Supplemental Materials for Proposing a New Digital Asset Management System for Glacier National Park

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Abstract

Digital asset management (DAM) systems are software that allow for the archiving, managing, and retrieval of digital assets, like photographs and historic documents. Glacier National Park's museum and archiving department needs a new system to protect its digital assets and increase the efficiency of organizing and sharing their many images. Moreover, the lack of a DAM system meant that archival documents were handled more frequently and at increased risk of damage. We interviewed archivists who work with DAM software and identified sixteen DAM systems. We evaluated them using the six criterion most essential to the Park. We found three systems, Razuna, Preservica, and ResourceSpace, that could meet the Park's needs and help preserve the Park's digital images.

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Supplemental Material A: Authorship Chart

Key: All Authors (ALL), Lucia Bernard (LB), Robert Dec (RD), Calum Lehrach (CL), & Jacob Matthews (JM).

Section	Written By	Edited By
Abstract	CL	RD
Digital Asset Management: Securing the Future	ALL	ALL
Methodology: Proposing a New DAM System	ALL	ALL
Objective 1: Identified essential criteria for the new system	LB	CL
Objective 2: Identified and evaluated potential DAM software systems.	RD	LB
Objective 3: Presented DAM software systems that meet criteria to sponsor.	JM	CL
Objective 4: Developed recommendations for implementation of the new DAM software system.	RD	JM
Findings: DAM System Criteria for Glacier National Park	CL	RD
Findings: Proprietary or Open Source?	LB	RD
Findings: Comparative Analysis of Different DAMS	CL	RD, JM
Recommendations	JM,LB	RD

Supplemental Material B: Interview Questions

Jean Tabbert 4/15/21

- How does the current system work?
    - How do people request images? How does the staff retrieve them? How are the images sent back? What is the timeline of this process?
- How are the images stored?
    - Are they organized in any specific way?
- Who uses / upkeeps the current system?
    - What kind of team are you working with? Skillset?
- What are some common problems that occur?
- What caused the previous system to fail - or stop being supported/funded?
- What kind of systems did you use in the past?
    - What was good about them, what was bad about them?
- What events led the IT services to stop supporting ColdFusion?
    - What can be done to prevent something like this from happening again?
- Is there a budget?
- Any Park restrictions regarding 3rd party software?
- How many people will be involved with upkeep and management?
- How restrictive to the public would you want the system?
    - Intended audience?
- What are the needs and requirements of the new system
- What are the end goals for users?
- Would you like the images in the new system to be stored in the cloud or on a hard drive?

Amy Smid & Emily O'Brien 4/27/21

- What criteria in a DAMS are most important?
- What digital asset management system does WPI use for archiving?
- What goes into running a digital asset management system?
- What are some of the things she wishes were different about WPI's current system?
- What are some things she likes about WPI's current system?
- How many people have direct access to WPI's DAMS?
- What was the process of learning/training people to use it like?
- What is the process of requesting a digital asset from the library like?
- What is the process of digitizing archives like?
- How is metadata tagging performed on large amounts of assets?
- If WPI's DAMS were to suddenly stop being supported, what effects may that have on the community as a whole?

Jean Tabbert 9/14/21

- What are some of the most important aspects of a DAM system for you and your team?
    - What kind of user experience features do you appreciate?
    - Do you prefer cloud or hardware storage?
- What kind of cost parameter do you have?
- What role does IT play in the Park?
- Have you looked at any DAM system yourself?
    - Were there any you were intrigued by?
    - Were there any you did not like?
- What kind of extant data is leftover from the older system?
    - What format is it currently in?
- What types of images / file types are you working with?
- Have you used any other DAM system in the past (not necessarily at GLAC)?
- Do you know anyone here that we could talk to about your previous DAMS, Microsoft Access / Adobe Coldfusion?
- How important is being able to port the data from excel into a new system?
- Do you want any access given to certain researchers outside of the Park staff?
- Are you able to download demos without full approval?

Anna Gold & Arthur Carlson 9/15/21

- How often do you work with your DAM system in your day to day duties?
    - Is it monitored by a few or many people?
    - Are there certain people with specific roles for maintaining the system?
    - How do you make retrieving assets as efficient as possible?
- How did you come to decide upon the current system you use now?
- What are some features that you really appreciate about the current system?
    - How user accessible / friendly is it?
- What are some oversights that are frustrating or inefficient about the current system?
- Is security a concern when it comes to DAM software?
    - If so, how can you further protect your digital assets?
- Would you recommend your current system in general?
    - Based on the needs of GLAC?
- What other DAM systems are you familiar with?
    - Have you worked with any others in the past that you would recommend?
- What would be a reasonable price for a DAM software (specifically for our situation)?

Anna Gold & Arthur Carlson 9/21/21

- What was the transition from your old system to your new system like?
    - Were there any challenges?
    - What was the timeframe of this transition?
- What are some features that you really appreciate about the current system?
    - How user accessible / friendly is it?
- What are some oversights that are frustrating or inefficient about the current system?
- Are there plug-ins you can add to DAM systems for example to import easily from excel?
    - Are these plug-ins common?
- How widely used are CSV files for metadata import/export?
- What would happen to the images/data if the company hosting the system went bankrupt/shut down?
- What goes into setting up an open-source system?
- Are there any people/organizations you recommend we reach out to?

Anya Helsel 9/23/21

- What are some of your everyday uses for a DAM system? / Tell us more about what you do
- What features in a DAM would make your job easier?
- Do you have any experience with other DAM systems?
- What file types are currently being stored in the Park system?
- How many systems would we be importing from?
- What is the largest file size we should worry about?

