Institutional Linked Open Data

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Museums, libraries, archives and laboratories in academic organizations are major players of collecting, accumulating and propagating humanities resources. Each organization provides excellent databases with sophisticated GUIs and APIs to find valuable information. Nevertheless, these databases are difficult to say as "knowledge support tools." The reasons are that each database is isolated and this makes it difficult to automatically link related databases, and then users need to find and retrieve necessary databases to collect information by try and error. For example, even following simple sequence is difficult to process automatically; finding a paper and its authors from a database -> finding another papers written by the same authors from other databases -> collecting a set of reference materials from the Web. Much less, we cannot count on these isolated databases to discover hints or knowledge to solve problems.

The obstacle to advanced usage of humanities resources caused by isolations will be solved, if databases can be reorganized as "linked data." That is, information should be fragmented into a set of smallest parts (subject, predicate and object) each of which is described by the standard way (RDF), and subjects and objects must be described by URIs to be uniquely identified and linked on the Web. By these methods, it will be easy to set automatically links between related information in different databases. Humanities data sets are relatively simple and small, but these data sets will be "complex big data" if these are reorganized as "linked data." Once linked big data are created, intelligent searches will be possible, that is, by following links, we can induce causal relationships, discover possible results and infer alternative interpretations.

This session "Institutional Linked Open Data" is the same theme in succession to PNC2015 and intended to exchange and circulate experiences of applying "linked data" techniques to databases of academic organizations to change academic databases into "public knowledge support tools."