

Living in a World of Data



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[www.hcibook.com/alan/papers/assets2011-world-of-data /](http://www.hcibook.com/alan/papers/assets2011-world-of-data/)

ASSETS 2011



Tiree

Tiree Tech Wave
3-7 Nov



Lancaster
University



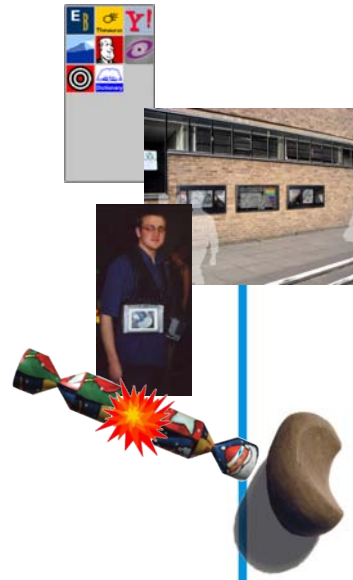
Talis



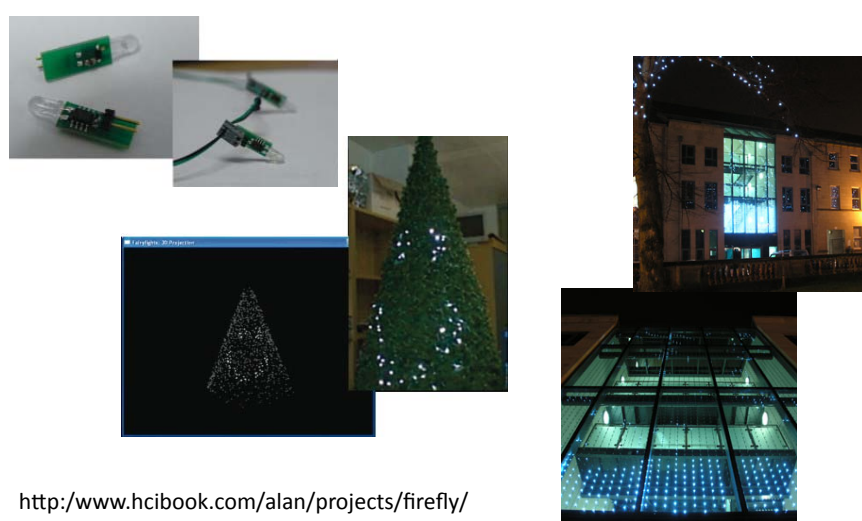
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today I am not talking about ...

- intelligent internet interfaces
- visualisation and sampling
- situated displays, eCampus, small device – large display interactions
- fun and games, virtual crackers, artistic performance, slow time
- physicality and product design
- creativity and Bad Ideas
- modelling dreams and regret



... or even lots of lights



overview

- web of data
- of physical and digital worlds
- economics and the long tail
- empowerment

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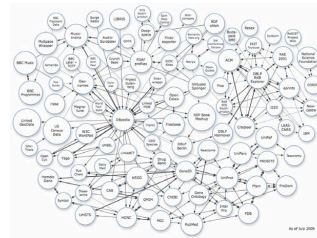
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a web of data

