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# 15<sup>th</sup> International Conference on Computers in Education

The Open Agenda and Organisational  
Alignment.

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5th November, 2007

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# Overview

- Introduction
- The open agenda
- Edna over 10 years
- Challenges
- Success?
- Conclusion

# Introduction

- About us
  - **education.au** is a not for profit organisation established by the Ministers for Education across Australia
  - Focussed on the delivery of Internet based services that are national in scope and require collaboration across States/educational jurisdictions
  - **education.au**, and edna, which is the focus of this case study, are both celebrating 10 years of operation
  - Both of the authors of this paper have been involved directly, or indirectly at different stages throughout this period
    - This involvement at different times has led to some interesting insights into organisational memory as well as the open agenda while collaborating on the paper
    - At times, we have had quite different perspectives from each other on some areas.

# The Open Agenda

- In our paper we highlight that there are many definitions of 'open'
- In the context of the open agenda we are referring to an increasing willingness within education and training to consider the use of:
  - Open source software
  - Open standards
    - Characterised by openness, consensus, due process
    - There are differing opinions on just how open, some of the standards/specifications that we refer to are
      - Many require some form of membership fees if you wish to participate in the standards development, others charge for access to the standards
      - Standards development and maintenance has costs that need to be met and there are various business models in place to support these efforts
  - Open content
    - Eg MIT Open Courseware
  - Open access to such content
    - Licensing regimes such as Creative Commons
- We use as an example of the impact of the open agenda, the edna project ([www.edna.edu.au](http://www.edna.edu.au)) from **education.au**

# The Web Revolution

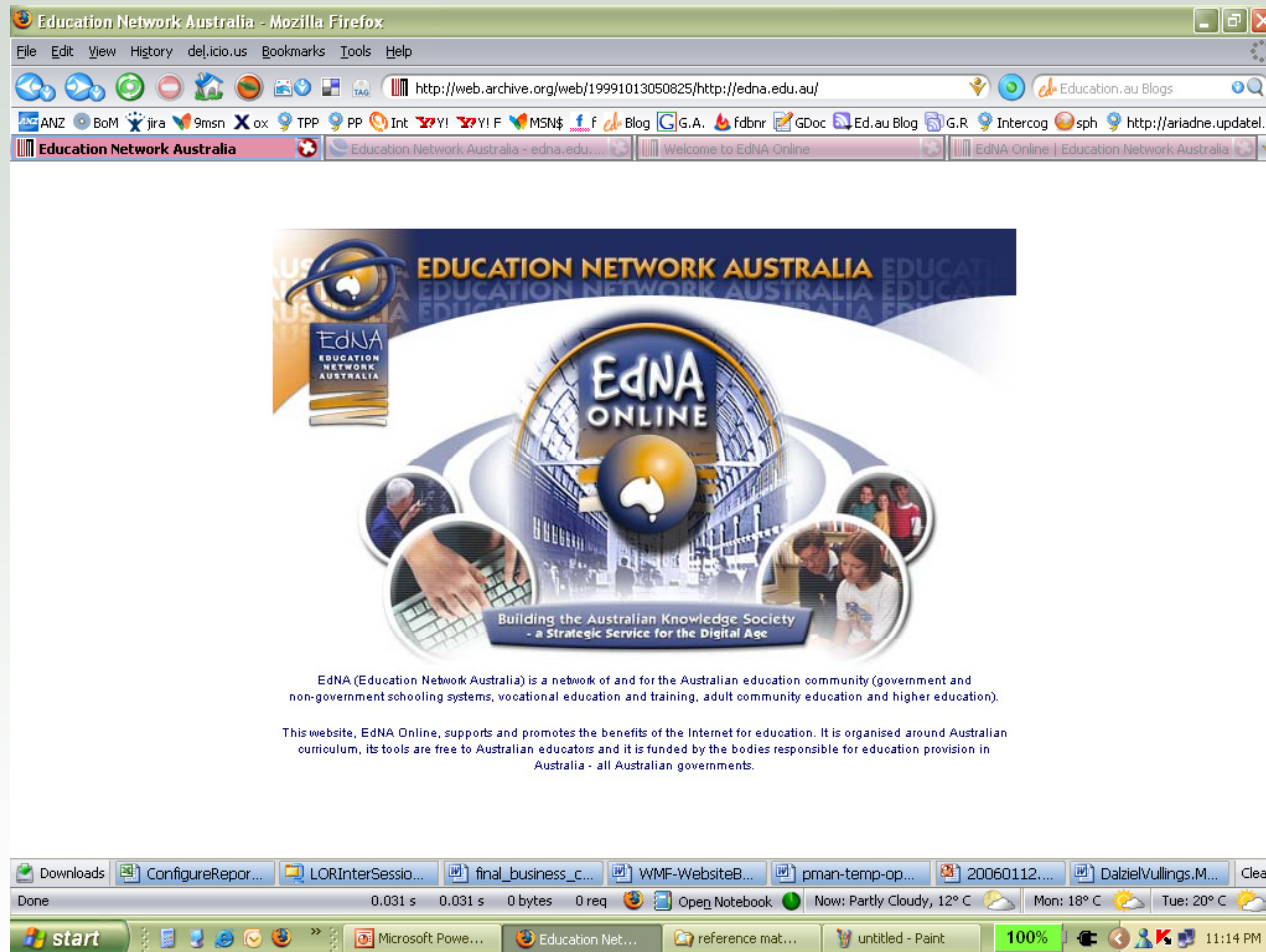
- Over the last 10 years the Web has transformed or impacted what seems to be almost all aspects of society, including education
  - A key enabler for these changes is in the area of collaboration. Many new technologies have emerged over this time that support collaboration
    - Digital photography, audio and video has transformed how we use images, audio and video
    - Dramatic rise and usage in social networking platforms
      - Myspace, Facebook, Flickr, Del.icio.us, YouTube etc
    - Technologies/approaches to support openness
      - Open source, publishing and syndicating technologies, recognition of 'open business models (such as amazon.com's or RedHat's approaches)

