2006

Protecting the digital citizen: The impact of digital personae on ideas of universal access to knowledge and community

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Abstract: Universal service obligations (USOs) are designed to ensure that citizens of a modern state get access to basic services, from telecommunications to postal services. USOs are interventions in the marketplace to ensure that inequalities caused by geography or income or other impediments to access are compensated for. What constitutes access to 'basic' telecommunications, however, is being challenged by new technologies and new understandings about how people use telecommunications and media. In the past the Plain Old Telephone Service (POTS) was the 'basic' service. However, in this paper the authors argue that internet telecommunications makes 'persona' an important part of definition of USOs and in the delivery of essential telecommunications to modern digital communities and digital citizens.

The Digital Citizen

Jo Twist, a reporter for the BBC, says that 2005 was the year of the digital citizen; "citizens really started to do it for themselves. Raising mobiles aloft, they did not just talk and text, they snapped, shared and reported the world around them." (Twist, J. 2006).

Citizens can use Vlog's, video blogs, to show people what is happening in their community. Regularly, US Boston Councillor Tobin reports and shows his voters the positives and negatives about their community. "He shows them the new mural or neighbourhood graffiti problems." (Twist, 2006). Vlog, like blogs and podcasts, can be subscribed to and each visual is automatically given to viewers.

While the new technologies give enhanced access to communication Twist reports what we already know – "that still leaves swathes of the nation digitally excluded" (2006). There can be no doubt that extension of access to electronic communications is perceived as a priority precondition for access to the knowledge economy. "The need to eliminate or at least minimise any "digital divide" that excludes major social groups from access to and use of, in particular the Internet is universally accepted and at a minimum expressed by the notion of a "universal service." (Huntley, McKerrel & Ashgar 2005). However, how we achieve that universal service is hotly debated. There are those who support government intervention to achieve it and those who argue that the market achieves equity without intervention.

The very idea of a digital divide means that lack of access impacts adversely on groups socially excluded by age, social standing, race and geography. A Universal Service Obligation (USO) is an explicit social inclusion agenda clearly reflected in legislation. It is USOs that have enhanced access to knowledge over the past century, together with earlier equivalent in copyright and in the public distribution of knowledge. These USOs are often not reflected upon in the public mind, but they have existed and have contributed to access to basic services associated with communication and knowledge. For example, public libraries are a 'USO'. They are a publicly supported legislated means for a citizen to get access to knowledge, regardless of social standing. Postal services are under USOs. There is an assumption that basic mail services will cost the same, regardless of the location in a country. In Australia, the Telecom's Universal Service Obligation has been the requirement: *to ensure that the standard telephone service is reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business; and to supply the standard telephone service to* people in Australia (Telecommunications Act, 1991, s288,).

The debates about whether USOs should continue revolve around the idea that markets are now providing telephone and internet services cheaply and efficiently in deregulated environments. Moreover, defining universal service in rapidly changing technological environments becomes difficult and legislative interventions not appropriate (Huntley, McKerrel & Ashgar 2004). These arguments, however, are missing important developments in the evolution of the current digital environment. Digital citizens are being re-presented with **digital persona** and protecting this persona will require legislation to protect privacy, intellectual property and people's access to services.

The digital citizen it would appear is different from the traditional citizen. The digital citizen can project their self into a virtual world, whereas the traditional citizen could not. The digital citizen can connect to a virtual community, whereas the traditional citizen could not. But in both cases there is a need to protect the individual and community's interest in knowledge in which the citizen is embedded (for it is here that citizen and community connect). For example, the idea that the community owns published knowledge is, of course, enshrined in law. Intellectual property law tries to protect the individual and the community interest in knowledge. There is no freedom of access to what a person knows unless that person publishes what he or she knows. Under common law you own your own ideas completely until they are published. 'Ideas are free; but while the author confines them to his study they are like birds in a cage, which none but he can have a right to let fly; for, till he thinks properly to emancipate them, they are under his own dominion' (Briggs, 1906: 19). People who decide to 'let fly' their ideas gain a reward because of their contribution to the public domain. 'Copyright, which defines the right of an author with regard to his production, is undoubtedly given him to recompense for his creative work' (1906: 22). While the right to tangible expression of knowledge is called a property right, it is more precisely a right to reward to those who surrender their exclusive control of their own thoughts. Freedom of access to the public domain, to the totality of published works, refers to access to the tangible expressions of knowledge, such as documents, signals and data structures.

