UNDERSTANDING INFORMATION ARCHITECTURE

Paul Rissen, Product Manager

Springer Nature

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OUR PLAN FOR TODAY

- What is Information Architecture?

- Information Architecture in practice

- The Future of Information Architecture

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WHAT IS INFORMATION ARCHITECTURE?

'ALLO 'ALLO! SERIES 1&2

Big Train

Bill Bailey Live

Black Books

Black Books 2

brass eye

The Day Today

THE FAST SHOW DVD COLLECTION

Garth Marenghi's Darkplace

GREEN WING 8 Disc Collectors' Edition

TAKE NOTHING FOR YOU

THE IT CROWD Version 1.0 & Version 2.0

Look Around You 2

the Mitchell & Webb situation

THE TWO OF Mitchell and Webb

BBC DVD THE BEST OF Monty Python's Flying Circus Live at Aspen

Dylan Moran · Monster · Live

Ross Noble · Unrealtime

Ross Noble Fizzy Logic

Ross Noble Randomist

Ross Noble - Series One

Ross Noble - Series Two

Ross Noble - Series Three

Ross Noble - Series Four

Ross Noble - Series Five

Peep Show

Randall & Hopkirk

SPACED 3 DISC COLLECTORS' EDITION

Kodak Pictures CD

JESSOPS DELUXE CLEANING KIT

DOCTOR WHO SNAKEDANCE

THE HOUSE OF CARDS Trilogy

DOCTOR WHO

NEW BEGINNINGS

The Visitation

The Caves of Androzani

Remembrance of the Daleks

The Curse of Fenric

POLICE PUBLIC CALL BOX
DOCTOR WHO
The Complete First Series
BBC DVD

DOCTOR WHO The Complete Second Series

DOCTOR WHO The Complete Third Series

DOCTOR WHO The Complete Fourth Series

DOCTOR WHO The Complete Specials

DOCTOR WHO

DUNGEONS & DRAGONS

Kodak Picture CD

basic elements of narrative · herman

The Language of New Media · Manovich

The Fry Chronicles · Stephen Fry

BORROWED TIME · Mayara A. Alderman

CONVERGENCE CULTURE · Henry Jenkins

The Discontinuity Guide · DOCTOR WHO

the book of LISTS · DOCTOR WHO

A HISTORY OF THE UNIVERSE · DOCTOR WHO – THE TERRESTRIAL INDEX – Jean-Marc Lofficier

WIKINOMICS · Don Tapscott & Anthony D. Williams

:59 SECONDS · Professor Richard Wiseman

This Is Your Brain On Music · Daniel Levitin

Everything Bad is Good for You · Steven Johnson

The Black Swan · Nassim Nicholas Taleb

STEVEN PINKER · the LANGUAGE INSTINCT

TIME · A USER'S GUIDE · Stefan Klein

Freakonomics · Steven D. Levitt & Stephen J. Dubner

13 THINGS THAT DON'T MAKE SENSE · The Most Intriguing Scientific Mysteries Of Our Times · MICHAEL BROOKS

JIMMY CARR & LUCY GREEVES · THE NAKED JAPE

Simon Pegg · NERD DO WELL

THE BOOK OF GENERAL IGNORANCE · A Quite Interesting Book

The Diary of Samuel Pepys

MICHAEL PALIN · Diaries: 1969-1979 · The Python Years

THE DAMNED UTD · DAVID PEACE

More, Bacon, Neville · Three Early Modern Utopias

John Kenneth Galbraith · The Great Crash 1929

OSCAR WILDE · Complete Short Fiction

H.G.WELLS · The War of the Worlds · The Time Machine

BILL BRYSON

BILL BRYSON

BILL BRYSON · MOTHER TONGUE

Bill Bryson · A Short History of Nearly Everything

Schott's Almanac · BEN SCHOTT

Schott's Almanac · BEN SCHOTT

Almanac · BEN SCHOTT

SCREEN BURN

ROOKER · The Hell of It All

U Dave Gorman?

