To the auDA Policy committee and auDA board for consideration.

Proposal for trials for new TLD paradigms

Geographical Domain Name systems

The need for an intuitive addressing system within the DNS is becoming paramount. The old standard cry of "the DNS is not (for use as) a search engine" is becoming overshadowed by the reality of the practice of "guessing" a URL and the commercial scramble for "intuitive" or "portal" style names.

The most pressing demand arises out of the need for "provider independent" e-mail and web addressing that is applicable not only to the business or cluster group levels of the community, but also fits and is practicable for the individuals within the community.

For such a system to be easily intuitive it would have to be universal within the domain space, and have reasonably immutable structure across the whole.

The prime requisite of such a system would be that it made simple sense.

Email would look like..

individual or service @ town.state.country

the corresponding URL would take the form of

www.town.state.country/individual or service

these would then look like

police@moe.vic.au

url = www.moe.vic.au/police

The lessons learned from the failure of the .us namespace to produce such a system must be taken into consideration at this point.

The .us namespace was/is (in most cases) allocated the regulation and structure of the sub levels to the relevant geo-political bodies. This led to a wide variety of structures and the loss of any real usability within the namespace.

It is only recently that the US govt. have seen the possibilities of this namespace and have attempted to bring it back under control via the US Postal Service. The .us legacy system may however be irreparably damaged.

The need for a centrally coordinated body, preferably some sort of statutory or semi govt. body, whose mission and scope aligns closely with the task at hand is paramount. It is also important that this body would have a presence in even the most remote areas of the country. The obvious choice for the .au namespace would be the institution whose role is apolitical and whose charter encompasses the delivery of packages, namely Australia Post.

The Base for experimentation.

In 1997 GIPS designed a system for the sustainability of Gippsland Community Network Inc. (GCN) based on email to fax gateways and a set of geographically based domains.

This proposal was put to NTN and NOIE was consulted. The outcome was that NOIE were (at that stage) not in a position to do anything about the .au namespace and the trials were seen as too early.

Although without funds, GCN did however proceed with the trials. Gippsland Internet Pty ltd (who founded GCN) purchased the domains and provided them (along with the use of the required servers) for the GCN to distribute among the communities, as each community centre became trained to utilise them.

This set of geographical based domains still exists, many are in long term use by the GCN, but the rest are available for further community development and research.

The current set was mostly purchased from NSI and are of the form town.net, many new (protective) domains have been added via the new INWW services as well this year (town.com & .org).

The network and servers are still running (the policy group web discussions run on one of these) and this complete system is available for this purpose. It is in fact purpose built for community development and experimental application of the technology to the Gippsland community.

Identification of issues

There is expected to be little outside challenge to the distribution and allocation of email addresses via Australia Post. Mostly this is percieved as an extension of their current role into the new technology.

Action research through the current trials indicates that a controversy may arise over the web publishing rights of a geographic domain. It is envisaged that Australia Post would be wise enough not to fall for the snake oil illusion that web presence will equal massive income.

Other less aware organisations may be disposed to challenge for the publishing rights under the current paradigm. Experience indicates these are more of a power nature rather than based in any technical or resource standpoint. These organisations include, local shires, local community groups, Business and Tourism groups, Regional Councils and possibly even State Tourism Authorities etc.

There is also likely to be considerable anxiety emanating from the commercial sector if the standard paradigm of publishing on the domains is followed.

What is required therefore is a different publishing paradigm.

Publishing Paradigms,

1st generation Portal, or Centralised Style Publishing

Early publishing of community information was of a central or hub style where a small group of enthusiasts, community pioneers or possibly an early entrepreneur would try to collate all (and often any) information available about a community and publish it on the net. This was mostly hand crafted HTML and costly to produce and maintain with little or no income being derived from the early market.

This Model is also referred to as a 1st generation portal.

This is the current model of publishing being utilised by the GCN to teach basic community publishing techniques. This is still a valid model under some circumstances but would prove immanently unsuitable for a nationwide system.

Whilst a good teaching method with a web presence as a byproduct, it is far too labour intensive to apply on a large scale.