# 10 years of edna

- Edna provides access to educational resources for the Australian training and education sectors (for educators)
- The original vision for edna was one of openness and collaboration
  - Building Australia's knowledge society
- Resources that were described within the edna database had to be freely available
- A large part of the initial collaboration efforts were concentrated on collaboration at a systemic level – between education systems and sectors (schools, vocational education and higher education)
- Much work was done on the establishment of a common metadata specification that could be used by all to describe resources
- Additionally, a browse structure comprising over 1,000 categories was developed through collaboration
  - 1,000 categories creates problems of its own over time



# An Early Home Page (early 1998)





# Early Technologies

- Outsourced development
- Custom built application maintained by third party
- A number of proprietary components
  - Oracle RDBMS
  - Verity Search 97
- Some open source
  - MajorDomo email list serv
  - Freeware Harvester
    - No standards based protocol for use in harvesting
- The degree of openness of edna was limited by the technology available at the time
  - Commitment to making resources discoverable and building 'Australia's knowledge society' through collaboration
  - Collaboration with users (as distinct from organisations) was limited by the collaboration platforms available back then

# Changes Start to Appear (early 2002)

The screenshot shows the EdNA Online website in a Mozilla Firefox browser window. The browser's address bar displays the URL: <http://web.archive.org/web/20020125001405/http://www.edna.edu.au/>. The website's header includes navigation links: [About Us](#), [Sitemap](#), [Feedback](#), [Suggest a Site](#), [Admin Access](#), and [Help](#). Below the header, there are dropdown menus for [Discover](#), [Communicate](#), [Events & Publications](#), and [What's New](#). A search bar with a 'GO' button and a 'Quick Links' dropdown menu is also present.

The main content area features a list of categories on the left, each with a radio button:

- School Education
- Higher Education
- Vocational Education & Training
- Adult Community Education
- Education & Training Providers
- International Education

Below the categories, there is a link to [SUBSCRIBE to EdNA's Newsletters](#). On the right side, there is a list of featured articles:

- [EdNA Online Survey](#): how the service can be improved to meet user needs ...
- [The World Congress Connects to the Community](#): an online forum on IT, ICT and related issues, from 12 Dec'01 to March'02 ...
- [A Study of Policies Supporting Effective Use of Information and Communication Technologies in Education and Training](#): a comprehensive information base of ICT programmes, strategies and policies in education and training ...
- [EdResearch Online](#): Australian educational research documents, articles and reports ...

At the bottom of the page, there are links for [Terms & Conditions](#) and [Privacy Statement](#), and a copyright notice: Copyright © 2001 Education Network Commonwealth of Australia.

The browser's taskbar shows several open windows, including 'Downloads', 'ConfigureRepor...', 'LORInterSessio...', 'final\_business\_c...', 'WMF-WebsiteB...', 'pman-temp-op...', '20060112...', and 'DalzielVullings.M...'. The system tray at the bottom right shows the time as 11:12 PM and the date as Monday, 12th December 2001.

