

# The OAI Static Repository

A file-based approach to exposing metadata via the OAI-PMH

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# The OAI Static Repository

A file-based approach to exposing metadata via the OAI-PMH

- motivation
- nature of solution
- status
- URIs
- acknowledgments



# motivation

- OAI-PMH is low-barrier protocol
- OAI-PMH favors to make it easy for Data Providers
  - bias has origins in the Santa Fe Convention



# motivation

- nevertheless, implementation is sometimes not trivial:

- lack of technical expertise
- size of collection does not justify the investment
- security considerations re database
- ISP does not allow 3rd party software
- cf. OLAC, union catalogues, LoCKSS



# motivation

- therefore: research to devise approaches to further lower the barrier to sharing metadata collections through the OAI-PMH



# target group

- Data Providers that are unable to operate special OAI-PMH software
- Data Providers that have access to file services of Web server



# nature of solution

- make metadata available in XML file of well-defined format (not dbase)
- put XML file on web-server
- make content of XML file OAI-PMH harvestable



# nature of solution

- 2 research tracks:
  - autonomous Data Provider
  - dependent Data Provider
- => both can operate on the basis of the same XML file format





# autonomous Data Provider

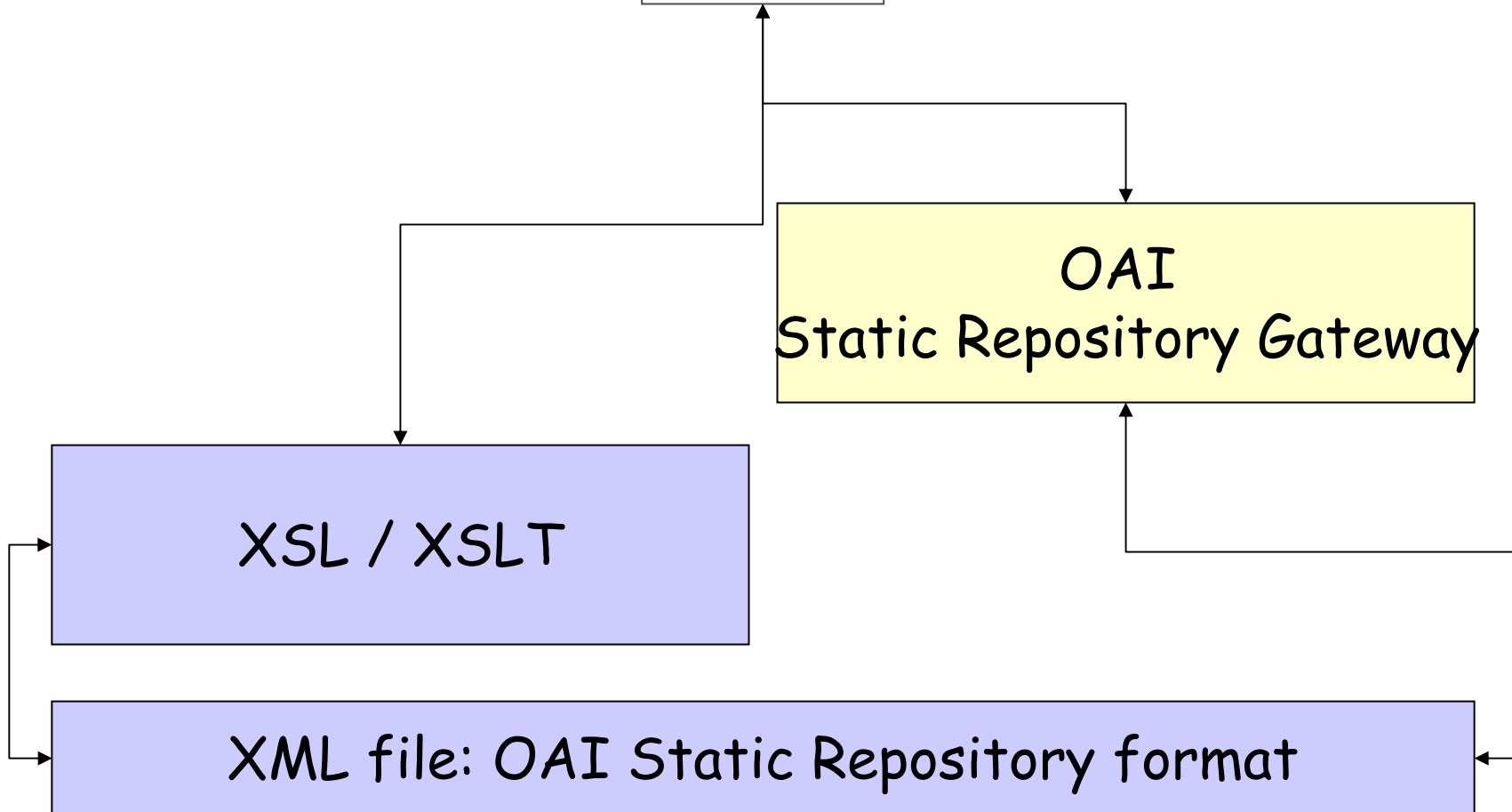
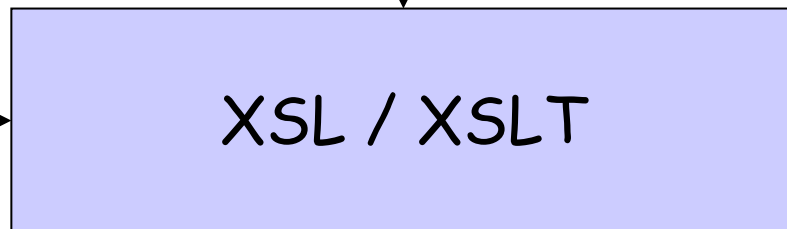
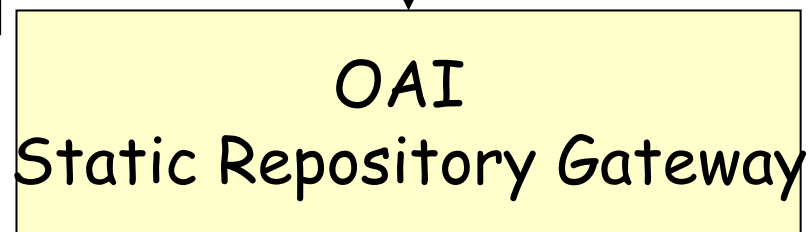
- XML file on web-server
  - XSL style sheet to respond to OAI-PMH requests on web-server
  - requires:
    - native XSLT support in web server
    - XSL v.2 functionality
- ⇒ not (yet) low barrier
- ⇒ but very promising



