IST	IST-2000-28336	ARCO
	Augmented Representation of Cultural Objects	

Updated ARCO Fact Sheet
and
Web Site Report

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Report Documentation Page

Report Documentation

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Glossary

Terms	ARCO Glossary File
For a complete glossary of ARCO terms see	ARCO-Glossary-R-1.0-280402.doc

Table of Contents

1. Introduction

The Web Site document is written in order to disseminate the effort spent on the Web Site on the current period, to provide a guide through the pages, and also to identify and list future developments. Clearly this report is not written to provide any technical details, although the web site's design will be presented. The intended audience is mainly the consortium of the ARCO project.

2. Updated Fact Sheet

This information is detailed in the Project Presentation (Brochure) developed by GIUNTI. However, the basic fact sheet text is repeated here for convenience.

2.1 The ARCO R&D Project

ARCO is a three-year European project that started in October 2001. Its global investment amounts to 2.8 M Euros and is co-funded by the Commission of the European Community within the Fifth Framework of the Information Society Technologies programme. ARCO involves seven partners from 4 European Countries, in a multidisciplinary partnership with participants from industrial, academic, research and cultural sectors.

2.2 The ARCO vision

There are many hundreds of European cultural heritage archives of special scientific and cultural interest. If you consider all the other small museums nationwide, then again European wide, we see the extensive, almost unimaginable size of the cultural archives that exist. We can clearly see a European wide need to preserve, study and protect these heritage archives, while at the same time making them available to the scientist, archaeologist, curator, historian and the European people for their enjoyment and learning. The vision of ARCO is to develop both the technology and the expertise to help create, manipulation, manage and present these cultural archives, and make available cultural heritage to European people and the world.

2.3 The ARCO Objectives

The ARCO project will analyse and provide innovative but simple to use technical solutions for virtual cultural object creation using Image Based Modelling through photogrammetry, manipulation of cultural objects through Interactive Model Refinement and Rendering, management of these objects (virtual representations) through an XML driven Cultural Object Relational Database, and presentation technology based on an Augmented Reality Interface or Web Browser, all developed in this project. All system components will be integrated through XML providing data exchange and interoperability. The project will demonstrate its results through a series of prototype system components leading to a final integration system for evaluation both technically and socio-economically. ARCO will address user (museum researcher and public) requirements, by involving them through the Museum Curatorial Steering Group. In this way, ARCO will focus on serving the end-user.

2.4 The ARCO approach

ARCO is a project that will simplify the digital capture of 3D objects (in the project cultural artefacts held in museum archives) through the use of photogrammetry, thus eliminating expensive laser based methods. The output from the digital capture process will be a standard XML polygon mesh description of the object. The cultural objects will be then refined and rendered to produce an XML based virtual representation, which will be stored in an object relational database. The virtual representation will be then presented to the user (museum researcher or public) through a web browser designed with X-VRML and HTML or screen browser using XML and OpenGL through the augmented reality interface. XML will be the key integrating technology for encapsulating cultural object descriptions and will be the interface mechanism between system components. The use of the XML standard, an XML driven database and interfaces will ensure efficient data exchange and interoperability between systems components, distributed cultural objects databases, and the presentation of cultural objects on the web. Selection of Oracle8i or similar database architectures such as Tamino with

XML development tools means standards and compatibility will be assured. The project will contribute to international standards efforts in XML and other metadata, particularly museum focused standards like CIMI and EMII. The museums (through the Museum Curatorial Steering Group) will contribute a cultural knowledge base at the XML description level at most stages of the project using XML editing tools. The project will produce several prototypes defined by the museum requirements and specifications, with the final prototype undergoing system integration and evaluation. The project plans a major dissemination and exploitation activity designed to ensure maximum uptake of results, the system and its components. Standard project management techniques will be employed throughout the project to ensure its smooth running and success.

The project consortium consists of the:

University of Sussex (UoS), Sussex Archaeological Society (Sussex Past) as assistant contactor to UoS, the department of Information Technology of the Poznan University of Economics (PUE), Commissariat à l'Energie (CEA-LIST), Giunti Gruppo Editoriale (GIUNTI), the UK Office for Library and Information Management at the University of Bath, (UKOLN), and the Victoria & Albert Museum (VAM) as assistant contractor to UKOLN.

