JISC

The University of
Nottingham

Project Information			
Project Acronym	SAMSON Extension Project		
Project Title			
Start Date	1st April 2011	**End Date**	31st May 2011
Lead Institution	University of Nottingham		
Project Manager & contact details	Kirstie Coolin Kirstie.Coolin@nottingham.ac.uk 0115 95 16976		
Programme Manager	Ruth Drysdale		

Document Name		
Document Title	Project Report	
Reporting Period		
Author(s) & project role	Kirstie Coolin, Project Manager, University of Nottingham Stuart Wood, Application Developer, University of Nottingham	
Date	24th May 2011	**Filename**	SAMSON-Extension_Final_Report_KC.pdf
URL		
Access	Project and JISC internal	✓ General dissemination

Document History		
Version	**Date**	**Comments**
V1	24th May 2011	KC

Project: SAMSON Extension Project

Centre for International ePortfolio Development, University of Nottingham

Contents

1. Background

This project extended the CIePD's SAMSON Project[1] to deliver a self-contained piece of work to deliver a practical model to demonstrate how an agreed set of employability competences can be combined with existing institutional information to provide personalised services for the sector.

The core aim of the project was to provide additional services within SAMSON's lightweight technical architecture to support Career and Professional Development (CPD) for University Post Graduate Researchers (PGRs).

In 2006, the University's ePARs tutorial and skills system was enhanced to incorporate Post Graduate Training, linked to Robert's skills, from a legacy Ingres database. This was funded with Roberts Money and piloted with Post Graduates in the Institute of Work, Health and Organisations. A new CPD database system, called DANTE, was introduced in 2010 by the Professional Development team which centralised post graduate courses, along with other University-based CPD courses. Also in 2010/11, the University instigated a review of the ePARs system with a view to replacing it in the longer term. Furthermore, the Researcher Development Framework was developed nationally in 2009 following recommendations to provide a competence framework for PGRs and research staff.

Funded by JISC's Flexible Services Delivery Programme, the University's PRAM project[2] is developing a Post Graduate Research Administration Module in conjunction with Oxford University and Unit 4 Agresso. Included within the specifications of the system, and also desirable for other University skills portfolio systems, was the requirement to push post graduate training to students based on their skills needs.

The University is currently considering models for offering CPD modules and training courses to the private sector through its overarching 'Engaging with Business' programme. The University currently has around 400 courses and many thousands of individual course instances on DANTE: these include core staff development offerings, accredited courses, Graduate School and Graduate Centre courses. In addition, individual University modules are held within the Student Management System and offer an, as yet, relatively untapped source of employer-focussed training.

The project aimed to bring together the PRAM and Professional Development teams to create a project team to provide standards-based web services for interoperability of CPD and PGR employability skills.

2. Organisational and technical issues

1.2   The CIePD joined with members of the University's JISC-funded PRAM project and the Professional Development team to deliver the project. There were no organisational issues and the Project Team worked well together.

---

[1] http://www.nottingham.ac.uk/eportfolio/samson/
[2] http://www.jisc.ac.uk/whatwedo/programmes/flexibleservicedelivery/pram.aspx

3. Approach

3.1 The Project team consisted of members of the CIePD, PRAM and Professional Development, and met twice to coordinate the project, communicating informally via phone and email. Discussions were technical as well as user-focussed. Development was iterative and testing took place throughout the project with the CIePD application developer providing and advising on feeds.

The project focussed on the technical work which was agreed at the meetings as follows:

- Create XCRI 1.1 web service from the DANTE database
- Create sample 'reader' interface for the XCRI feed
- Import the Researcher Development Framework (RDF) into a database structure
- Create a webservice from the RDF using the emerging JISC-funded InterOperability[3] data standard
- Create additional input screens for DANTE to include RDF broad domains
- Additional screens for 'training attended'
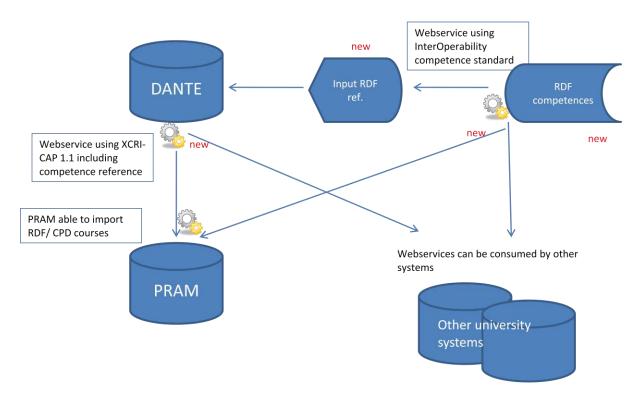- Provide a model for incorporating PGR training into the PRAM project and beyond