# dependent Data Provider

- XML file on web-server
  - depend on Gateway to respond to OAI-PMH requests
  - requires:
    - *registration* with Gateway
    - Gateway implementation(s)
- => cf. OLAC ViDa





# OAI Static Repository

- XML file
- format defined via W3C XML Schema
- uses elements from OAI-PMH Namespace
- sections that contain response to Identify and ListMetadataFormats verbs
- one ListRecords section per Metadata Format
- no support for "sets", "deleted records"



# OAI Static Repository

- Data Provider creates/updates:
  - via XML editor
  - via recurrent downloads from database
- demo



# OAI Static Repository Gateway

- makes Static Repository harvestable as an autonomous OAI-PMH Repository
- base URL of OAI-PMH Repository is concatenation of:
  - base URL of Gateway
  - HTTP address of Static Repository



# OAI Static Repository Gateway

- Static Repository *registers* with Gateway by issuing an Identify against its own OAI-PMH base URL
- Gateway exposes all registered Static Repositories in "friends" container in all Identify responses



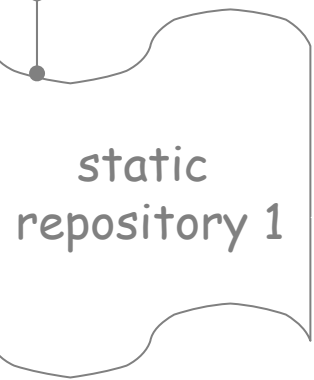
# OAI Static Repository Gateway

- Strictly defined behavior re guaranteeing accuracy of responses to harvesters:
  - always use most recent version of Static Repository
  - may cache Static Repositories but must perform freshness test before responding

