

Decentralized Music Document Image Search

Andrew Hankinson

Evan Magoni

Ichiro Fujinaga



McGill



Schulich School of Music
École de musique Schulich



Centre for Interdisciplinary Research
in Music Media and Technology

SIMSSA | Single Interface for Music
Score Searching and Analysis

DDMAL

DISTRIBUTED DIGITAL MUSIC
ARCHIVES & LIBRARIES LAB

SIMSSA | Single Interface for Music Score Searching and Analysis

SIMSSA | : Single Interface for Music : Score Searching and Analysis

Libraries and archives are digitizing large collections of both text and music documents (scores)

SIMSSA | Single Interface for Music Score Searching and Analysis

Libraries and archives are digitizing large collections of both text and music documents (scores)

Large-scale OCR (e.g., Google Books)
can provide searchable **texts**

SIMSSA | Single Interface for Music Score Searching and Analysis

Libraries and archives are digitizing large collections of both text and music documents (scores)

Large-scale OCR (e.g., Google Books)
can provide searchable **texts**

Using Optical Music Recognition (OMR) we
can do the same for music, but we need
improvements in several areas

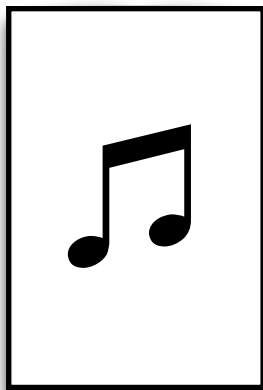


International Image Interoperability Framework

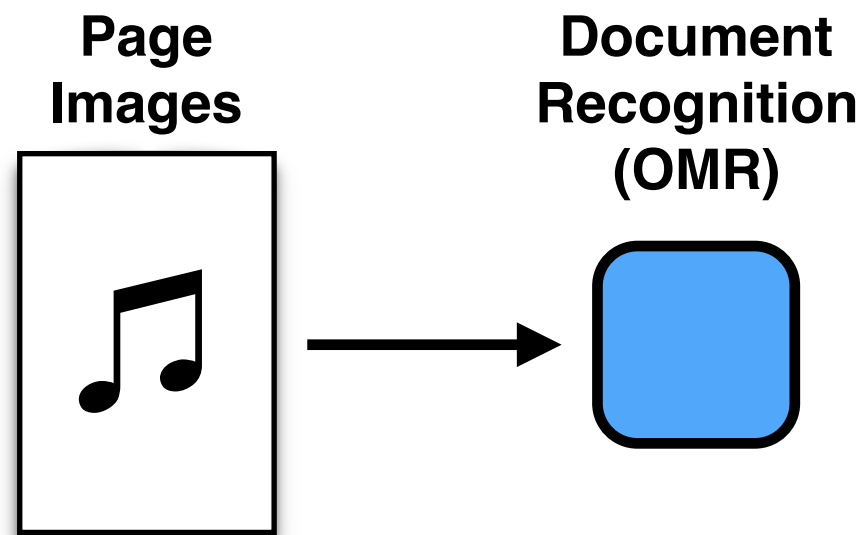
<http://iiif.io>

The Process

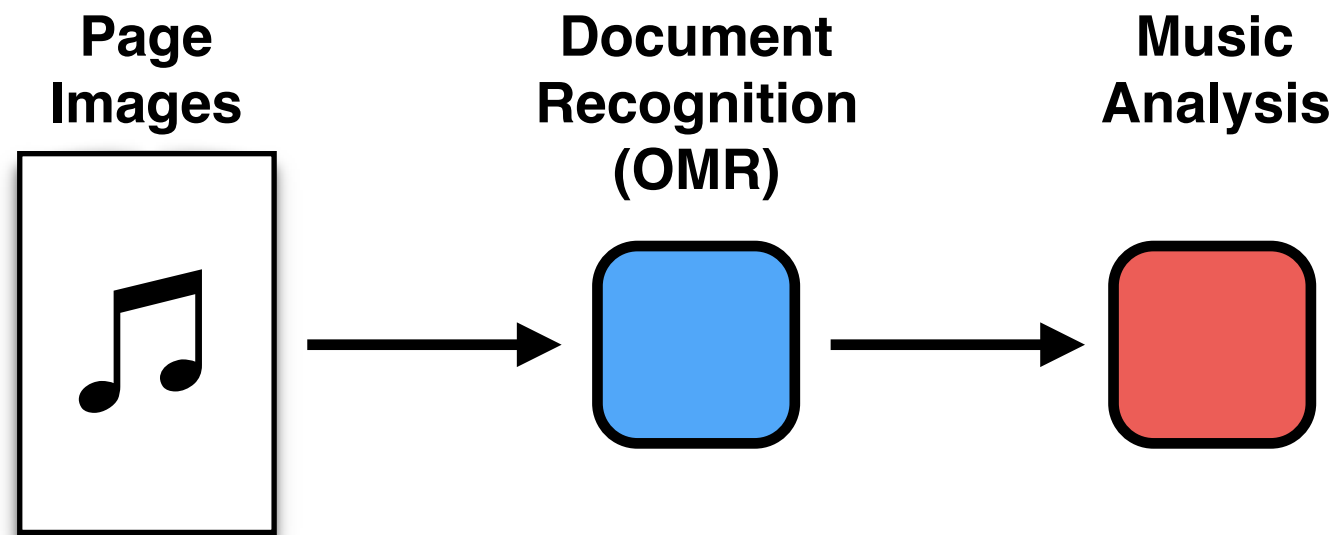
**Page
Images**



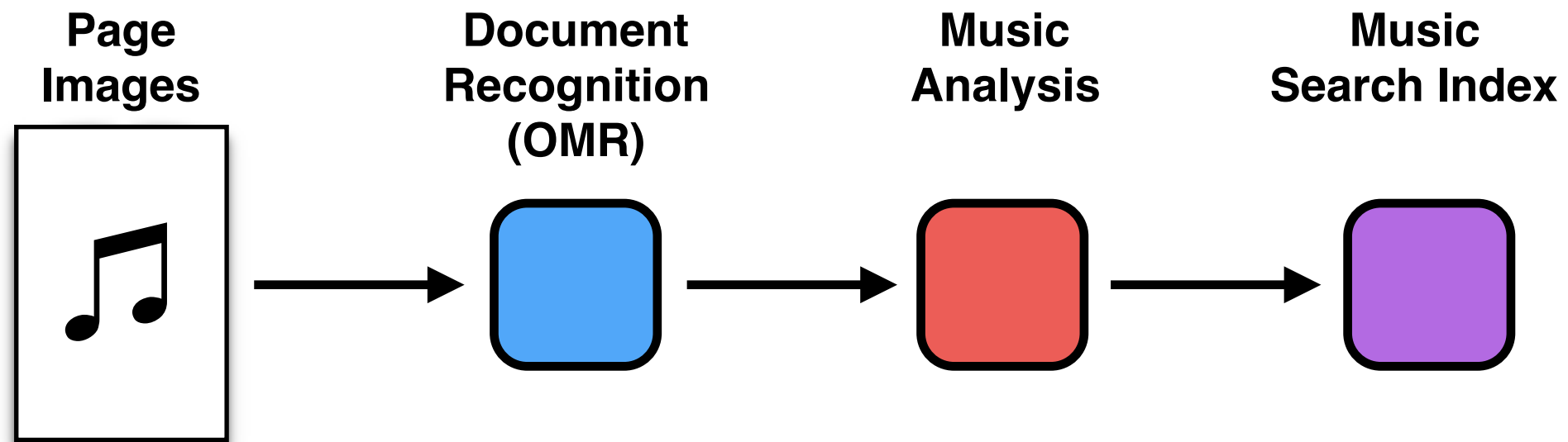
