This paper explores some of the software that has become available for social networking on the internet. It provides an outline of some of the strengths and weaknesses of a selection of existing sites as a way towards thinking about how we might provide access to software for ATN research candidates to build their own online research communities.

At the end there is a summary of the results of a short survey conducted of RMIT candidates on what social software they currently use and what they might like to have the ATN provide from which is generated a list of objectives for implementing and sustaining an ATN research community online.

What is Social Software?

The terms ‘Social software’ and ‘social networking tools’ refer to web applications that enable participants to store information in various formats, share this information with selected others and interact with others in an online community. The specific types of tools that the sites are equipped with vary, but many have facilities such as wikis, blogs, mailing lists, photo archiving software and other tools that enable people to put content up and/or work together online.

It is important to note that there have been a number of failed attempts at creating community on the internet, which demonstrates that it is not enough to provide people with tools and expect the community to grow automatically. Software tools have to be sympathetic to the needs and desires of target audience and enable them to make connections with others in meaningful ways.

---

1 The ATN Universities include: RMIT University, University of Technology Sydney (UTS), Queensland University of Technology (QUT), Curtin University of Technology and the University of South Australia (UniSA)
There are three main types of social networking sites that have developed over time: interest or product related sites, user profiling sites and collaborative knowledge building sites.

An interest or product related site develops community by giving people a forum in which to discuss and share information about a specific topic or interest. A good example of such a site is ‘Librarything.com’ (see below) where people catalogue their book collections online. Once they have uploaded information about their book collections, users can tag their books, rate them, run statistical analyses and provide reviews. The Librarything site enables users to identify and contact those other members who have similar collections and provides them with the ability to join discussion groups related to the literature they are interested in. Other interest or product related sites might be constructed around news and information feeds. There could be said to be an excess of news and information on the web, so sites like Slashdot.com provide a way for users to ‘sift’ this information. Slashdot.com does this by allowing some reviewers to develop into ‘trusted sources’, who have already done the work of sorting through and commenting on news worthy items. The tight focus of many of these sites enables users to easily identify those people who have similar interests, make contact with them and thus develop a meaningful ongoing dialogue.

User profiling sites are explicitly focussed on the user themselves to provide the ‘content’. Most of these sites allow participants to build a personal public or semi-public profile and manage their relationships with others; dating sites are the most obvious manifestation of this approach. The two most successful (non-dating) examples of this kind of site in recent times are Myspace.com and Facebook.com. Both these sites enable users to build an informative profile, add photos and other documents and join discussion groups. Another example of this sort of interaction model is Linkedin.com, which is designed to help manage professional networks by facilitating new professional contacts, giving users the ability to ask questions of these networks (as a large knowledge base) and providing users with very specific job hunting tools. User profiling sites are increasingly popular, although it could be argued (looking at the demographic information of the users) that these sites have a greater take up with younger users (below 30).

The last category is collaborative knowledge building sites. On these sites users can freely contribute their knowledge (usually in the form of writing, but sometimes with videos, 3d models and images) and together build a knowledge database. The most
obvious example of this is wikipedia, which was intended as a free and changeable form of a more traditional encyclopaedia. Educational institutions have also employed this wiki based collaborative model; below I include information about the Open University’s latest initiative in this area called ‘open learn’. A slightly different form of this knowledge building occurs in massive multiplayer online games such as Second Life and World of Warcraft (WoW). Although both these examples are explicitly constructed as games, second life in particular shows how community knowledge building does not just have to be in the form of text, but can also take the form of 3D digital objects and animations.

Of the three types identified here, the knowledge building sites are of particular interest for thinking about an online community of post graduate candidates because they demonstrate ways in which the creation of these communities can coincide with educational activities and objectives.

Case Studies of Online Social Networking and Educational Tools

Below is a selective review of a number of sites which actively employ social software and the features that make them attractive for their communities.

