Contexts of Resolution

1080p was £4 10s not so long ago
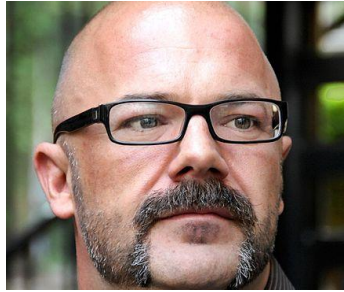
Identifiers occur in contexts

Andrew Sullivan is a BoF proponent for this BoF:

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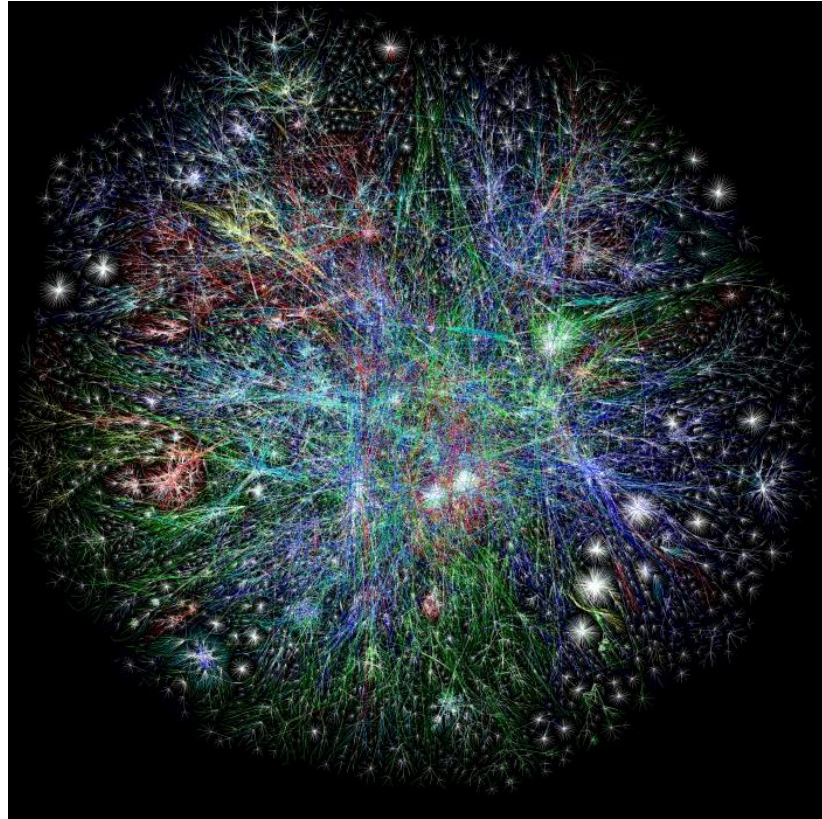Andrew Sullivan is a BoF proponent for this BoF

Not this political blogger

The Internet is a context

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Kind of a big, complicated context.

Internet names are part of directed graphs

The name's uniqueness is because of its place in the graph.

This is expressed in the DNS portion of the Internet name space by the hierarchy of the DNS:

www is not unique.

gov is not unique

www.nasa.gov. is unique

Not all names are within the global DNS

.local names are part of a directed graph that includes the link as part of the graph.

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The link is an implicit part of the identifier, and it turns out that if you think of implicit terms in identifier tuples, this gets a lot easier.

Remember nsswitch.conf?

hosts: files nis dns

Is not the same as

hosts: files dns nis

Or

hosts: dns files

But note that there is no indicator at the APP protocol level (e.g. the URI) what resolution context is to be/was used. That makes failure modes painful to debug.

An NSSWITCH indicator for the Internet?

At some level, what we are talking about is how different resolution contexts can coexist in the Internet, without collision.

Making other items in the directed graph/implicit tuple *explicit* is a good first step.

But how?

A critical requirement is that it be usable within application protocol contexts.

In the p2psip context, we once created this:

```
overlay-node://22301203/;context="overlay://enrollment.example.org/;
otype=pastry"?resource=example.iso
```

It works, but there's no way to use a syntax like this in HTTP or email or SIP.

The [draft](#) goes into a few alternatives, but the engineering trade-offs about whose software has to change to accommodate them needs a lot more work.