The Process



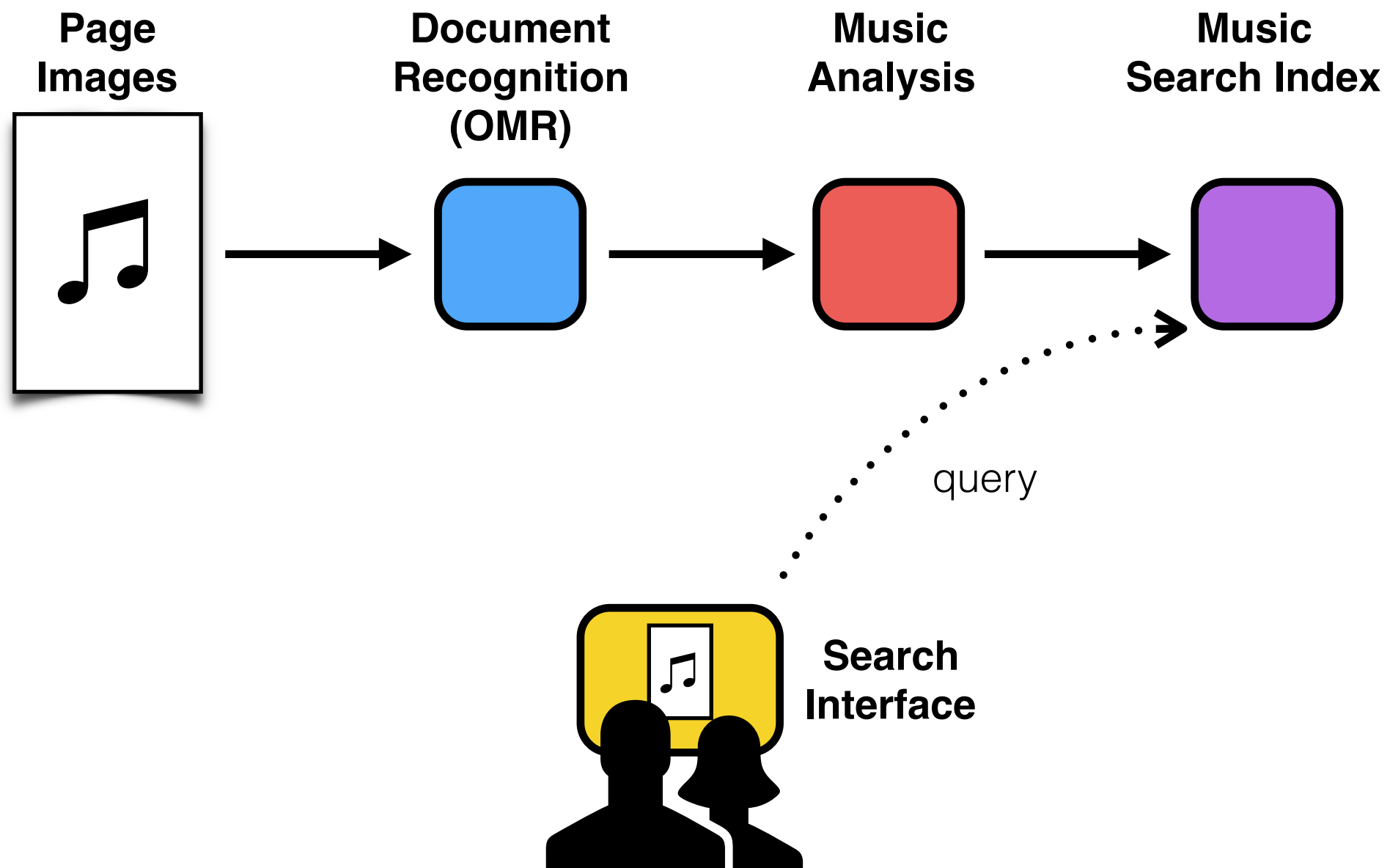
The Process



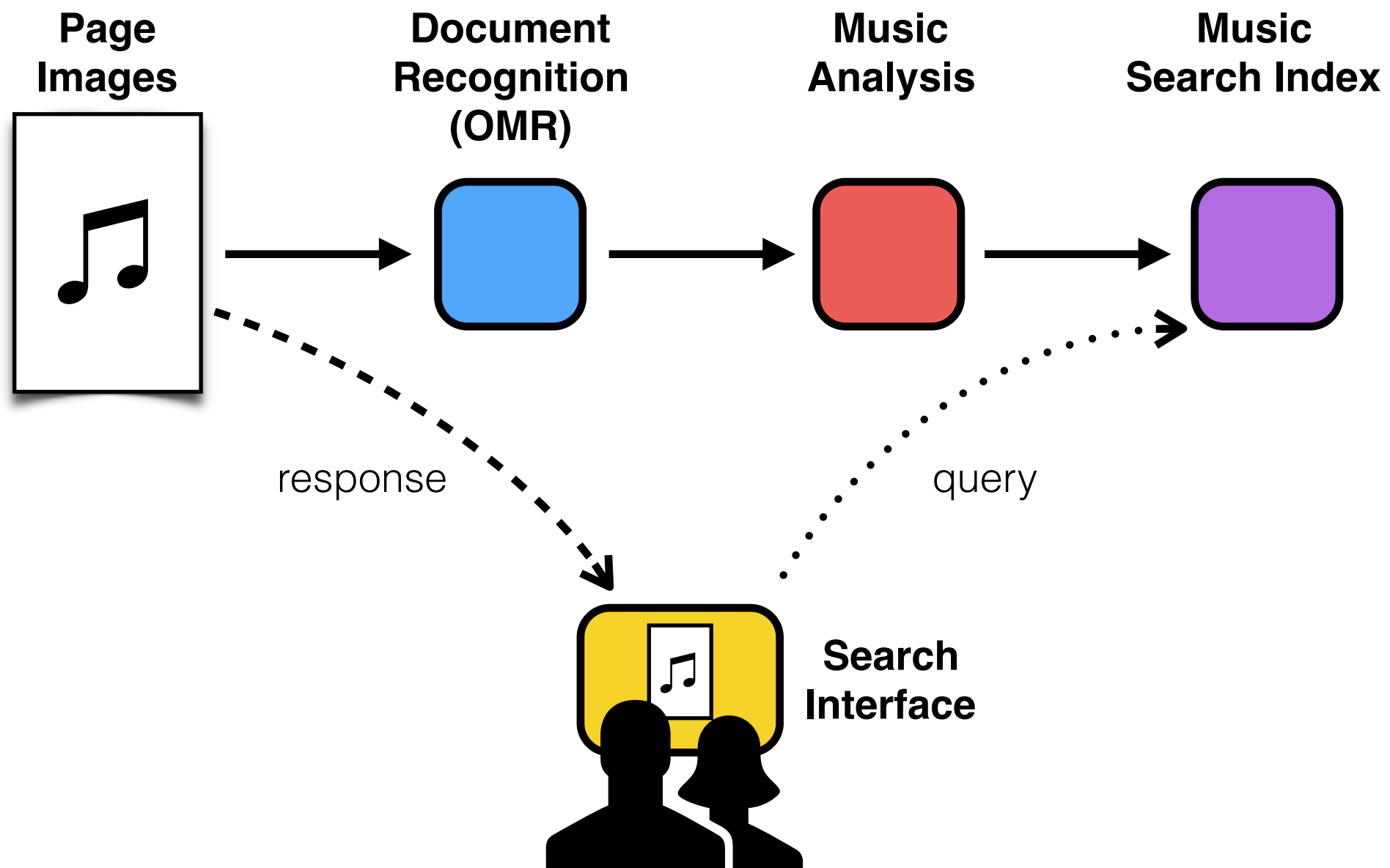
The Process



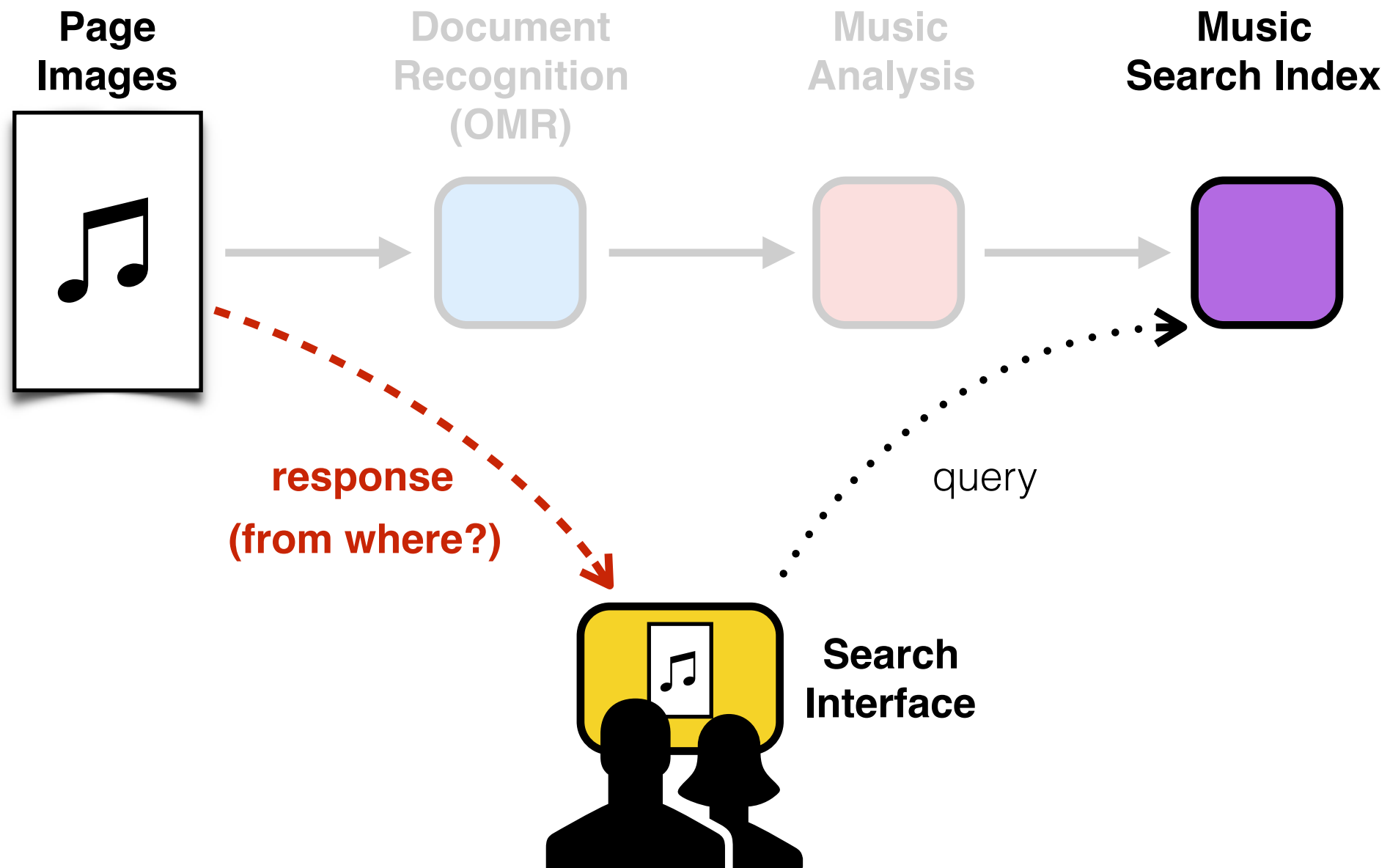
The Process



The Process

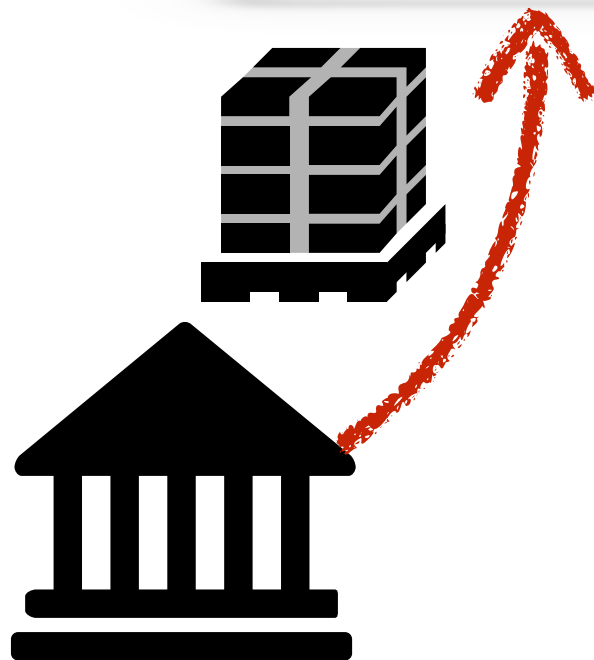
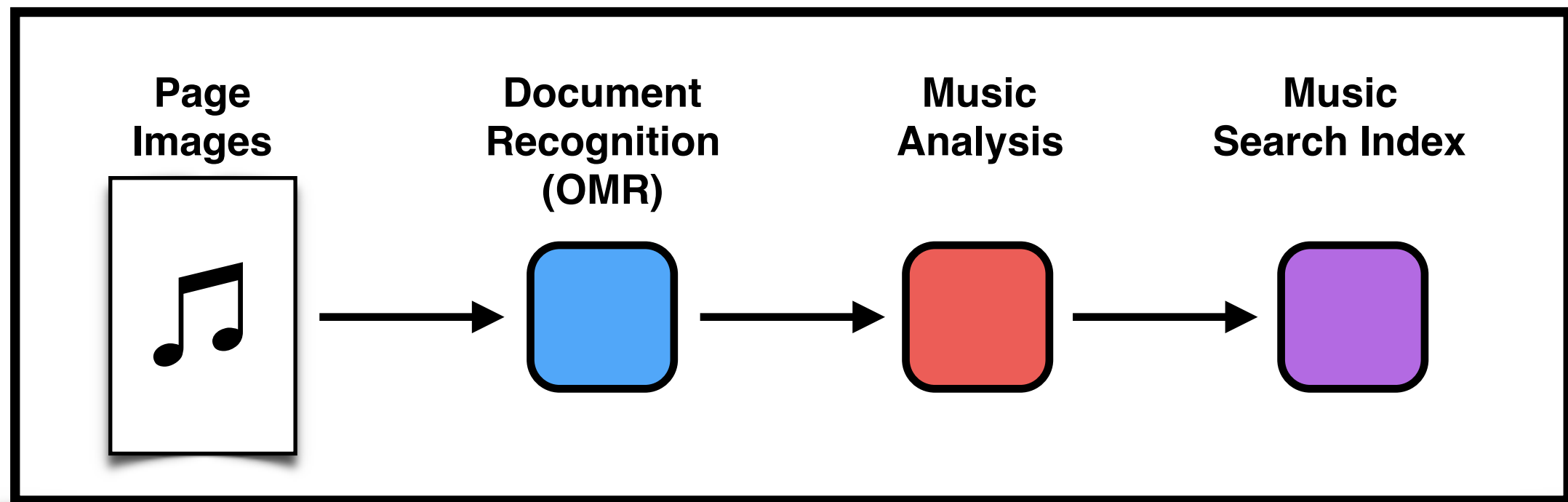


