

Collaborative Local Content Creation through edgeX: An Evaluation

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Building on our presentation at AoIR 2007, this paper describes the further development of the Emergent Digital Grassroots eXpo (edgeX.org.au) project – a research and application project centred on mapping grassroots and amateur content creation, community engagement with new media, and strengthening local identity. Developed in conjunction with the City Council of Ipswich, a city of some 150,000 residents in regional Queensland, the edgeX project provides a site for local residents to upload creative content, to participate in competitions, to comment on each other's work, and to develop new skills. Research goals associated with edgeX arise from a broader project of mapping the creative industries and their role in the knowledge economy, and a growing understanding of the significant part user-led content creation plays in these processes, especially including the role of amateur creatives. (See Bruns and Humphreys, 2007, for a full description of the intentions which have influenced site development.)

The project addresses Ipswich City Council objectives relating to cultural development and community building through its examination of new forms of community engagement around grassroots content development and broadband participation. Widespread concerns about declining forms of community and participation (Putnam, 1996, 2000) have been debated by researchers who argue that such assessments are misguided, 'measuring old forms of community and participation, while new forms of communication and organization underneath ... [the] radar are connecting people' (Wellman et al., 2002), particularly online forms such as email, chat, blogs, wikis, online games, and other participatory environments (Kraut et al., 1998; Bruns, 2005, 2008; Nguyen, 2003; Humphreys, 2005; Jenkins, 2006). Results from studies of Internet consumption indicate that 'the observed decline (in traditional forms of community participation) has not led to social isolation, but to community becoming embedded in social networks rather than groups, and a movement of community relationships from easily observed public spaces to less accessible private homes' (Wellman et al., 2002; Wellman, 1999, 2001; Wuthnow, 1991, 1998; Guest & Wierzbicki, 1999; Lin, 2001). It has been argued that "as the Internet is incorporated into the routine practices of everyday life, social capital is becoming augmented and more geographically dispersed" (Wellman et al., 2002). Community engagement can be enhanced

as the Internet provides “opportunities for people to bond, create joint accomplishments, and collectively articulate their demands” (Curtis, Baer & Grabb, 2001; Eckstein, 2001; Schofer & Fourcade-Gourinchas, 2001).

One of the key areas the edgeX project is exploring is whether people’s sense of local, *geographic* community can be strengthened and enhanced through the use of Internet technologies focussed on local issues. Thus while the Internet has proved beyond doubt its capacity to connect and grow communities of interest, we are interested to see whether the creation and sharing of local content in a broadband environment by local amateur practitioners can enhance a location-based sense of identity and community.

Community Engagement

The contact between the edgeX project and Ipswich community groups has been premised on two main understandings of the team about the project. The first is that having a ‘build it and they will come’ attitude toward a community website will not be enough to ensure its success. The second is that the project is seeking to enhance online literacies amongst groups within the population of Ipswich who may previously have had little experience with the ‘web 2.0’ environment that allows them to upload their own content, to create their own web presence, and to interact with others.

One of the key interests of this project has been to explore how people in local communities use new media (specifically internet) technologies as part of their communication ecologies and whether uptake of new media technologies can be encouraged by the provision of both access and training to people within the communities. Thus the people targeted through the community engagement strategies have not necessarily been people already using these kinds of technologies. Local groups, craft businesses, and arts and crafts practitioners were approached by the research team. Each contact included an offer to demonstrate the capacities of the site and also to train the person or group to use the site. We were able to do ‘on site’ training, taking the technology to the groups’ meeting places and using mobile wireless broadband and laptops to demonstrate the site. The team also had access to a number of training labs at the local university campus.

The process of engagement was designed to offer as much support as was possible to help a group or individual overcome technological literacy barriers. Over 30 groups were contacted in the first 6 months of the year and each initial contact followed up with at least two and sometimes more visits, phonecalls or emails. Training and support were offered and taken up by many groups. This face to face approach to recruiting to the site was supplemented with a small amount of online marketing through *FaceBook* and *MySpace*, with plans for search engine optimisation and further online marketing in the coming months. It will be interesting to see whether site take-up increases with more concerted online recruitment strategies.