If digital citizens are representations of themselves in a digital world – in the social distribution of knowledge - then obvious questions arise about how to protect those citizens. A digital citizen could be at one point a document, at another a signal and at another a data structure.

The Digital Persona

Modern databases and digital depositories have the capacity to store vast amounts of information on individuals. In the case of normal everyday affairs, of course, there may be many databases and many organizations involved in collecting information on individuals. There are two types of digital persona possible in these environments – active persona and passive persona (Clarke 2001). Many organizations collect information on people, ranging from health, justice, and social security through to education. Sharing information on people is, the authors will argue, essential to our understanding of the momentum of and the future for the digital technology revolution and access to the web. People in future may want to have their own active digital persona. How these personae are constructed has implications for privacy legislation and how we construe access to the Internet.

The current digital collection of information is primarily 'passive' (see figure 1). Active persona originates with the idea of "agent". In a digital context, "an agent acts on behalf of the individual, and runs in the individual's workstation and/or elsewhere in the net. A trivial implementation of this idea is the 'vacation' feature in some email servers, which returns a message such as 'I'm away on holidays until <date>' to the senders of messages. (Where the sender is a mailing list, this may result in broadcast of the message to hundreds or thousands of list-members)." (Clarke, 2001).
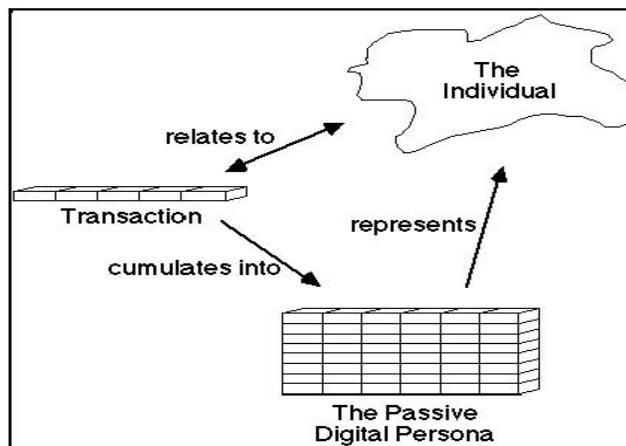
Figure 1: Passive Digital Persona (Clarke 2001)

Projected active digital personae include mail filterers, news and 'knowbots' (intelligent searches of networks). Active digital persona can be projected by the individual or imposed by others. The difference between active and passive is in the degree to which control can be exercised over what is happening to the persona. If the individual is projecting their persona, for example, they may wish to create filters around themselves and restrict the bombardment of information through the networked world.

Not surprisingly, the idea of a 'persona' can generate fear:

> "There is something innately threatening about a persona, constructed from data, and used as a proxy for the real person. It is reminiscent of the popular image of the voodoo doll, a (mythical) physical or iconic model, used to place a magical curse on a person from a distance. Similar ideas have surfaced in 'cyberpunk' science fiction, in which a 'construct' is "a hardwired ROM cassette replicating a ... man's [sic] skills, obsessions, knee-jerk responses" (Gibson, 1984, 97).

As Clarke (2001), an expert on the idea of digital person and privacy points out, the ability to create a persona may be vested in the individual, or in other people or organisations, or in both. "The individual has some degree of control over a projected persona, but it is harder to influence imposed personae created by others." There are clearly dangers with an imposed persona, including: Dangers of personal dataveillance, Wrong identification, Low quality data, Non contextual use of data, Low quality decisions, Lack of subject knowledge of data flows, Lack of subject consent to data flows, Denial of redemption, Denial of due process (see also Clarke 2001).

An active digital person will be essential in the digital era. It will be able to communicate with other persona, collect relevant information, and, indeed, make decisions on behalf of the 'real' citizen. Traditional USOs have addressed the means for ensuring access to the community's social distribution of knowledge, including the telephone, libraries and limited ownership of knowledge. If digital citizens have digital personae, then there eme rges the problem of USOs to ensure that that persona is not restricted in its access to the community's knowledge in Internet contexts.