Collaborative Knowledge Building Sites:

http://openlearn.open.ac.uk/

The Open University in the UK has developed ‘The Learning Space’ for online education and interaction based around some of their existing course content. The site is open to anyone inside or outside of its registered student cohort who has access to the internet. It is run on a wiki platform which allows users to access comment on and selectively alter the content while providing free access to a selection of Open University Courses. In addition it provides access to activities, noticeboards, instant messaging, knowledge maps and journaling software. The accompanying site ‘The Learning Lab’ allows users to download and upload content so that they can ‘remix and reuse’ the existing Open University content and provide it back to the university if they wish. Of all of the sites reviewed in this paper this one offers the most potential as a model for an ATN wide network as it combines educational content with user interaction and self directed online learning. The following features are notable:
- Access to educational content developed by Open University – there are many courses online, all of which are covered by the creative commons share attribution share a like licence.
- Flash Meeting: a 'one click conferencing tool' that allows instant video conferencing between people connected to the internet who have webcams. There is no extra downloading required and no special technical expertise to use the feature, which removes many of the barriers on this kind of participation.
- Learning Journal: This online notebook can be used to make notes on material as it is accessed and share those notes with others if you wish to. It creates a single online space to house research notes that can be accessed from any internet able computer and allows users to cut and paste these writings into other documents.
- Knowledge Maps: This area uses ‘Compendium’, a visual mapping tool to help to keep track of information generated as you read through content – it is not unlike an online sketch book where you can makes notes on ideas, record important references, connect concepts and arguments and share these thoughts with others.

www.wikipedia.org
This (in)famous knowledge database is the best known wiki in the world. Wikis are web pages that can be edited by designated groups of users who can over write or comment on each other’s work or upload images, sound or video. The most powerful aspect of a wiki is the ability for words on pages to automatically become links to other pages; in this way information can be yoked together by the strategic use of language. Wikipedia highlights all the features of wiki that make it a good online collaboration tool.

- Buy-in is easy: altering pages is straight forward and the interface is clean and simple.
- Content is rich (if not always reliable). It is a reasonable starting point for finding out about a topic and getting to other sources of information (which was its explicit design intention)
- Discussion areas are clearly linked to topics so allows individuals with similar interests to have conversations if they wish to.
- The wiki can be adapted to other uses – for instance pages can be added which have some personal value to the user, like a menu from a favourite restaurant
- Search functions are powerful, links to other relevant content are easy to access
Second Life is a Massive Multi Player world where participants can own and manipulate ‘real estate’ and their own virtual bodies (avatars). There has been some take up of second life in the university sector in Australia, RMIT has at least two ‘islands’: one owned by creative media and the other owned by the architecture school where undergraduate students can build and explore content. In terms of teaching Harvard law school has one (non compulsory) course where discussions, lectures and ‘office time’ are conducted online (http://blogs.law.harvard.edu/cyberone/).

**Product or Interest focussed sites:**

**www.librarything.com**

‘Librarything’ is an example of a pastime or object centred social software application. It is a book cataloguing site where users can store information your book collection online, organise it in various ways and share the contents of their library with others. It has several powerful features that make this an attractive site for sustained community participation:

- Easy cataloguing of books – the full detail of books can be entered by typing in the ISBN number. Librarything then tracks the book through the Amazon.com catalogue (or others as defined by the user) and adds the publishing details and a picture of the cover. The cataloguing function is useful enough to be a reason to subscribe to the site.

- Users can search easily through their library and rate the book using a star rating system. The star rating system is linked to all the other user data to create a ‘one click’ recommendation system – by clicking on the cover of the book in your library catalogue you are given 20 recommendations based on an aggregate of other user data.

- Librarything is an ‘opt-in’ system in that you can set a desired level of privacy over your data, letting only certain friends see it or leaving it open to the world. If you allow others to see your collection they can create an RSS feed to keep a watch on your library to see what you have added.
• Library thing gives users the ability to create metadata – for example you can add labels to further sort your library and run statistics tracking. Labels generate ‘tag clouds’ allowing the users to see at a glance how much of any particular genre of book they have.

