



## D6.1 – Project Website

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**Deliverable Identification Sheet**

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Abstract	D6.1 (the project's website) is in accordance with the requirements of the EU; it is developed by AUEB-RC and hosted by the coordinating partner (NTNU). After the website is built by M6, it will be kept updated during PRESIOUS and kept live beyond the end of PRESIOUS, as required by the EU. All publicly available data and reports will be hosted at the project's web site and referenced by the participant's own web pages.	
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## 1. SPECIFICATIONS

According to the Description of Work, the project website will act as a point of reference for all of the audiences and a passive way of discovering PRESIOUS. It will also disseminate all the deliverables graded as 'public'. PRESIOUS website is developed in accordance with the requirements of the EU; the site is designed and developed by AUEB-RC and hosted by the coordinating partner (NTNU). After the website is built by M6, it will be kept updated during PRESIOUS and kept live beyond the end of PRESIOUS, as required by the EU. All publicly available data and reports will be hosted at the project's web site and referenced by the participant's own web pages.

According to EU guidelines, proposed specifications in PRESIOUS Web Site Development Internal Report v0.1 and decisions taken in Project Kick-Off meeting, the finalized specifications are described below.

### 1.1. Domain Name

The reserved domain names for the PRESIOUS website are <http://www.presious.eu> and <http://presious.eu> and both will be kept for at least 2 years after the end of the project.

### 1.2. Layout

**On Every Page:** Project and EU Logos - Site Search – Site Map – Icon Links (like RSS and project Blog – the Social Medium that we shall use).

The basic sitemap should look like the following:

#### Home

- *Abstract* (short project description)
- *Teaser gallery* (no “splash screen”, should be restricted to a small part of the main viewable area) and will contain Videos and Photos as Project Teasers
- *News feed* (latest project news and announcements)
- *Member login*

#### About

- *Goal* (simple explanation for the non-technical visitors)
- *Objectives* (a summary of the objectives stated in the DoW – more technical)
- *Facts* (general financial facts, dates, project status etc.)

#### Consortium

- *Consortium* (participant descriptions, depending on content volume could be a top level menu item)
- A participants country image map (clickable)

#### Deliverables

- *Deliverables table*

#### Events

- *News & Events*

#### Resources

- *Image Gallery*
- *3D Data Sets*
- *Videos*

#### Contact

- *Help Desk*
- *Project Coordinator*
- *Web Master*

### 1.3. Authentication

#### 1.3.1. User access level groups

- *Visitor.* Can access all public content of the site, including publications, public deliverables and data that the IPR committee has classified as public.
- *External member.* He/she is a member of the external expert advisory board (EEAB) and has the same access rights as a regular visitor plus access to specific content as decided upon by the IPR committee.
- *Content editor.* He/she is a member of the consortium with an elevated access level to edit specific content of the site, upload new content or update existing data (including removing content).
- *Administrator.* This group has unlimited access to the web site's CMS and file structure, with permissions to modify the content, structure and underlying infrastructure of the site. Only the systems administrators of the hosting organization and the web developer/designer belong to this group. Administrators can deny or prevent login to a member, external member or content editor if there is any evidence or suspicion of abuse of their right to access this web site, without prior notice.

#### 1.3.2. Users

All authenticated users are assigned by default the “member” role of the CMS. “Content editor” roles are assigned also after a successful email registration and approval of the Project Coordinator. All users of the system have usernames/password exclusively for it and their credentials should fulfill the minimum-security requirements, as this system's Administrators define them.

#### 1.3.3. Access Mechanisms

- *Login.* Users who want to login to this web site will enter their credentials sent to them by the Web Site Administrator to the relevant login section of the front page.
- *Page Access.* Access rights of this web site are defined per section and per role. This means that any page is accessible and readable or editable as long as the role of the user trying to access it has this right, and the section that this page belongs, permits it.
- *Partner Access.* All partners of this project will have full access to specific sections of this web site for editing and uploading data (like publications or digital content pages). Any page that belongs to a partner will be fully accessible by the Partner's content editors.