COOLEST ! Adventure

YES MAN

THAT'S ME IN THE CORNER

HOW NOT to GROW UP!

atlas · Luke Rhinehart

I, PARTRIDGE · WE NEED TO TALK ABOUT ALAN

THE SCRIPTS AND MORE · Jesse Armstrong & Sam Bain

PEEP SHOW

BLACKADDER · 1485-1917

THE WRITER'S TALE · Russell T Davies and Benjamin Cook

FOR JUST £1! · SPINELESS SWANSONG

TVGoHome

BEHIND THE SCENES · CHARLIE BROOKER
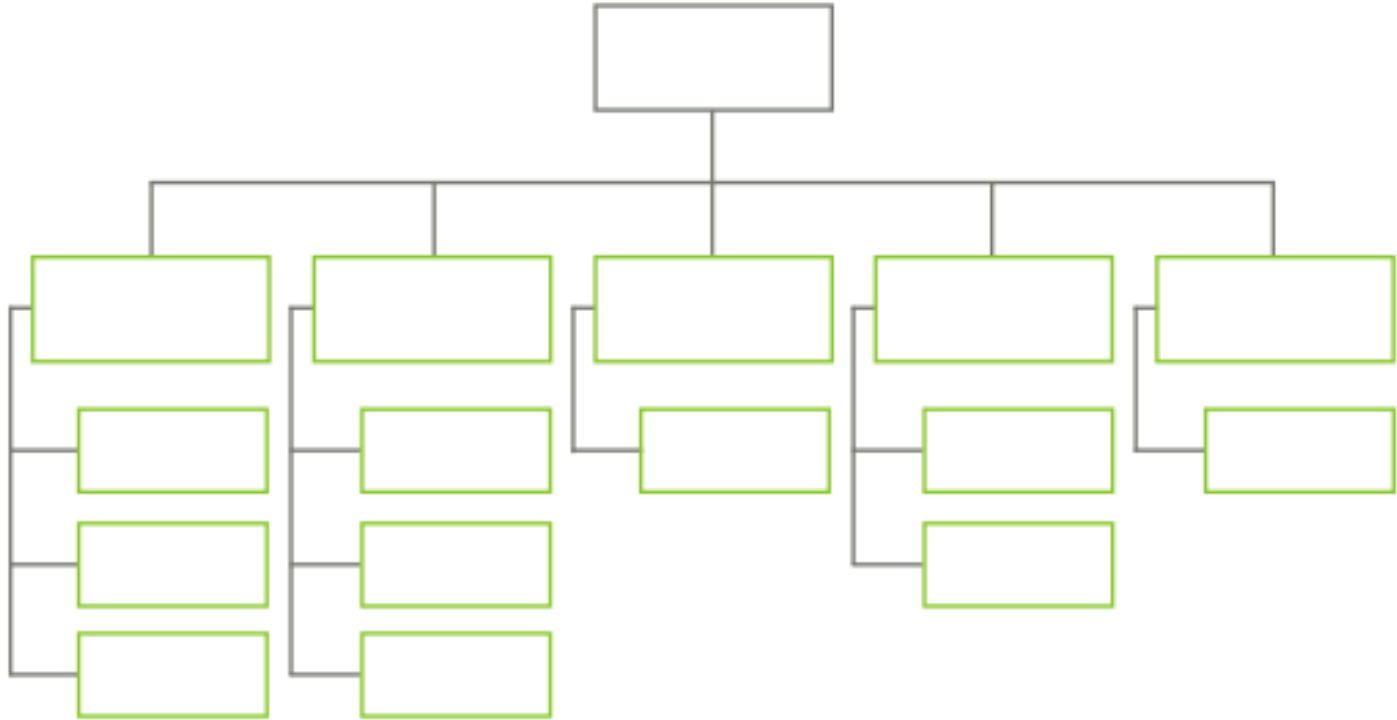
Information Architecture is
about making sense

Ω

CARD SORTING

- Open sort - no set categories; *generative*

- Closed sort - fixed categories; *evaluative*

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SITE MAPS

THE PROBLEMS WITH HIERARCHY

- Things can only be in **one** category.

- Requires users to understand your structure **before** they can use the site.

- Difficult to deal with **changes and updates** to your structure.

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"Everything is deeply intertwingled"

Ted Nelson

programmes   food   health   science   earth   history   arts   sport   news

Information Architecture is about making sense of a messy world

Ω

INFORMATION ARCHITECTURE IS…

- About **describing** a world.

- About being able to **find** things.

- About how you **orientate** yourself in that world.

- About establishing a **flexible conceptual framework** for reuse.

- Ultimately, about establishing, and sharing, **understanding.**

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- **S**tructure
- **O**rientation
- **U**nderstanding
- **N**avigation
- **D**efinition

= SOUND

INFORMATION ARCHITECTURE IN PRACTICE

FOOD RECIPES

Chocolate fridge cake

+ Add to Favourites

By **Annabel Karmel**

A no-bake cake that's perfect for making with children. You can also pick and mix the fillings to suit your taste.