Our initial contacts with community groups and individuals were used to test out various features of the site and feedback taken on board to change the site. We had sought to emphasise the local nature of the site by making the geo-tagging features very prominent. Thus the default interface used for searching was a map with geo-tagged content (and people and groups). However after some months it was decided that in fact not enough pieces of content were being geo-tagged to warrant this kind of search return – much of the content wasn't showing up because it wasn't on the map. So this idea of making the mapping interface the most prominent was shelved. Any geo-tagged content shows up with the map in a less prominent place on individual content pages. While conceptually attractive, in practical terms the content that *was* geo-tagged was also difficult to differentiate as the individual pins for content tended to crowd on top of each other. The site background is a schematic map of the area and it was decided this would have to be enough local branding.

Other feedback went to functionality and was incorporated where possible. Groups were given private space where they could interact out of the public eye, but also with the option to have some of their content public. This gave them the opportunity to use the site for both publicity and internal communication. Implementing this blend of public and private proved to have quite a few technological challenges and took some time to work out. Although the functionality is now there, it does complicate the content uploading process somewhat, and makes it harder to implement an intuitive uploading process. However it has improved the desirability of the site for some groups quite markedly.

Aside from these site design issues that initial contact with users has addressed, the ability to engage groups and to sustain that engagement has thus far proved slow and difficult. We find this interesting and offer two initial comments. Firstly, we are working with people who do not as a matter of course use new media technologies to communicate within their community, and who have not incorporated the internet into their general ecology of communication tools. People and groups have established means of communicating with different people and agencies in their lives. Telephones, mobile phones, mail, email, face to face strategies are blended in different ways for different people. Although some of the people we have been training are *very* enthusiastic and can see many opportunities and the potential to use the site, unless the group or network of people they belong to can also be convinced to use it, it fails as a communication tool. This form of technology and the kinds of uses it would be good for in the context of trying to build local community identity and strengthening community ties, needs groups of people to adopt it, rather than lone individuals. Thus unless the enthusiasts champion the site, and convince others in their groups to integrate it into their communication strategies, we suspect no strong networks will form on the site. Although the site may eventually generate some networked activity between people who had no prior knowledge of each other, initially we have been trying to harness existent groups and networks to populate the site and generate the critical mass it needs in order to be sustainable.

Secondly, we are dealing with access and literacy problems that are probably beyond the scope of this project to overcome. For instance with one writers group we had multiple contacts with, there was much enthusiasm for the possibilities, an immediate understanding of how the site could be useful for them for both publication and collaboration – in the sense of seeking feedback from each other on work within a private group setting. With this group the barriers lie in technological literacy and technology access, with only one person having broadband access. Two more had dial-up access, one lived outside of any accessible broadband area. One member couldn't use a computer at all, several were computer literate but didn't really use the internet. Thus over a period of three training sessions each person registered, the group uploaded content and started their own group page, enthused about the potential for getting various people they used as critics, who live elsewhere, to access their work on the site and start discussions about it and so on. However, since the training finished the group have not used the site at all. Follow up interviews have yet to be carried out, but it is not difficult to see that for them the project has foundered on the rocks of access and technological literacy. A different writers group has been much more active on the site as they don't face the same barriers.

We want to turn now to the experience of engagement with two different cohorts. The first is with young people in high schools, and the second with people from the Senior Net group.