### 1.4. Web Technologies

As a modern information system, this website exploits the latest achievements in Web Development (like HTML5 and CSS 3.0). This way the website will be search-engine friendly and will have the ability to use a very large array of tools for improving its content and media presentations.

### 1.5. CMS

This web site will be created with an Open Source Content Management System. The reason for this is that Content Management Systems help website creators to focus on how to publish their content more efficiently than to spend time re-inventing the wheel. Additionally the selection of an appropriate CMS gives the ability to have finer access control per page and per user, modern codebase (like HTML5, PHP5 and CSS3.0), extensibility through the addition of modules/extensions and the ability to select between default or downloadable themes or creating your custom ones.

## 1.6. Security

As previously mentioned the site will implement restrictions to its' visitors to specific pages. An authentication scheme will be saved in the site's database and users' passwords will be saved encrypted as MD5 hashes in the database. Web traffic to restricted pages (login page, admin pages etc.) will be encrypted using Secure HTTP (HTTPS) protocol.

## 1.7. Theming

This web site should have cross-browser functionality and should be accessible to all users, even those with disabilities. For this reason, a theme based on modern Web standards will be used (like HTML5 and CSS 3.0) while proprietary technologies like Flash or extensive use of incompatible / undocumented features of these languages will be avoided.

## 1.8. Accessibility

For the users with disabilities a special CSS theme with larger fonts and fewer colors will also be designed. The CSS theme will also give the ability to have a printable version of the site.

## 1.9. Mobility

For users with mobile devices a mobile (reduced) version of the page should also be available.

## 1.10. Use case scenario

In PRESIOUS Project's website front page a user can read a non-technical description of PRESIOUS and see the latest news from the project. If a user wants more information, the *About* section of the menu gives descriptions about the project's goals and objectives and also some facts about PRESIOUS.

In the *Consortium* section of the menu one can find information about the project's partners along with a brief description of them.

The *Deliverables* menu link presents a table with the projects' deliverables list which is regularly updated by the partners, according to the progress of the project.

The *Publications* section serves as a publishing point for the partners' papers and articles relevant to the project.

In the *Resources* menu list, a user can see an image gallery from various events of the project. There is also a link to 3D data sets acquired during the project and made available for public access. A download link to provide access to freely available software developed under the project's context is also provided.

Next also the *News* menu link, with a full historical list of news and announcements.

Finally, there is a *Contact* submenu with information about the project's Contact Point(s), the Coordinator and the Webmaster.

On the right side of the menu, there is also a *Login* link to allow users with additional roles to enter the website's administration area.

## 2. WEBSITE DEVELOPMENT

This section provides a detailed overview of the design and implementation choices that were made in accordance to the specifications for the web site and the target audience of the PRESIOUS web site.

### 2.1. Website Infrastructure and Implementation

The PRESIOUS website was designed and developed with a CMS that is based mostly in HTML5 and CSS3. jQuery and JavaScript were also extensively used. PRESIOUS database is kept in a MySQL RDBMS, while large files are stored inside a PRESIOUS dedicated file system and uploaded through an FTP connection.

#### 2.1.1. Hosting Information

The PRESIOUS website is hosted on a virtual machine in the Coordinator's web infrastructure. It has an AMD Opteron 2645 processor (1 core dedicated), 2GB of RAM, 10GB hard disk space and a 1Gbit Ethernet line.

#### 2.1.2. The Drupal Content Management System

Drupal CMS version 7.0 was chosen as the main codebase. The reasons for this choice include: Drupal is a very mature and stable Content Management System with an extensive and very active open source community, supporting it since 1999. It now has almost a million users in 228 countries. One of the main reasons for using Drupal is its ability to adapt to the needs of almost every project by adding modules of code that can be downloaded from the community or developed in-house. Another important reason is its high security standards resulting in a system with as little as 1-2 security warnings in widely-known exploit databases (e.g. exploit-db.com); while for other popular Content Management Systems exploits are greater in numbers and far more critical.