Second Generation, or distributed Publishing models,

The labour intensivness of the hand crafted web pages, along with the workload required to keep them updated led to the development of the database driven second generation. Other factors that came into consideration were ease of production of new material and updates and the non central nature of the publishing.

Basically to publish, all an individual has to do is fill in a form (similar to a guest book technology) and the pages are created within the guidelines of a standard template. This type of technology is extensively used for populating directory style pages and search engines etc.

The technology itself is not new, only the application of it.

In the last 6-9 months a plethora of "out of the Box" portals have been sold to many Govt and semi govt agencies, often with the snake oil promises and mostly funded by Govt grants. (these "portal" software setups generally retail between $20k to $45k and are thus quite profitable for the vendor sector)

There has been 18 months of research activity around building, utilising and promoting this publishing paradigm with the pilot of ABC's Australians Online project (in Gippsland). The findings of this work are consistent with what is occuring in the many new Govt funded "portal" type projects.

Community engagement and participation rates are low. The equivalent analogy would be the "forum" section in a newspaper where only the vocal speak out. It tends to be the same minority again and again.

Quite apart from this, the publishing paradigm utilised still requires the generation of new content to populate the server, and doesn't address the problems of competitive neutrality with commercial entities or even with the existing portals.

It still only replicates what already exists and in many cases detracts from the value/usefulness of both itself and its competition simply by its duplicating nature.

Whilst both of these traditional publishing paradigms have a place, neither are suitable, nor provide solutions for the issues of competition, community engagement, ownership, or hosting.

The answer comes again from outside of the Box.

Don't Publish Paradigm

With the looming scenario of Publish and Perish the obvious choice is not to publish. How can this then be achieved whilst still providing a URL that is permanent, intuitive and matches the email address issued.

The answer lies in some more very old and disregarded server styles. The Persistant Uniform Resource Locator or PURL server.

The PURL server is a resolver server that functions in a very similar manner to the DNS servers themselves. Whilst the PURL server does not "host" the web content it provides a consistent place where it can be pointed to.

From http://www.purl.org

A PURL is a Persistent Uniform Resource Locator. Functionally, a PURL is a URL. However, instead of pointing directly to the location of an Internet resource, a PURL points to an intermediate resolution service. The PURL resolution service associates the PURL with the actual URL and returns that URL to the client. The client can then complete the URL transaction in the normal fashion. In Web parlance, this is a standard HTTP redirect.

Although a PURL service is being run and maintained at OCLC, the PURL model lends itself to distribution across the net, with servers run by organizations with a commitment to maintaining persistent naming schemes (libraries, government organizations, publishers and others).

It is not unreasonable therefore that this technology could be utilised to provide a permanent address for communities and business alike. Redirects on both email and web addressing for those organisations or individuals who do not have the wherewithal required to set up their own domains, and even to function as a funnel or channel for intuitive searches to the hosts of those who do.

This theoretical application of the technology provides equity of access to the geographic domain names that define our communities.

It would also provide the probable framework for the application of the suggested .ind.au domain level; a locator system for a nomadic people who describe themselves by role and tribe.

For over 5 years, work has continued quietly on this project, researching and trialing methodologies, and searching for a match between the technologies available and the needs of the community.

What is very clear is that the advance of technology is vendor driven.

Pre-packaged technology solutions are onsold to hapless communities in a 'one size fits all' manner. The community is then often forced to try to alter itself, and its structure, in an attempt to adapt.

The true requirements are that the technology be molded by vision to suit the needs of the community.

The possibilities arising from this work have not previously been openly discussed as most available forums were carrying some portion of individuals or representatives of those who may have had motivations not fully in the public interest.

It would appear now that a suitable forum has arrived.

I would request that this committee and the auDA board give serious consideration to these issues, given that the community here is actually working with exactly the kind of systems and problems that are currently being discussed.

I would strongly suggest that before any Australia wide changes are irreversibly invoked that they be tested on a trial basis first.

Over the past 5 years the test bed for this work has been developed and is in place within a defined community. It would be negligent not to use it and test the theories before they are imposed on the whole country.

We are willing and stand ready to assist in any way possible the trial of new paradigms on the existing experimental base.

Yours sincerely,

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