

# Pachyderm Release Version 2.1.0

**Specification Draft rev.5 (for comm. rev.) 11.07.07**

## **Introduction/Objective:**

In version 2.1.0, our objective is to solve all the outstanding bugs and stability issues from previous versions, standardize template design and functionality, meet 508 accessibility guidelines and facilitate easy installation and upgrading the Pachyderm. Version 2.1.0 will be a relatively large upgrade and will serve as the foundation for smaller, incremental 2.1.X releases to come in following months. This document outlines the additions and changes to be incorporated in the 2.1.0 release.

## **Release 2.1.0**

### ***1. Authoring Application***

#### *1.1. Accessibility compliance in interface*

- 1.1.1. The authoring application will be made 508 compliant and tested/verified with a controlled set of browsers, including Windows/IE, Windows/Firefox, Mac/Safari and Mac/Firefox.
  - 1.1.1.1. All images used in the authoring application must have intelligible and useful alternative text associated.
  - 1.1.1.2. Vertical and horizontal scroll bars are not accessible and must be addressed whenever they occur. Either an accessible alternative must be created for those parts of the interface that present scroll bars, or the scroll bars must be replaced across the entire application with an accessible solution.
  - 1.1.1.3. The tab order in the authoring application must be corrected as to not be confusing to authors using screen readers. The tab order must proceed in a logical and useful order, and assisted with instructions and text where appropriate.

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- 1.1.1.4. Color contrast for links and surrounding colors must meet accessibility standards. One possible approach would be to create a high-contrast style for the authoring application that can be turned on or off with an interface control.
- 1.1.1.5. Currently the text in the authoring application cannot be re-sized in IE due to the fact that the current CSS style sheets make use of pixel height instead of descriptive font sizes, and must be changed to use descriptive font sizes.

## 1.2. Stability enhancements

- 1.2.1. Currently, uploading files (especially large files) can be unreliable and fraught with difficulty, as html uploads are prone to from time to time. We need to spend due diligence to ensure that file uploading is as stable and reliable as we can make it.
- 1.2.2. In the past, users have consistently experienced data loss when authoring large screens. If a user interacts with the authoring interface before all the components have reloaded into the edit screen, the screen's state becomes saved with the unloaded items removed from the screen state. There needs to be some sort of solution that disallows the data loss to occur.
- 1.2.3. While editing a screen, if an author unlinks a screen from a screen link component, any changes made to the screen in the duration between the unlinking action and previous explicit saves are lost -- the unlink action does not force a state save.

## 1.3. Data Model Extensions

- 1.3.1. The Data model will be extended to include the complete extended Dublin Core metadata set, plus several other data fields to support accessibility functionality and other pachyderm-oriented functionality (Data model to be included in a separate document).

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- 1.3.2. The native asset repository will support the Extended Dublin Core metadata set, plus accessibility and pachyderm-oriented fields.

## 1.4. User Experience

- 1.4.1. Pachyderm will be made to catch all exceptions and handle them before stack traces are surfaced to the end user. Errors that are surfaced to the end user will be in intelligible common language and will hold only useful information to the end user.

## 1.5. Database interoperability enhancements

- 1.5.1. The OKI OSID Plug-in will be bundled with the 2.1.0 release, allowing those institutions who have developed or wish to develop an OSID implementation for their data repository (or who use one of the supported repositories by the previously-developed OSID implementations) may make use of the OKI bridge to connect with their external asset repositories.

## 2. *Presentation Screen Templates*

Release new, standardized version of original and new templates with extended functionality.

### Original Templates

- Aspects
- Commentary
- Enlargement
- Exploration Entry
- Layers
- Media Focus
- Phone Dial
- Series
- Slider
- Zoom

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## New Templates:

- Timeline Comparison
- Multi Comparison
- Dual Comparison
- Full-screen movie player
- Full-screen image viewer
- Full-screen swf player

## 2.1. Global Improvements (affecting all templates)

### 2.1.1. Accessibility compliance for presentations

2.1.1.1. 508 compliance for all templates on all browsers

2.1.1.2. Standardized tab order and read order for screen readers.

2.1.1.3. All templates that play media (audio, video) have capability to present accessibility data, such as transcripts for audio, alternate text and descriptive text for images.

