

# BitCurator Access

Simplifying and improving access to the contents of disk images in born-digital collections

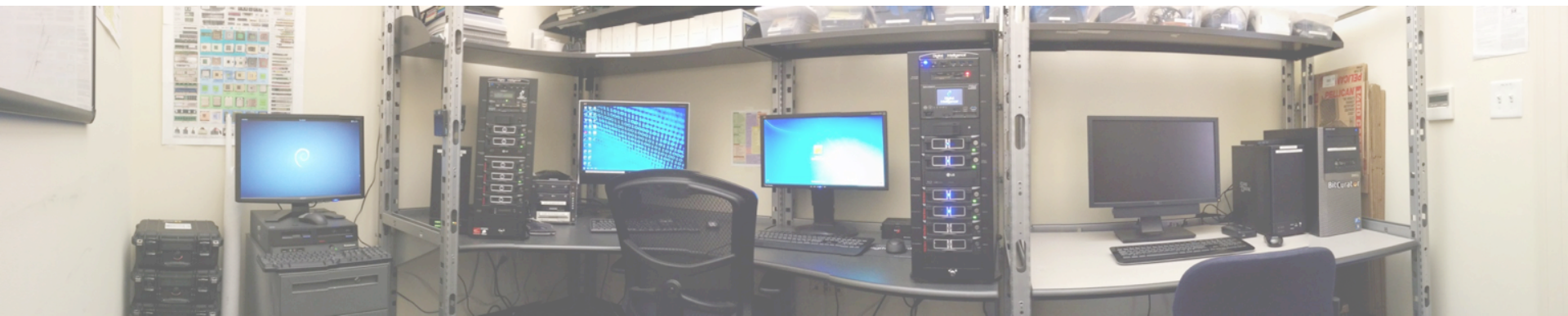
**Kam Woods**  
**Research Scientist**  
**UNC School of Information and Library Science**



**UNC**  
SCHOOL OF INFORMATION  
AND LIBRARY SCIENCE

**CurateGear**  
**January 7, 2015**

**The Andrew W. Mellon Foundation**



**BitCurator Access is a two-year Andrew W. Mellon Foundation funded project (October 1, 2014 – September 30, 2016) housed in the School of Information and Library Science at the University of North Carolina at Chapel Hill.**

We're developing open-source software to support access to disk images. Three core approaches:

- (1) Tools and reusable libraries to support web access services for disk images
- (2) Analyzing contents of file systems and associated metadata (and developing software to support redaction)
- (3) Simplifying access to emulated environments

# BitCurator Access Core Team

- Cal Lee, PI
- Kam Woods, Technical Lead and Co-PI
- Alex Chassanoff, Project Manager
- Sunitha Misra, Software Developer



