

Open Repositories 2013 24x7 Proposal

jquery.xmleditor

A schema driven, browser based XML editor for modifying descriptive metadata where it lives in the repository.

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The jquery.xmleditor is a portable jquery widget developed by the University of North Carolina at Chapel Hill Libraries for the purpose of simplifying the description workflow for existing objects in our digital repository. It does so by adding context and structure informed by an underlying XML schema. Even more generally, it creates and modifies XML documents in your web browser.

It can be found here, including a live demo:

<https://github.com/UNC-Libraries/jquery.xmleditor>

In our own implementation, it communicates with a SWORD 2 enabled repository (Fedora based) in order to receive the starting document and to submit changes. But it's all XML in the end, and includes options for exporting to file or submitting to any endpoint that accepts XML.

This presentation will include an overview of the development process, technologies and issues involved, as well as a brief demonstration of the editor in use. It will also touch on the tool backing the editor which constructs JSON objects from schemas.

Development process

The Carolina Digital Repository uses the Curator's Workbench to describe objects before ingest. But prior to developing the jquery.xmleditor tool, our metadata editing workflow for objects already in the repository consisted of a clunky download, edit offline, and resubmit cycle.

As adoption of the repository began to grow, it became clear that the existing workflow was unsustainable, and represented a significant barrier to collection owners being able to easily describe and maintain their collections.

We explored existing options for online editing of XML documents, MODS documents in particular, including Orbeon and other X-Forms based solutions. None of them proved to fully meet our needs, and would have required considerable development time and added layers to our stack.

Ideally we wanted an open source, schema-driven javascript XML editor that could submit XML to a server, but there were surprisingly few options in this space. To further complicate matters, there was little in the way of tools for making XML schemas usable in javascript, despite the prevalence of XML in the web development realm.

We tried to fill that space, resulting in the creation of the jquery.xmleditor and xsd2json, general purpose tools for enabling XML editing directly in the browser. The current version is integrated into the Carolina Digital Repository's Administrative interface and is used for MODS record editing.

We faced several challenges along the way, including dealing with restrictions on cross domain file requests and inconsistent namespace support in javascript. But the current widget is now in use by our repository and ready to be shared more broadly.

Future plans

At present, the widget is mostly usable by domain experts who have a deep understanding of the metadata formats they are working in. We are interested in pursuing ways to optionally abstract some details to remove some of the repetitive aspects of creating a metadata record in MODS. One option is further interaction between the jquery.xmleditor and the Curator's Workbench, taking advantage of the data dictionaries the Curator's Workbench generates to create more human readable, reusable metadata blocks in the jquery.xmleditor. We are interested in gathering feedback from others in the community who might benefit from additional development to this tool.

We are also interested in integrating this editor back into the Curator's Workbench to provide a consistent individual object description interface that utilizes the aforementioned data dictionaries before and after ingest.