#### 2.1.3. Drupal Modules

To achieve all the desired functionality several modules were selected to be installed and coordinated:

- *IMCE* : A WYSIWYG editor that allows all content users to edit text in browser window like in a normal text editor (e.g. Microsoft Word), including actions like cut, copy, paste, table formatting, text formatting, hyperlinks, images etc.
- *Views and Panels*: These modules combined allow web site developers to create custom "views" of the content of the system, creating mini pages or "panels" of these views, which can be styled and filtered as autonomous objects.
- *Biblio*: A very useful module targeted to academic users. With this module, a user can directly insert bibliographic data in a variety of formats (e.g. Pub Med, BibTex, RIS, MARC), export to BibTex, EndNote tagged and XML while styling it in AMA, APA, Chicago, CSE, IEEE, MLA, Vancouver with features like inline citing of references and many others.
- *Mobile Detect/Switch*: A module that detects mobile devices and switches website to a different CSS theme, suitable for the device in use.
- *Page style accessibility module*: A module that allows users with visibility problems to change colors of the site by clicking a relevant icon.
- *RSS*: A module, which permits a Drupal website to show, feeds regarding various aspects of its content in form readable by RSS readers.

## 2.2. Theming

Four different themes and layouts were designed for PRESIOUS:

- a. The *desktop theme* was designed according to the Kick Off meeting decisions and the Web Site Specifications Internal Report, and it is the primary theme of the site. It is meant to be fast, simple, easy to use and aesthetically pleasant.
- b. The *printer-friendly theme* is a version derived from the desktop theme with fewer bitmaps and a lighter colour palette (with many elements replaced with white/transparent colours). Additionally, this theme contains only the content and no navigational or web browsing enhancements.
- c. The *accessibility theme* gives the ability to have three more colour schemes, enhancing contrast for people with low vision.
- d. Finally there is a *mobile theme* which the PRESIOUS site automatically switches to in case it detects a mobile device (i.e. a device with a screen smaller than 7"). For devices with size greater than that, PRESIOUS remains in desktop theme.

### 2.2.1. Desktop Theme

The desktop theme of PRESIOUS web site can be seen in Fig.1.

In the header there is the Logo and a running header with the expanded PRESIOUS acronym. There is also a search box for directly searching the website for information. The main menu follows in a clear blue colour background and with the structure described earlier in this report. The colours palette of the PRESIOUS website was chosen from a combination of Coordinator's website main colour theme and earthly, pale brown and beige tones of Cultural Heritage objects.

The main menu of the site is a javascript-based drop-down menu, with the exact structure of the specifications mentioned earlier in this document (see Section 1.2).

Below the header, there is an image teaser which is visible only in the front page and it shows rotating images related to the proposed and ongoing work in the project. The image teaser is also capable of showing videos and it includes a numbered image navigator and next/previous image buttons. Below the teaser, the main content of the website appears, which - for the front page - is a non-technical description of PRESIOUS project.

On the right side there is a vertical sidebar which includes a theme selector for people with low vision (accessibility theme) and the list with the latest news and events of PRESIOUS.

The typical PRESIOUS web site page ends with a footer which includes the EU and FP7 logos, some quick links, social media links, general information and RSS links.





Figure 1 – PRESIOUS website desktop theme.

### 2.2.2. Printer Friendly Theme

An image of the printer friendly theme of the website can be seen in Fig. 2. In this theme, menu and footer sections are completely hidden, and so are the header background, the search box and the new sidebar.