Fig1: illustrates the new developments created and how systems interact

PRAM has already investigated the University's current situation with PGR training. There are some issues, outside of the scope of this project, with how courses are allocated 'training points' (also known as 'credits') around the University. However, by demonstrating new methods to join systems and by providing easy and time-effective interventions (i.e. the simple additions to the DANTE input screens) the benefits of ensuring that richer course information containing the broad competences adhering to a national framework are clear and achievable.

---

[3] http://www.interopability.org/wiki/

Fortunately, DANTE, although an externally purchased system, is hosted within the University and there is flexibility to access the database back-end to develop web services. Dante is fairly simple in how it stores information, using the notes field to describe extra information about, for instance, the intended audience or learning outcomes. However, this is not particularly useful for interoperating with other systems where competences and learning outcomes are required to provide richer additional uses for other systems. Within PRAM, the model developed will allow PGRs to assess their own skills and to record training (and therefore) skills they have achieved/evidenced. Currently, there are concerns that some PGRs often do not see the value in undertaking extra courses, which on surface appear irrelevant to their research. By providing systematic access to the RDF and skills-based training outcomes via PRAM, it is anticipated that PGRs will be better able to associate the CPD available with their own development as researchers. The University is following the PRAM project with a roadmap for implementation, which will include the SAMSON Extension developments.

4.   Meeting the project requirements – deliverables

4.1   Identification and implementation of Roberts metadata
Through conversations with key staff combined with desk-research, the team decided to use data provided within the Researcher Development Framework (RDF) as this is a UK competence framework recognised by the University.

4.2   XCRI Mappings for CPD and placement data
The CPD data within DANTE was mapped to XCRI-CAP 1.1 with the web service available from here http://dante.samson-portal.org/ResearchDevFrameService.asmx/getCourses . Technical information is available in Appendix A.

The placement instances held on the SAMSON Placements Portal had previously been mapped to RSS as this provided a simple and universal mapping available to be shared with a wide range of systems. The placements were also were mapped to XCRI-CAP 1.1. The web service is available here https://notts-pg-placements.co.uk/xcri/xcri.aspx. The placements data from the SAMSON Placements Portal is fairly basic in terms of advertising information, with each individual placement described within an XCRI course element. The mappings were as follows:

XCRI-CAP 1.1	Placement information
identifier	Unique URL
title	placement name
subject	category (e.g. 'art and design', 'marketing')
description (terms:topic)	Placement activity description
url	link to placement opportunity

This is essentially headline information, however, where more detail is provided, not just for placements, but also internships, common fields include:
Deadline, Region(s), Address information, salary information, company sector, duration, start date, end date. Whilst some of this information does overlap with XCRI-CAP 1.1 (sector as subject, start and end dates, duration etc.) the information clearly moves towards job advertising information and HR-XML.

This project recommends a follow up exercise to standardise placement information into HR-XML and explore how data can be linked between a course-based placement and the course itself and for the sector to agree on how to commonly standardise placements, internships and apprenticeships.

4.3   *Recommendations on XCRI enhancements/suitability of XCRI-CAP and XCRI 1.0*
The project demonstrated an extra input element to the Dante courses which includes the ability to choose relevant RDF competences associated with the course. For headline information, XCRI-CAP 1.1 provided the flexibility to incorporate references to competence information. With the development of a competence framework data standard in the InterOperability project, there should be no need to duplicate a structure using extended XCRI elements, rather, a connection to a URI referencing the competence would be advised. This is being explored further in the InterOperability project which finishes in July 2011.

4.4   *Recommendations of key vocabularies for placements and CPD*
The Researchers Development Framework web service outputs the 4 domains, shown here http://www.vitae.ac.uk/policy-practice/234471/Framework-content.html . Also output are sub domain items within each domain. The RDF was stored on a local database for the purposes of creating the web service. The sub domain was given its own table, however, there was not really an appropriate or meaningful way of incorporating these sub domains into the output xml as they apply to all items within each domain, rather than being a logical descendant of the individual domains. Codings exist within the RDF as described on the framework content page. Codings have been developed using these to reference individually each competence element and the relation to its parent. In terms of providing unique references, ideally, URIs to represent each element, and agreement on how to use the codes provided would be desirable to work towards the goal of providing a UK national and sharable data resource. Providing an RDF web service ensures that other systems can also use this. This piece of work will also transfer to the InterOperability competence standards project so as interoperability of the framework can be tested with the ePortfolio systems provided by partners in that project, for instance, PebblePad, Tag, MyKnowledgeMap and ePet.