- microformats, RDFa, schema.org

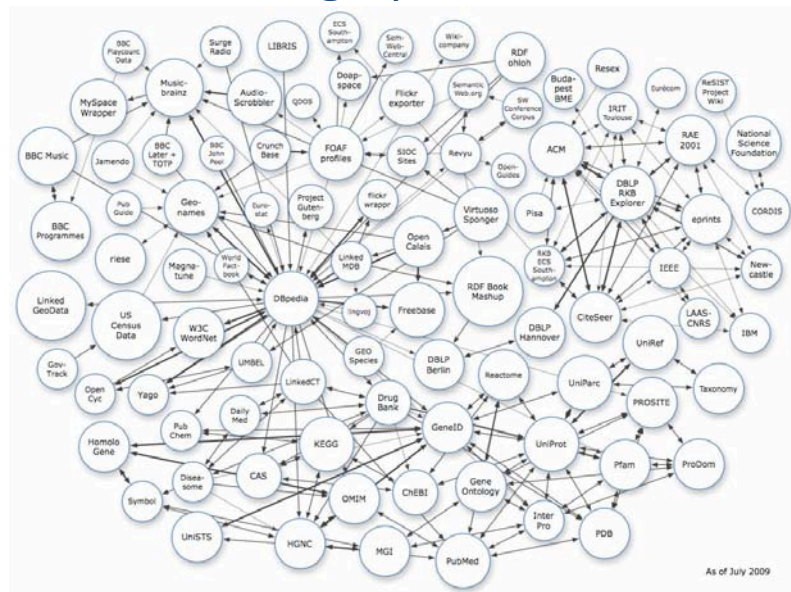
```
<p class="vcard">Hi, my name is  
<span class="fn">Jamie Jones</span>  
and I dig microformats!</p>
```

- LOD, semantic web
- Ajax & APIs



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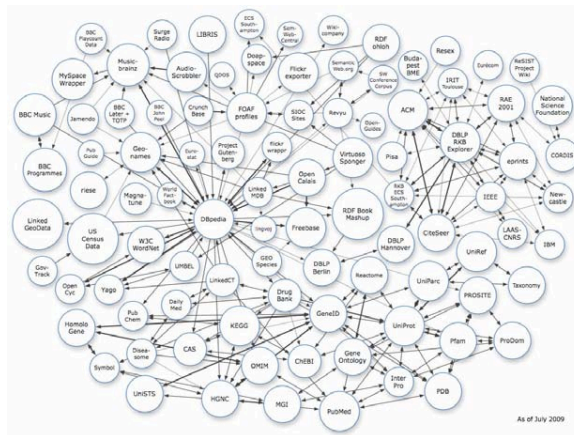
linking open data



linking open data

linking through:

- shared
- dereferencable
- URIs



As of July 2009

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APIs and mashups everywhere

WEBSERVIUS

Mashape

Socrata
Making Data Social™

3scale
Infrastructure for the professionals

KASABI

MASHERY

apiary.io

apigee

Infochimps
Find the world's data

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potential

- data/API orientation enables alternative interfaces

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MikiWiki

The screenshot displays the MikiWiki interface. On the left, a 'Content page' shows a list of entries with user avatars, names, and timestamps. On the right, a 'Data page: wall001' is shown with a 'Format' dropdown set to 'wall'. Below it, a 'Format page: bo/wall' is shown with a 'Format' dropdown set to 'javascript'. The format page contains JavaScript code for rendering the data. Red boxes highlight the 'Format' dropdowns and the 'DATA' and 'FORMAT' fields in the content page's footer.

Data page: wall001
 Page name: /example/data/wall001 | Format: wall

```

1 [{"I've been working for the whole
2 ["another sunny day", "julie", "129
3 ["the exhibition was pretty cool"
4 ["I went to that asian art exhibi
5

```

Format page: bo/wall
 Page name: bo/wall | Format: javascript

```

1 var ct = nugget.data();
2
3 function makeEntry(entry){
4   var comment = entry[0];
5   var username = entry[1];
6   var time = new Date(parseInt(entry[2]));
7   var nice_time = time.getDate()+"/"+(t
8   +time.getHours()+":"+time.getMinutes());
9
10  var new_comment = $('<li/>').css({
11    margin: '5px 5px 10px 5px',
12    padding: '5px',
13    border: '1px solid #ccc',
14    'max-width': '300px'
15  }).append("<span/>")
16  .append("<em/>by "+username+"</em> on
17  .append(comment);

```

DATA: /demos/example/data/wall001 | FORMAT: /bo/wall

Content page

<https://github.com/juliezhu/mikiwiki>

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potential & threat

- data/API orientation enables alternative interfaces
- loads of 'CMS' (22% of domains run WordPress)
... but the data hidden
- AJAX interfaces hide the page and the data!