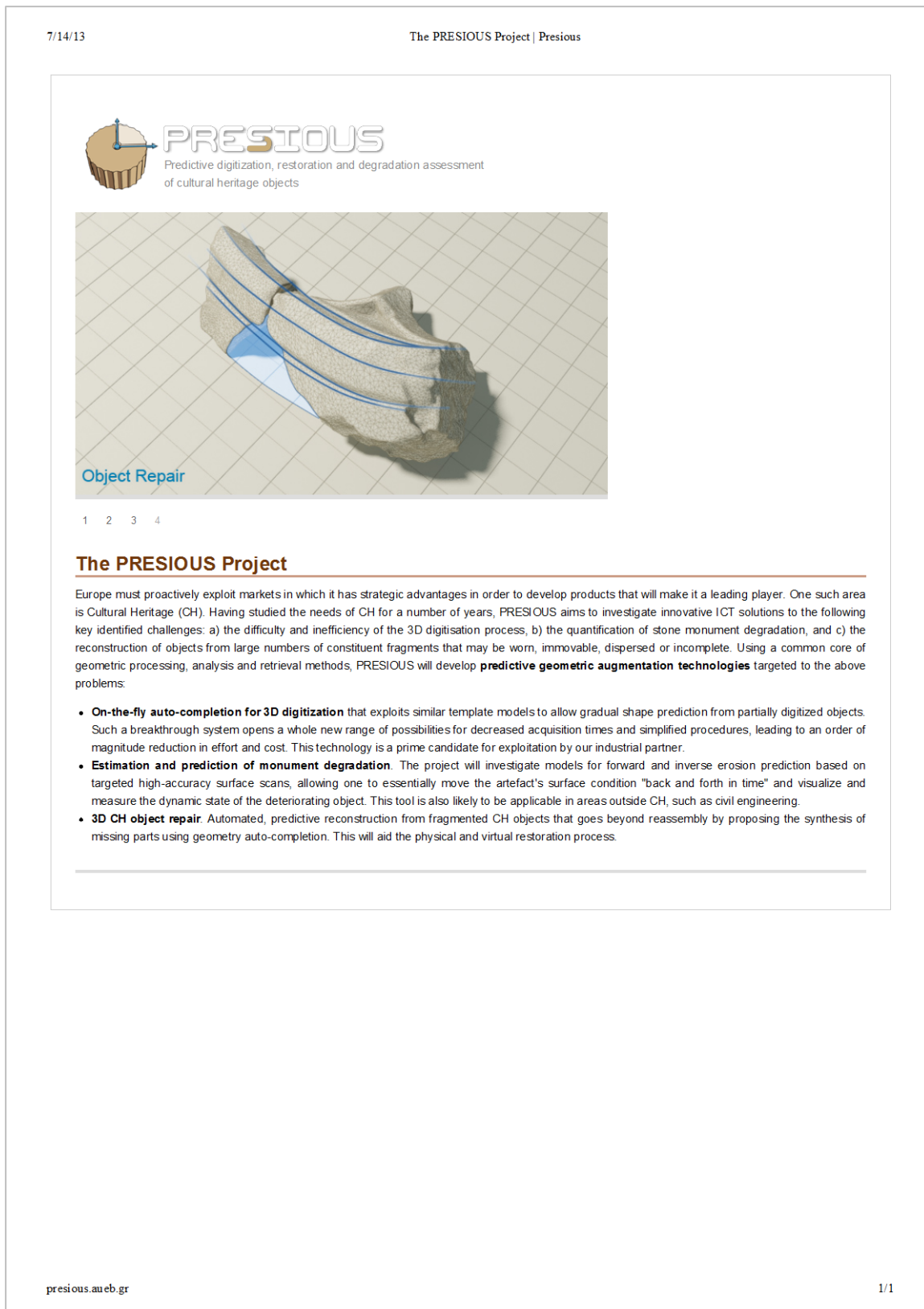


Figure 2 – PRESIOUS website printer-friendly theme.

### 2.2.3. Accessibility Themes

People with low vision need web pages with high contrast. And since modern browsers offer the ability to enlarge fonts with a few clicks, a modern accessibility theme should have at least one high-contrast colour scheme and some captions and alternative text inside images and figures. With the help of a module designed for Drupal for this purpose, the PRESIOUS Website provides its users with certain vision limitations a set of three different high-contrast schemes, including two high-contrast themes for colour-blind people. Accessibility colours can be seen in Fig.3.