The Challenge



Traditional Method

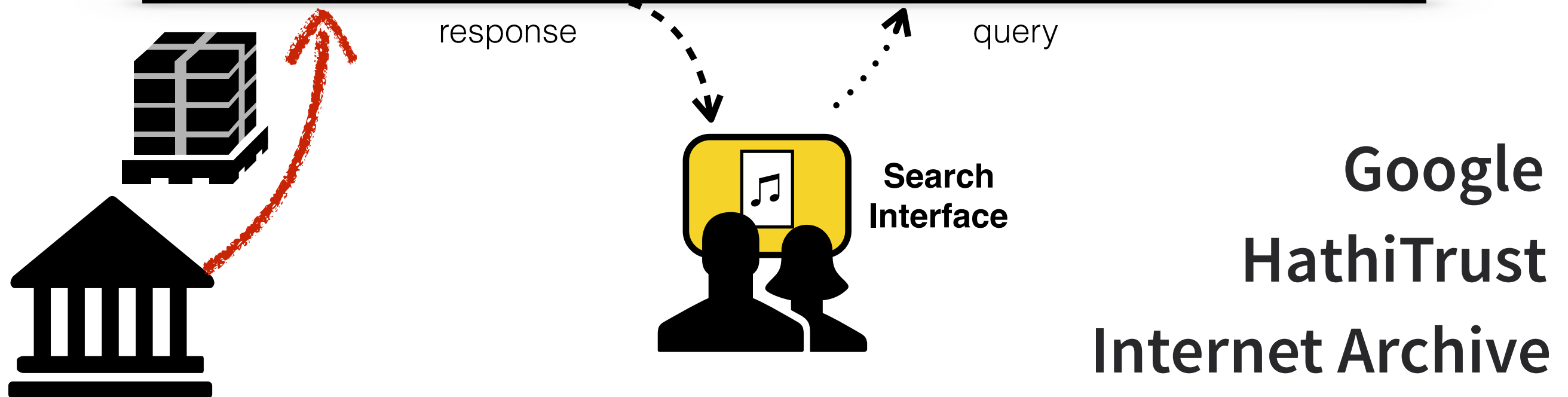
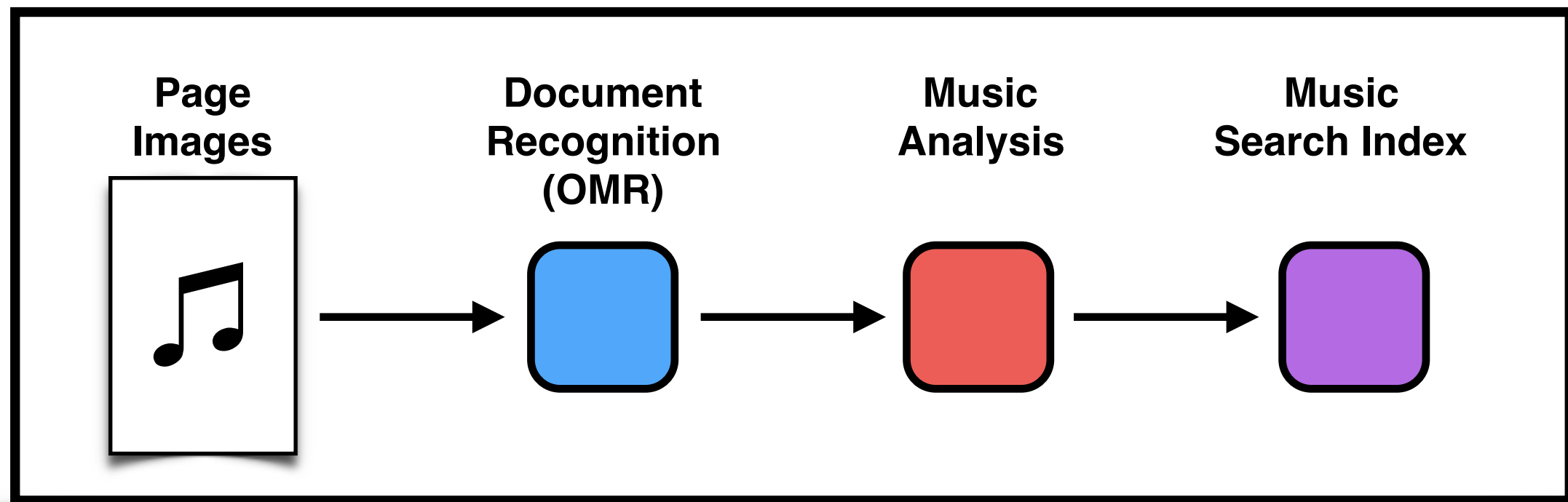
“monolithic system”



Google
HathiTrust
Internet Archive

Traditional Method

“monolithic system”



