Global interoperability and linked data in libraries: ICCU international commitment

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The digitization of cultural heritage issues even new challenges for accessing and sharing the content on the web. The Central Institute for the Union Catalogue of the Italian Libraries (ICCU), which is involved in the digitization of cultural heritage, participates in the European debate on open data to develop new approaches for the valorization of cultural heritage within some major European projects such as Europeana and Linked Heritage, and national initiatives as CulturaItalia, the Italian culture portal.

This conference is organized in cooperation with the Linked Heritage project, funded through the ICT Policy Support Programme, and coordinated by ICCU. Linked Heritage involves 20 European countries and dozens of European cultural institutions in each sector (archives, libraries, museums). Its main objective is to provide 3 million data to Europeana; the first ones will be online in September 2012. In addition, the Linked Heritage partners are working on three areas considered crucial for the development of cultural content on the web: multilingualism - with the aim to supply cultural institutions with a technology platform that facilitates the production of multilingual metadata that can be easily found in Europeana and in

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the web; the participation of the private sector (publishers in particular) in the context of content aggregation - traditionally developed in the public sector - with the aim to spread in the web even content protected by copyright; finally, the linked (open) data of cultural domain (LOD). This last topic is now considered crucial for all cultural institutions in Europe who want to publish their cultural resources on the web; on the other hand, concrete experiences of application are not yet widespread. Europeana has recently produced a video on linked open data in the cultural sphere in order to promote their use and reuse; the video has also been translated into Italian and is available on CulturaItalia. Linked Heritage partners are currently working on some resources already sent to the Europeana to experience possible applications of linked open data in the cultural field and to help cultural institutions to publish their data as LOD.

The possibility of connecting information offers many advantages because publishing raw data online and making connections with other data of the same type allow content providers to enrich the knowledge, improve their visibility on the web and obtain multiple benefits:

**Less duplication of information.** For example, those who create a dataset can directly connect it to other existing datasets created by other entities. Less work and updated data at the same time.

**Higher profile.** The Linked Open Data helps generate meaningful links between web pages. This helps users to discover content, which in turn raises the institutions’ profile and drives the traffic to their websites.

**Authority.** DBpedia, FreeBase, and Project Gutenberg are often cited as sources of authoritative metadata. Cultural institutions can become authorities for information on cultural heritage.
New audience. When users analyze data and use it to create applications such as APIs and mashups, they offer your content to a new audience that couldn’t be otherwise reached.

Better user experience. By providing users high quality, contextually relevant information, their viewing experience is improved and they will therefore be more likely to visit again the website of the institute.

Efficient use of resources. Sharing data coming mainly from public investment means that it can be used more efficiently because users can help enrich those resources. This also means direct reuse in areas such as education, scientific research and cultural tourism.

Even CulturaItalia, the Italian culture portal promoted by the Ministry for Cultural Heritage and Activities (MiBAC) and managed by ICCU, is moving in the direction of linked open data: his system is also designed to transform the metadata provided by cultural institutions in LOD and automatically send them to Europeana. The content providers that wish to join CulturaItalia sign a license that illustrates the content (metadata) to be made available in the portal, the activities to be carried out for the interoperability of databases, and the frequency of updates. This agreement also includes the possibility to send data to Europeana under the terms of the Data Exchange Agreement (DEA) based on the open license Creative Commons 0 (licensed under public domain) aimed at the re-use of data as Linked Open Data. CulturaItalia released a new license in line with the Data Exchange Agreement of Europeana and started a plan to renegotiate the existing agreements between CulturaItalia and its content providers. The answers are not immediate because the Linked Open Data are not yet so widespread and the aggregators must in turn ask their content providers if they agree. The positive
feedbacks are mainly from the library world: the libraries that participate in Internet Culturale, the portal of the Italian libraries whose data are included in CulturaItalia, were the first.

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