USOs as a Positive Right

Privacy is a 'negative right' as it is 'freedom from' interference from others, while agencies 'sharing information' about a person is potentially a 'positive right' as it might be something that is done in that person's or society's interests. Positive and negative rights have complex philosophical underpinnings (Holmes & Sustein 1999) but inform much of how we operationalise everyday life in modern societies. Bans on smoking in public places, for example, are positive rights, as the imposition of the law is said to benefit the individual and society, even if that law may be against that individual's wishes. Compulsory education is another example. Taxing people to ensure that money is available for libraries is a positive right as are cross-subsidies in telecommunications where city users fund rural users.

Digital personae raise complex issues about how information is shared about people and how information is controlled. However, digital personae also raise issues about access to the internet. USO theorists do not link the problem with digital personae to the problem of universal service provision because, superficially, they appear unrelated. However the definition of what counts as 'basic' internet access and 'basic' persona for access to and distribution of knowledge, have become related. Unlike the basic telephone service, the definition of 'basic' access to telecommunications will increasingly require sophisticated understandings of trust, privacy

and the social distribution of knowledge, all of which are embodied in the idea of 'digital repositories' as a means of access to information on personae.

Trust in Digital Repositories

Trusting the representation of a digital persona and the means by which is stored and secured are related. The Digital Repositories Review (2005) differentiates digital repositories from other types of collection on the basis that the: Content is *deposited* in a repository, whether by the content creator, owner or third party on their behalf; Repository architecture manages content as well as metadata; Repository offers a minimum set of basic services e.g. put, get, search, access control; and, Repository must be sustainable and trusted, well-supported and well-managed

The RLG-OCLC report *Trusted Digital Repositories* (2002) identifies minimally three levels of trust that must apply to the establishment of trusted digital repositories:
1. How institutions earn the trust of their designated communities
2. How institutions trust third-party providers
3. How users trust the documents provided to them by a repository.

Government and non-government agency electronic collection of information about people, whether that information is about health, justice, social security or other areas, has the characteristics of a 'digital repository'. Studies on digital repositories acknowledge that 'trust' is central to the operation of a digital repository but that trust is difficult to define. There are obvious legal questions on the extent to which the current active persona (informal) can be translated into an active digital persona (formal and legislative). It is here that we get an insight into the future of web accessibility. If digital persona become important to the understanding of basic access to telecommunications in which real people are likely to become better informed citizens, then what do institutions need to contribute to a digital persona?   If people in future operate with very complex active digital persona, their own constructions, which also incorporate their learning styles and needs, then how can learning systems and digital repositories interact those digital persona?   In brief, digital repositories are the libraries of the future but they also incorporate digital personae.

Digital Citizen, Digital Community and USOs

Web accessibility under a USO would be a positive right. A definition of such a USO would include a definition of basic internet access and a definition of digital persona and the capacities of an active persona that are supported financially by government. At present, as figure 2 shows, we already generate a number of 'persona' in digital contexts. The key question for the digital citizen is in what legislative guarantees might be needed to protect those personae that are essential for citizenship. This might mean a definition of a basic 'knowbot' that could search for individually related information (eg health, jobs, etc).   If we put this into a model, figure 3, we can see how the different conceptual areas overlap. The community exists in digital environments and citizens require particular means to access it. A person using a Vlog, for instance, needs both the technology and the skills.   A person with an active digital persona that hunts for information for the Vlog requires particular 'skills'. The USO provides legislated mechanisms therefore to ensure that the means to create an active digital persona are there, just as legislative obligations do this for other areas of the social distribution of knowledge. When we look at the intersection of 'individual', 'community' and 'USO' we find the digital citizen. In order to be educated and informed the community as relied on USOs in different areas to protect the citizen's access to and use of knowledge and its social distribution through communication. The authors' argument is that it is time to reconceptualise USOs for the digital citizen.