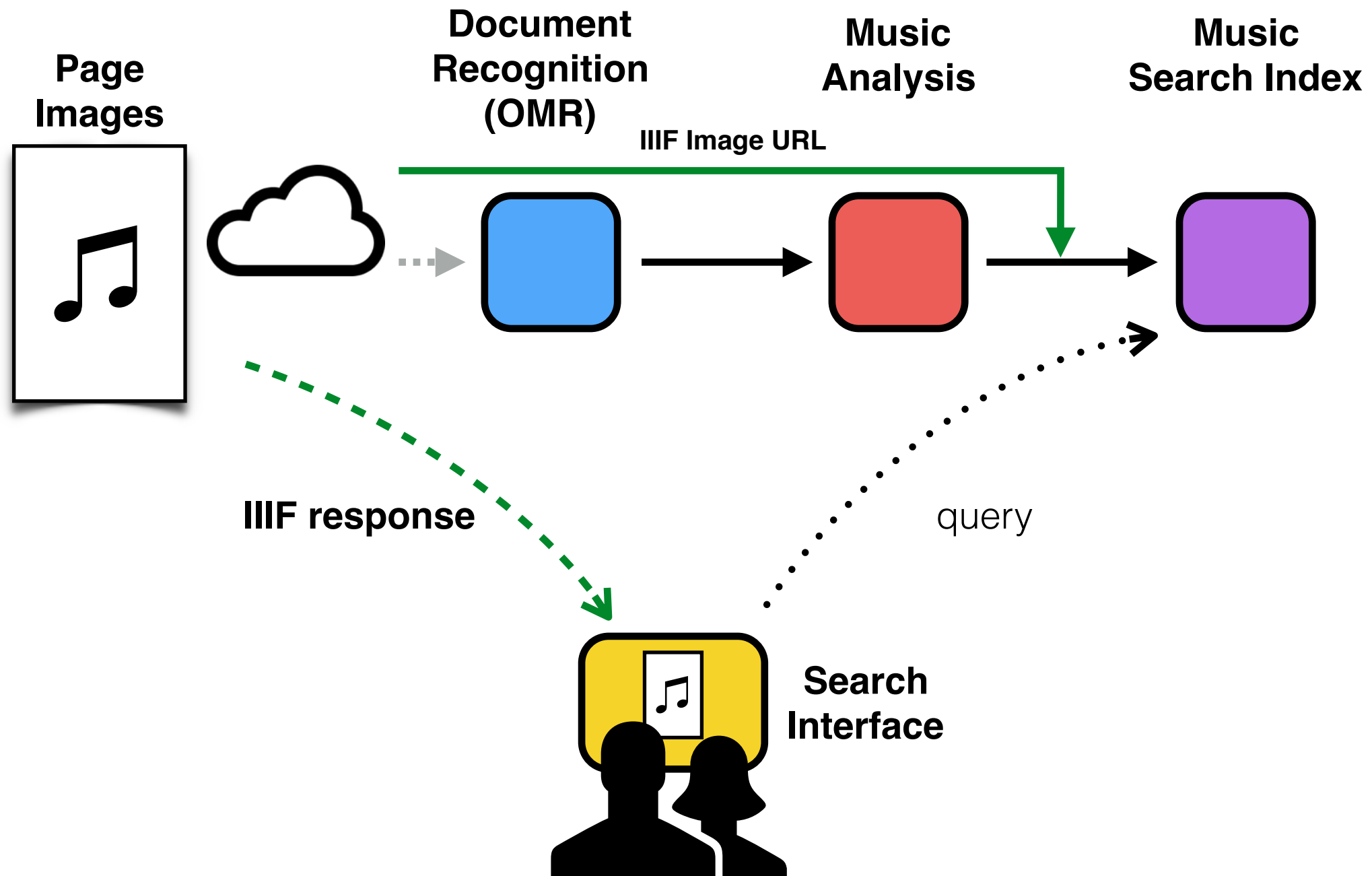
Traditional Method

“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

Summary

With IIF, libraries can make their document image collections (and regions of these images) **addressable**

Summary

With IIF, libraries can make their document image collections (and regions of these images) **addressable**

Images can be hosted with the original library but **indexed** and made **searchable** through external services

Summary

With IIF, libraries can make their document image collections (and regions of these images) **addressable**

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.

<http://simssa.ca>

<http://github.com/DDMAL>

andrew.hankinson@mail.mcgill.ca



SIMSSA | Single Interface for Music
| Score Searching and Analysis



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada



Centre for Interdisciplinary Research
in Music Media and Technology

DDMAL DISTRIBUTED DIGITAL MUSIC
ARCHIVES & LIBRARIES LAB