3. Overall design of ARCO's Web-Site

The UoS developed ARCO's Web Site. Its purpose is to be accessible by both the public and the consortium. The web site is a continuing development that hosts project descriptions, deliverables, disseminations, etc. The web site also has a secure area for exchange of consortium information that is not public. This area is password secured. The first draft version of the web site has been operational since month 3, and development will continue as the project develops. Figure 1 illustrates the overall design of our Web Site
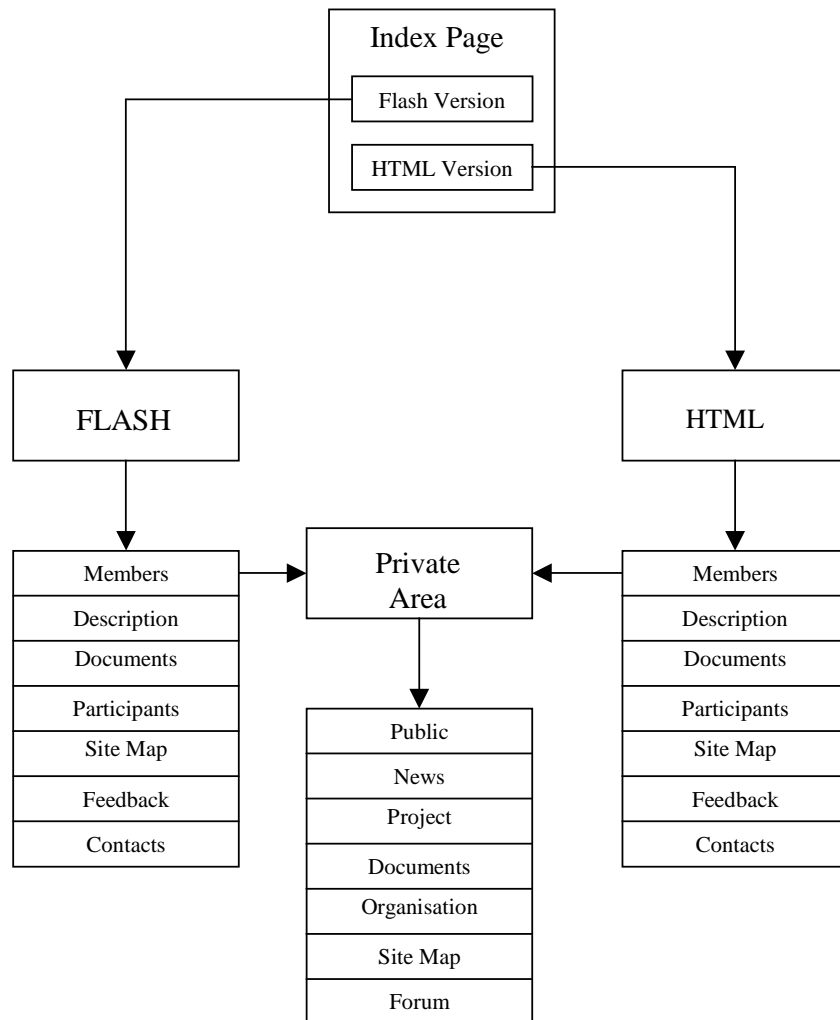
Figure 1: The Overall Design of the Web Site

In order to access the web Site the user needs to enter the following URL http://www.arco-web.org/ in a web browser. The first page displayed is the index page, which provides two links to the public site; a Flash and an HTML version. Both of the latter versions provide the same information. The reasons for the double implementation were that UoS wanted to provide people with a slow connection easy and convenient access to our public site, and also to make our site more attractive with the use of flash technologies. The user may go to our private side by clicking on the Members link. In order to get into the private area the user needs to be aware of the username and password. A more detailed structure and information about the ARCO web site will be presented on the following two sections of this report.

4. The Public Area of the ARCO's Web-Site

On the publicly accessible area, the UoS team has been contracted to provide the Web Site with the following type of information:

- The parts of the Annex 1 "Description of work" deemed by the consortium to be publicly available.
- The Project fact sheet, which will be updated every six months.
- The Project Presentation.
- All public (PU) disseminations
  - Deliverable D6: Description of the Final prototype Interactive Model Refinement and Rendering Tool.
  - Deliverable D8: Report on the XML descriptions of the database cultural objects.
  - Deliverable D9: Report on XML schemas, XSL style sheets and X-VRML technology.
  - Deliverable D10: Report on the XML interface description between system components.
  - Deliverable D11: Final Report on XML Technology.
  - Deliverable D12: Description of the Augmented Reality Interface based on X-VRML.
  - Deliverable D13: Description of the Augmented Reality Interface based on XML/OpenGL.
  - Deliverable D16: Assessment and Evaluation report on the ARCO system and its components.
  - Deliverable D18: Dissemination and Use Plan.
  - Deliverable D19: Updated ARCO Fact Sheet, and web site report
- ARCO publications, e.g. journals, conferences, workshops, etc.
- Feedback forms for targeted groups.