ⓥ

Less than 30 mins preparation time

Less than 10 mins cooking time

Makes 12 squares

1.7K ◄ Share f 🐦

🖨 Print version

☰ Shopping list

📱 Send to a mobile

Ingredients

- 250g/8oz digestive biscuits
- 150g/5oz milk chocolate
- 150g/5oz dark chocolate
- 100g/3½oz unsalted butter
- 150g/5oz golden syrup
- 100g/3½oz dried apricots, chopped
- 75g/2½oz raisins

62 people have recommended this recipe

Quick recipe finder

Type ingredients, chef or programme 🔍

☐ Quick & Easy   ☐ Vegetarian

Advanced search options

BBC **DiSh Up** 🍓 an easier way to cook

Related recipes

Recipes for fridge cake ▾

Honeycomb crunchies
By Mary Berry

Christmas rocky road
By Nigella Lawson

See more fridge cake recipes

Recipes using dark chocolate ‹

Baking with children recipes ‹

Structure
Orientation
Understanding
Navigation
Definition

recipe

chef

programme

technique

ingredient

chef

- awards won
- restaurants owned

recipe

- name
- description
- number of servings
- preparation time
- cooking time

programme

- duration
- genre
- broadcast date
- available on-demand until

technique

- equipment needed
- level of skill required

ingredient

- seasonality
- allergy advice

DOMAIN/CONTENT MODELLING

recipe

chef
- awards won
- restaurants owned

cooks

uses

relies on

featured in

contribute to

programme
- duration
- genre
- broadcast date
- available on-demand until

technique
- equipment needed
- level of skill required

ingredient

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HOW TO DOMAIN MODEL
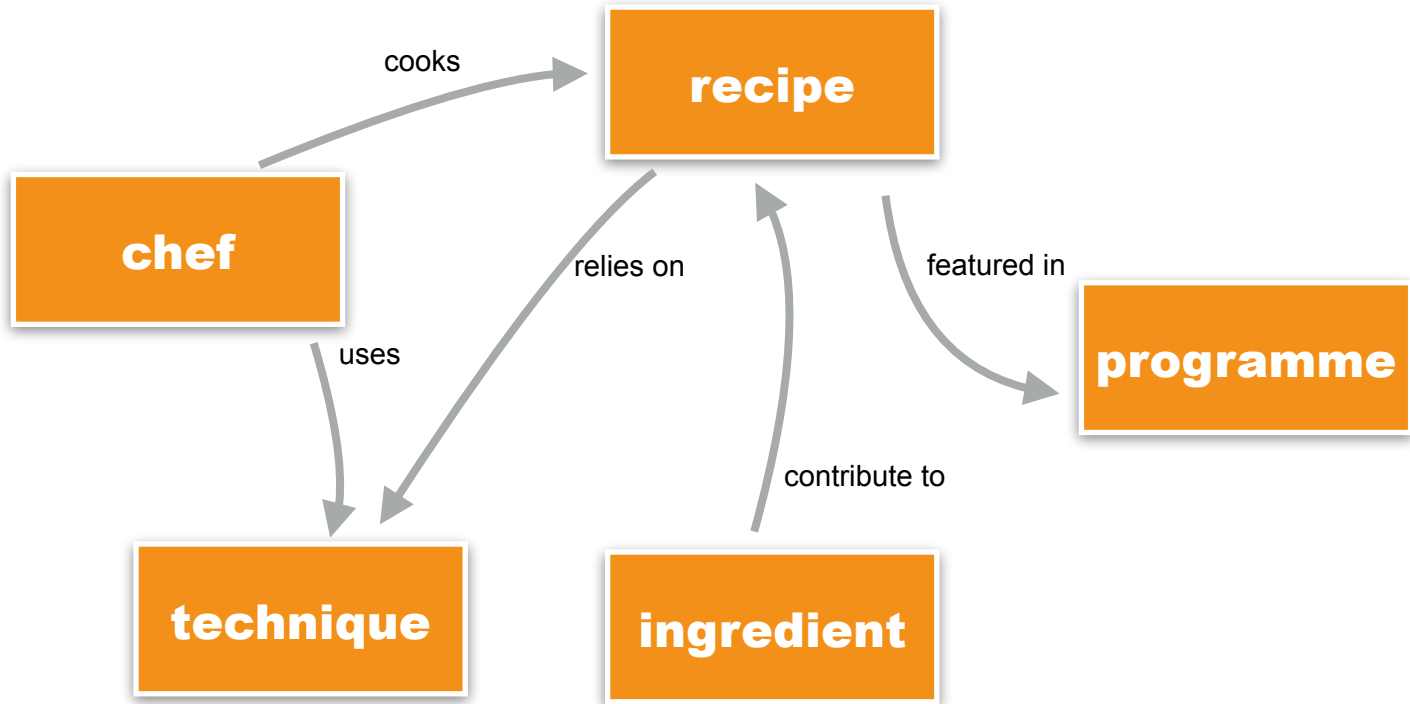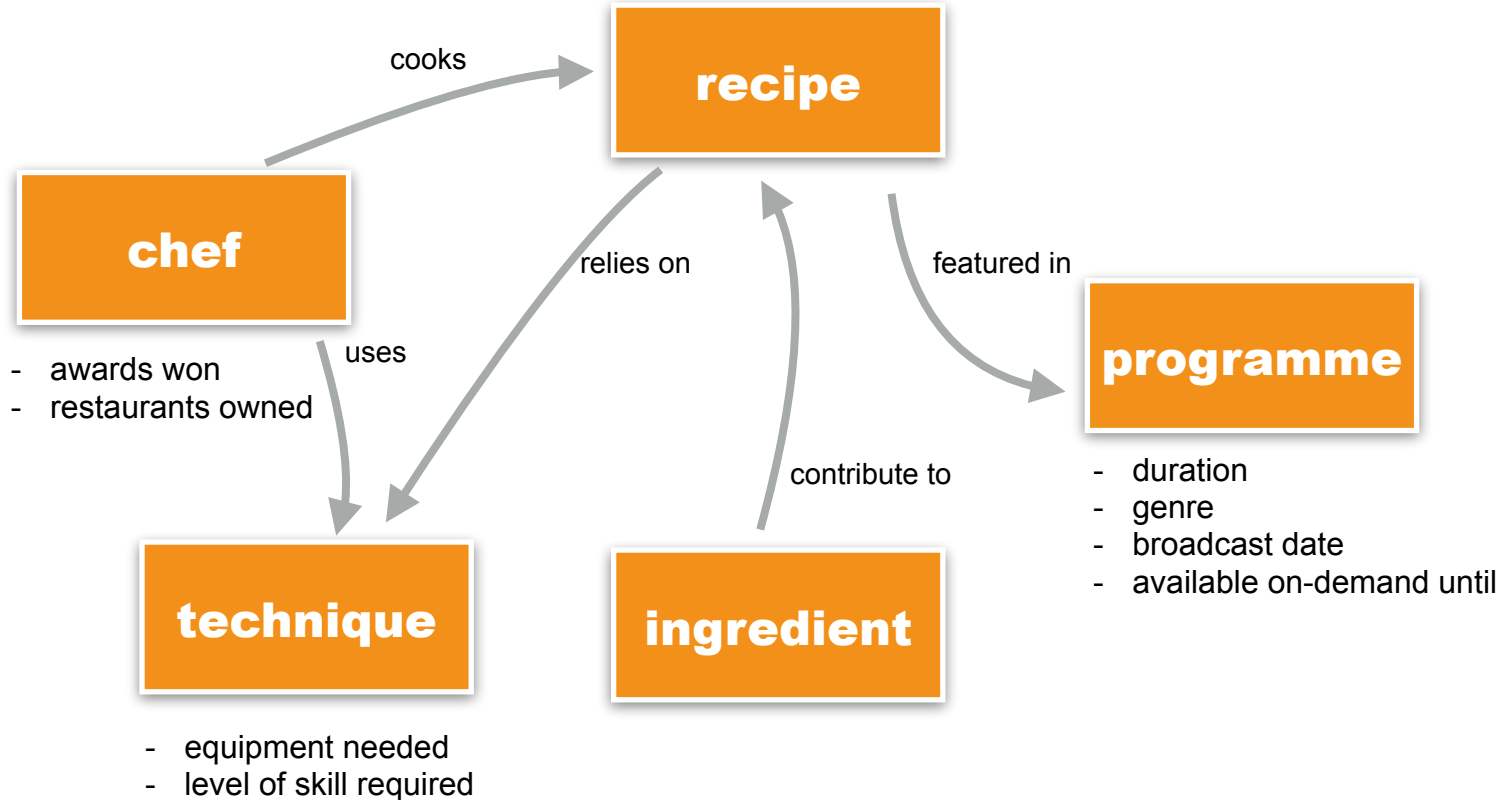
Break down the subject
Break a subject down into the things people think about

Connect each thing
Show how these real-world concepts actually join up

Label the connection
Define the relationship one thing has to another

Subject experts
Get an overall picture of their world. Find where the borders are and demystify any jargon.

