

University of Massachusetts Amherst

From the Selected Works of Yuan Li

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Selected Works Page as a Comprehensive Tool for Promoting Faculty Research

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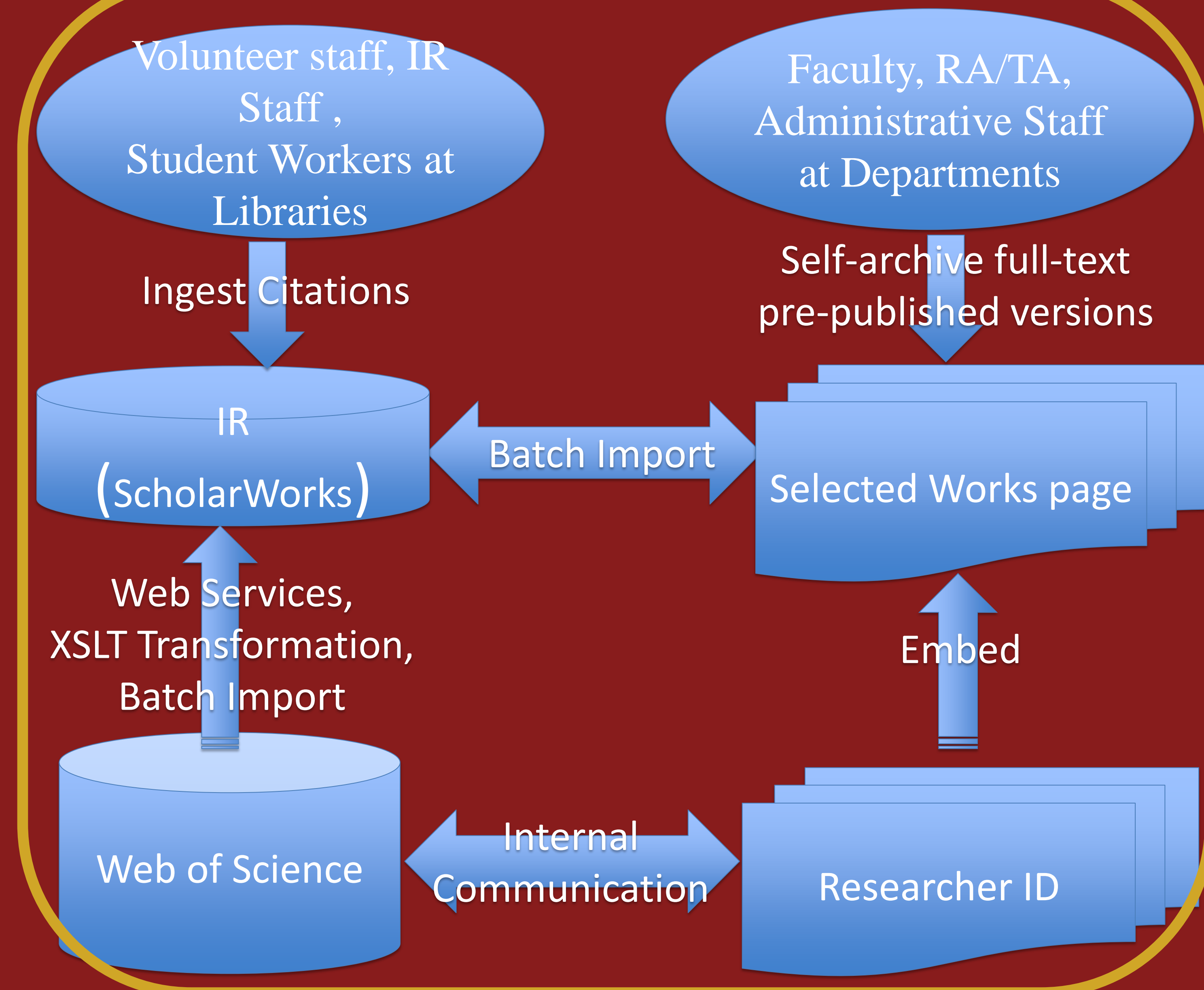
Available at: https://works.bepress.com/yuan_li/1/



