Combating Information Overload:
Some Practical Applications of Web 2.0

David Brunt

Knowledge Systems Manager, Derbyshire County PCT

david.brunt@derbyshirecountypct.nhs.uk

Heather Gardner

Project Librarian, Derby Hospitals NHS Foundation Trust

Heather.Gardner@derbyhospitals.nhs.uk

Abstract:

This article looks at some practical examples of using web 2.0 technologies to provide innovative current awareness services for nurses and how Web2 can still use information science skills to provide conventional services.

Background

Paper based bulletins are easy to produce and distribute, however, they can be time consuming to collate, they can become out of date and the contents quickly lose their usefulness. A database driven current awareness service can enable geographically distant library services to contribute and share the time-consuming task. The recipient of these services can access their news alerts when and where they choose. Using a wiki instead of a word processor to produce bulletins is another potentially useful application of web 2.0 technologies.

Interactive Topic Based Bulletins

Interactive web pages are a more user friendly way of
introducing the use of a wiki. Wiki is a piece of server software
that allows users to freely create and edit web page content
using any web browser. We have used this software to enable
everyone to contribute to the topic based current awareness
bulletins we compile. The bulletins are available on the web for
anyone to view, but a password is required to edit the wiki. Link
to website: http://librarynursesbulletin.pbwiki.com/
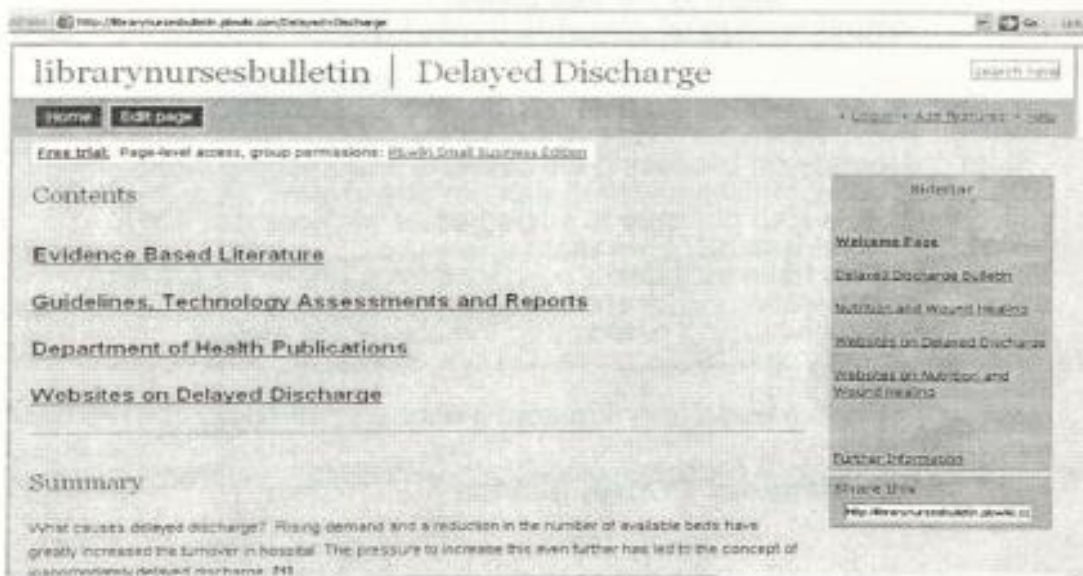
The first page of the bulletin contains a summary of the
evidence found with references. There are then sections on
evidence based literature; guidelines, technology assessments
and reports; Department of Health publications and useful
websites on the subject. If a section gets too long additional
pages can be added so the user can click through to the items
of interest.

The benefits of using a wiki are that the end user can:

- Add comments on the usefulness or otherwise of the articles
- Discuss some of the issues around the topic
- Make suggestions on how to use the information in practice
- Add further useful articles or new information to the bulletin
- Create additional web pages
- Share other documents of interest by attaching them to the web pages

The main benefit for the library is that the wiki enables the team to collaborate on producing the bulletins and keeping them current. It is also possible to embed other web content into a wiki and we have included a newsfeed from Intute: Health and Life Sciences nursing gateway so the content is always changing.

The East Midlands PCCAS Service

This is an example of a web based current awareness service for primary care (and staff working in acute trusts too!) http://www.tin.nhs.uk/welcome/keeping-up-to-date.

The database is the hub of the service. Contributors enter data into the database, from their local workplace. The database is updated daily, so searching the database finds recent

information as well as archival material and RSS feeds are up to date. The use of newsfeeds or RSS is a good technology for sharing content with other websites and thereby bringing more traffic to the TIN website. Content that was originally circulated locally is now used nationally (and indeed internationally).