The Schools Competition

One of the strategies for driving uptake of the site and for dovetailing the project's interests with those of various partners was to run a competition for local high schools. The aim was to engage students through a citizen journalism project, where they created a digital story of some form (video, slide show, animation, text etc) about some aspect of Ipswich life. The business school at University of Queensland agreed to offer a \$3000 prize to the winning school. To run the competition we decided to work with the Australian Teachers of Media (ATOM), with a local youth project co-ordinating service called Lead On, and with the Creative Commons clinic which runs out of QUT. It was hoped that using these organisations would help us gain access to teachers, to students, and to resources. We planned to run a teacher training session through ATOM in the university computer labs which would count as a metric for professional development for them. The teachers would then have a chance to work with students for a few weeks before a student workshop. The CC clinic would run a session within each workshop on how students could access properly licensed material (particularly music for soundtracks) for their work. Lead On would help with accessing youth groups they were in touch with. (Unfortunately after the first couple of planning sessions the Lead On person fell ill and could not return to their job. They had not been replaced by the time the competition was being run and so this source of contacts dried up.) Entries would be uploaded to the

competition space on the site, judged through the site alongside a 'peoples choice' voting system, designed to get family and friends on the site to vote.

What we experienced in the end was a series of barriers both very interesting to encounter and difficult to overcome. Engaging with schools in the local area meant having to engage with the education system and bureaucracy. In particular the state schools are subject to some fiercely protective barriers, chief of which is that students cannot access most of the internet from school. They are restricted to a 'walled garden' run by the education department. Thus rather than seizing an opportunity to teach students risk management and safety behaviours on the internet the education department feels compelled to restrict access for their own risk management in relation to litigious parents. For our project this meant that the students could not register on our site, unless they did so after hours from home (if they had access from home). They were unable to explore the site from school or see other school entries. Entries had to be made by the teachers on their behalf and under the name of the school rather than the students themselves. For the project's aim of recruiting people to the site this was not a good outcome.

Secondly gaining access to teachers themselves proved very difficult. We had anticipated ATOM would have a group of contacts in the area, but in fact ATOM had no members in the area and were trying to recruit through the project. Many of the schools in the area do not run media studies programs and have no equipment or resources to do so. This is possibly due to the lower socioeconomic status of the schools in the area and their difficulty in accessing resources. Thus teachers were recruited through a cold canvassing process that was long and met with many brick walls. Eventually teachers from nine schools, from departments as diverse as art, IT and English, attended the teachers' workshop. In talking to a number of them afterwards they were particularly impressed with the creative commons presentation and noted they had been desperate to find a resource such as this. All were enthusiastic about the competition, but only 4 were able to bring students to the next workshop.

There were 20 students in this workshop, which went very well. Students and teachers were given digital video and still cameras to work with, and were given hands on experience with software tools available for free online. One student commented to his teacher later in the week that it had changed his life and what he wanted to do when he left school! In both sessions the creative commons person gave clear information about CC and handed out a list of sites and ways for teachers to access CC material with their students. This information was also loaded on the edgeX site and also emailed to them.

Ultimately only 3 schools entered the competition with a total of nine entries. Of those, eight were in breach of copyright! At the time of writing, entrants had been asked to fix their entries to make them legal, and the judging times had been extended. There are lessons here for those of us running research projects about dealing with large bureaucratic structures like education departments (especially non-tertiary ones), but also perhaps some broader

lessons about what is possible in poorly resourced localities where some of the basic access problems have yet to be overcome.

Senior Net

One of the groups that has seemed most promising for this project to engage with has been the local seniors computing group. This group has been in existence since 1995 and is a peer training network of seniors dedicated to computer literacy. As a group for the edgeX team to engage with it seemed ideal as it involves 'training the trainers'. We hoped this would mean that as we trained them, they would spread the word through their own networks as part of their core business. We have had contact over the past year with a number of key figures in Senior Net, including the president, head trainer and the webmaster. Earlier in the year we ran two training sessions in their training lab. These were well attended and it was clear that mostly this group had been focused on computer literacy but very few had engaged with the internet, particularly with respect to uploading their own content. Thus while some were familiar and competent with email, and could do some basic web surfing, almost none had ever used any 'web 2.0' tools like *Flickr*, *YouTube* or blogs.