The Citizens ability to Control their Persona or Online Personality with Legislative Guarantee
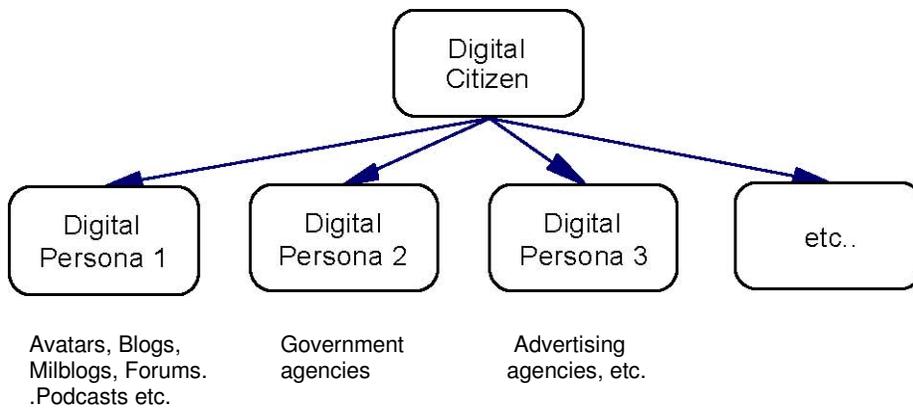
```
                        ┌──────────────┐
                        │   Digital    │
                        │   Citizen    │
                        └──────────────┘
        ┌───────────┬────────┴────────┬───────────────┐
┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│   Digital    │ │   Digital    │ │   Digital    │ │    etc..     │
│  Persona 1   │ │  Persona 2   │ │  Persona 3   │ │              │
└──────────────┘ └──────────────┘ └──────────────┘ └──────────────┘

Avatars, Blogs,    Government      Advertising
Milblogs, Forums.  agencies        agencies, etc.
.Podcasts etc.
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Figure 2: Multiple personae used by a digital citizen

* Laws to protect freedom   * The right to knowledge
* Knowledge   * The right to vote
* IP   * Freedom of speech
                                   * Freedom of association

Community   Individual

Digital
Citizen

Universal Service Obligation

Digital Repositories
* Libraries   * Telephone
* Government Agencies   * Postal Services
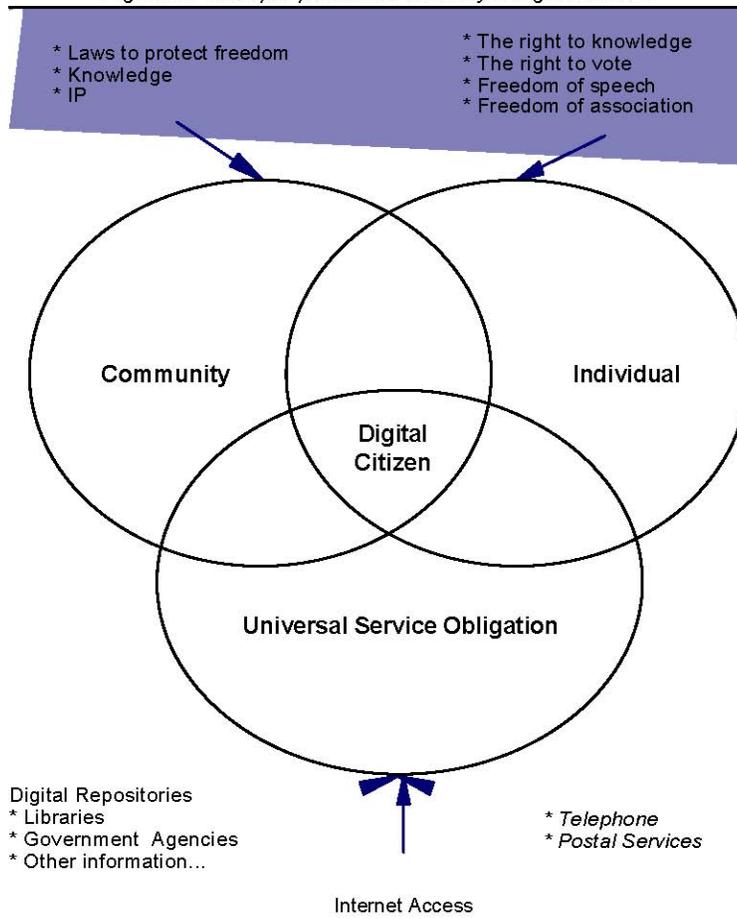* Other information…

Internet Access

Figure 3: Intersections of community, individual and USOs

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