Introduction

Selected Works (SW) page is a personal research page for collecting, preserving, and promoting faculty research, developed as an integral part of the Institutional Repository (IR) of the University of Massachusetts Amherst, which serves as an open access information portal to increase visibility, usage and impact of both ongoing and accomplished research of included faculty members. ScholarWorks team create SW pages and ingest citations for each faculty by using a newly developed workflow, which takes advantage of technologies, such as Web Services, schema transformation and batch import, and is much more efficient than a traditional workflow (500 items/person*hour V.S. 20 items/person*hour). In addition to highly improved content ingesting efficiency, embedding ResearcherID in SW pages greatly enriches the information on the pages by providing more research metrics, such as article citing accounts, h-index, co-author collaboration network, etc. Therefore, each faculty has a SW page as a comprehensive tool for promoting their research.

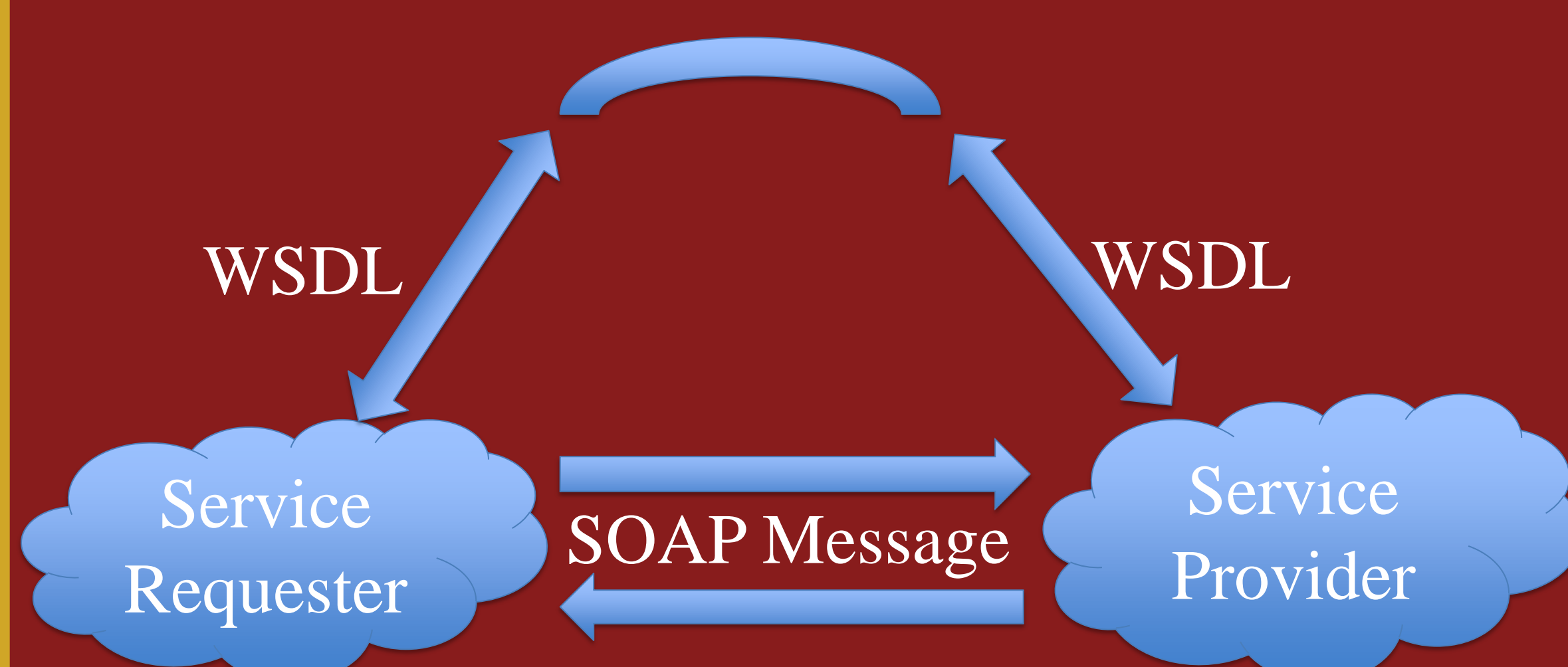
Workflow



Web Services

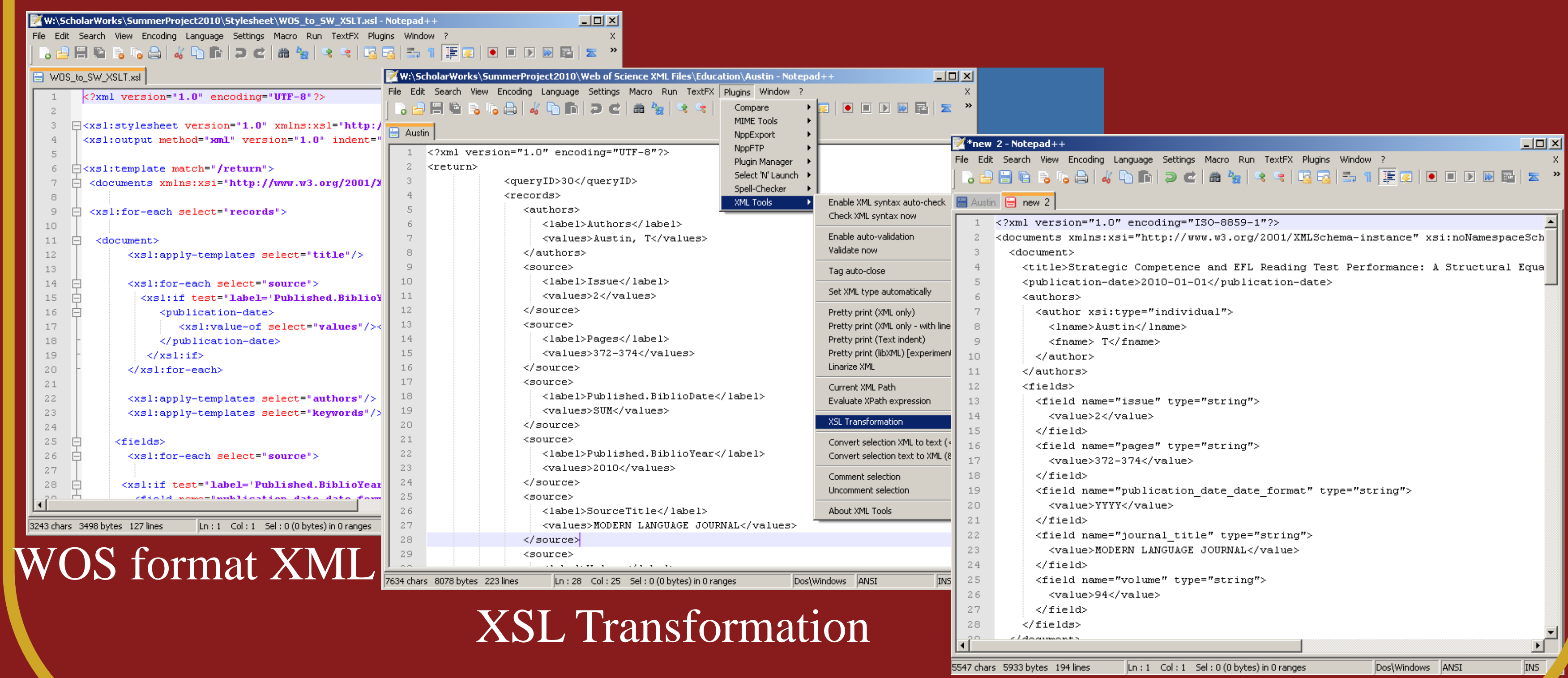
A Web service is a software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in a machine-processable format (specifically WSDL). Other systems interact with the Web service in a manner prescribed by its description using SOAP messages, typically conveyed using HTTP with an XML serialization in conjunction with other Web-related standards.

(Definition is from W3C Website at <http://www.w3.org/TR/ws-arch/#what-is>.)