### 2.1.2. Centralized XML Parsing API for all templates

2.1.3. Mid-ground (background) images option added for all templates and is available at individual screen level

2.1.4. Standardized, documented and expanded template text and template item (e.g. slider items) limits visible in authoring UI without needing to preview.

2.1.5. Standardized titles and subtitles on every template

2.1.6. Consistent HTML rendering in all template text areas

2.1.7. Consistent line breaks in text rendering for all templates

2.1.8. Consistent rendering of characters containing diacriticals in all template text areas

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- 2.1.9. "Home" button added to root border to return user to start screen
- 2.1.10. Tombstone display and scroll interface consistent with template text scrolling UI.
- 2.1.11. All components published in Flash 8 resolving permission problems and with smoothing turned off for all images.
- 2.1.12. Templates are clear of all legacy library and scripting items including institution specific interface elements.
- 2.1.13. Template scripting is commented and contain version information
- 2.1.14. FLV playback support for AV media in all relevant templates (this will be handled through the media player swf components):
  - Aspects
  - Commentary
  - Exploration Entry
  - Layers
  - Media Focus
  - Slider
  - Full-screen movie player
- 2.1.15. Enlarge and standardize thumbnail and main images on all templates
- 2.2. Template Specific Improvements
  - 2.2.1. Aspects Screen
    - 2.2.1.1. Resolve bug that permits template to link to non-existent movies
    - 2.2.1.2. Option to link to other screens from central item

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## 2.2.2. Commentary Screen

- 2.2.2.1. Text layout is automatically adjusted based on the proportions of the primary image (e.g. horizontal or vertical)

## 2.2.3. Enlargement Screen

- 2.2.3.1. Text layout is automatically adjusted based on the proportions of the primary image (e.g. horizontal or vertical) to maximized screen real estate

- 2.2.3.2. Resolve bug causing text to be cut-off on left hand side of column

- 2.2.3.3. Option to link to other screens from central item

## 2.2.4. Exploration Entry Screen

- 2.2.4.1. Resolve issues with right to left item alignment

- 2.2.4.2. Menu item ordering set to build left to right then top to bottom.

- 2.2.4.3. Resolve issue with inconsistent menu item animation

- 2.2.4.4. Option for thumbnail images to be used instead or in addition to text menu items

- 2.2.4.5. Option to link to other screens from central item

## 2.2.5. Full-screen swf player

- 2.2.5.1. Template interacts with back button on in Root border template to stop any processes initiated by actionscript when the back button is clicked

## 2.2.6. Phone Dial Screen

- 2.2.6.1. Text in digit areas is centered

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2.2.6.2. Resolve issues in properly handling apostrophes in text

2.2.6.3. Circular image masking implemented for digit areas

## 2.2.7. Series Screen

2.2.7.1. Option to link to other templates as an alternative to the default link to the built-in Zoom screen

2.2.7.2. Built-in Series Zoom screen design and functionality identical to separate Zoom Template except for addition of paging