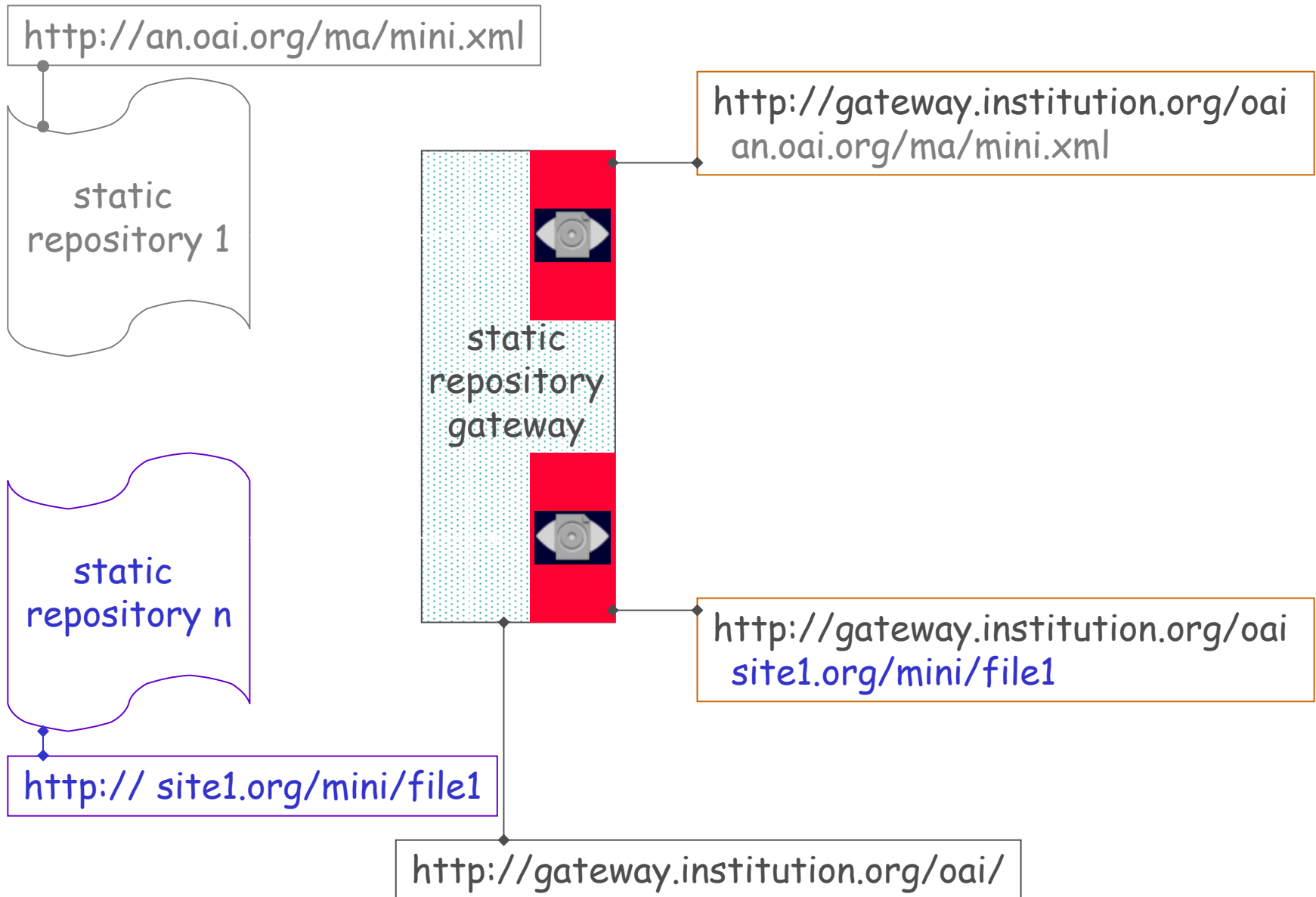


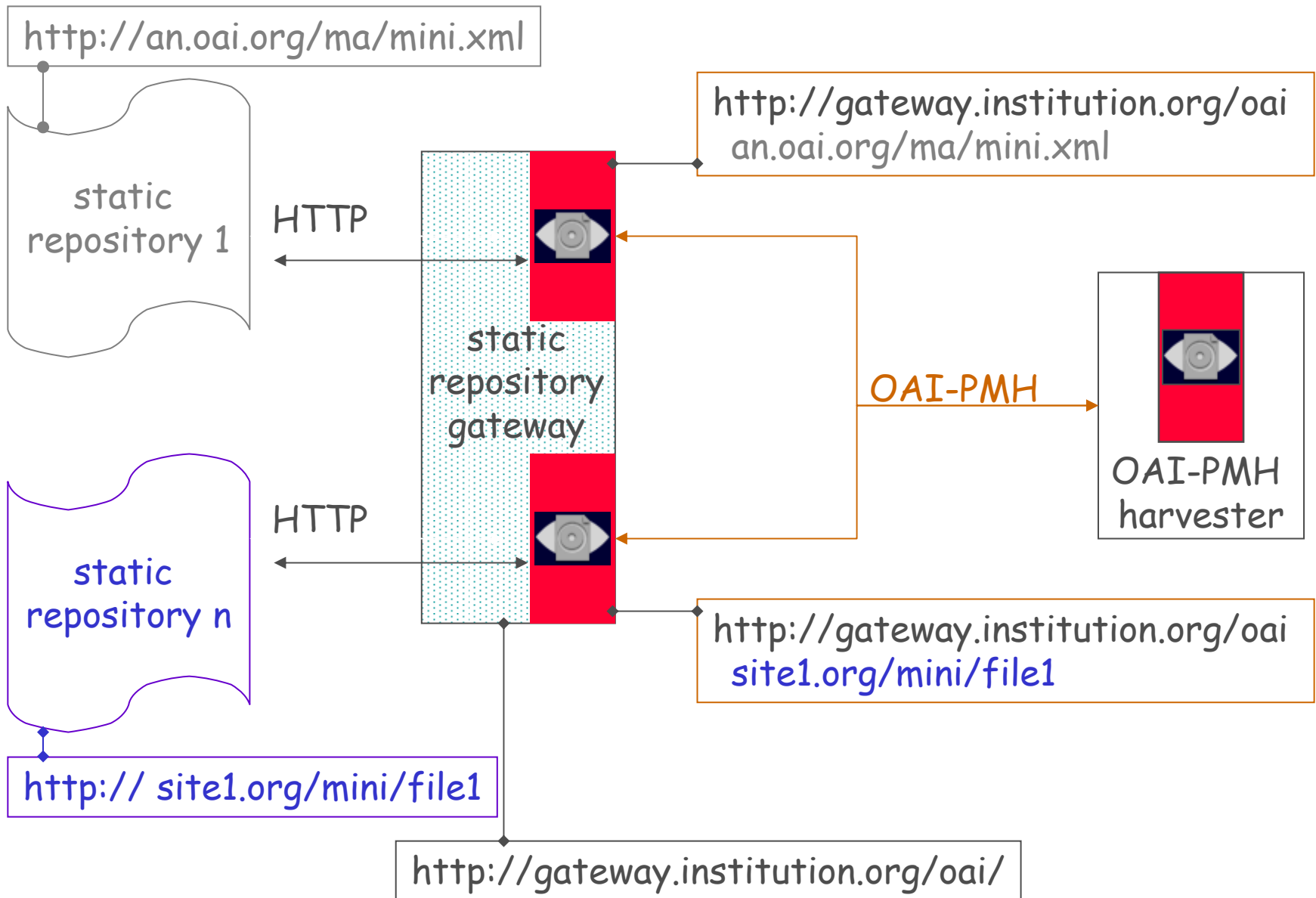


<http://an.oai.org/ma/mini.xml>



[http:// site1.org/mini/file1](http://site1.org/mini/file1)





# OAI Static Repository Gateway

- demo



# status

- alpha OAI specification for Static Repository and Gateway
- initial feedback received
- ~ August 2003: OAI tech group to move spec to beta and release
- interest?



# status

- strong interest from:
  - OLAC
  - NSDL
  - U Illinois Urbana Champaign
  - Belgian Union Catalogue
  - Brazilian Union Catalogue
  - Virginia Tech



# status

- LANL Gateway implementation
- tested in several environments, e.g. OLAC
- demo site live
- very soon: release of software



# status

- XML editor for Static Repositories
  - OLAC
  - Virginia Tech





# URIs

- OAI Static Repository & Gateway spec

<http://www.openarchives.org/OAI/2.0/guidelines-static-repository.htm>

- LANL demo Gateway

<http://libtest.lanl.gov/cgi-bin/gateway.cgi>

- This presentation

<http://lib-www.lanl.gov/~herbertv/presentations/DLF-200305/>

JCDL 2003 paper

<http://lib-www.lanl.gov/~herbertv/papers/jcdl2003-submitted-draft.pdf>



# acknowledgments

- Patrick Hochstenbach, Henri Jerez - LANL, Research Library
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