Schema Transformation

All search results are exported in XML in the Web of Science (WOS) format. In order to use the batch import XML function in Digital Commons (DC), the xml file is transformed from the WOS format to the DC format by using an in-house developed XSLT stylesheet.



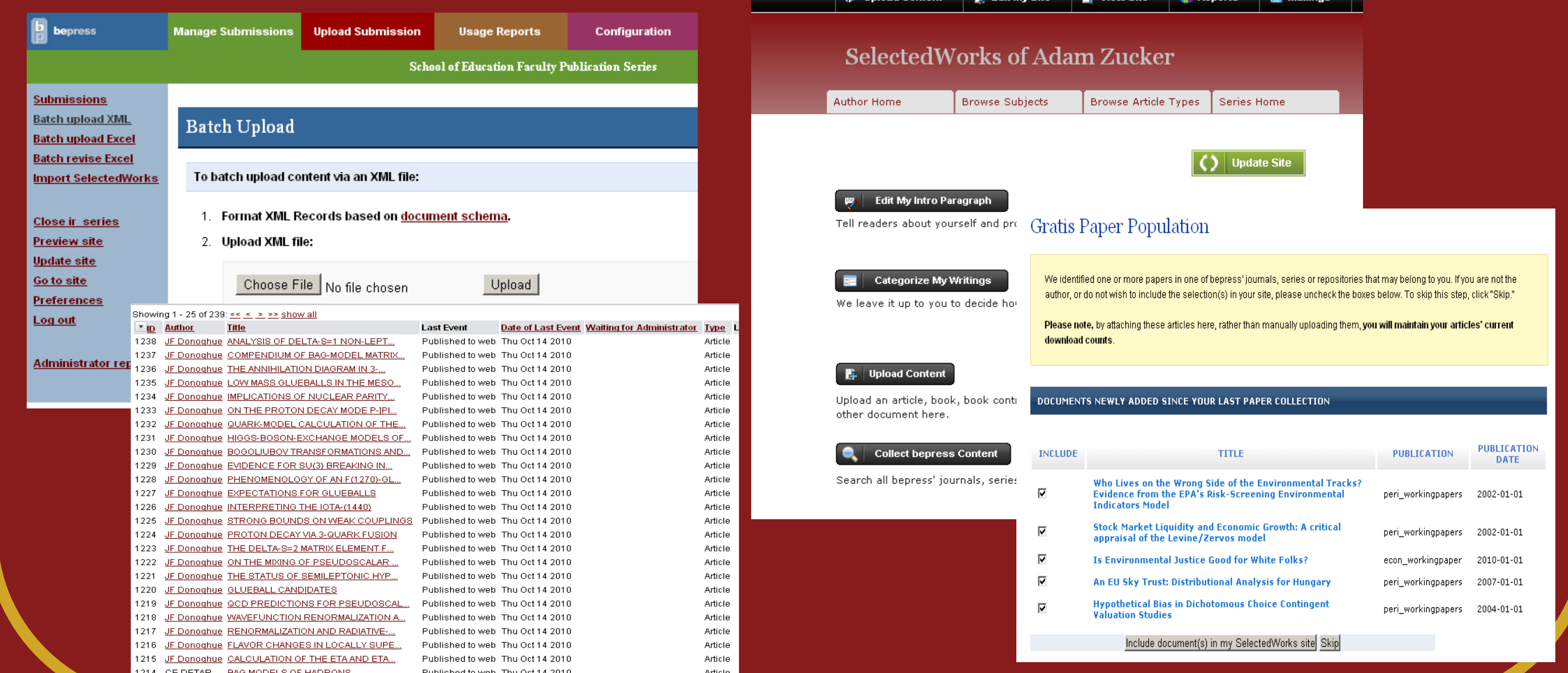
WOS format XML

XSL Transformation

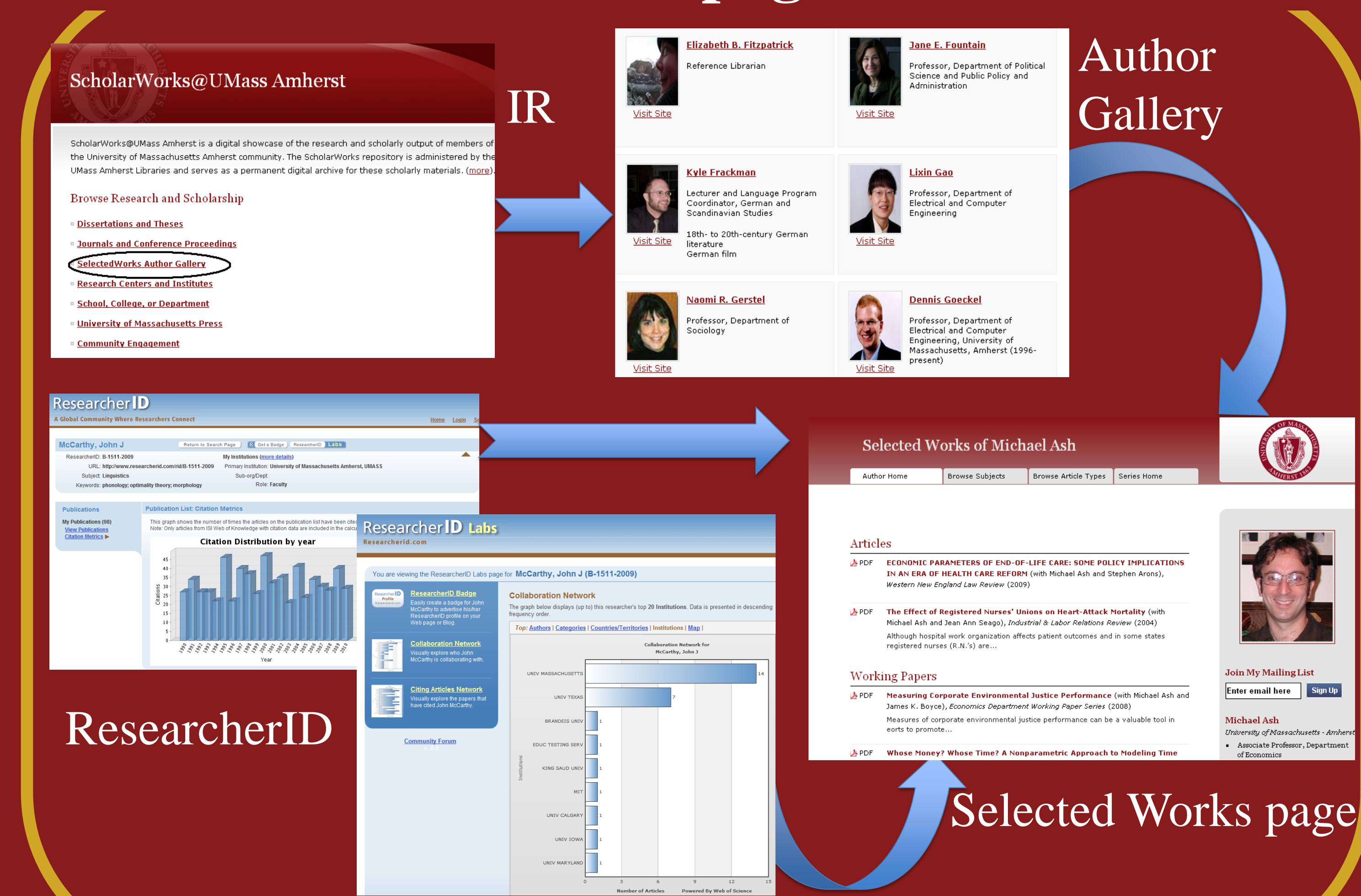
DC format XML

Batch Import

In order to ingest data efficiently, the Digital Commons platform provides two methods for batch import data: batch upload XML and batch upload Excel. We use the approach of batch uploading XML to batch import data into our IR (ScholarWorks) and move all data from ScholarWorks to SW pages using the “Collect bepress Content” tool.