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the physical world



material artefacts
and design

the body
physiology



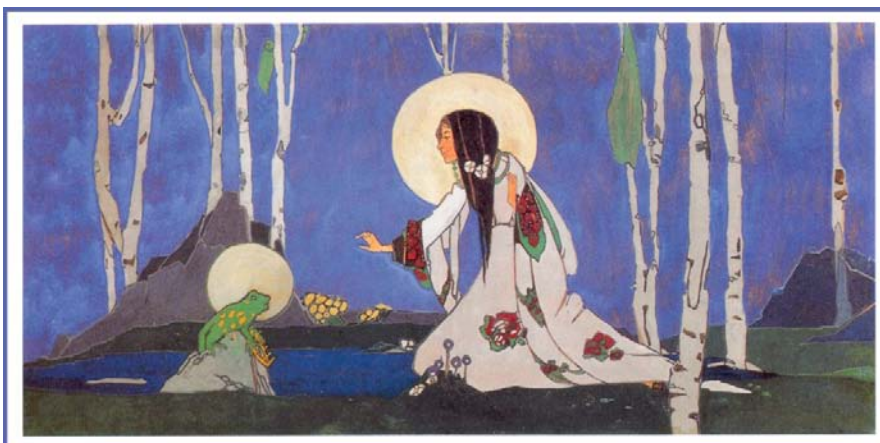
space and spatial
arrangement



digital artefacts
virtual physicality

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sources: from psychology to fairy tales



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why understand? a sense of space ...

standard psychology:

- body space vs. navigation space

but maybe three:

- body space – full 3D – tactile & kinesthetic
- vista space – 2.5 D – visual & walking
- travel space – network – memory & landmarks

recruited to understand digital 'space'

... but what about differing perceptions?

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from physical to digital

ubiquitous sensing & internet of things

medical devices and assistive sensing

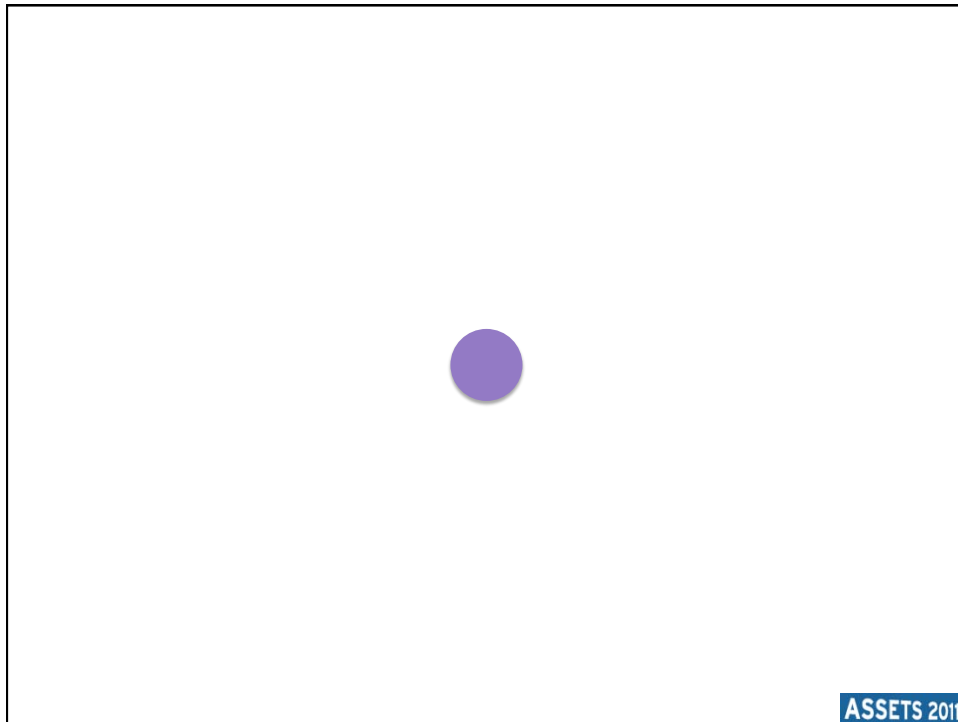
but also everyday: phones, cars, ...