• In library thing it is easy to create group discussion based on shared interests. Users can easily find out which other people own the same or similar books and provides a number of avenues for contacting them. The social interaction is therefore mediated through the books themselves rather than being based on personal information.

http://www.citeulike.org/

CiteUlike is an Online referencing system, a bit like Endnote, that enables users to compile a reference library, rate papers and export the citations into other bibliographic software. It is a powerful referencing tool because:

• Unlike Endnote it frees your references from being ‘located’ on a particular hard drive and thus is accessible to scholars who tend to move between locations. Users can upload PDFs of papers and store them here so that they can be accessed from any internet connected computer

• Users can review papers and access the reviews of others. Reviews are aggregated so that it is easy to get a sense of what a community of interested people think about a paper.

• The tagging system allows for the generation of ‘tag clouds’ (similar to librarything) in this case the tag clouds are shared by the community and ‘unfold’ as you click through labels to reveal a finer grain of information.

• Users can keep a watch on what others are reading by setting up an RSS feed of ‘watched readers’

User Profiling Sites:

www.facebook.com

Like MySpace, FaceBook provides anyone who joins with an easily constructible online presence, an area where they can upload pictures and information, as well as numerous ways of making connections with other community members. Features that make Facebook attractive are:
• It is easy to become part of multiple networks. For example anyone with an RMIT email address is automatically enrolled in the RMIT Facebook network and from there can easily find people to enrol as ‘friends’)
• Each user’s ‘homepage’ allows them to show personal information, but allows for access to be restricted to certain groups of people.
• There are several sections that allow people to make contact with each other, such as ‘The wall’ – a public notice board area which is attached to the user’s profile or the notes page which is like a virtual version of passing notes in class.
• Users can create photo galleries and share them with selected people who in turn can comment on the images.
• There is a market place, which operates a bit like ebay.com, but is for selling and exchange within a particular community
• Users can easily create groups that can share information, discussion boards and write each other ‘notes’. There are also wiki-like tools which can be used for online collaboration.
• The ‘poke’ function is a ‘low involvement’ way to contact people, allowing users to make initial contact in a networked environment without having to commit themselves or the other person to a more in depth conversation
• The directory function on facebook is a better way to locate people within the network than most university directories as users can use other things they know about that person to track them down.
• Developers can write applications to use in facebook to extend or augment existing functionality – for instance there is a version of a librarything like cataloguing system with the ‘ibook’ function.
• There is a sense of immediacy and presence while using facebook – you can see what your friends are doing, listening to, talking to and reading amongst other things. Communication is multi-channel and happening at different speeds from instant messaging to long term conversations and the exchange of in-jokes.

www.linkedin.com

‘Linked in’ is a networking site dedicated to professional networking. On it users can list a profile of themselves and the type of work they are looking for and/or business contacts they might be interested in making. Some interesting features of this site are:
• Online resume building facility enables users to create annotated work histories
• The recommendations facility enables a form of online personal reference to be recorded next to the user’s work history
• Ways to visualise and access the network of people created by all the people that they user may have professional or personal links with.

What sort of online community do Research Candidates want?

In order to gauge what candidates might want from an online networking resource, we solicited feedback from RMIT’s research candidate community by sending some questions via the main candidate email list\(^2\). 38 people responded to the call for feedback.

Many of the respondents were enthusiastic about the idea of being provided with the opportunity to network with other research candidates online. The reasons given for this interest in online interaction were: the difficulties candidates had experienced when attempting to make connections with others because of distance (for example off campus students); time constraints (like part time study); or their position in a niche area of study. Most of the interest in contacting others was related to finding those researching in similar topics or areas and beginning a dialogue. Ideas for how this dialogue could be conducted included: discussion forums, chat, mailing lists, online presentations and seminars, keyword tag clouds (to cluster candidates for searching through the database), broadcasting events, trading resources (particularly lab equipment or time), file storage and transfer capabilities and photo gallery software.