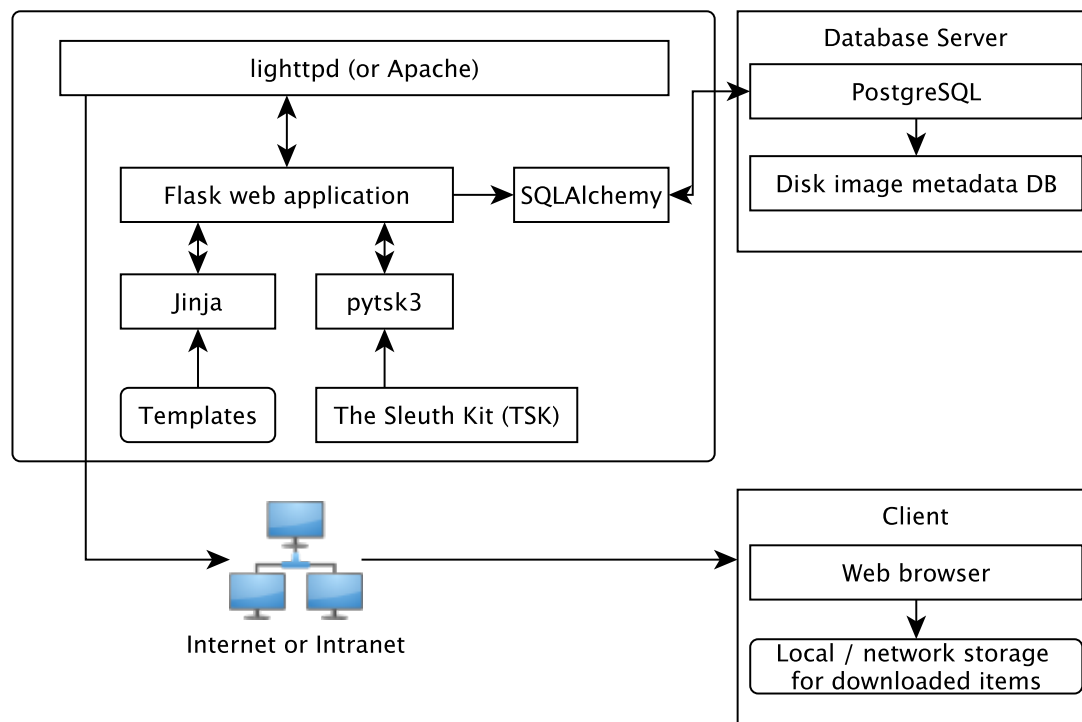
# BitCurator Access Advisory Board

- Geoffrey Brown, Indiana University
- Mark Evans, History Associates
- Erika Farr, Emory University
- Matthew Farrell, Duke University
- Brad Glisson, University of South Alabama
- Matthew Kirschenbaum, Maryland Institute for Technology in the Humanities
- Susan Malsbury, New York Public Library
- Don Mennerich, New York University
- Alex Nelson, Prometheus Computing
- Michael Olson, Stanford University
- Klaus Rechert, University of Freiburg
- Kari Smith, Massachusetts Institute of Technology
- Bradley Westbrook, ArchivesSpace
- Doug White, National Institute of Standards and Technology
- Carl Wilson, Open Planets Foundation

# Today's Demo:

We've developed a prototype to demonstrate integrating digital forensics forensics software libraries and lightweight webservices tools. Drop your disk images in a local or network-accessible location, start up the service, and start browsing a wide range of disk images.

- Most analysis runs server-side (via Sleuthkit and DFXML Python bindings, among others)
- Service is database-agnostic (we use postgres)
- Automatic metadata production (DFXML, PREMIS, others)
- Coming: user authentication, annotations, selectable services



<https://github.com/kamwoods/bca-webtools>

# http://access.bitcurator.net/

BitCurator Access

access.bitcurator.net/index.php?title=Main\_Page

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## Main Page

BitCurator Access software tools will assist collecting institutions (libraries, archives, and museums) in providing web-based and local access to born-digital materials held on disk images. BitCurator Access will focus on software that simplifies access to raw and forensically-packaged disk images, allowing collecting institutions to incorporate these objects into access environments in a manner that reflects the original order and relevant environmental context. The use of open source digital forensics software will allow for detailed analysis of file and file system provenance, quality and accessibility of files, metadata in files and the file system, and residual (non-file system) data contained within disk images.

## Development Areas

BitCurator Access explores four areas of interest related to accessing born-digital collections:

- Web-based access to raw and forensically packaged disk images
- Transforming and using digital forensics metadata in collecting environments
- Redaction of file items, metadata and hidden data from disk images
- OS and executable virtualization for legacy disk images



## Web Access to Disk Images

The **bca-webtools** repository contains a prototype **Flask** application that demonstrates the feasibility of providing direct access to the contents of raw and forensically packaged disk images within a web browser.



For more information on the design of the application, along with instructions on how to obtain and build the software, see the [BitCurator Access Webtools](#) page.

## Redaction

## Tools

 [BitCurator Access Webtools](#)   
[\[Installation Guide\]](#)

## Support

 [The BitCurator Community](#)   
Get support and speak with members of the team.

