Building Image-based Electronic Editions using the Edition Production Technology *

Alex Dekhtyar, Ionut E. Iacob, Jerzy Jaromczyk, Kevin Kiernan,
Neil Moore, Dorothy C. Porter
University of Kentucky
Lexington, KY 40506
{dekhtyar,eiaco0,jurek}@cs.uky.edu, kiernan@uky.edu,
neil@s-z.org, dporter@uky.edu

ABSTRACT

We demonstrate the Edition Production Technology (EPT), an integrated development environment for building Image-based Electronic Editions (IBEE). EPT is developed in Java on top of Eclipse platform and benefits from the openness of Eclipse's plugin architecture and its portability (currently EPT runs on Windows XP, Linux, and Mac OS X). EPT provides software support for building image-based digital libraries of historic documents. Starting with high resolution images of manuscripts and transcriptions of them, EPT tools provide support for creating XML encoding of the electronic edition, searching the electronic edition, linking text and images, and publishing the electronic edition (using filters and XSLT).

Categories and Subject Descriptors

H.5.4 [**Information Interfaces and Presentation**]: Hypertext/ Hypermedia—*Architectures*; D.2.11 [**Software Engineering**]: Software Architectures—*Domain-specific architectures*

General Terms

Management, Design

Keywords

Image-based electronic edition, XML management

1. INTRODUCTION

The process of creating image-based electronic editions of historic manuscripts is necessarily very complex and requires extensive labor from the humanities researchers. In this process, digital images of the manuscript are taken and a transcript of the manuscript is created based on images of the manuscript folios. The EPT (Figure 1) consists of a set of flexible and highly customizable editorial tools developed as part of the interdisciplinary projects Electronic Boethius [1] and ARCHway [2] at the University of Kentucky.

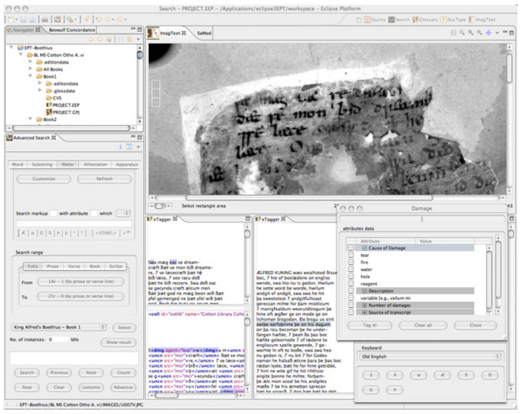

Figure 1: The EPT overview

2. DEMO OVERVIEW

We demonstrate the EPT by creating a project and going through the usual operations for preparing an image-based electronic edition: content markup (using only text projections or filtered XML views), automatic linking of images and text, and text updates. We demo the support for overlapping markup structures by adding or removing DTDs and markup encodings from external files, searching overlapping XML structures, and publishing the encoded materials as HTML views. We demonstrate how our document-centric XML editor can significantly simplify and speed up the encoding process. In addition, we will show how the Eclipse plugins architecture allows the EPT to be customized by adding new tools and functionality to meet the editor's specific needs. We will furthermore present such a plugin that translates operations on standard and multihierarchical XML documents, images, and other types of data into HTTP requests. This HTTP driver allows EPT to transparently access and manipulate projects, images, and markup data stored on a remote web server, simplifying collaborative editing projects.

3. REFERENCES

[1] K. Kiernan and D.C. Porter. Edition Production Technology (EPT) and the Electronic Boethius Project. *DigiCULT*, forthcoming 2005.

[2] K. Kiernan, J.W. Jaromczyk, A. Dekhtyar, D.C. Porter, K. Hawley, S. Bodapati, I.E. Iacob. The ARCHway Project: Architecture for Research in Computing for Humanities through Research, Teaching and Learning. In *Literary and Linguistic Computing*, accepted, forthcoming 2005.

*This work was supported in part by the NSF under Grant No. 0219924.It is subject to GC-1 Grant General Conditions (10/98) and is made in accordance with the provisions of NSF 98-63, ITR. The work of the second, fourth, and sixth authors is supported in part by a Collaborative Research Award from the NEH and the Andrew W. Mellon Foundation.

JCDL'05, June 7–11, 2005, Denver, Colorado, USA.