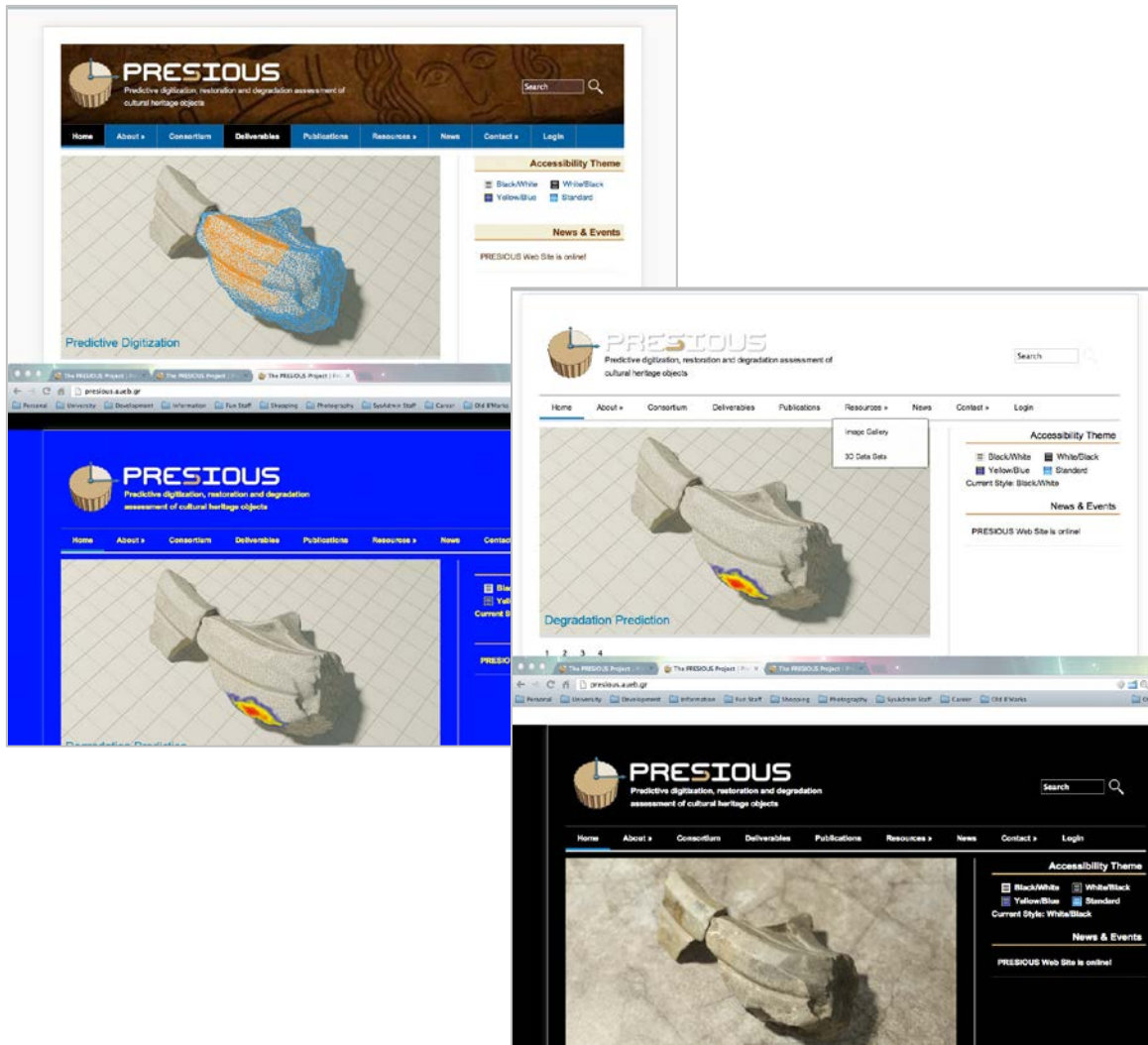


Figure 3 – PRESIOUS website accessibility themes.

### 2.2.4. Mobile Theme

The mobile view of a web site must show a reduced version of the website content, without any fancy effects and with lesser graphics and effects to reduce bandwidth consumption. It must also have “a tap and scroll” friendly navigation.

