

An Open Source JPEG2000 Image Server

# aDORe djatoka

FOR

# DJUMMIES

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# Roadmap to Djummiville

- What is djatoka?
- What are some of djatoka's features?
- What are some of djatoka's issues?
- Demos!

# What is djatoka?

- Open source JPEG 2000 image server
- OpenURL-based image dissemination platform
- Follows "Do one thing and do it well" maxim
- A jump start for the JPEG 2000 digital library and repository world

# Why JPEG 2000?

- Open specification defined in an ISO standard
- Multiple resolutions, quality layers in single file
- Fast extraction of ROIs and quality layers
- Lossy and lossless compression
- Support for embedded XML in the image file

# File and Tile Caching

- Local file cache
  - Caches, converting files to JPEG 2000 if needed
  - rft\_id HashMap with local non-resolvable URIs
- Tile caching
  - LRU cache manager keeps track of used tiles
  - Configurable; default is 1000 tiles
  - Tile segment = level, region, rotate degree
  - Total pixel count < cache max pixel size (100000)

# URIs for Reuse / OpenURL

- URI-addressability of specified ROI in an image
- Get region - `svc_id:lanl-repo/svc/getRegion`
  - Format - `svc_format=image/jpeg`
  - Rotate - `svc_rotate=0`
  - Level - `svc_level=4`
  - Region (YXHW) - `svc_level=0,0,100,100`
- Get metadata -  
`svc_id=info:lanl-repo/svc/getMetadata`  
`rft_id=info:lanl-repo/ds/CB_TM_QQ433`

# OpenURL Examples

[http://images.org/djatoka/resolver?url\\_ver=Z39.88-2004&rft\\_id=info:lanl-repo/ds/CB\\_TM\\_QQ431&svc\\_id=info:lanl-repo/svc/getRegion&svc\\_val\\_fmt=info:ofi/fmt:kev:mtx:jpeg2000&svc\\_format=image/jpeg&svc\\_level=4&svc.rotate=0&svc.region=0,0,100,100](http://images.org/djatoka/resolver?url_ver=Z39.88-2004&rft_id=info:lanl-repo/ds/CB_TM_QQ431&svc_id=info:lanl-repo/svc/getRegion&svc_val_fmt=info:ofi/fmt:kev:mtx:jpeg2000&svc_format=image/jpeg&svc_level=4&svc.rotate=0&svc.region=0,0,100,100)

[http://images.org/djatoka/resolver?url\\_ver=Z39.88-2004&rft\\_id=info:lanl-repo/ds/CB\\_TM\\_QQ431&svc\\_id=info:lanl-repo/svc/getMetadata](http://images.org/djatoka/resolver?url_ver=Z39.88-2004&rft_id=info:lanl-repo/ds/CB_TM_QQ431&svc_id=info:lanl-repo/svc/getMetadata)

# OpenURL

"There is nothing pretty about OpenURL."



# Get and Install It

- LANL/Sourceforge download (see last slide)
- Instructions in download and on LANL site
- Test script to make sure environment is OK
- Out of the box, djatoka expects  $\geq$  Tomcat 5.5
- Set `JAVA_OPTS` or use djatoka's `tomcat.sh`

# Issues

- Djatoka is open source, Kakadu is not.
- Image stream reference implementation based upon file extension
- AJAX based viewer must run in the Tomcat context

# Demos

- Basic Djatoka Viewer
- Djatoka viewer (IIPMootools version)
- OpenLayers implementation
- Djatoka in Production at Biodiversity Heritage Library

# aDORe djatoka

<http://african.lanl.gov/aDORe/projects/djatoka/>

<http://sourceforge.net/projects/djatoka>

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