



## DRS 2.1.1 Release Notes

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### **Support for New Formats: Portable Document Format (PDF) and Opaque Containers**

The latest release of DRS software supports two new formats: PDF and Opaque Containers. This support was made possible through enhancements to Batch Builder, the DRS Loader, and the DRS Web Admin; as well as the development of a new delivery service, the File Delivery Service (FDS). These enhancements support the basic deposit, management and delivery of files in these formats. Additional DRS 2 enhancements scheduled for release in 2010 will provide additional deposit-time and management options for both of these formats.

### **Portable Document Format (PDF)**

The latest version of Batch Builder supports PDF Batches. A PDF Batch consists of one or more PDF files. While any variation of the PDF format will be accepted, OIS has published a document providing guidance on choosing PDF formats and best practices for creating PDF files:

[http://hul.harvard.edu/ois/digpres/docs/OIS\\_recs\\_for\\_pdf.pdf](http://hul.harvard.edu/ois/digpres/docs/OIS_recs_for_pdf.pdf)

By default, PDFs deposited with Batch Builder will be assigned URNs that will resolve to the new File Delivery Service (FDS). See the [FDS section](#) of this document for more information.

Future DRS 2 enhancements will allow curators and depositors to indicate relationships between PDFs and other DRS content using Batch Builder or the DRS Web Admin.

### **Opaque Containers**

The latest version of Batch Builder has been enhanced to support a new type of Container Batch - the Opaque Container Batch. An Opaque Container Batch consists of one or more ZIP files containing files in any file format. Opaque Containers in the DRS will receive the same secure storage and bit-level monitoring services as other DRS content. It is expected that this content will be migrated into fully supported objects at some point in the future, as resources become available and management tools are developed for this purpose. The two expected use cases for depositing Opaque Containers are:

1. The depositing unit cannot adequately process (assess, appraise, catalog, describe, etc.) the content in advance of deposit into the DRS, or
2. The DRS does not yet support these formats explicitly (outside of opaque containers)

Because the content deposited as Opaque Containers is expected to be migrated into supported DRS objects in the future, URNs are not supported for Opaque Containers. They can be retrieved as ZIP files using the DRS Web Admin, or more directly using the File Delivery Service (provided the default access flag of 'N' is changed to 'P' or 'R' using Batch Builder or the DRS Web Admin).

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[http://hul.harvard.edu/ois/systems/drs/relnotes-DRS-2\\_1\\_1.pdf](http://hul.harvard.edu/ois/systems/drs/relnotes-DRS-2_1_1.pdf)

**File Delivery Service (FDS)**

The FDS is a new delivery service for PDF files and Opaque Containers (ZIP files), as well as XML files, SGML files, and ICC color profiles that are deposited to the DRS and enabled for public delivery. FDS URLs have the following syntax: [http://fds.lib.harvard.edu/fds/deliver/\[DRS ID\]](http://fds.lib.harvard.edu/fds/deliver/[DRS ID]).

Examples of FDS delivered files:

<http://fds.lib.harvard.edu/fds/deliver/123530> -- plain text

<http://fds.lib.harvard.edu/fds/deliver/13768034> -- PDF

The FDS sends files directly to the user's web browser, relying on the user's web browser or external applications, such as Acrobat Reader, to render the file.

For more information about FDS, see the the [DRS Delivery Systems](#) portion of the OIS web site.

**Image Captions**

With the latest release of the DRS Image Delivery Service (IDS), OIS has implemented the option of applying image captions to the images delivered from the DRS. An image caption is generated on-the-fly and is delivered to the web browser as a part of a DRS image (a caption and an image are fused into one continuous image). This feature would enable a user or a librarian to save or print an image with some minimal identifying information included. The information currently displayed in a caption consists of the following:

Harvard University, [Institution Name], [Owner Supplied Name of the file].

E.g., Harvard University, Baker Library, Harvard Business School, W80671\_1.

An example of a page-turned document with captions at the bottom of every page image:

<http://pds.lib.harvard.edu/pds/view/6478734>

An example of a still image with caption:

<http://ids.lib.harvard.edu/ids/view/1274457>

Image captions currently can be turned on or off by OIS staff at the DRS billing code level. If image captions are turned on for a particular billing code, the captions will be applied to all the deliverable images under that billing code.

Please contact the [Digital Library Projects group](#) in OIS if you are interested in using this new feature or have any additional questions about it.

**File Information Tool Set (FITS)**

In anticipation of the DRS accepting files in any format, OIS has developed the File Information Tool Set (FITS). FITS uses JHOVE, as well as five other open source tools to identify file formats and extract metadata for files in a wide range of file formats. The latest release of Batch Builder has been integrated with FITS, and is used to identify the file formats submitted within Opaque Containers.

Future DRS 2 enhancements of Batch Builder will use FITS to streamline the deposit process. FITS will be used by Batch Builder to automatically determine the technical metadata that will be recorded in the DRS based on metadata embedded within files. Please see the FITS website (<http://fits.googlecode.com>) for more information.