SMART

Student-Managed

Access to Online Resources

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Newcastle University
Outline

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- SMART at Newcastle University
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Project Description

- The **SMART** (Student-Managed Access to Online Resources) project will develop an online data access management system based on the User-Managed Access (UMA) Web protocol, deploy it within Newcastle University and evaluate the system through a user study.

- The project team will also contribute to the standardisation effort of the UMA protocol by actively participating in the User-Managed Access Work Group (UMA WG – charter of the Kantara Initiative)
Project Description - UMA

- **User-Managed Access protocol** – allows an individual control the authorization of data sharing and service access made between online services on the individual's behalf.

Source: http://kantarainitiative.org/confluence/display/uma/UMA+Explained
Objectives:

- Define scenario for UMA use case within Higher Education (HE) environments and provide a comprehensive requirements analysis
- Develop UMA-based authorisation solution
- Deploy the UMA-based solution within Newcastle University:
  - Integrate the system with institutional Web applications
  - Evaluate the system through a user study
- Contribute with the scenario, software and project findings to the UMA WG and actively participate in the standardisation effort of the UMA Web protocol.
- Demonstrate, document and disseminate project outputs
Newcastle University has ~4,500 staff members and more than 19,000 students. This results in large amounts of data being hosted within our institution:

- **personal information** – dob, address, lists of modules and courses, certificates, marks, reference letters, resumes, calendars, etc.
- **resources** – documents, presentations, software, etc.

There is a need for **efficient, secure and usable** access management system that:

- supports data owners with sharing their data
- supports data consumers with accessing this data
Institutional Context - Objectives

- Deploy UMA-compliant software to allow data hosted within Newcastle University to be shared more efficiently and more securely
- Evaluate how students and academics manage their access control using UMA in a large HE institution

By defining the HE scenario we aim to capture distinctive aspects of the UMA protocol necessary for HE environments

We also aim to contribute with lessons learnt from the deployment of UMA-compliant software within a large institution to the UK academic (and AIM) community
Project Benefits

- Participation in the UMA WG ensures that HE requirements for access management are taken into consideration. It also ensures that JISC and UK HE remains at the forefront of developments in Web authorisation solutions.

- Scenario for UMA use case shows applicability of the new technology to HE environments.

- Conducted research, experience and developed software for UMA to be reused by AIM community within and outside UK.

- Contribution to JISC e-Framework:
  - UMA use case scenario & RESTful access control system based on an emergent technology.
  - Reports and the technical architecture of the solution.
# Project – Measuring Success

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>QA Method</th>
<th>Evidence</th>
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</thead>
<tbody>
<tr>
<td>Use Case Scenario (M1-M2)</td>
<td>Fitness for purpose</td>
<td>Relevant to UMA</td>
</tr>
<tr>
<td></td>
<td>Usability</td>
<td>Written clearly</td>
</tr>
<tr>
<td>Requirements Analysis</td>
<td>Fitness for purpose</td>
<td>Allows to develop UMA in HE</td>
</tr>
<tr>
<td>(M1-M2)</td>
<td>Usability</td>
<td>Written clearly, no ambiguity</td>
</tr>
<tr>
<td>Developed Software (M3-M9)</td>
<td>UMA Compliance</td>
<td>Passes validation tests</td>
</tr>
<tr>
<td></td>
<td>Fitness for purpose</td>
<td>Satisfies Requirements</td>
</tr>
<tr>
<td></td>
<td>Usability</td>
<td>Can be easily integrated</td>
</tr>
<tr>
<td>Demo Application (M6-M13)</td>
<td>Fitness for purpose</td>
<td>Matches Use Case Scenario</td>
</tr>
<tr>
<td></td>
<td>Usability</td>
<td>Proves to be usable within HE</td>
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<tr>
<td>Participation in UMA WG</td>
<td>Active Participation</td>
<td>Co-authorship of UMA WG deliverables</td>
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<tr>
<td>(M1-M15)</td>
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Project Team

- Project Manager:
  - Maciej Machulak, Newcastle University

- Project Team:
  - Prof. Aad van Moorsel, Newcastle University
  - Chris Franks, Information Systems and Services, Newcastle University
  - Lukasz Moren, Newcastle University
Project WWW

- http://research.ncl.ac.uk/SMART

**Student-Managed Access to Online Resources**

**Personalised Access Management to Online Resources**

**SMART Project - what's that?**

The project will develop an online data access management system based on the User-Managed Access (UMA) Web protocol, a newly proposed technology that builds on OAuth. UMA is in the process of being standardised by the UMA work group (charter of the Kantara Initiative). The project will define a Higher Education (HE) case study that exemplifies access management requirements for HE applications, implement UMA-based access management solution and evaluate this through a user study. Through this work, we aim to ensure that HE requirements for access management are taken into consideration early in the standardisation process, and, at the same time, ensure that UK HE continues to be at the forefront of developments in this area.

**Latest news**

- JISC AIM 08/09 Start-Up Meeting
  - Posted on 27.02.2019.
- Project Website Launched
  - Posted on 23.02.2019.

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[Read more]
Questions and Discussion
Thank You

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http://research.ncl.ac.uk/smart