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OATS – Open-Source Assistive Technology Software

A repository and ‘dating agency’

ANDREW LYSLEY¹ & SIMON JUDGE²

¹ The ACE Centre, 92 Windmill Road, Oxford OX3 7DR Email: lysley@ace-centre.org.uk Website: www.oatsoft.org

² Access to Communication & Technology, West Midlands Rehab. Centre, 91 Oak Tree Lane, Selly Oak, Birmingham B29 6JA, UK

INTRODUCTION

This article describes the plans for the development of the first open-source software repository and forge *dedicated* to Assistive Technology (AT).

Web-based, it will provide a one-stop ‘shop’ for end users, clinicians and open-source (see Footnote) developers/programmers to meet, exchange notes, promote new ideas, develop new software and download reliable open-source AT software. Initially, the OATS Project is a one-year pilot project finishing in March 2006. If successful, its exit strategy will be for it to become a self-supporting, on-going web-based service for end users, AT professionals, and open-source developers.



Via its *repository* or *library* the project will make existing OATS more accessible by:

- Listing software in a central web-based database.
- Offering simple and easy methods to find appropriate software.
- Standardising the downloading and installation of software.
- Providing a level of quality assurance to guide potential end users.



Via its *forge* or ‘*dating agency*’ the project will also encourage the development of innovative OATS by:

- Attracting volunteer software developers.
- Developing new AT software based on specific user needs.
- Providing a dynamic discussion forum for users and open-source developers.

Finally, for the benefit of end users of AT the definition of OATS will be extended to embrace copyright-free:

- Symbol and picture libraries.
- Software resources such as grid sets and user configurations.

RATIONALE

Globally, the Assistive Technology (AT) software field is small and specialised. As we all know AT development remains an under funded field with its key players often working in relative isolation.

Software is becoming an increasingly powerful and effective tool within the field however the restrictions of the field are holding back development. Open-source software offers a new way of driving forward the Assistive Technology field.

The ethos of OATS, as with all open-source activities, is to make its source or programming code freely available to end users and developers, who then have the right to modify and redistribute the software.

The OATS Project, a web-based, pilot project, was established to evaluate what demand and interest there might be for open-source software within the AT field and whether this would ulti-

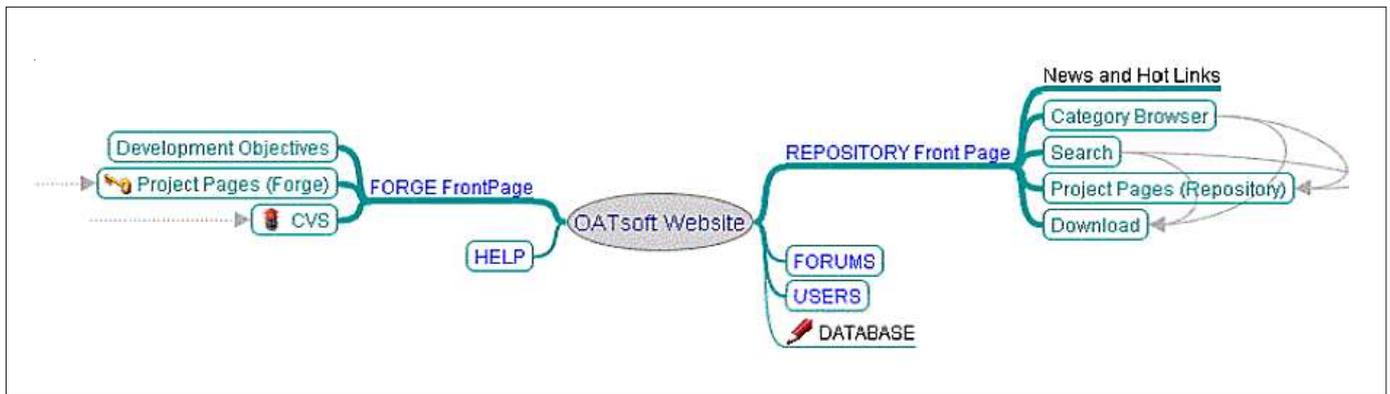


Figure 1 Structure of the OATS website

mately warrant the establishment of a ongoing, self-supporting web service.

