

Towards the essence of a Facebook for Research

A perspective on the changing role for information about research in the provision of Research Services.

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Within the current eResearch debate both nationally and globally, there is significant opportunity for the University of Melbourne to become a leader in the standards based communication of research information required for the effective provisioning of eResearch services.

Anyone who has worked in Research Administration or has been on the receiving end of it would probably agree that the dynamic between researchers and research administrators is not so dissimilar to that between market researchers and the public. Market researchers have an exhaustible need to find out what the public is thinking, and are constantly surveying, running focus groups, and otherwise poking and prodding the public to tell them what they need to know. Likewise, research administrators are constantly requesting information about research in endless cycles. (Often the atmosphere in which we collect information from researchers is as if we had called them up over dinner to ask them for their publications!) The perspective that research administrators and marketers share is that they are both on the outside looking in.

For marketers though, with the rise of sites such as Facebook, the perspective is changing. The genius of Facebook is that creators have managed to build an environment where the public wants to be and exchange social information, which at the same time can be mined directly for marketing information without having to specifically ask anyone anything. Putting aside some of the my more sinister feelings about this setup, for a research administrator the model of being able to get what you need without having to directly ask researchers is a tempting one to explore. So what would be the essence of a Facebook equivalent for research? How can we collect information on research as it happens?

But first, why should we worry about the problems of research administrators? Putting aside internal University reporting requirements, a university's ability to publicly communicate its research identity- who it is and what it does, the outcomes of its research, and what problems it wants to address - are crucially important for engaging with the public, the media and industry, and increasing knowledge transfer. Information on our researchers, such as projects, publications, and grants are the key information assets that a University can use to expose its research activity to the broadest possible audience.

Yet at most Universities, information about research identity is fragmented. It is usually not possible to find a single comprehensive source of information about the ongoing research projects at the University. Typically, information about research groups and projects is distributed across faculty and departmental websites, where it is treated as a

content management exercise, and like all content management exercises there is a constant (losing) battle to keep information up to date.

Whilst websites might be the only public source of information about research projects, within universities research project information is declared and redeclared on ethics and grant applications, annual reports, faculty and university reporting exercises. Should a project span multiple universities, requests for information quickly multiply. One strategy for creating a University wide research portal is to reuse this research reporting information to create public research profile pages that list a researchers grants, publications, awards, qualifications, and contact details. Within the US, impressive examples of research portals exist such as the University of Cornell's [VIVO](#) project. Two recent examples within Australia are The University of Queensland's [UQ Researchers](#), and the University of Melbourne's [Find an Expert](#) system. Both of these systems provide a searchable public research portal that allows unprecedented access to information about research at their respective universities.

These initiatives, although impressive exercises in information architecture and maximizing the value of the information that is collected about research, are still products of research reporting exercises that are on the outside looking in. We can maximise the value of the information we collect, but the cost of collecting this information is still high.

One reason that Universities have been unable to 'get inside research' is that by themselves, they lack the information infrastructure to be able to target services at research projects. As a significant proportion of projects cross organizational boundaries the information infrastructure to adequately describe all of the people against a given research project is lacking. Even to call these participants external is misleading, research projects just don't neatly fit within research institutions. What we end up being able to record within our university walls is just an incomplete projection of the research activity that is going on. To put it another way, the 'source of truth' about research projects is distributed. Without proper records of research projects there is very little an individual University can do to offer services targeted at research projects, that have the added advantage of 'getting inside' the research workflow.

Of course, this problem is the bread and butter of eResearch concepts such as virtual organizations. Since at least 2004, Universities have begun to share information infrastructure to enable researchers to collaborate in virtual teams. These initiatives allow researchers to authenticate against their own institution, and then to get access to resources and collaborations that are hosted elsewhere. Access to resources can be arranged at an individual level, but importantly, they can also be based on project membership. These descriptions of research projects have the potential to be more than just security definitions. As research data is created and placed into collections, the persistent record of the project becomes an important part of the associated metadata. Being able to identify what project created the data, and who to contact about using it is an important question to address even beyond the active life of the project. Virtual organizations, properly managed, can function as a source of truth about research projects.

So like Facebook, eResearch should enable us to harvest records of research as it happens. However there are a few problems we need to iron out first.

- Only a small amount of research projects currently use virtual organizations, therefore the benefits of harvesting research project definitions from these environments are limited.
- Current collaboration environments have not been designed to communicate research, but to facilitate it, and there is no agreed approach for creating persistent identifiers for researchers and research projects.
- There are many different collaboration environments, and there is no accepted standard way of describing research projects.
- Work needs to be done on how to import research project information from one environment to another. (Significant work in creating a common research information exchange format has already been undertaken by a European organization with a brief to promote the communication of research information across the EU www.eurocris.org)

These hurdles are not difficult technology hurdles, but hurdles for our broader research information infrastructure communities to address. Furthermore, I would argue that they are strategically important in the endeavour to see broader uptake of eResearch infrastructure. Like the relationship between social networking and marketers on Facebook, acknowledging the development of a symbiotic relationship between research administration and eResearch, stands to transform practices in both worlds.

Some milestones towards the essence of a 'Facebook for research.'

- Universities establish a virtual organization that contains a harvestable registry of all research projects in the University. Projects spanning multiple universities, are harvested and shared between registries.
- Universities create research portals, that allow the public to search through all active research projects, and link through to information about researchers, (internal and external).
- Universities restructure university administration processes around an already existing record of research. Publications recorded against research projects are also available to providers of cyber infrastructure who need to report on research outcomes resulting from the use of their facilities, and to granting bodies.
- Based on a standardized way for recording research project definitions, a practice emerges where researchers can sign their project up to use cyber infrastructure resources, (rather than signing up to use cyber infrastructure resources, and then creating a project definition). The barrier for participation is significantly lowered. Business models for offering services to research projects become more viable.
- Social Networking information embodied in University wide project registries is used to broadly enable resource discovery

Recommendation for the University of Melbourne

Within the current eResearch debate both nationally and globally, there is significant opportunity for the University of Melbourne to become a leader in the standards based communication of research information required for the effective provisioning of eResearch services.

- Through initiatives such as Findanexpert, the University already has an understanding of the benefits (and challenges) of a single source of information about research. The University's achievements in this area are recognized nationally.
- Recent experience with the RQF preparation has left faculties and departments with an understanding that current practices of managing information about research projects and practices are deficient, and there is a will to change.
- The need to provide data storage for research (along with the requirement for the better management of research data management plans), would be significantly enhanced by a registry of research projects.
- The eScholarship Research Centre has the expertise to take this agenda forward.