Re-platforming digital collections for enhanced access & search functionality

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ABSTRACT
Currently, Kent State University Library is preparing to redesign its online exhibits and digital collections on to a different content management system and interface. The plan will entail migrating existing digital collections to another platform, and in so, provide a more inclusive search mechanism to enhance access. In order to prepare for this migration, we are currently mapping the existing digital collections and associated metadata for the proposed solution, from a locally created and hosted framework into a more sustainable platform with a consolidated, searchable base for all digital objects and corresponding metadata. This work includes moving away from a highly tailored, in-house solution, and transposing the data into a RDF file. Principles of Linked Data will also be applied to the accompanying metadata files during the conversion process. The largest resulting change from this shift of a homegrown solution into an extensible, open access platform is for the capability of searching across multiple collections. Currently, cross collection searching is not available in the current interface, and there are oftentimes many related materials between several existing digital collections that would benefit as a result of this change. The poster will address the shift in the ideology into this new framework and highlight the benefits in this switch.

Keywords
Digital collections, Fedora, Hydra, XML, Linked Data

INTRODUCTION
The digital collections are currently configured to be searched individually through a homegrown application and interface, and users who may not be aware of the individual search feature may unknowingly exclude related content in other collections. For example, an oral history contained in one digital collection may touch on many of the people, places and events that may have relevant hits in another digital collection on the website, specifically the May 4 Digital Archive and May 4 Oral Histories¹. In migrating the content to a platform will enable cross-collection searching and also allow users to actively find and discover more related content. Further, the current local solution for digital collections is not searchable outside of the interface provided on the Kent State Library webpages. In some instances, the image files may also be derivatives depending on the size of the original full resolution file.

This past spring, a proposal has been made at the University Library at Kent State University for a new content management system to address the needs of growing digital collections. This proposal will involve implementing an open source content management system for all current and future digital projects, and, in some cases, migrating the existing digital collections. The poster will touch on the topic of enhancing search capabilities as a result of migrating the existing digital collections, through use of a cross-collection searchable index and also through the application of Linked Data. Two collections in particular that will be highlighted and discussed are the May 4 Digital Archive and the KSU Shootings Oral Histories in this poster¹.

PROJECT PROPOSAL
The proposal for a new platform will include the plan to implement the newest version of the open source content management system, the Fedora 4 Repository² for the back-end and use another open source application for the front end, Hydra³. Metadata from the existing collections will be mapped into a crosswalk that will be

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¹ Both digital collections are accessible from this site, http://www.library.kent.edu/page/16454 [Accessed May 25, 2014]
formatted into RDF/XML. The migration work and resulting batch of records will be searchable in a single search method. As Bryne and Goddard (2010) discussed, technology is no longer the main obstacle in implementing linked data projects, and the hope in this project is to create a new system to handle Linked Data records. The upcoming release of Fedora is RDF native, which provides a great platform for the project. The metadata records will also utilize the Open Archives Initiatives (OAI) protocol in the proposed solution, further opening the records into a broader scope and arena for discoverability.

Figure 1 illustrates a current item in the May 4 Digital Archive. Currently, there is a use of extended Dublin Core elements which have an internally agreed upon vocabulary for the interface terminology. A keyword search of the photographer in the example from Figure 1 from the May 4 Digital Archive for Chuck Ayers would not include a related item in the Oral History collection, Figure 2. The user would need to be aware to search each digital collection in separate searches, and could inadvertently be missing content if they fail to search through multiple collections.

The goal of this project is to create a platform and system that enables users to more fluidly search throughout the digital repository and find related content more easily and readily than the current scenario allows. The goal of this work as we build up digital collections is to create a network that supports navigation and discovery in a method that is a seamless process to the user. In addition, we will open up our local collections by using linked data methods to create connections between content that may not have been apparent previously, such as in the example provided here.

Further, by utilizing the elements of linked data, common names, places and things will be linked together through the use of locally created as well as more established Uniformed Resource Identifiers (URIs). For example, if a key figure from the shootings provides an oral history, the use of a given URI will create a system to associate all other material, such as photographs, film or any other related content that may be present in the digital library. In the example provided here, the name connected with both assets in the figures displayed here would be recalled in a basic search in the new proposed platform and indexer, but would have taken two separate searches within each collection in the existing framework. Further, the transcription of the oral history is also not being searched in the current set-up, but would have the potential of being searched in the new system as full text.

CONCLUSION
The new platform and migration of existing collections into this newly proposed framework is important as we continue to add more content and build on digital collections. We have identified this process to be beneficial to users to be able to search through many collections through one search, and additionally in the use of Linked Data underpinnings to further enhance and highlight connections between digital objects. Further, with use of OAI protocol, we will further enable the content of the digital library to be discoverable through even more avenues of searching.

![Figure 1. Screenshot of Item #1244 from May 4 Digital Archive, one of several photographs that were taken by Chuck Ayers](image1)

![Figure 2. A screenshot of a partial record of the oral history from Chuck Ayers in the KSU Shootings Oral Histories](image2)
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REFERENCES
