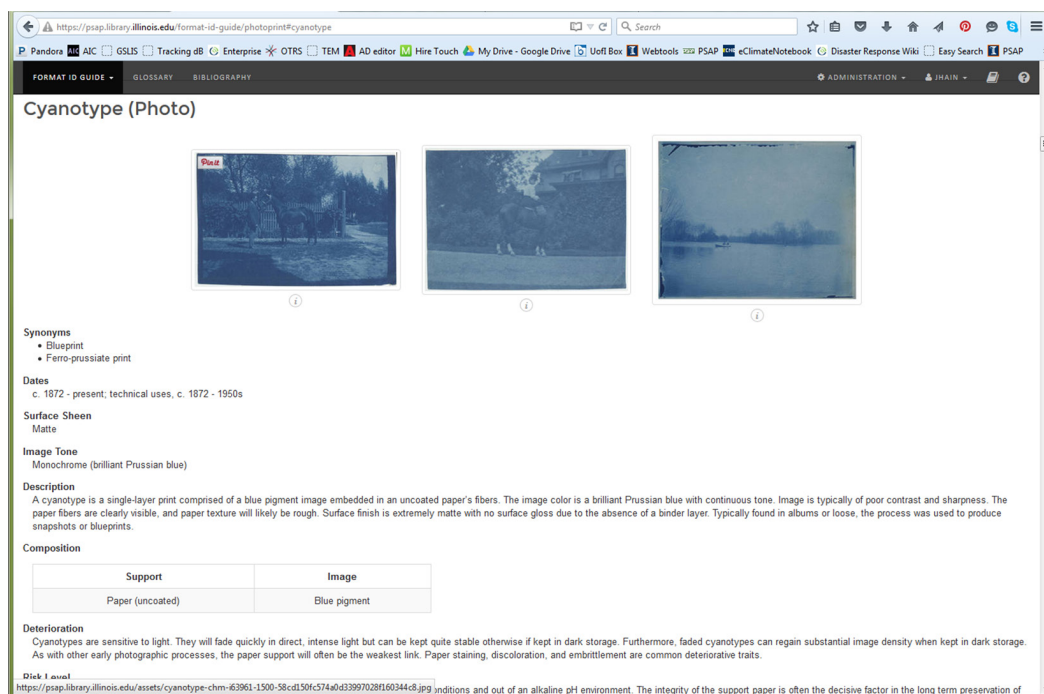

Fig. 2. Format ID Guide reference page

100 are both nearly impossible to actually attain for your final score (though possible in sections such as Location), and most final scores actually lie between 50 and 90. The final resource score is weighed such that the condition of an item is weighted as half (50%) of the score, the format of the resource is 40%, the location of the resource is 5%, and the temperature and relative humidity of the location are each 2.5% for a total of 100% of the total score. This weighting of scores was developed by the project team to represent the understood balance of the current condition of the object with the inherent vice of an individual artifact (format) and the effects of the environment on that particular format (Location, Temperature and RH) (fig. 3).

Depending on the format of your resource—specifically for original unbound papers (i.e. manuscripts) and bound papers (i.e. books)—the format score is determined differently. For bound and original unbound papers, the format score is weighted as 60% of the format of the support (paper) and 40% of the format of the ink or media used on the paper. All other formats (photographic and image materials, office reprographic processes, audiovisual materials, etc.) have a single format score.

> **Resource score (RS)** = (sum of Question Scores / # of questions) + (0.4 * Format Score) + (0.05 * (Location Score) + (0.025 * Temperature) + (0.025 * RH)

Fig. 3. Formula used to derive final PSAP score

REPORTS

After users have entered a number of resource-level assessments, you may also view your scores in aggregate by viewing the "Assessment Reports". Assessment reports allow users to view, graphically and statistically, overviews of their institution, locations, and items. If items were grouped into collections, data will also be clustered by collection with summary overviews of the scores and formats of all materials found in each collection. These reports can be exported to PDF for easy sharing (fig. 4).

ADDED FUNCTIONALITIES

In an effort to make data entry easier and more useful for other purposes, we have added several additional functionalities to the PSAP that may be useful to users. For those institutions using ArchivesSpace (http://www.archivesspace.org/), the PSAP has the capability to import EAD-XML files exported from the ArchivesSpace software. Data entered into the PSAP can also be exported in a variety of formats (CSV, XML, and JSON) to be utilized in other applications. One export that is specifically outlined in the user manual is how to export the PSAP data into CSV and map that information over to import into PastPerfect 5.0.