powerful for reflection and support

... but downsides

pleaserobme.com





economics and the long tail

- traditional market economies:
 - optimise for the bulk of money
 - ... but also local market effects
- web 2.0
 - the long tail
 - minority groups create virtual communities
 - => critical mass of the small

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data-orientation

data released for bulk use

allows alternative interfaces for micro-markets

- Next Billion (N.B. micro = £ not people!)
- differing perceptual, physical, cognitive abilities

opportunity

or easy get out?

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empowerment

- empowerment from the net:
 - Arab Spring, London Riots, Malaysian Election, WikiLeaks
 - forces of restriction: Egypt & London
 - ? global 1st ammendment ?
- open data:
 - UK, US & European governments, inc. OS
 - allows alternative interpretations
 - also alternative data (e.g. iraq body count)

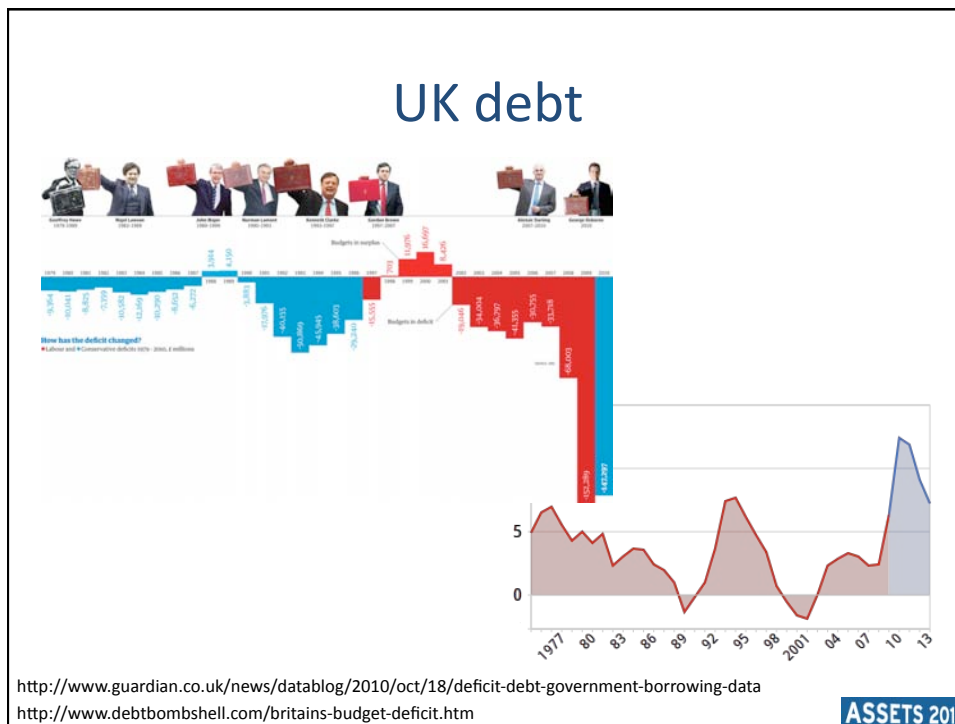
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data matters

- e.g. public debt at last general election!
- often hard to understand
- Guardian Data is great!

DATABLOG
Facts are sacred

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data matters (ctd.)

- e.g. public debt at last general election!
- often hard to understand
- Guardian Data is great!
- making it easier to publish (e.g. Kasabi)
- ... but availability is not enough
- e.g. Indian experience

DATABLOG
Facts are sacred

KASABI

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web of data and APIs
many opportunities
... and some dangers

we are on a cusp

what we do matters

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plus ...

come to
Tiree Tech Wave
3-7 Nov 2011

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