All the above and an amount of other information (such as contacts' and partners' details) can be found on-line. A more detailed structure of the public accessible area will be presented in this chapter.

Figure 2: illustrates the first level of links of the web site when the user has just entered the publicly accessible area. The information held on the pages, where the first level links lead, will be listed in the following subsections of this chapter.
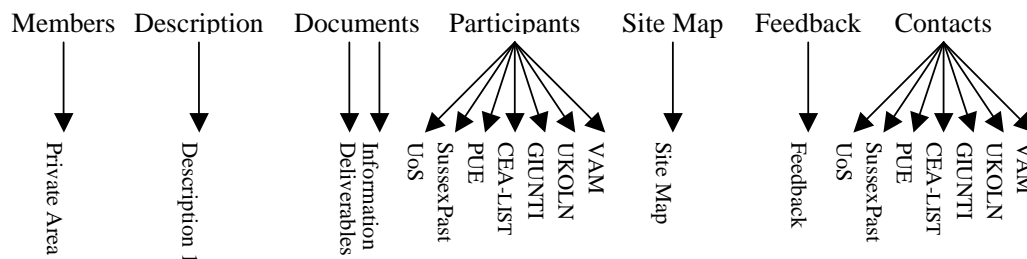

Figure 2: The first level of links in the publicly accessible area

4.1.1 The "Members" link

The "Members" link leads to a page, where the user is asked to enter the username and password. If the login is successful, then he can enter the private area. More details about the private area will be reported on chapter 5.

4.1.2 The "Description" link

The "Description" link leads to a sequence of pages, the first of which is the main page of the publicly accessibly area, where general information about the project; such as:

- Project Summary
  - Objectives
  - Description of work
  - Milestones
- Project Objectives
- Key Technical Objectives
- Key Socio-economic Issues
- Contribution to programme/Key Action objectives
- Community added value and contribution to EU policies
- European Added Value
- Contribution to Community social objectives
- Quality of Life, Competitiveness, and Employment

4.1.3 The "Documents" link

The "Documents" link leads to a page where a set of links some of which are active and others, which will become active through project development.

The complete set of links is the following, and the active ones are in bold.

- "Project Publications"
- **"Project Deliverables"**
- "Project Factsheet"
- "Project Presentation"
- **"Project Information"**

The **"Project Deliverables** link leads to a page where all the deliverables, in the form of a short description, with related work package descriptions also presented. Each deliverable description is actually a link to relative pages, where deliverables' information is provided.

The **"Project Information"** link leads to a page where the standards that will be adopted by the project are presented. Some of the standards have links that lead to pages with additional information.

4.1.4 The "Participants" link

The "Participants" link leads to a page, where the user is provided with very general information about the number of participants and a short description of the work of each consortium member. Also the links from this page lead to relevant pages for each participant that provides information about the groups, the key people and finally links to each group's web site.

4.1.5 The "Site Map" link

The "Site Map" link leads to a page, where the user will be provided with a site map in order to facilitate the site's navigation.

4.1.6 The "Feedback" link

The "Feedback" link leads to a page, where the user could provides feedback about the web site or other issues.

4.1.7 The "Contacts" link

The "Contacts" link leads to a page, where the user is provided with information about all the people involved in the project as well as their contacts.

5. The Private Area of the ARCO's Web-Site

On the secure consortium (private) area, the UoS team has been contracted to provide the Web Site with the following type of information:

- All confidential (CO) or restricted (PP) deliverables:
  o Kick-off meeting minutes, management meeting minutes, prototype specifications, final system specifications, business and IPR models, market analysis, etc.
- All management reports
- All periodic progress reports
- Resource usage sheets and document templates for general partner use
- Model contract
- Consortium agreements
- Exploitation agreement
- The links for JISCmail service, which provides a forum for general or specific consortium communication on technical and management issues.