IR & Selected Works page & ResearcherID



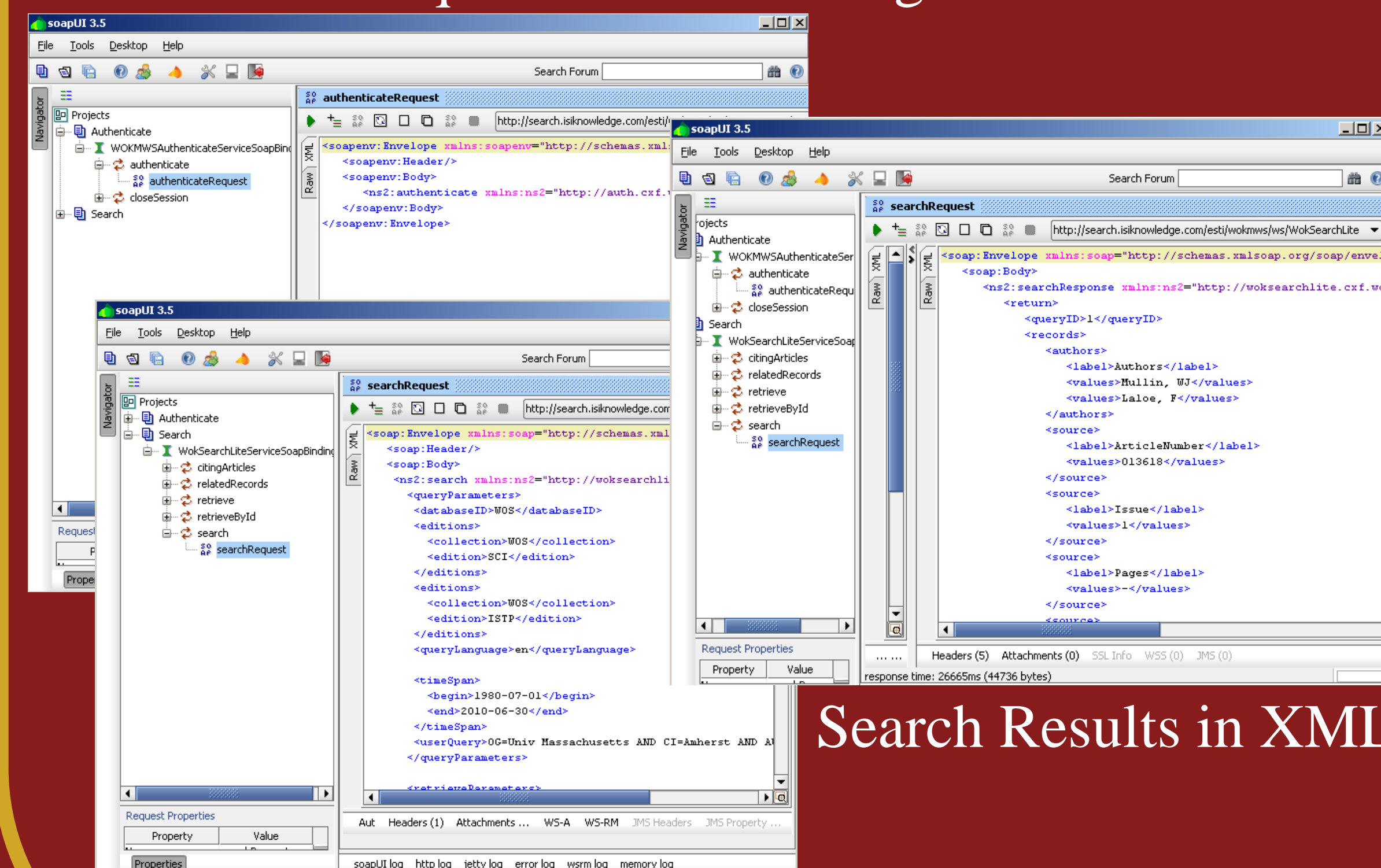
ResearcherID

Selected Works page

WSDL: Web Services Description Language.

SOAP: Simple Object Access Protocol.

Authenticate Request SOAP Message



Search Results in XML

Search Request SOAP Message



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