Learning from 20+ Years of Interoperability Challenges in Libraries

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Digital Antiquity
How did you do your research?

- Spirs
- WebSpirs
- Z39.50
- Telnet
- Pazpar2
- XML Gateways
- SOAP
- SRW/SRU
- Metasearch
- Google Scholar
- Journal Indexes
- OpenURL
Broadcast Search

User

Proquest

Web of Knowledge

JSTOR

Library Catalog
Benefits
• Always up-to-date
• Better overview of results
• Gets user quickly to more advanced interfaces
• Full-text

Challenges
• Slow
• Only see top x results from any provider
• Have to learn lots of interfaces
• Only keyword searching
Benefits

• Faster
• Single interface
• Search often supports more features
• Search can be enhanced with better matching and results because metadata is local

Issues

• Often not as recent (data loads may be nightly/weekly/monthly)
• Harder to maintain
• Search may not have access to full-text
• One provider may overwhelm results
The definition of ancient manured zones by means of extensive sherd-sampling techniques
TJ Wilkinson - Journal of Field Archaeology, 1982 - ingentaconnect.com
Abstract: Thin carpets of worn and abraded sherds frequently occur over many square kilometers of ground around archaeological sites in the Middle East. Sherd scatters around three sites in Iran, Oman, and Syria are described. It is suggested that the artifacts arrive ...
Cited by 100 - Related articles - All 3 versions

Extensive sherd scatters and land use intensity: Some recent results
TJ Wilkinson - Journal of Field Archaeology, 1989 - ingentaconnect.com
Abstract: Offsite artifact scatters are described in relation to sites in SE Turkey and northern Iraq. Examples of similar scatters are cited from Western Europe, the Middle East, and Asia, and are interpreted as being the result of the distribution of urban-derived refuse, manure, ...
Cited by 69 - Related articles - All 5 versions

The use of sherd weights and counts in the handling of archaeological data
WG Solheim - Current Anthropology, 1960 - JSTOR
IT HAS LONG BEEN customary to rely primarily on artifact counts when quantifying archaeological data. Relatively little attention has been paid to the mass of the artifacts. This disregard has resulted in the loss of much information otherwise inferable from potsherds, ...
Cited by 19 - Related articles - All 2 versions

Analysis of organic residues of archaeological origin by high-temperature gas chromatography and gas chromatography-mass spectrometry
RP Evershed, C Heron... - Analyst, 1990 - xlink.rsc.org
... compositional information that would be lost if the more conventional degradative approach to acyl lipid analysis was adopted. Keywords: High-temperature gas chromatography; mass spectrometry; lipid; archaeology; sherd ...
Cited by 92 - Related articles - All 6 versions
Automated Linking

Benefits
• More dynamic
• Protocol often built around less precision
• More customized to user

Challenges
• User may end up in a blank screen
• User may go in circles
Extensive sherd scatters and land use intensity: Some recent results

Wilkinson, T J

Journal of field archaeology [0093-4690]

Volume: 16, Issue: 1, Page: 31

Full text available

Via JSTOR Arts & Sciences

Year: 1989 Volume: 16 Issue: 1 Start Page: 31

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Technologies go in Cycles

- Centralized
- Broadcast
- Centralized
- Broadcast
- Centralized
Shared Issues

- Metadata Mapping
- Shared Vocabularies
- Granularity of Objects
- Security/Permissions
- Protocols
- Updates
- Performance
Success Stories

- Google / the web
- RSS
- Linking
- OAI-PMH

Why are these successful? Simplicity, ubiquity.
What can we learn?

• Use industry standards wherever possible.

• Keep the technology as simple as possible.

• Develop a shared data standard with both a grammar and a vocabulary.
More Lessons

• Keep data at same level of granularity.

• There is a direct relationship between the complexity of what you want to do with interoperability and the success of reliably doing it.

• Build in assumption for error.

• Linking works, but we have to be careful in how we link.