There was some interest in what could be termed ‘knowledge sharing and building activities’ like recommending papers to others, jointly building FAQs or lists of expert answers, tips for finding resources and collaborating with others on papers. Some interest was expressed in an ability to publish papers online and most said they would like to be able to put up a profile of themselves and their research interests. Surprisingly,

---

\(^2\) The questions I asked were:
1. Do you use any 'social networking' sites online? If so which ones and why do you use them? (examples of social networking sites are: [www.facebook.com](http://www.facebook.com), [www.myspace.com](http://www.myspace.com), [www.linkedin.com](http://www.linkedin.com), second life etc)
2. Do you use any online bibliographic or library software online? If so which ones and why do you use them? (examples of bibliographic software are: [www.citeulike.com](http://www.citeulike.com), [www.librarything.com](http://www.librarything.com) or the user profiles on [www.amazon.com](http://www.amazon.com))
3. Do you use any online photo gallery software? (examples are: [www.flickr.com](http://www.flickr.com), [www.photobucket.com](http://www.photobucket.com) etc)
4. If RMIT was to provide you with a site to connect with your research colleagues, what features and tools would you like to see?
most candidates seemed to be unaware of such databases and referencing aids like citeulike; many confused these with the library’s online journal databases or services like Google scholar. One student commented that these sorts of online aids might be much more useful with better wireless access on campus.

It should be noted that a few candidates expressed disinterest or suspicion at the idea of an online community. Some suggested that they would be too busy with their research to participate in such a community; others commented that they preferred face to face contact and would not like to see attempts to replace such opportunities (such as RMIT’s research discussion forums) replaced with online forums. Others said they were worried about privacy issues and were unsure about how much of their research they would be willing to communicate (particularly those who were working on grants with commercially sensitive information). Anxiety existed in relation to using an interface that was ‘complicated’, with some candidates claiming they were ‘too old’ to learn new ways of operating on the computer. Many candidates expressed concern at the idea that a network would be restricted to ATN, or even Australian researchers, as they were eager to make contact with anyone in their discipline or field, wherever they were located.

**Objectives of a potential researcher network**

Given this feedback from candidates, and an assessment of what there is available online already, we are in a position to make a preliminary list of objectives for a possible online researcher network. We stress that further investigation is needed, particularly in terms of determining stakeholder interest, before moving on to looking at implementation issues. We offer the following as some preliminary objectives of an ATN wide online research community site, in whatever form it might take:

1. *The site should provide information on research and researching that is of value to candidates.*

Sites with a lot of members and sustained community interest provide value to their users above and beyond the ability to build connections with others. For example Librarything is a useful database application – whether or not users choose to participate in the extra features of the site such as discussion forums. In the case of the ATN the existing e-gradschool content (ATN MORE and ATN Leap) has the potential to attract candidates and build interest in accessing and participating in the other things the site might have to offer. Open University’s site suggests a way in which content can be linked
with participation, while allowing ways for that content to grow and be enriched with increased community participation.

2. **The site should encourage rich and meaningful community connections:**
Developing tools to make community online is easy – building and maintaining the community engagement can be difficult. Successful online communities don’t always have to tap into existing interpersonal networks (such as family and friends) but they do need to provide ways in which people can interact with like-minded others. The key issue here, which candidates have already picked up on in their feedback, is making contact with people in whose research you have a genuine interest and who, therefore, might be interested in your own. Features like the ability to cluster researchers in ‘clouds’ generated by keywords and tags would be one way to help others to find others that they want to connect with. Some consideration should be given as to the membership of the network – is it only to be restricted to students or can supervisors and other researchers be involved? How might we cater for the desire to make contact with others outside of the ATN and internationally? Expanding the membership of the network has advantages, but it remains to be seen if there are ways to draw in such outside participants and engage them with the community. Lastly careful consideration should be given to ways in which contact can be made, for example Facebook’s concept of the ‘wall’ provides a low risk way of making contact with another person when the ‘rules’ for the appropriate way of meeting others are uncertain.

3. **The site should be accessible, while remaining sensitive to potential privacy issues**
Simple and clean interfaces enhance accessibility for users, particularly those with disabilities. Overly complicated interfaces may also put off candidates who are not ‘digital natives’. Not all candidates will be comfortable in sharing their information with everyone on the network; some attention should be paid to providing ‘levels’ of engagement so that candidates can choose how much they wish to display to whom this information is available.

**Conclusion**

In summary, there are many tools available with which to build an ATN wide online research candidate network and a number of potential models already existing to inform its shape, but a more detailed study, particularly of stakeholder interest, is highly recommended. In addition to this research, an examination of resources and governance issues is advisable before proceeding to implementation issues and a pilot study.