Wendy Essery 9/23/21

- What system do you use?
- How many people actively use your system?
- Are there any features that you particularly like?
- Are there any problems that you run into with the system?
- How many files do you store?
- How do you maintain the system?
    - How much time does system maintenance take?
- Batch update/import?
- How did setting up the system go?
    - Where were your assets stored beforehand?

Supplemental Material C: Assessed Digital Asset Management Software System Features

Importance	Criteria	Canto	Razuna	Extensis Connect	Preservica	ImageKit	PixelsShelter	Bynder	Filecamp	ResourceSpace
	Demoed By	Jake	Lucy	Calum	Robert, Jake	Lucy	Lucy	Lucy	Calum	w/ Wendy Essery
The price of the system is obviously a big factor in a final choice	Cost	Likely around $500/month, quote needed	$49/month - $199/month $100 version has Batch upload	$300/user/year	$200/month - $400/month	Starting at $49/month	$25/month - $49/month	Quote needed	$29/month	$364/month $4365/year
Matching excel / csv metadata to uploaded assets saves so much time and does not waste the efforts of the team	CSV Uploading / Batch Upload Metadata	Y	Y, with upgrade	N	Y, with upgrade	N	N	N	N	Y
Options that match what GLAC uses + more useful options	Good Selection of Metadata options (1-10)	10	10	3	8	5	5	5	5	9
Being able to jump in immediately without the help from IT is heavily preferred, how intuitive is it	Navigability (1-10)	7, very casual theme. Everything labeled well and easy to find. Most features are in the settings tab	8, Features are clearly labeled. Interface is simple	7, intuitive to use	5, Contains some pointless menus. Most surface level functions are well labeled	3, On the surface is easy to use, but you have to have some knowledge of coding to use it meaningfully	7, some features could be clearer, but pretty easy to use overall	5, interface is pretty busy, purpose of some features are unclear	7, pretty easy to navigate, lots of personalization and themes as well	8, a bit cluttered just because of the many features, but otherwise navigable
Ties with ease of use, will help with lack of IT dept.	Tech Support	Y	Y, Yearly subscription based	Y	Y	Y, can email them, but chat support has to be paid for	Y, can submit help form on their website	Y	Y	Y
Important to allow Jean + team to remain in control while allowing access to other GLAC staff	User Roles	Y	Y	Y	N	Y	N	Y	Y	Y
Could be useful in for tagging many images quickly, but not essential	Smart Tagging	Y	N	Y	N	N	Y	Y	Y	Y
XMP file type metadata would be preferred, but not essential	XMP File Type Metadata	Y	Y	Y	N	Y	Y	Y	Y	Y

	Key:
	Very Important
	Somewhat Important
	Not as important / Not hard to achieve
	Others: Researchnet, Brandfolder, Capture, IBM Object Storage

Could be useful in for tagging many images quickly, but not essential	Smart Tagging	Y	N	Y	N	N	Y	Y	Y	Y
XMP file type metadata would be prefered, but not essential	XMP File Type Metadata	Y	Y	Y	N	Y	Y	Y	Y	Y
Could be very useful especially if the provided options are lackluster	Custom Fields	Y	Y	N	N	N	N	Y	N	Y
If the system is a bit harder to use, a good manual would be beneficial	Tutorials/Manual	Y	Y	Y	Y	Y	Y	Y	Y	Y
May be a useful alternative to batch metadata editing	Excel Compatability	Y	Y	Through Google Drive or Dropbox	N	N	N	N	Y	Y
The more the better, must support all of the files GLAC has	Which File Formats are Supported	Controllable by admin	Controllable by admin	All	All	All	Almost all major image types, no videos	All	All	All
Intended to stay private, but could be useful down the road	Privacy Controls	Y	Y	N	Y	Y	Y	Y	N	Y
Makes it easier to download assets in one go	Metadata within Files	Y	Y	Y	N	Y	Y	Y	Y	Y
Many systems run on Windows, MacOS and Linux if not already Cloud Based	Which OS is Supported?	Cloud Based	Cloud Based or Hosted Server	Cloud Based	Cloud Based	Cloud Based	Cloud Based	Cloud Based	Cloud Based	Cloud Based or Hosted Server
Most systems have this, but it is incredibly important for organization	Hierarchical	Y	Y	Y	Y	Y	Y	Y	Y	Y

Uploading many assets at once will save a lot of time, easy to find	Batch add/ update Assets	Y	Y	Y	Y	Y	Y	Y	Y	Y
Should allow file sizes around 30MB, but more would be useful	Maximum File Size Supported?	200GB	N/A	3TB total storage	N/A	25MB	4GB w/o subscription, max subscription is 39GB	50GB	200MB to view	N/A
	Comments	Simple enough to use, has many of the requisite features needed by the park	Good option, less expensive choice that has batch metadata editing	Does not seem like it can import metadata to match with files. also pretty lacking in metadata types	no tags or keywords; can't download metadata without customer support; metadata fields are limited;	Too difficult to use, also, it's main focus is to help photographers sell their photos.	Similar to ImageKit in that it's made for photographers to sell photos, but has more features the park could use. It's also easier to use	Seems like it's mainly targeted towards marketing brands, not archiving	Metadata is slightly lacking and it may not be possible to batch upload the excel sheet, but is a fairly cheaper option to consider	May be slightly harder to set up, a bit finicky, but is tailored to and offers what is needed by the park for a competitive price