Figure 3 illustrates the first level of links of the web site when the user has just entered the secure area. The information held on the pages, where the first level links lead, will be listed in the following subsections of this chapter.
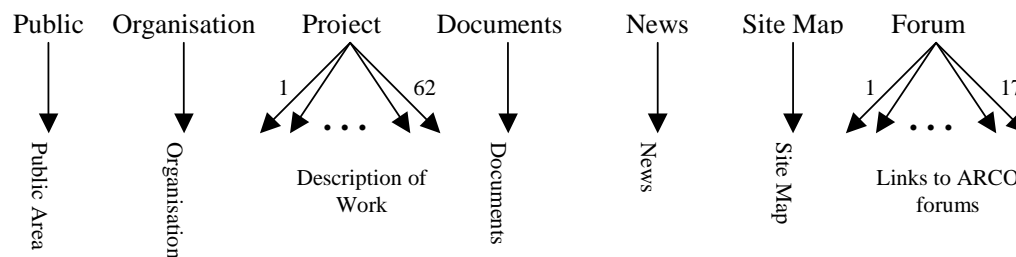
Figure 3 : The first level of links in the secure consortium area

5.1.1 The "Public" link

The "Public" link leads to the main public page of the ARCO web site.

5.1.2 The "Organisation" link

The "Organisation" link leads to a page, where the Project management structure is illustrated.

5.1.3 The "Project" link

The "Project" link leads to a sequence of pages, the first of which is the main page of the secure consortium area, where the description of work document "Annex 1" can be found in an HTML format.

5.1.4 The "Documents" link

The "Documents" link leads to a page where a set of links, some of which are active and others, which will become active through project development.

The complete set of links is listed below, and the active ones are in bold.

- "Project Publications"

- **"Project Deliverables"**
- "Project Factsheet"
- "Project Presentation"
- **"Project Resources"**

The **"Project Deliverables** link leads to a page where all the deliverables, in the form of a short description, with related work package descriptions also presented.   Each deliverable description is actually a link to relative pages, where deliverables' information is provided.

The **"Project Resources"** link leads to a page where there is the set of links comprised below:

- **Project management Templates**
- **Project Months**
- **Annex 1(Description of work)**
- **Project Development Documents**
- **Project Review and Monitoring Templates**
- **Project Contracts & Amendments**

5.1.5 The "News" link

The "News" link leads to a page, where the partners can find all the frequently asked questions.

5.1.6 The "Site Map" link

The "Site Map" link leads to a page, where the user will be provided with a site map in order to facilitate the site's navigation.

5.1.7 The "Forum" link

The "Forum" link leads to a page, where the user could find links and a guide for ARCO forums.

6. Major Changes since the previous version of this report

6.1 Logo & Branding

The Branding of the web site has being provided by GIUNTI.

Figure 4: ARCO logo

The original web site needed to be branded. GIUNTI provided the Consortium/partners with 9 possible branding options. All the partners took part in the vote and the best logo was selected. The winning logo was used to brand the public area of the ARCO web site as illustrated in figures 4 and 5.

