The Problem
Currently, librarians, archivists, and museum professionals can choose from a large universe of representation standards (see Figure 1). Each of these standards exhibits various strengths and weaknesses based on the problems they are engineered to address. Unfortunately, standards developers do not always explicitly articulate the problems or the contexts that shaped a particular solution. Although Greenberg (2005) provides a way to classify standards according to their domain, objectives, and architecture, there is no mechanism to identify and organize the features found within a standard.

Solution
Design patterns – optimal solutions to common problems – are useful tools used by developers for software engineering, interface design (Figure 4), ontology development, and Linked Open Data modeling (Figure 3) (Gamma, et al., 1995; Blomqvist, Gangemi, & Presutti, 2009; Dodds & Davis, 2011; Gangemi, 2005; van Harmelen, ten Teije, & Wache, 2011). Although the library, archive, and museum (LAM) domain frequently uses concrete examples in standards documentation, these examples lack important features which make design patterns useful. In addition to providing solutions, design patterns serve an important function by identifying and articulating common problems. By doing so, design patterns create a shared technical lexicon around which designers, developers, and creators can structure their conversations (Dearden & Finlay, 2006). Because design patterns make problems, their contexts, and solutions explicit, they can serve as important educational tools for students and novices (Chatzigeorgiou, Tsantalis, & Deligiannis, 2008). Design pattern languages are also capable of expressing patterns at different scales and in ways that build relationships among patterns (Alexander, 1977).

Ongoing Research
The initial work funded through the FYAP grant exposed several difficulties in shared understandings of what design patterns are and how they can be used. This observation translated into a series of qualitative questions that are driving semi-structured interviews with individuals responsible for developing cultural heritage Linked Data services. At this time five interviews are complete. The results of these interviews will inform future development of a published pattern library.

References