The output from the database can also be used, to create more focused bulletins e.g. for the Chronic Fatigue Syndrome Network. The search facility has been modified so that it just searches one category of the database and thus enables more precise search results.
http://www.tin.nhs.uk/local-networks/chronic-fatigue-syndrome-network/latest-publications

A variety of daily, weekly and monthly bulletins are produced by local library services, but are made more widely available by storing them on the website. These include topics of interest to staff working in Acute Trusts and across networks e.g. the Big Four Bulletin that contains recent research published in the major four health journals and the Cancer Services Bulletin.

The benefits of PCCAS in terms of using the information are that it can be made more widely available and used in more than one way, although it is only input once, which fits well with the "do once and share" philosophy being promoted by the National Knowledge Service.

Further options

A lot of the commentary on Web2 issues has focussed on its social aspects from a personal perspective, but as we have seen with PCCAS and Wikis, it is possible to use the collaborative potential of the Internet (both Web1 and Web2) to produce conventional services, based on sound information science, in a new way and a new format.

We will now consider some further uses of the Internet and Web2 in a service setting.

1. Collaboration

As we have seen with the PCCAS service, the internet has always had the potential to facilitate collaborative working. We are also all familiar with discussion list services such as Jiscmail, which allow sharing of information and ideas. Web2 ideas promise to add additional options in terms of the collaborative development of services, one interesting one being the use of Google Co-op to develop a Google search box that searches specified websites only:
http://www.google.com/coop/.

One good example of this approach is the midwifery search developed by the Royal College of Midwives (RCM) library service: http://www.rcm.org.uk/info/pages/library.php?id=1

The RCM example seems to have been developed within a single organisation, but it is equally possible a number of collaborators based anywhere to work together.

2. Personalisation

Blogs are a good way for individuals to publish their ideas and read and comment on other people's. RSS newsfeeds are, perhaps a better way for information services to provide a menu of options from which individuals can select updates of interest to them.

RSS means Really Simple Syndication or Rich Site Summary, both terms containing something of the essence of RSS, that is, to syndicate summaries of new content or resources. PCCAS and Intute:
http://www.intute.ac.uk/healthandlifesciences/latest.html, for example, produce structured RSS feeds. Blogs can also be read with RSS readers.

Personal RSS readers fall into three type:
- Desk top based, eg, Great News:
  http://www.curiostudio.com/
- Browser based, eg Firefox: http://en.www.mozilla.com/en/
  (and now Internet Explorer 7)
- Internet based, eg, Bloglines: http://www.bloglines.com/

It is also worth mentioning the National Library for Health RSS Directory and MyLibrary portal, which allows users to add their

selected RSS feeds to their MyLibrary page:
http://www.library.nhs.uk/mylibrary/default.aspx

3. Integration

Java and RSS can also be used embed or integrate resources
from one website into another. It is possible in this way to build
composite web pages, with content from your own institution
and external organisations, all updated dynamically. Examples
are:

- search boxes, for search engines such as TRIP, Intute
  and Google Co-op
- RSS feeds with the latest news from another service.
  Many websites now provide this option. Many journal
  contents pages can also be found as RSS feeds
- Search results updates are also available as RSS, again
  from TRIP, Intute, Medline and others.

Intute: http://www.intute.ac.uk/integration/, for example, have
been doing a lot of work with Leeds University on integration.
Not only is a search box available and a latest resources RSS
feed, but library staff are using MyIntute to produce lists of
selected resources, which are exported as HTML and
integrated into their web page, a resources list that will update
itself as the resources change:

http://www.leeds.ac.uk/library/subjects/medicine/websites.php
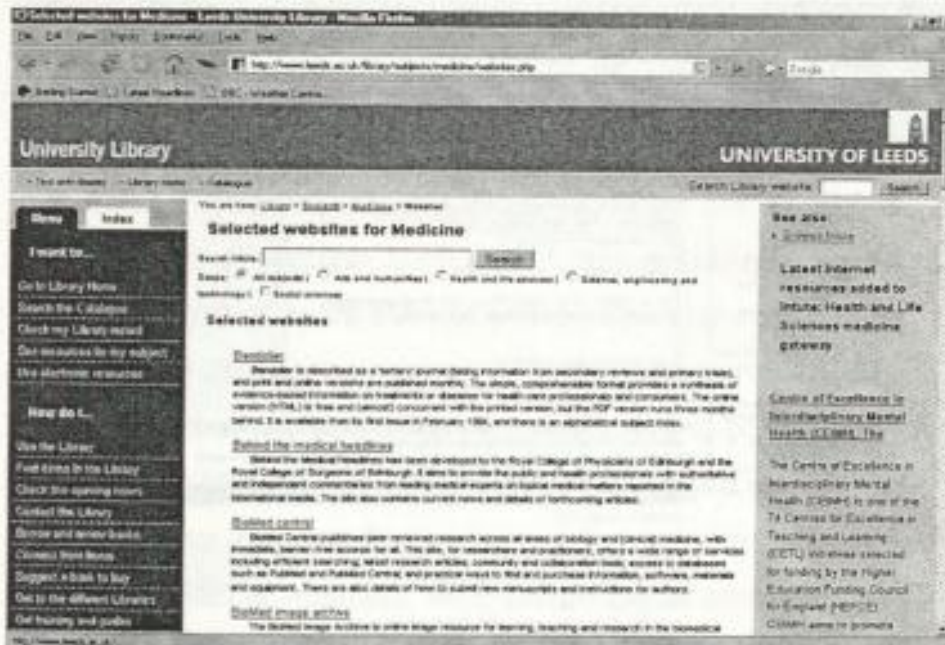
The Leeds example uses only Intute content, but it would be equally easy to blend content, for example, a TRIP search box, or an RSS feed that will update TRIP search results: http://www.tripdatabase.com/addtrip/index.html, PCCAS or other newsfeed, as well as Intute content.