While there was a polite interest maintained throughout these sessions, two noticeable responses were dominant. The first was a scepticism that this was a useful tool for them. Some thought it might be handy for uploading photos to show to geographically distant family, but most were obviously at a loss as to why they would want such a tool. Secondly, among some of the participants there was a palpable fear about protecting their privacy. One woman refused to register because she was afraid to put a password on line. She was convinced that everything on the internet was insecure and if she had to give her email address to us in order to register then it would be a means for someone to steal her identity. This was an extreme case, and not completely typical by any means, but it demonstrated that the discourses and rhetoric of the internet as an unsafe place have a powerful hold on some people.

There was very little further use of the site by this cohort of people after the workshops, although the head trainer immediately saw its value and started posting his 'tips sheets' there. Disappointingly the webmaster, who had initially been enthusiastic about the site and the work it might save him, did not attend the workshops. He runs the Senior Net website, and is frequently called upon by members to upload content to the site, as he is the only one with the access and skill to do so. He thought edgeX could save him a lot of trouble if people could upload their own material to the Senior Net group site within edgeX. The webmaster was pursued a number of times by one of the team members and eventually agreed (most reluctantly) to come to the training lab for a session on edgeX one to one. He brought a chaperone and was polite but quite resistant to start with. However after a couple of hours going over the site and learning how to use it (while his chaperone nodded off quietly in the chair next to him), his attitude was completely transformed. He became the site's most

enthusiastic supporter. He said he had been put off by the cumbersome registration process that was initially implemented on the site (subsequently streamlined). He went home and began to explore its possibilities in earnest and teach himself how to implement various functions for the group. He emailed with questions and we had phonecalls, and were able to give him the support he needed. He became a source of feedback on design.

At the time of writing, he was about to run two more workshops for Senior Net on using the site. It will be very interesting to see whether having a champion from within the organisation helps to drive some uptake, and whether his enthusiasm is enough to convince others that they could incorporate this as part of the group's communication ecology.

Probably one of the lessons learnt from the Senior Net example is that it takes time to nurture interest among people and relies to a certain extent on building relationships and trust, as well as providing decent support. The Senior Net group at least have a lab with 13 computers with broadband access that all members can use. Access is thus less of a problem for this group, although domestic use of broadband is still not high.

An Assessment of Progress So Far

This project may not engender the kind of engagement it set out to initially generate, for a number of reasons. Some of these reasons relate to difficulties with the development of the website which put the project significantly behind schedule. The amount of time available to do the main work of the project was reduced by nearly two thirds and has meant that the careful, extended process of community engagement will possibly not have the chance to mature to the point where we are able to achieve a sustainable community on the site. The fact that the website development took so long is an indication that, unless a project is properly resourced and can employ technical development staff on an adequate and ongoing basis, easy and low-fi solutions should be sought. Although the project's website now has an enormous amount of functionality and works well, the fact is that it took much too long to develop and has threatened to turn the project into a technological one, rather than a community based development and investigation project.

However the process so far has yielded some interesting material which we will be able to build on during the remaining six months of the project. More follow up work will be done with community groups, more groups contacted and more competitions will be run. Students at the University of Queensland will do search engine optimisation for the site as part of a subject being run in the business school. The success of each of these strategies depends to some extent on the strength of networks and relationships that can be developed in the remaining time. As demonstrated with the Senior Net example, sometimes it takes time to get a key person on board. Success may also depend on managing to market the site more widely and successfully.

Indeed, the lengthy development time experienced for edgeX may also have meant that the window for stand-alone solutions aiming to address the social media needs to local

populations has now closed. In 2004 and 2005, when plans for the edgeX project were first developed, available media sharing sites such as *Flickr*, *YouTube*, and *Blogger* still offered a relatively basic set of functionality which enabled users to carry out core tasks well, but provided little added functionality. Today, this has changed, and especially the increasingly sophisticated Application Programming Interfaces (APIs) of these and other auxiliary sites, coupled with advanced content storage providers such as Amazon Web Services, combine to create a very different online services environment.

edgeX was intended to provide the Ipswich community with the functionality to enable them to share content of salience to local users in a variety of formats (text, photos, audio, video), with geotagging tools to enable a very specific hyperlocal form of content creation and sharing. Additionally, widespread use of Creative Commons licences was hoped to provide a platform for collaborative approaches to creative work and remixing and mash-up experimentation with the material provided by others. When the site framework was first drafted, no existing mainstream site or platform offered the functionality required to achieve these aims.