# Moving Forwards

- While edna was open to an extent, it was still a gateway
  - You had to go to it to find resources
- The release of the search and browse APIs changed all this.
  - Users could now incorporate edna services on their own websites/portals
- Advent and acceptance of RSS extended this capability and allowed us to syndicate almost all of our content to other parties
  - RSS is one of the most important technologies we have available to support our open agenda
    - For distributing our content and consuming other's content
- To accomplish these objectives, development was also moved in-house which removed many of the barriers we felt were preventing us from moving forward
- OAI/PMH (Open Archives Initiative/Protocol for Metadata Harvesting) began to emerge as a protocol that was well supported with our partners and other repositories which allowed for an increased ability to share metadata with each other
  - Edna is a network and OAI allowed us to move content around that network more easily
  - OAI also provides us with the ability to implement very fast search and advanced search across many repositories

# Moving Forwards (2004-2005)

Welcome to EdNA Online - Mozilla Firefox

File Edit View History del.icio.us Bookmarks Tools Help

http://web.archive.org/web/20050116020000/www.edna.edu.au/edna/page1.html

Education Network Australia

EdNA Online  
Education Network AUSTRALIA

About EdNA Online | Alliances | Media Releases | Suggest a Site | FAQs | Feedback | Admin

Events | Publications | News | Communities | Developer's Kit | Metadata | Related Sites

SEARCH Centres | Pick a Sector | BROWSE Education | HOME | Register | Login

Make this my Home page  
Bookmark this page

Adult & Community Education  
Educational Organisations  
General References  
Higher Education  
International Education  
School Education  
Vocational Education & Training  
Find Education Providers

Login to MyEdNA

Username:   
Password:  Go

Remember me on this computer  
 Jump to my MyEdNA page

**EdNA Online**  
Australia's gateway to resources and services for education and training

COMMUNICATE  
DISCOVER  
COLLABORATE

**New Today! School Education**

- Sustainable Development - Curriculum Context

**New Today! VET**

- Attorney-General's Department - Copyright Amendment Regulations 2004 (No. 1) 2004 No. 405

**New Today! Higher Education**

- Attorney-General's Department - Copyright Amendment Regulations 2004 (No. 1) 2004 No. 405

**Education News**

- First Year at University - resource page**  
A resource page from EdNA Online providing information on open days, o-weeks, issues facing students in their ...
- Hot Topic - Indian Ocean Disaster**  
Summary of information on the Indian Ocean Earthquake and Tsunami disaster collated by AusAID. Content include...
- School Term Dates for 2005**  
Summary of school term dates for 2005 by state and territory...

JOIN US!  
Join the EdNA Online User Group

hosted by:  
THE UNIVERSITY OF ADELAIDE AUSTRALIA

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EdNA Online is a joint initiative of the State and Territory governments, and the Australian Government, through their education departments.

Downloads | ConfigureRepor... | LORInterSessio... | final\_business\_c... | WMF-WebsiteB... | pman-temp-op... | 20060112... | DalzielVullings.M... | Clear

Done 2,937 s 23,859 s 146.17 KB 74 req

Open Notebook Now: Partly Cloudy, 12° C Mon: 18° C Tue: 20° C

start Microsoft Powe... Welcome to Ed... reference mat... edna1.bmp - P... 100% 11:18 PM

# Technology starts to catch up

- A number of major redevelopments have occurred with edna which allowed our original vision to align with the open agenda to unfold:
- The CMS/Portal component was replaced with Jahia, a 'community source' application
  - Community source an interesting hybrid between open and proprietary software
    - Licence is required for the software
      - Can be purchased or obtained through contribution to the development of the software
      - Once licence is obtained, the source code is available
      - Jahia had formal support available which eased concerns over moving into an open source arrangement
      - We moved from simply being a consumer of 'open' software to a producer as well
- Next to go is the Oracle database which is replaced by PostgreSQL
  - A significant change for the edna management
    - Trusting its most valuable asset with an open source database.
- Dspace selected as repository solution
- Old collaborative tools replaced by a new generation of collaborative software
  - Moodle open source course management system
    - Has very good collaborative capability
    - Scales well – we currently support over 1,200 online communities (illustrates the shift to community support, community content)

# edna Today

Education Network Australia - edna.edu.au - Mozilla Firefox

File Edit View History del.icio.us Bookmarks Tools Help

http://www.edna.edu.au/edna/go

Education Network Australia - edna.edu.au

Skip to Content

News Events Resources Networks Groups Lists edna

edna.edu.au

Login | Register

A- A+ PRINT

Advanced search

edna all

edna sectors

- Early Childhood Education
- School Education
- Vocational Education and Training
- Adult & Community Education
- Higher Education

edna topics

- Education Organisations
- General References
- ICT Research
- International Education

Australia's free online network for educators

Sunday November 4

FAQS FEEDBACK HELP

Education Network Australia (edna) is Australia's leading online resource collection and collaborative network for the education and training community. More about edna ...