GIUNTI provided UoS with the modified templates, which were applied to both of the public sites; i.e. the HTML and Flash Version. Over one hundred pages were modified in this way.
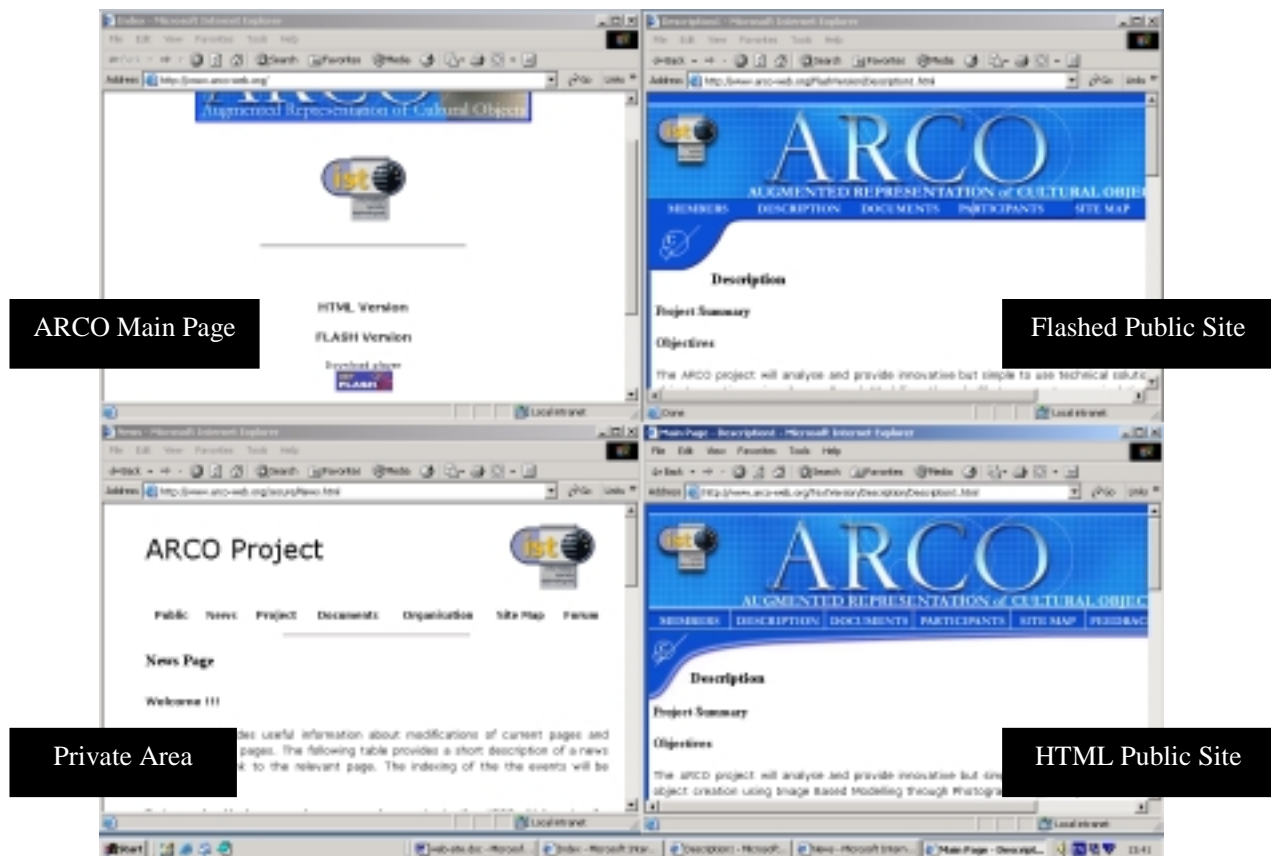
Figure 5: ARCO Web site Branding

When you visit the ARCO web site the first thing you can see on the screen is the ARCO Main Page (illustrated in figure 5). There the user is provided with two options. The "HTML Version" and the "Flash Version". If the "Flash Version" is selected then a short flash movie introduces the ARCO web site to the user. A screenshot of the flash file is illustrated with figure 6. When the flash intro is finished the user is entered to the flashed public web site illustrated in figure 5.
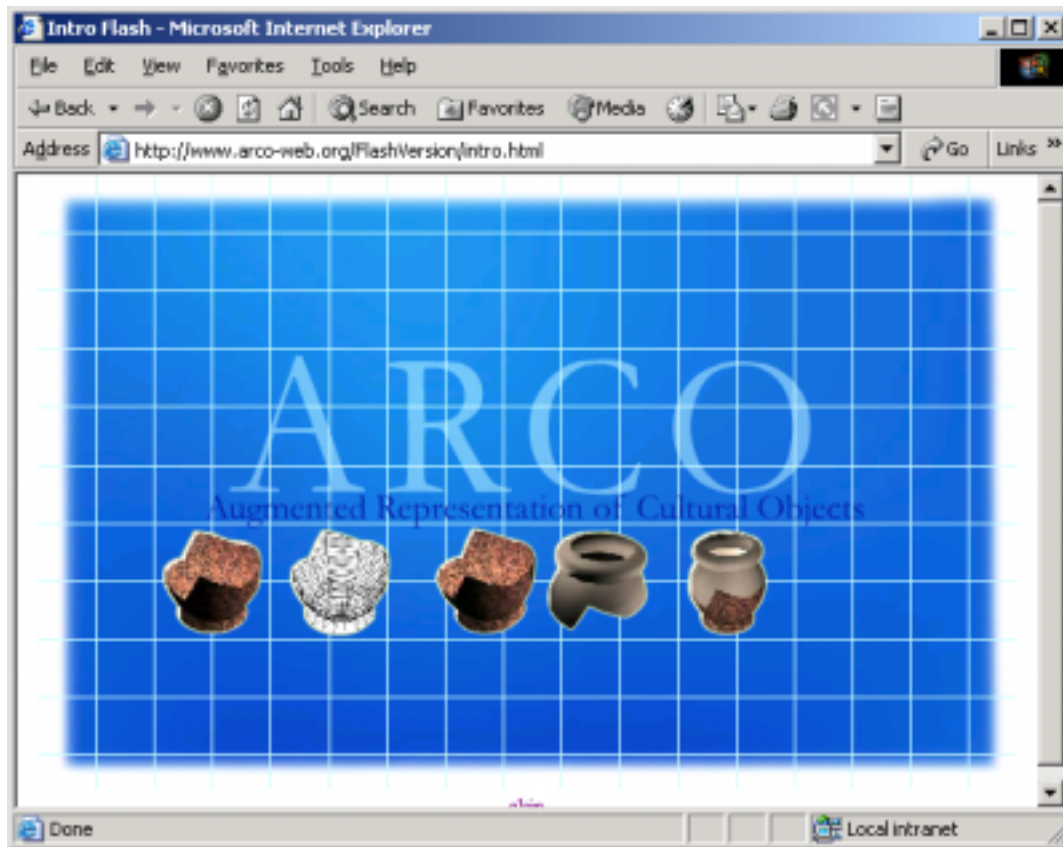
Figure 6: Flash intro

