Title: Metadata generator

Company: University of Kentucky School of Medicine

Client: Bryan Maloney

Client Email: bjma250@uky.edu

Project Summary:

Our laboratory is an NIH-funded research lab devoted to the blood-brain barrier. NIH recently imposed a data deposition requirement on all grantees. Data deposits are required to be accompanied by metadata. NIH has given no guidance regarding this metadata. It is on the shoulders of every recipient to find or create a metadata schema and implement it. We have a schema. We need implementation that is simple to use and minimizes manual entry. It also should not require learning to code. Furthermore, the bioscience research world at large needs such an implementation. Potentially, there could be thousands of groups using it, across the United States.

Thus, we need an application for users to construct metadata according to our schema. We would like the end-user experience to be semi-graphical, utilizing drop-down menus, selection buttons, etc., as appropriate for different portions. In addition, we would like for a user to manipulate the metadata as modules—combine or split sections. This condition might exist if there were two or three sub-projects, each of which, when completed, has a metadata created for its data. If we wish to combine these subprojects, we would like to easily combine the metadatas. We would like to be able to have a drag and drop interface for such combinations. Likewise, we would like to be able to fork off subsets of a given metadata.

Finally, we would like to be able to modify the schema as needed—not have it hard-coded. This is in case future events show us that our schema needs to be fixed. This could be more technical and involve some (very) simple and basic coding. For example: Our schema has a list of file types. In the future, we may end up generating raw data with new (currently unknowable) file types. We would want to add these file types. We also want output to be generated in JSON format. It would be nice to also generate XML and YAML. Whether the application uses JSON, XML or YAML internally isn't important. We just want to be able to create JSON and possibly the other two.

Enclosed are three additional documents. "Data SOP part 2 240424.docx" is a description of manually creating a metadata according to our schema. "Metadata Figure.pptx" is an illustration of the structure of the metadata schema that would apply to one of our projects. It would be nice if the project could take a metadata and create such a graphic output. The output does not need to be PowerPoint format. However, it would be nice if it weren't just a bitmap and were something like EMF. The file "Three Formats for Metadata concept.docx" is three examples of the metadata created as files, specifically in JSON, XML, and YAML formats.