Find	Join	Connect
<b>educational resources</b> <ul style="list-style-type: none"><li>Search resources</li><li>Browse sectors and topics</li><li>Events and conferences</li><li>Related sites</li></ul>	<b>online networks</b> <ul style="list-style-type: none"><li>Groups of common interest and practice</li><li>Email discussion lists</li><li>Login to edna services</li><li>edna sandpit</li></ul>	<b>via news, events, tools</b> <ul style="list-style-type: none"><li>Latest education news</li><li>Education RSS feeds</li><li>Generate feeds for your website</li><li>Subscribe to podcasts</li></ul>

Downloads ConfigureRepor... LORInterSessio... final\_business\_c... WMF-WebsiteB... pman-temp-op... 20060112... DalzielVullings.M... Clear

Done 0.078 s 0.500 s 203.03 KB 1 req Open Notebook Now: Partly Cloudy, 12° C Mon: 18° C Tue: 20° C

start Microsoft Powe... Education Net... reference mat... edna3.bmp - P... 100% 11:27 PM

# edna Today

- 3 major areas to support openness
  - *Find*
    - Search
      - Uses both proprietary (Verity) and open source (Lucene)
    - Federated Search
      - Open source developed (contributed by edna team)
    - Standards/specifications used include OAI/PMH, RSS, Z39.50, SRW/SRU, SQL, SOAP, edna open APIs
    - Calendar and Events
      - Published via RSS
      - Individual events can be downloaded via iCal
  - *Join*
    - Edna Groups, edna lists, edna Sandpit
  - *Connect*
    - Publishing more and in newer formats (eg podcasts)
    - About to release major redevelopment of myedna
      - User tagging and other Web 2.0 functions
      - Exploring the relationships and possibilities between expert users and community knowledge (taxonomy directed folksonomies)



# Some Challenges

- Quality process puts constraints on getting resources into edna
  - Manually evaluated by 'experts'
  - 'letting go' of centrally controlled content processes
  - Need to redefine quality
- Community now demands the ability for individual users to contribute
- Business rule challenges
  - Harvesting vs federated search
  - Commitment to supporting both and make it easy for repositories to be included
    - Need to support many standards
- Ranking/relevance in federated environments
  - Everybody's resources are the best (context)
- Performance in distributed search environments
- Global/local access problems for some of our content providers
- What licences to use?
  - For open source (gpl, lgpl, bsd, apache etc)
  - For open content (Creative Commons, FFE (free for education – Australian))
- Jahia CMS/Portal is now a legacy problem for us as is dspace
  - Drupal / Fedora?
- Identity Management (LIMF)
- Modifying core components of open source applications – if mods are not adopted by community, problems will occur at migration/upgrade time
- Adopting standards early can cause some grief

# Evidence of Success

- Does conforming to the open agenda work?
  - edna is 10 years old and perhaps more relevant today than ever
  - Developing and releasing federated search solution has led to:
    - Engagement with Ministry of Education in New Zealand
    - Joining GLOBE
      - Providing the software for the Australian link to GLOBE
    - Development and implementation of LORN (Learning Object Repository Network for Australian VET Sector)
    - Implementation of Federated Search for Federation of Natural Resource Management (NRM) repositories
  - We feel we can now engage meaningfully with the Standards community
    - For example, contributing use cases to IMS/GLC for its LODE (Learning Object Discovery and Exchange) working group

# Conclusion

- Openness is good for business (we hope)
- There is no doubt in our minds that edna has survived this long because of its commitment to openness and collaboration
- Its not always easy:
  - Business imperatives make openness difficult at times.
  - Changes in staff can introduce different attitudes to openness and a loss of corporate memory
- The impact of the open agenda has been felt across our company
  - Commitment to open publishing, blogging etc to share our experiences/knowledge
  - Desire to contribute open source to the community
    - We hope that, rather than lose our competitive edge by releasing our software as open source, potential customers will gain a better understanding of our capabilities and be encouraged to engage with us
  - There are a number of companies that are achieving great success through adoption of an open approach
    - Eg MIT Open Courseware
    - Amazon's business model
    - Open source business models

Thank you

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