In order to fulfil these demands, a new sub-site of PRESIOUS main web site was designed from scratch, creating new blocks of information based on the original information in the main database, customizing its output to suit the mobile user needs.

A new theme was also designed, so that the web site content can be read with a scroll only top-to-bottom motion. All decorations from the main site were removed, while images inside our content were replaced with mobile versions of smaller dimensions and size. A new smaller version of PRESIOUS logo and EU and FP7 logos was designed for mobile screen output.

An accordion effect menu was designed, that is hidden and is visible with a tap on its button.

The mobile version of PRESIOUS website can be seen in Fig.4.

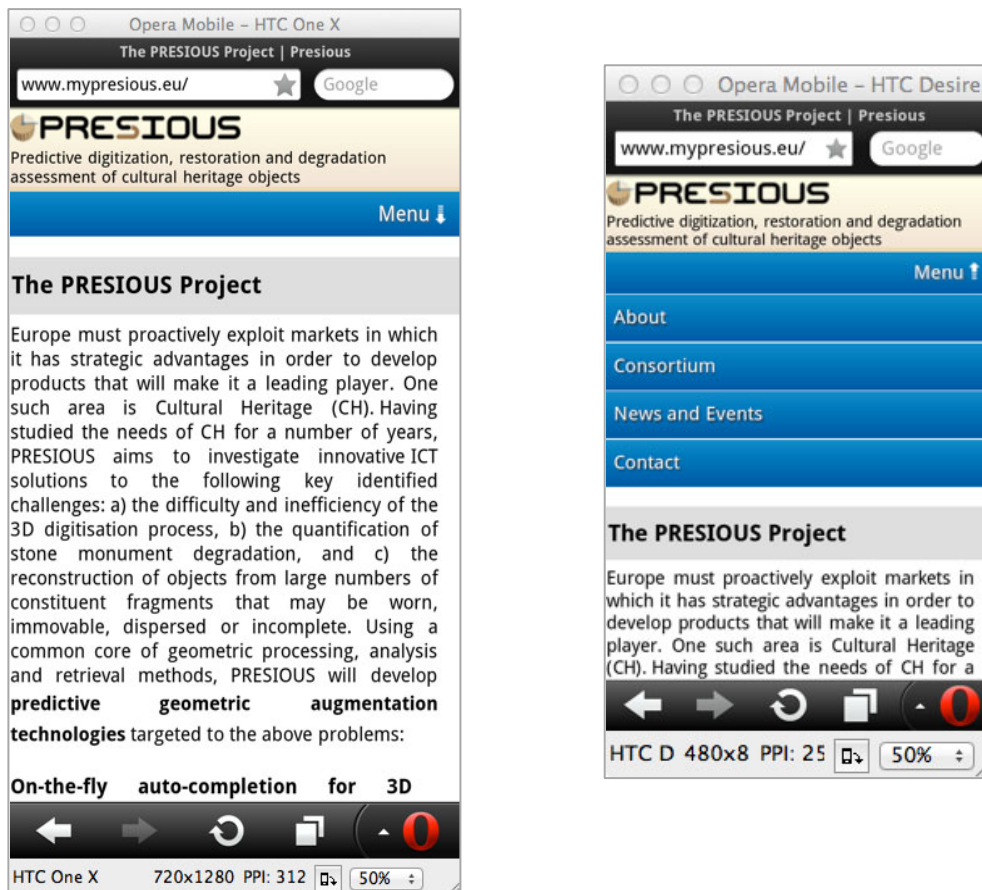


Figure 4 - PRESIOUS Website mobile version demonstrated at two different resolutions.

### 2.3. Website visitors analysis

In order to be able to keep track of the visitor access patterns and preferences, the popularity of web pages and the demographic statistical data of the individuals exploring our site, we have registered our site with Google Analytics. In Fig. 5 the audience overview analysis of the PRESIOUS website is shown, dating from its initial deployment.