Some web services, such as PCCAS, provide the Java script of each RSS feed pre-formatted to copy and paste into the HTML of a web page. Integration of content can be that simple (although it is best to copy it to unformatted HTML. Some web editors add formatting that prevents it working):

http://www.tin.nhs.uk/welcome/keeping-up-to-date/rss-
newsfeed-menu
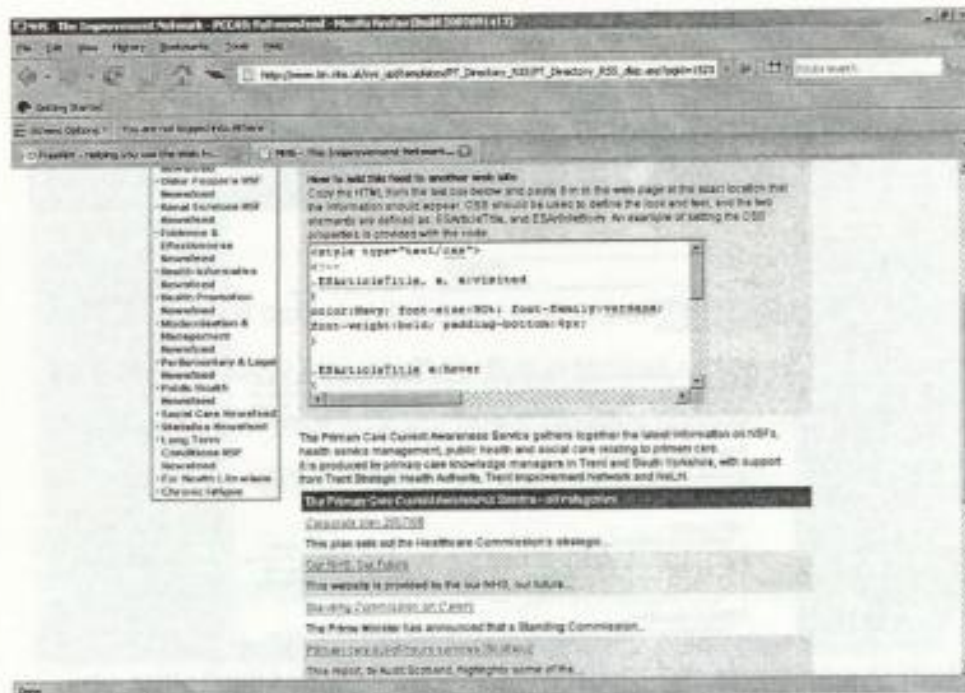
If the requisite Java scrip is not provided, it can be obtained free
from web services such as RSSxpress Lite from UKOLN:
http://rssxpress.ukoln.ac.uk/lite/include/ and RSS to Java:
http://www.rss-to-javascript.com/. Simply type in the URL of the
feed you want to embed in your web site.

Conclusions

As we have seen, the social aspects of Web2 can provide us
with opportunities to share information work and output in new
ways, but without necessarily forgetting our traditional skills.
PCCAS, Intute and the nursing wiki, for example, whilst entirely

web based are also based on traditional information science principles.

What else might we look out for in terms of our use of Web2? Communities of practice, such as MyIntute and MyLibrary will have more expert users than an entirely open forum like Wikipedia. If users are prepared to share bookmarks and other resources these are more likely to be relevant to colleagues. In services like MyIntute these resources are tagged, or indexed by the user as they see fit. One idea to improve this is from the Myedna project in Australia, which is looking at taxonomy directed tagging. In other words, a taxonomy will make suggestions for more appropriate terms when a user is adding tags, thus getting more consistency:
http://www.edna.edu.au/edna/go and the related paper:
http://www.ifla.org/IV/ifla73/papers/157-Hayman_Lothian-en.pdf

There is also a useful review of Web2 technologies in Health Information and Libraries Journal 2007, 24, 2-23.