If successful, the OATS 'Repository and Forge' will offer the AT field an innovative, inexpensive opportunity to create, share, and above all disseminate good, well-maintained products that have high AT end user value. Importantly, it will also offer the opportunity for users to drive the development of software to provide truly user-centred software.

WHAT OATS WILL I REAP?

Open-sourcing offers great potential for AT software users. However, currently there are a number of barriers that stop its widespread use within the AT community. It is generally difficult to find on the Internet and until the OATS Project there have been no specific areas dedicated to developing or downloading AT software.

Open-source software can also be unfriendly to install, often obliging the user to download many different packages before it can be set up and used.

Often it is still 'under development', poorly documented or technically demanding, something that the end user finds frustrating and irritating.

To see just how complicated this can be for the lay enquirer, one need only visit the most well-known source of mainstream open-source products, Source Forge (www.sourceforge.net). Finding OATS products here is like experiencing death by a thousand cuts!

The OATS Project's repository will strip away all the technical complexity and provide via its database and search engine an efficient and intuitive way to access good quality OATS.

By removing these barriers to open-source AT software, users will not only have a single point of contact for obtaining open-source software but volunteer developers will also discover a forum where they can develop ideas

and write software that meets the real needs of specific end users.

WHAT IS OATS?

The deliverable of this project is a website - this website will be unique, even among open source websites, since it aims to allow both end users, professionals and developers to interact in the same place.

- *End users* will experience a simple way to find appropriate software through an accessible web interface - users will be able to find software in a variety of ways. From logging on to downloading software will take less than 5 clicks. Users will not only be able to download existing software, but register a need and request software development.
- *Developers* will have a dedicated area for project development with integrated code versioning system, bug and feature tracking, forums, documentation and publishing tools. In addition developers will obtain direct feedback from users and 'power user' testers.
- *A third party of users* will be professionals/clinicians, who will sit between the two groups and contribute on both sides - both suggesting development ideas, feeding back information and providing software to clients.

The website will be achieved through using a Content Management System (CMS) - PLONE - this extremely scalable CMS is W3C AA accessibility compliant. The aim of the content management system, combined with the development of a set of boiler plate template pages is for the site to move towards becoming self-sufficient.

The core of the site will be an online database listing of the software and its characteristics - this database will include both existing and developing

software and the website will display the appropriate records in the appropriate areas on the site.

A further outcome of the project will be work on the ease of use of software installation - the aim of the project will be to allow seamless, simple, installation of appropriate software. To this end some initial software will be packaged into OATS installers, possibly installing straight from the web page. This will allow easy installation and also updating when new software releases are available. A standard for software packaging will also be produced and suggested for the Assistive Technology field.

For further information on OATS, please visit www.oatsoft.org *

Andrew Lysley
OATS Project Co-ordinator, The ACE Centre
Simon Judge
ACT, Birmingham

THE OATS PROJECT CONSORTIUM

- The ACE Centre, Oxford
- ACT, Birmingham
- Dept Of Applied Computing, University of Dundee
- Swedish Institute for Special Needs Education, Gothenberg

OPEN-SOURCE SOFTWARE

Open-source Software (OSS) is computer software written for any operating system (Windows, Macintosh, Linux, etc.) that, although distributed under a license, allows other people to change and/or share the software freely. Open-source Software must make its source or programming code *freely* available. End-users have the right to modify and redistribute the software, as well as the right to package and sell the software. Open Source software is a well established software license with a large amount of established software available. For further information on Open-source Software, visit: <http://en.wikipedia.org/wiki/OpenSource>