To help speed along the assessment process, the PSAP is also equipped with a cloning functionality. This tool is most helpful when you are assessing a run of individual materials that share most or all of their descriptive information. For instance, a collection of 25 8x10 black and white photographs
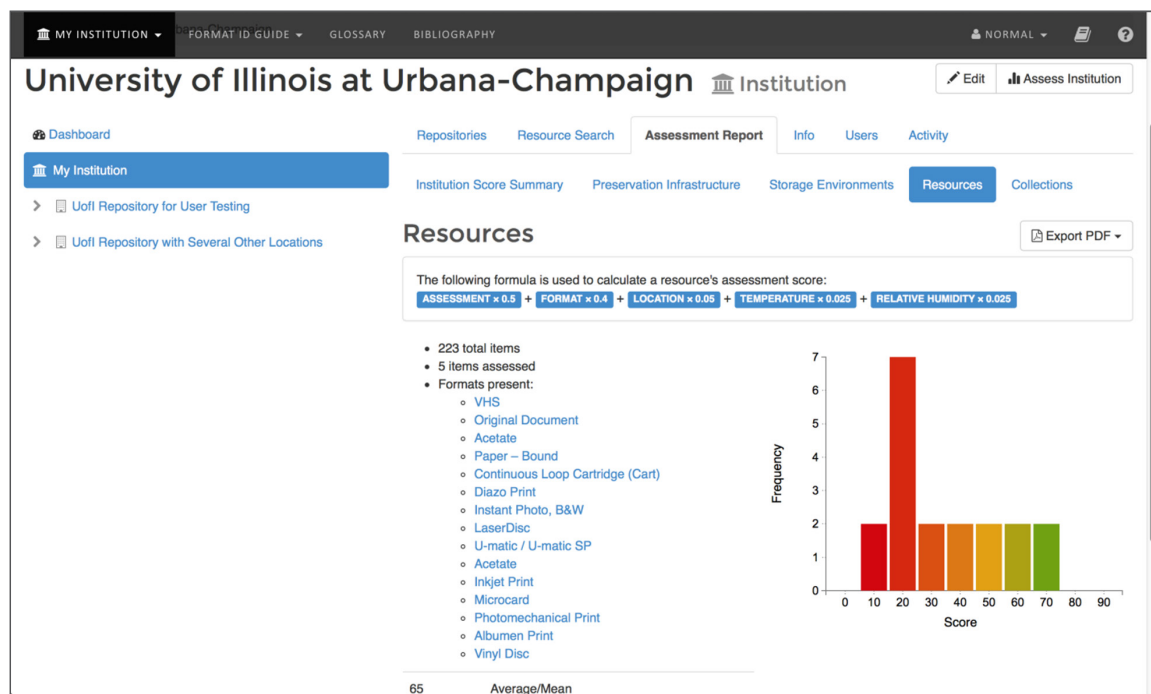

Fig. 4. Example of a resource report

of the same subject will share many data points. The clone function will allow users to create a new record that exactly copies the information from an existing resource record, reducing the need to re-enter that information manually. When a user selects to clone a resource (by clicking on the "Clone" button on the upper right of the resource page), they are prompted to clone the record either "including the assessment", or "without the assessment" depending on whether the condition of materials is consistent or variable.

Lastly, another handy tool offered by the PSAP is the "Move" function. This utility can be used to update records if an item or collection is shifted from one location to the next. Resources can be shifted individually or in batches by selecting resources found listed under any one location and the PSAP will change their location and scores to reflect this modification. This functionality can be particularly useful if users are considering the best long-term storage for an object or collection of objects. Once the descriptive, format, and condition information are entered, materials can be "moved" to different locations and scores can be compared to find the best location for long-term preservation.

ADDITIONAL RESOURCES

The PSAP offers a limited number of helpful resources to aid users in taking the "next steps" after an assessment is complete, though purposefully avoids making prescriptive recommendations for action. Resources available to users include sections on how to select and understand preservation storage materials, when and how to bring in a preservation professional or conservator, finding disaster recovery services, and what grant opportunities might be available for funding preservation projects.

PROGRAM RELEASE AND THE FUTURE

As of June 2015, the PSAP is in beta testing with plans for a public release in August of 2015. Visit www.psap.library .illinois.edu for updates on the program release and to sign up. It is our hope that we will continue to develop this application beyond the current formats. Discussions are currently underway to develop a grant application to broaden the PSAP to encompass more commonly held museum objects, such as fine art, natural history specimens, or anthropological collection materials. The long-term goal of the project is to create a universal preservation assessment tool that covers most commonly held collection materials in any library, archive, or museum.

JENNIFER HAIN TEPER
Velde Preservation Librarian and Head, Preservation Services
University of Illinois Library
Urbana, IL
jhain@illinois.edu