Today, this is no longer the case. It is now possible to draw on the functionality of other sites both as simple storage providers, and as alternative pathways into creative participation; for example, it would be possible to store videos on *YouTube*, photos on *Flickr*, and blog content on *Blogger*, to geo-tag such content using *Google Maps*, and to transparently integrate these elements through a relatively lightweight custom-made community Website. This is the approach taken at least in part by “crowd-powered” citizen journalism site *NowPublic*, by project-based social networks host *Ning*, and by many other sites which build on a ‘services mash-up’ philosophy.

By pursuing a mash-up approach, such sites divest themselves of the need to address information storage and format conversion issues (leaving such technical issues to the better resourced mainstream media sharing sites on whose services they depend), and can instead focus on optimising the integration between different services, on building attractive and user-friendly interfaces, and on fostering an engaged on-site community. Additionally, by being available both through their own site and through the sites of the media sharing services upon which they build, their content gains additional exposure, thus potentially drawing further users to the mash-up site.

At the same time, in drawing on the services of others such sites also give up a significant degree of control over the content uploaded by their users (or, more precisely, require their users to do so). Where edgeX was able to implement Creative Commons licencing options effectively and in a legally appropriate fashion by providing its own content upload and storage functionality, for example, an edgeX building on *YouTube* and *Flickr* for content storage would have been beholden to *YouTube*'s and *Flickr*'s content licencing, terms of service (TOS), and end-user licence agreements (EULA) as well. In the worst-case scenario, in other words, this approach would condemn any users of the site to giving up, by default, some of their ownership rights to the corporate operators of these service providers.

That said, at least at present, it appears that the benefits of being able to draw on such reliable, industry-standard services in developing new, more specialised or niche content sharing sites do outweigh the concerns about licencing agreements. Being able to focus on integrating these services rather than having to develop storage and management systems from scratch enables a more rapid prototyping and development process than is otherwise possible (and would likely have sped up edgeX development substantially). APIs and related services are improving and expanding rapidly, and many new services, gadgets, widgets, and new mash-ups are constantly becoming available.

At least in some areas, in fact, there is a growing trend towards developing standard frameworks for integrating the diverse available service options in a reliable and manageable fashion; Google's recently launched OpenSocial standards framework serves as just one example in this context. OpenSocial is widely seen as an attempt to develop a distributed, decentralised social networking alternative to the still dominant *Facebook* – rather than reinventing the wheel by launching yet another *Facebook* clone, it is understood that Google sees OpenSocial as a means of cracking *Facebook's* walled garden and enabling a wide variety of social networking and social media services to interoperate and share content (see e.g. Farber, 2007).

Though clearly operating of a vastly different scale when compared to *Facebook*, edgeX and other insular, stand-alone content sharing sites may well be similarly affected if OpenSocial and comparable interoperability frameworks do succeed. In future, unless it is an attempt to build platforms for sharing forms of content or offering types of interaction that are as yet entirely unaddressed even in part by any mainstream site, it appears probable that there will no longer be a need to develop entirely self-contained systems such as edgeX, and that it will be possible instead to connect up the service and storage facilities of extant media sharing sites, thereby enabling developers and researchers to redirect more energy towards those processes of user engagement and community development which will remain crucially important. With technological facilitation questions as background, the issues of access and literacy in local communities and whether there is a role for new media technologies in building local community identity can be more fully foregrounded and addressed. It is possible, and this research team suspects, that while these new online social media spread virally and uptake is driven through mechanisms of social networking, this applies mostly to those already literate with the technology and already online. For those who are part of communities and networks not online and not already literate, the barriers are still high, and the gap between them and their online counterparts continues to grow. In economically depressed areas, where most members of a community may rely on non-internet technologies for their communication, uptake will continue to be slow.

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