Decentralized Music Document Image Search

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SIMSSA: Single Interface for Music Score Searching and Analysis
Libraries and archives are digitizing large collections of both text and music documents (scores)
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Using Optical Music Recognition (OMR) we can do the same for music, but we need improvements in several areas
International Image Interoperability Framework

http://iiif.io
The Process
The Process

Page Images → Document Recognition (OMR)
The Process

Page Images → Document Recognition (OMR) → Music Analysis
The Process

Page Images → Document Recognition (OMR) → Music Analysis → Music Search Index
The Process

- **Page Images**
- **Document Recognition (OMR)**
- **Music Analysis**
- **Music Search Index**

**Search Interface**

query
The Process

1. Page Images
2. Document Recognition (OMR)
3. Music Analysis
4. Music Search Index

Flow:
- Page Images → Document Recognition (OMR) → Music Analysis → Music Search Index

Interactions:
- Search Interface
- Query
- Response
The Challenge

Page Images → Document Recognition (OMR) → Music Analysis → Music Search Index

response (from where?) → Search Interface

query
Traditional Method
“monolithic system”

Page Images → Document Recognition (OMR) → Music Analysis → Music Search Index

Google
HathiTrust
Internet Archive

HANKINSON, Decentralized Music Document Image Search, DLF, Vancouver, BC, October 2015
Traditional Method
“monolithic system”
Traditional Method

“monolithic system”

Keeping copies of images is storage intensive, maintenance intensive, and legally problematic.
Proposed Method
“distributed system”
Proposed Method

“distributed system”

Images are stored with original institutions, while the musical contents are stored and queried externally.

Images and musical content are re-assembled in the user’s browser
Summary
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With IIIF, libraries can make their document image collections (and regions of these images) addressable.
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Images can be hosted with the original library but **indexed** and made **searchable** through external services
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Images can be hosted with the original library but indexed and made searchable through external services.

Aggregating images and data from multiple institutions will allow distributed image search platforms.
Thank you.

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http://github.com/DDMAL
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