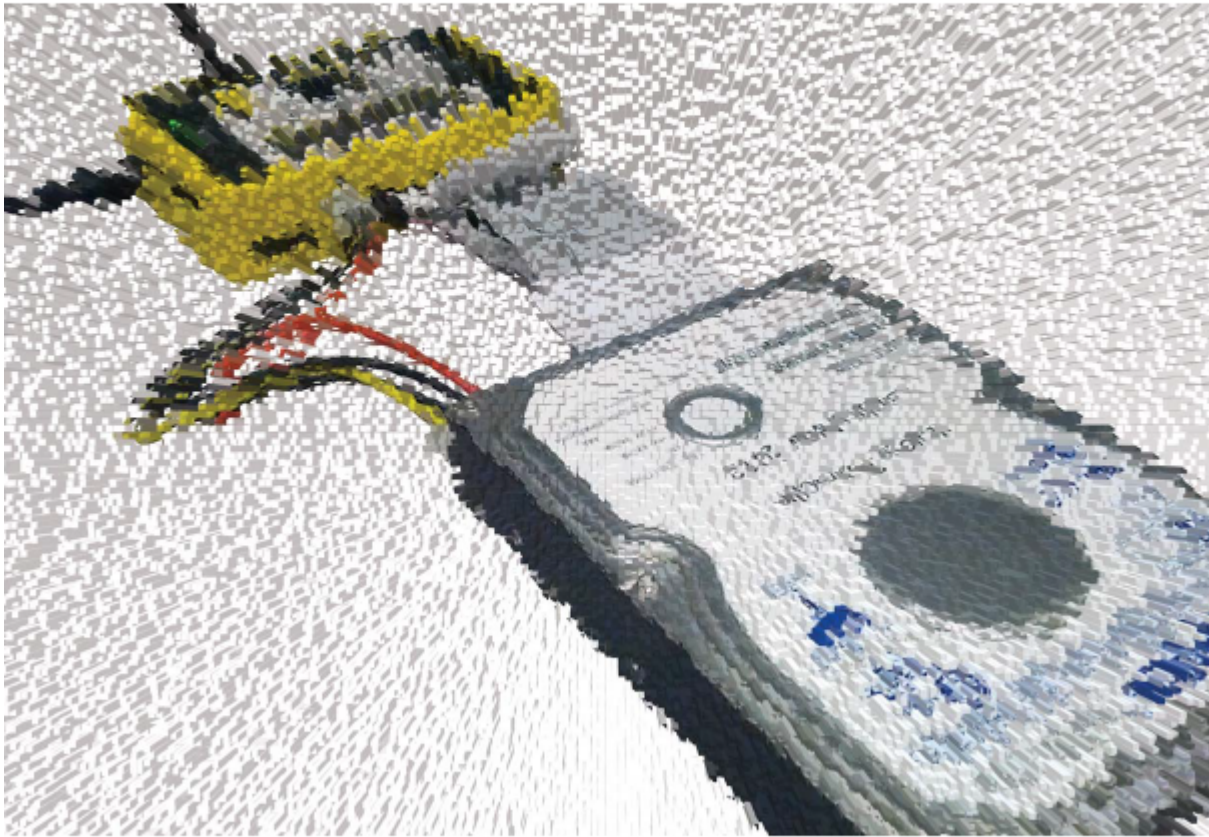
## Licenses

Software in our GitHub repositories is GPL v3 licensed. This wiki, documentation, and



# From Bitstreams to Heritage:

Putting Digital Forensics into Practice  
in Collecting Institutions



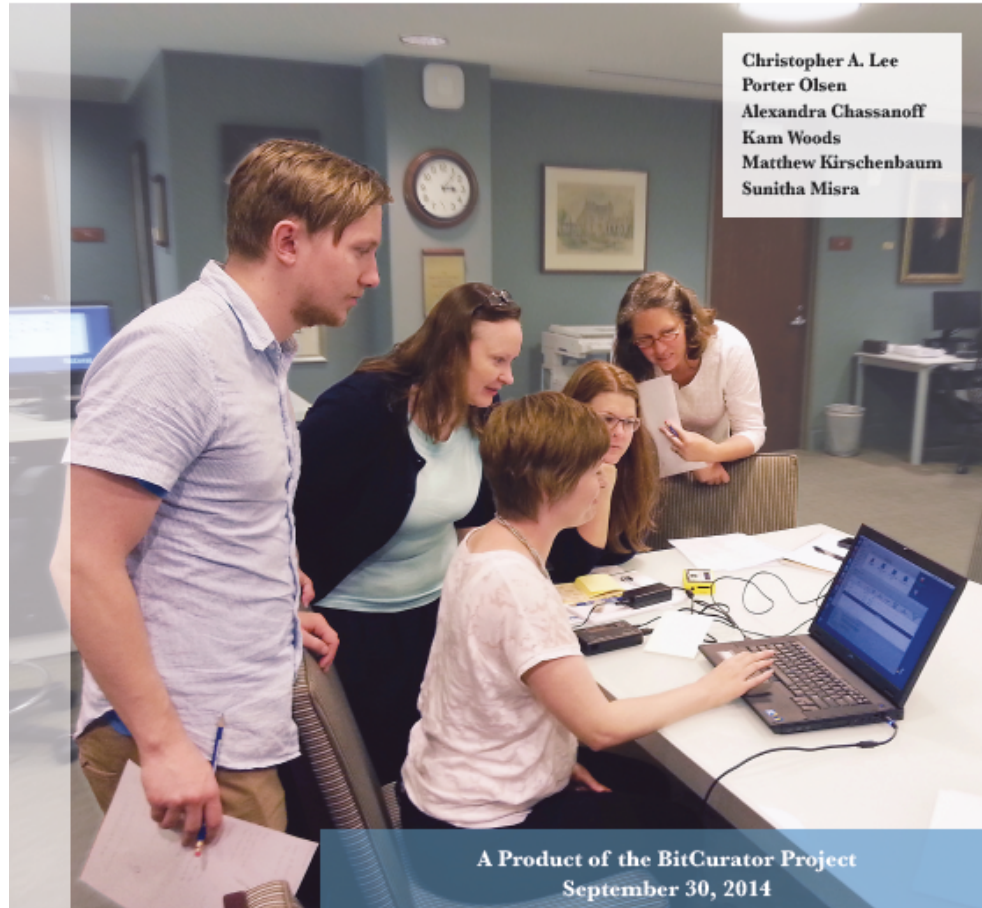
Christopher A. Lee, Kam Woods, Matthew Kirschenbaum, and Alexandra Chassanoff

