XML Schema-Driven Implementations of Architecture. Virtual Museum over the Web

Ali Elbekai, *Higher Institution of Computer Technology, Libya*

Based on the previous experience gained during working on previous projects for publishing museum content over the Web and also, to extends the work presented at CIDOC 2005, CIDOC 2006 and CIDOC 2007. The paper describes one further step in the direction of accomplishment of truly pan-European collaboration for organisation of virtual museums and exhibitions. Using an XML schema for specification of the common museum information and utilising contemporary information technologies for processing XML data over the Web, the approach adopted demonstrates how to add a new European dimension in the inter-museum collaboration and to achieve wider access to the rich European cultural heritage.

The paper describes an implementation of architecture for organising virtual museum, which uses information provided by the collaborating museums in the form of Web services. The museum content published by the collaborating museums is organising in a homogeneous virtual exhibition space by an exhibition curator and is accessible from a single point of entry – the Virtual Exhibition site. The system presented is build entirely using public domain stack of technologies for processing XML data in Java (J2SE, J2EE and additional XML and Web Services packages Object Oriented Programming). It functions as entirely server-side Web application executed by Tomcat server connected to a backend database (one for each participating museum plus one for the exhibition itself). Furthermore, we will use the UML is to be able to produce detailed object models, in addition to identifying the use case diagrams for the proposed system and expanding them into full behavioural designs. The implementation of the architecture virtual museum shows the entire important diagram such as activity diagram and sequences diagram that shows how the system processes this activity. The system will be demonstrated during the conference.