4.5   *Interoperable XCRI web services between UoN test-bed systems*
The project has provided webservices illustrated in Fig1 which provide a circular joined-up set of services and user-interventions to demonstrate CPD course creation through to PGR skills mapping and development.

4.6   *Sustainability plan*
The outputs from the project will be integrated into the PRAM implementation project. This will occur within the University following the close of the JISC-funded PRAM project. The University is moving towards a Service Oriented Architecture, and the webservices and enhancements to DANTE will contribute to the University's information landscape. The Professional Development team have a good working relationship with the company providing DANTE and will take forward a conversation to establish how DANTE might want to take these 'feature' enhancements forward for the benefit of their other HE clients. Standardising the RDF in the emerging Competence standard for further testing in the InterOperability project will ensure that project outputs are re-used and disseminated more widely.

4.7   *Case Study Report*
This report consists of the University of Nottingham's case study.

5.   Dissemination and update from core SAMSON project

- **Derby Validation Assembly 17th May 2011**
  Showcase of the SAMSON Benefits Realisation University of Derby project
- **Mahara 2011 22nd June 2011**
  Paper accepted – SAMSON ePortfolio pilot with Mahara
- **XCRI Validation Assembly 27th June 2011**
  National XCRI Showcase event, joint with Middlesex University's MUSKET project
- **EPIC 11-13th July 2011**
  Papers accepted – presentation of SAMSON ePortfolio pilots, infrastructure and competence interoperability work.
- **ALT-C 7-9th September**
  Paper accepted - presentation of SAMSON ePortfolio pilot work

Activity on Biosciences
Two employers joined Mahara from this current Biosciences Placement pilot; also, former employers engaged from the first placement pilot have re-joined to mentor new placement students.

The JISC-funded ESCAPES project
The CIePD ESCAPES project, funded under the JISC Relationship Management programme, is blueprinting placement processes within the University and providing technical enhancements to systems and processes developed within SAMSON. This is further embedding the outcomes from SAMSON and enabling the key beneficiaries of SAMSON to continue building on the pilot work undertaken.

Appendix A
XCRI webservice technical documentation

Dante XCRI Web Service

Overview
The XCRI Web service outputs data from the DANTE staff training booking system into an XCRI CAP 1.1 XML document. The XML document is returned when the getCourses() web service is called.

Mapped fields
The following table shows the tables and columns used from the DANTE database with the relevant XCRI mapping. The provider data and the remainder of the data required for the XCRI CAP feed has been hard coded into the web service. An example snippet of the XCRI XML document is included at the end of this document.

Table	Column	XCRI
course	CourseName	course.title
course	AimOfCourse	course.description
course	CourseReferenceNumber	course.url
course_categories	CourseCategory	course.subject
sched	ScheduleReferenceNumber	course.presentation.identifier
sched	Duration	course.presentation.duration
sched	StartDate & StartTime	course.presentation.start
sched	EndDate & TrainingEndTime	course.presentation.end
sched	CourseLocation	course.presentation.venue.title
sched	VenueAddressLine1 & 2 & 3	course.presentation.venue.address
sched	VenuePostCode	course.presentation.venue.postcode

Course Presentation
Each occurrence of a course is output within the XCRI CAP document as a presentation element within the course element. Therefore a course can have multiple presentations within the same course (a strength of the XCRI standard). This storage model will allow aggregators of the feed to show the different dates that the course runs on therefore improving user choice. The example output at the end of this document shows two presentations of the same course and how that is output within the XCRI CAP standard.

Enhancement Recommendations
The XCRI output is fully valid and usable as it is although the following steps could be followed in order to enhance the feed.

- Subject Codes. The subjects held within DANTE could be improved and mapped more closely with SSA (Sector Subject Areas) to make it easier for aggregators. If both the exporter and importer map there own subjects to a standard set of subjects (SSA or JACS for example) then this will improve how the course can be held/referenced/searched for within the importers system.
- Course Descriptions. Within the TEST environment not all courses have full descriptions, if this is the case within the LIVE environment then maybe these could be added.
- applyTo. Email address required for application enquiries.
- enquireTo. Telephone details required for enquiries.