6.2 Site Map

The Site Map, at the moment is at its first draft version. It lies on the HTML public version, and it purpose is to facilitate the users to navigate through the web site. Its current form is illustrated in Figure 7. Of course UoS expects that this page will be refined by the constructive feedback provided by the partners.
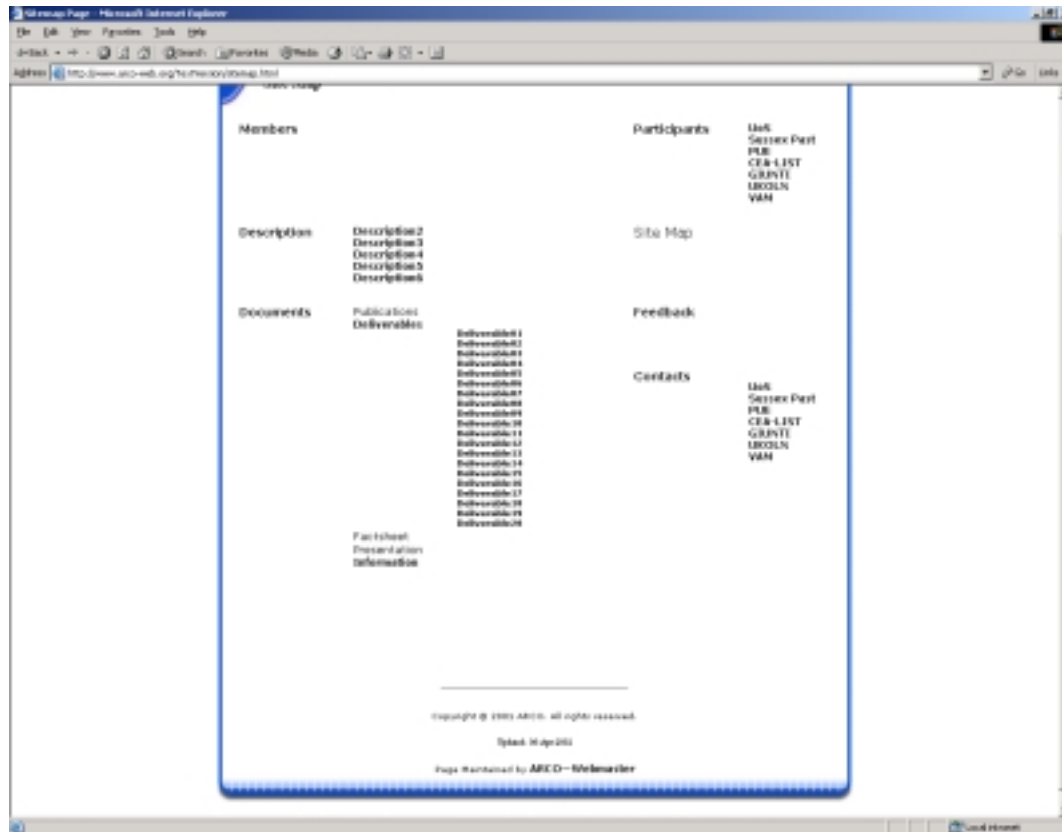
Figure 7: First draft attempt for the Site Map

6.3 News Page

This page provides useful information about modifications of current pages and/or insertion of new pages. The page is illustrated with the use of a table that provides a short description of the news event, and a link to the relevant page. The indexing of the events is chronological.

Figure 8: News Page in the private Area

7. Future Work

The list below identifies the future work that has to be done on the web site.

- Search Engine (pages' search, e.g. Google)
- DB support for JISCmail with user and administration interfaces.
- Web trend
- Hit Counter