## 2.2.8. Slider Screen

2.2.8.1. Slider labels wrap text and work as described in manual

2.2.8.2. Subtitle and highlight indicate which item is currently being viewed

## 2.2.9. Zoom Screen

2.2.9.1. Text box available like previous series zoom screen.

2.2.9.2. Functionality and design consistent with Series Zoom screen

2.2.9.3. Paging/linking functionality available via user defined links to other templates.

## **3. *Installers / Extras / Supporting Applications***

3.1. A migration tool will be developed to move existing data from a 2.0 instance to a new 2.1 installation.

3.1.1. The tool will extract data from the 2.0 instance and insert data into the 2.1 instance.

3.1.2. The tool will update all necessary files and will need to be run only once on any given instance.

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- 3.1.3. The tool will preserve all user data (profile information, media and assets, and presentations).
- 3.1.4. The tool will be as close to one-click as possible and will be usable by a layperson.
- 3.1.5. The tool will be downloadable from SourceForge at the time that 2.1.0 is released.
- 3.2. Installers will be created to run on, at a minimum, Windows XP; Windows Vista; Mac OS X (X Serve); and Mac OS X (desktop).
  - 3.2.1. All installers will be as close to a one-click application as possible. They will be usable by a layperson.
  - 3.2.2. All installers will be downloadable from SourceForge at the time that 2.1.0 is released.
  - 3.2.3. All .NET dependencies will be removed from the Pachyderm code and from the Windows installer executable.
  - 3.2.4. *Installers for Linux, Linux RPM, and Solaris* are desired but not required for release 2.1.0.
  - 3.2.5. Installers will check for existing installations and ask the user whether to update or replace them.
  - 3.2.6. Installers will be able to successfully apply updates to current installations.
  - 3.2.7. Installers will install only Pachyderm; no other 3<sup>rd</sup>-party software will be directly installed by the Pachyderm Installer.
  - 3.2.8. Installers will check for the presence of other software required to run Pachyderm and alert the user if any necessary software is not present.
- 3.3. The installer as well as a stand-alone application will include a wizard that steps the user through first-time configuration of Pachyderm.



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- 3.3.1. The wizard will, at a minimum, allow the user to configure the administrator ID and password; to set up additional administrator accounts; to identify the machine name; and to record the MySQL username and password that will give Pachyderm access to the database.
- 3.3.2. The stand-alone application will be part of the standard installation and can be run by hand at any point after the initial pachyderm installation.
- 3.4. Software necessary to run Pachyderm 2.1.0 includes, and is limited to, the following applications:
  - Java version 1.5,
  - ImageMagick 5.5.1 (or greater),
  - MySQL Version 5.0.27-standard (or greater)<sup>1</sup>
  - Apache 1.3.33 (or greater)<sup>2</sup>

## **4. Development and Architecture**

- 4.1. Starting with 2.1.0, all frameworks and application project files will be converted to the Eclipse IDE<sup>3</sup>.
- 4.2. The default directories and variables could use with some consolidation and standardization throughout the code, allowing for more streamlined use of default values. This means cleaning up hard-coded variables, and using more derived variables instead of explicitly designated variables.
- 4.3. We will integrate the Project WOnDer libraries (open source WebObjects project) into Pachyderm to allow for added functionality and stability.

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<sup>1</sup> Other database systems, such as Oracle or MS SQLServer, may be used but are not officially supported.

<sup>2</sup> Other web servers, such as IIE, may be used but are not officially supported.

<sup>3</sup> Eclipse is cross-platform, and is the chosen IDE of the WebObjects open source community (WOLips, WOnDer).

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- 4.4. We shall move as much application configuration information from the apdefault table into a flat-file configuration associated with the Pachyderm application as possible.
- 4.5. XML definitions for templates and components are to be stored on the file system as opposed to in the database.

## **5. Documentation**

- 5.1. Template Documentation will be updated to include descriptions for each new template released in 2.1.0. Each template description will include a sample image, a copy of the schematic image, and details about how the template functions and how it is authored. Existing template descriptions will be reviewed against the templates and any corrections will be made.
- 5.2. The authoring manual will be reviewed, compared against the 2.1.0 system, and updated with any necessary corrections, additions, or deletions.
- 5.3. A new document will be created that explains how to use the migration tool to update a working 2.0 instance to a 2.1 instance. This manual will be written in a style appropriate for a layperson to understand.
- 5.4. Installation manuals will be developed to accompany each installer that is released. These instructions will cover the complete installation and setup process and will be written in a style appropriate for a layperson to understand.
  - 5.4.1. Installation manuals will make clear the requirements for additional software that must be installed prior to installing Pachyderm.
- 5.5. The process for creating new installers (for subsequent releases) will be documented clearly, and the documentation will be placed on SourceForge and PachyForge.

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- 5.6. Documentation must pass 508 standards. <sup>4</sup>
  - 5.6.1. PDF tags will be added to the PDF version of the new Pachyderm user manual.
  - 5.6.2. An accessible HTML version of each of the documents listed above will be produced.
- 5.7. Documentation will be housed on SourceForge and PachyForge.

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<sup>4</sup> **Electronic and Information Technology Accessibility Standards (Section 508): Subpart D: Information, Documentation, and Support.**

**§ 1194.41 Information, documentation, and support.**

- (a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.
- (b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.
- (c) Support services for products shall accommodate the communication needs of end-users with disabilities.