Example Output
The following XML are examples of output from the test DANTE database.

```xml
<?xml version="1.0" encoding="utf-8"?>
<catalog xmlns:xcri="http://xcri.org/profiles/catalog"
        xmlns:terms="http://xcri.org/profiles/catalog/terms"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xmlns:ukrlp="http://www.ukrlp.co.uk"
        xmlns:qcda="http://www.qcda.gov.uk/"
        xmlns:geo=http://www.w3.org/2003/01/geo/wgs84_pos
        xsi:schemaLocation="http://xcri.org/profiles/catalog
                    http://www.xcri.org/bindings/xcri_cap_1_1.xsd
                    http://xcri.org/profiles/catalog/terms
                    http://www.xcri.org/bindings/xcri_cap_terms_1_1.xsd
                    http://www.ukrlp.co.uk
                    http://www.w3.org/2003/01/geo/wgs84_pos"
        generated="2011-04-14T11:21:49+00:00"
        xmlns="http://xcri.org/profiles/catalog">
 <provider>
   <identifier>training.nottingham.ac.uk</identifier>
   <identifier xsi:type="ukrlp:ukprn">10007154</identifier>
   <title>University of Nottingham Staff Training Catalogue</title>
   <url>http://training.nottingham.ac.uk/</url>
   <image src="http://www.nottingham.ac.uk/siteelements/images/base/logo.png"
       title="University of Nottingham" />
   <address xsi:type="geo:lat">52.9395</address>
   <address xsi:type="geo:long">-1.1971</address>
   <address>University Park</address>
   <town>Nottingham</town>
   <postcode>NG7 2RD</postcode>
   <phone>0115 951 5151</phone>
   <email>csc@nottingham.ac.uk</email>
<course recdatetime="2011-04-14T11:21:49+00:00">
   <identifier>
   http://training.nottingham.ac.uk/cbs-notts/Guests/GuestCourse.aspx?CourseRef=X1LA9
   </identifier>
   <title>Listening: Academic Focus</title>
   <subject>Academic Language &amp; Writing Skills</subject>
   <description xsi:type="terms:topic">
     <div xmlns="http://www.w3.org/1999/xhtml">
```

Module description
Aims and Objectives
- To help you understand and develop strategies to cope with spoken English in academic situations. The course provides help with such aspects as:
- Strategies for following a lecture and making notes
- Noticing signals for important information, examples, change of topic etc
- Understanding in academic discussions or seminars
- Strategies for improving listening on your own
- Plenty of practice in using strategies and listening to lectures and discussions, with tutor guidance and support; individual and pairwork activities; discussion of vocabulary and other points of difficulty that arise.

Who should attend
Any international students who would like guidance and practice in improving their listening skills in academic situations

```
        </div>
      </description>
      <url>http://training.nottingham.ac.uk/cbs-
notts/Guests/GuestCourse.aspx?CourseRef=X1LA9</url>
      <presentation recdatetime="2011-04-14T11:21:49+00:00">
        <identifier>TS2605057</identifier>
        <duration>9 Days</duration>
        <start>21/02/2011 13:00:00</start>
        <end>21/02/2011 14:00:00</end>
        <studyMode xsi:type="terms:studyModeType">Part Time</studyMode>
        <applyTo>csc@nottingham.ac.uk</applyTo>
        <enquireTo>Staff Training: 0115 951 5151</enquireTo>
        <venue>
          <title>Jubilee Campus</title>
          <address>A07 Business School South</address>
          <address>Jubilee Campus</address>
          <address>Wollaton Road</address>
          <postcode>NG8 1BB</postcode>
        </venue>
      </presentation>
      <presentation recdatetime="2011-04-14T11:21:49+00:00">
        <identifier>TS6219253</identifier>
        <duration>9 Days</duration>
        <start>07/03/2011 13:00:00</start>
        <end>07/03/2011 14:00:00</end>
        <studyMode xsi:type="terms:studyModeType">Part Time</studyMode>
        <applyTo>csc@nottingham.ac.uk</applyTo>
        <enquireTo>Staff Training: 0115 951 5151</enquireTo>
        <venue>
          <title>Jubilee Campus</title>
          <address>A07 Business School South</address>
          <address>Jubilee Campus</address>
          <address>Wollaton Road</address>
          <postcode>NG8 1BB</postcode>
        </venue>
      </presentation>
    </course>
  </provider>
</catalog>
```