<http://www.bitcurator.net/docs/bitstreams-to-heritage.pdf>

# From Code to Community:

## Building and Sustaining BitCurator through Community Engagement

Christopher A. Lee  
Porter Olsen  
Alexandra Chassanoff  
Kam Woods  
Matthew Kirschenbaum  
Sunitha Misra



A Product of the BitCurator Project  
September 30, 2014



# http://www.educopia.org/community/bcc/

The screenshot shows a web browser window with the address bar displaying [www.educopia.org/community/bcc/](http://www.educopia.org/community/bcc/). The page features the Educopia Institute logo and a navigation menu with links to About Us, Communities, Research, Consulting, Events, Downloads, and Contact Us. The main content area is titled "BitCurator Consortium" and includes a description of the organization's mission, a list of facilitators and websites, and a section for recent hosted events.

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**Communities**

- [BitCurator Consortium](#)
- [Library Publishing Coalition](#)
- [MetaArchive Cooperative](#)

**Educopia and Communities**

The Educopia Institute provides backbone infrastructure and facilitation support to strengthen growing community networks. Such services are provided both on a project basis and through formal programmatic partnerships.

**BitCurator Consortium**

**Facilitator:**  
[Katherine Skinner](#)

**Websites:**  
[BitCurator Project](#)  
[BitCurator Wiki](#)

Helping cultural organizations acquire and curate born-digital materials through open-source digital forensics tools.

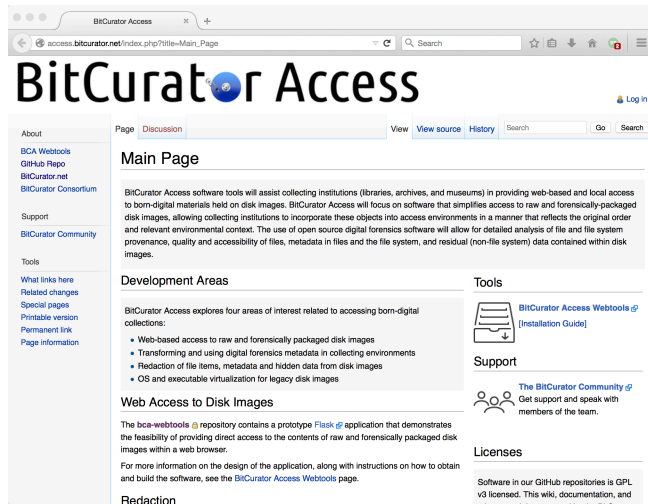
The BitCurator Consortium is an independent, community-led membership association that serves as the host and center of administrative, user and community support for the BitCurator environment. It is a continuation of BitCurator project (2011-2014) funded by the Mellon Foundation and led by the School of Information and Library Science at the University of North Carolina, Chapel Hill (SILS) and the Maryland Institute for Technology in the Humanities (MITH).

The BitCurator environment is a set of open-source tools adapted from the digital forensics industry for libraries, archives, and museum use. The tools extract digital objects, create metadata, ensure integrity, and identify sensitive data, providing libraries, archives, and museums with information to make appropriate processing decisions. The BitCurator environment is freely distributed under an open-source license. It can be installed as a Linux environment; run as a virtual machine on top of most contemporary operating systems; or run as individual software tools, packages, support scripts, and documentation.

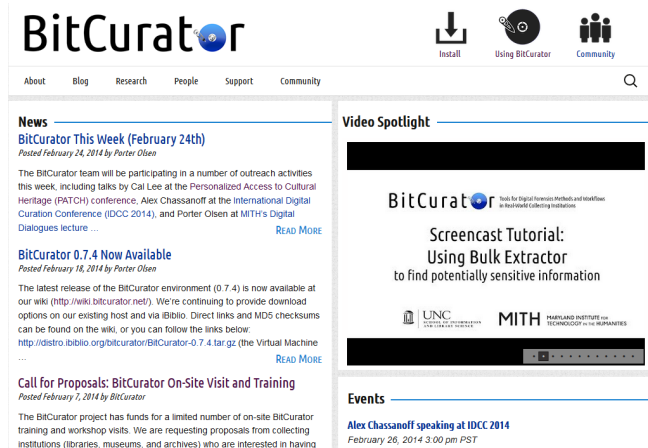
**Recent Hosted Events**

[BitCurator Users Forum 2015](#). 09 January 2015

# BitCurator, BitCurator Access and BC Consortium Resources



Get the software  
Documentation and technical  
specifications  
Google Group  
<http://access.bitcurator.net/>



People  
Project overview  
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...and on Twitter: @bitcurator