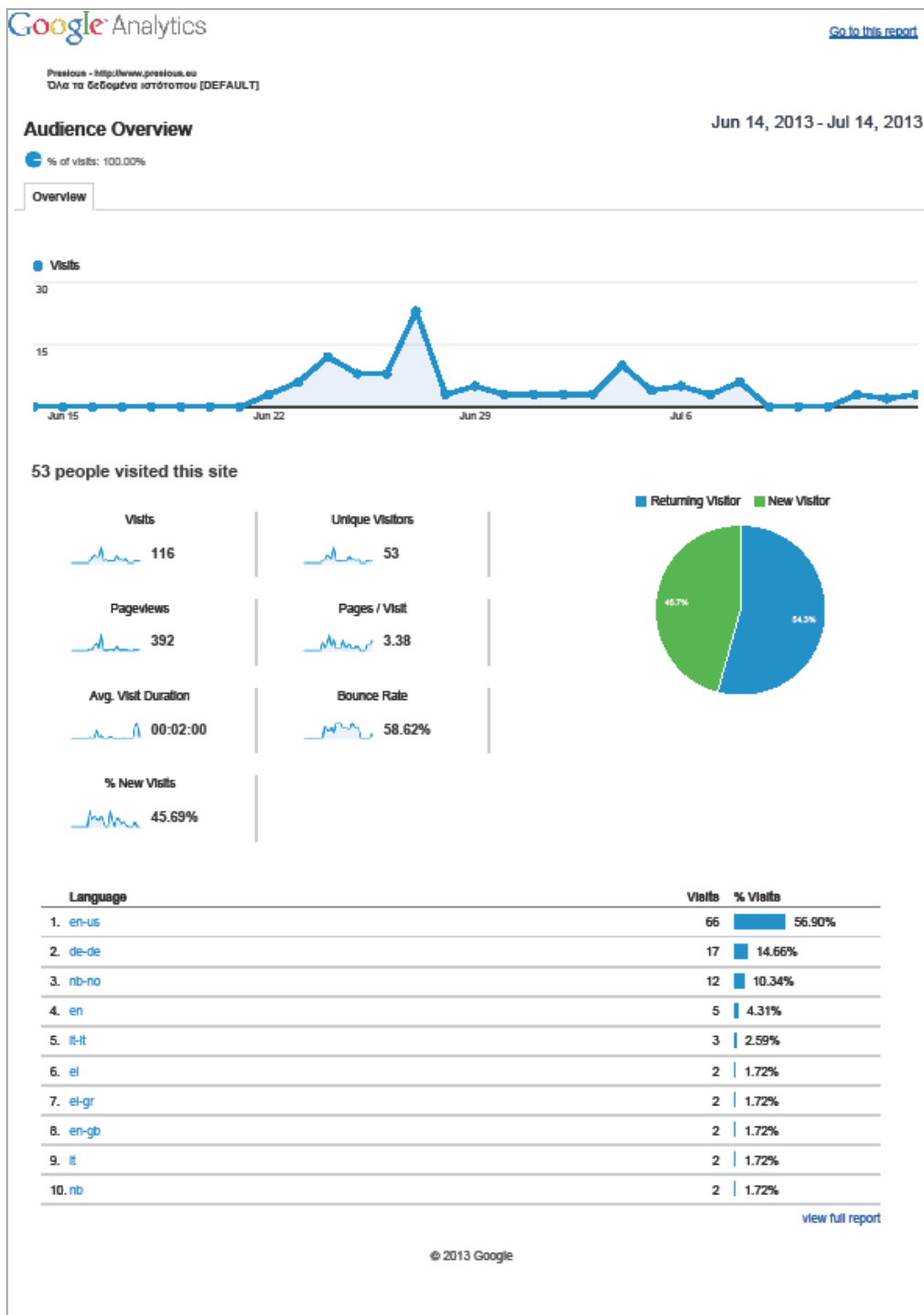


Figure 5 – Audience overview for the [presious.eu](http://www.presious.eu) web site (source: Google Analytics).