Target users
Discover their priorities. Which things do they care most about? Does their terminology differ?

Experts map the world, users mark points of interest.

chef
- awards won
- restaurants owned

cooks

recipe

uses

relies on

technique
- equipment needed
- level of skill required

ingredient

contribute to

featured in

programme
- duration
- genre
- broadcast date
- available on-demand until
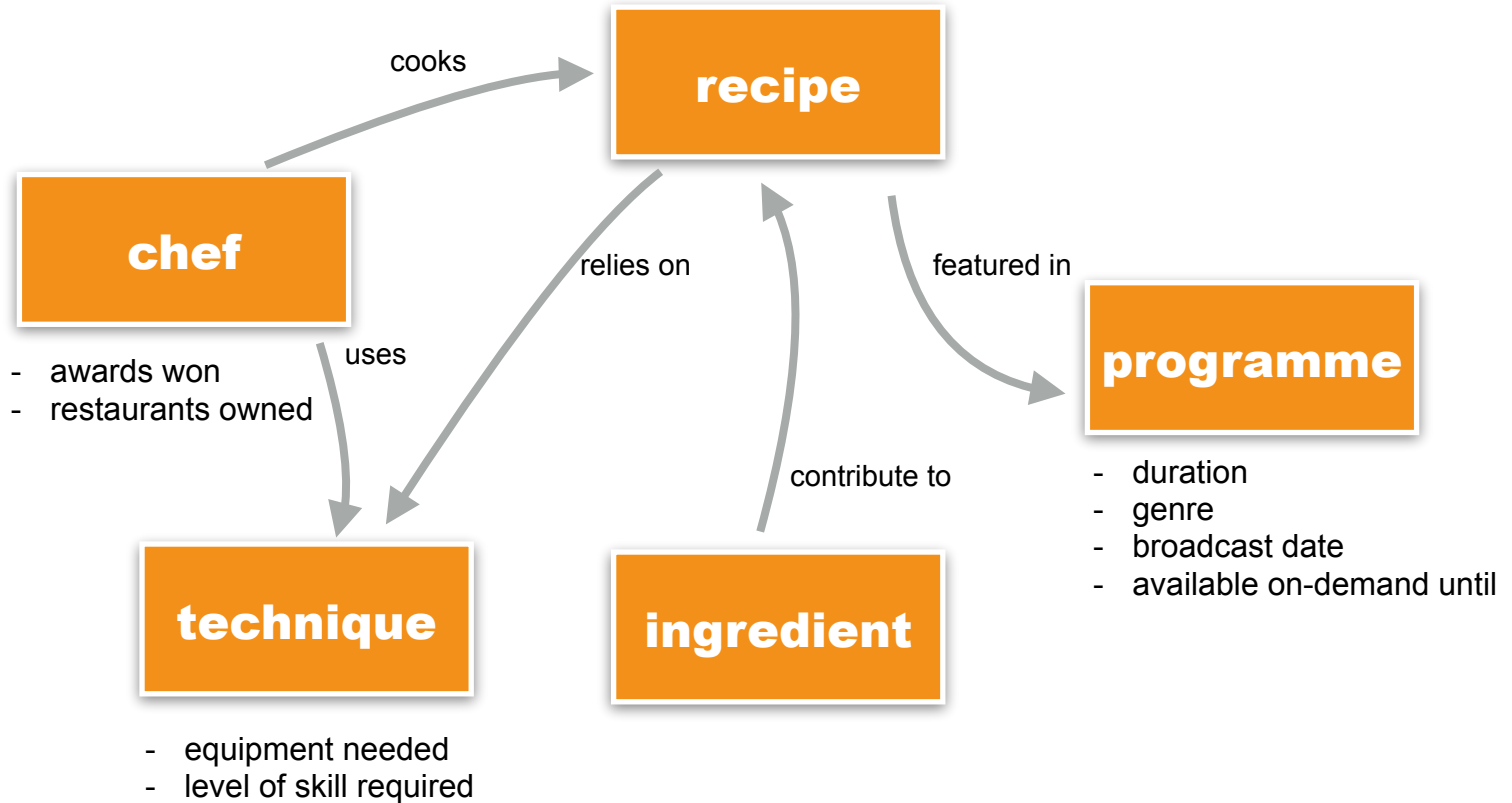
INFORMATION ARCHITECTURE IN PRACTICE: URL DESIGN

Desirable

Delightful

Usable

Useful

I love it

I like and enjoy it

I can understand it & can use it

It fulfils an important want or need

Hackable

Readable

Persistent

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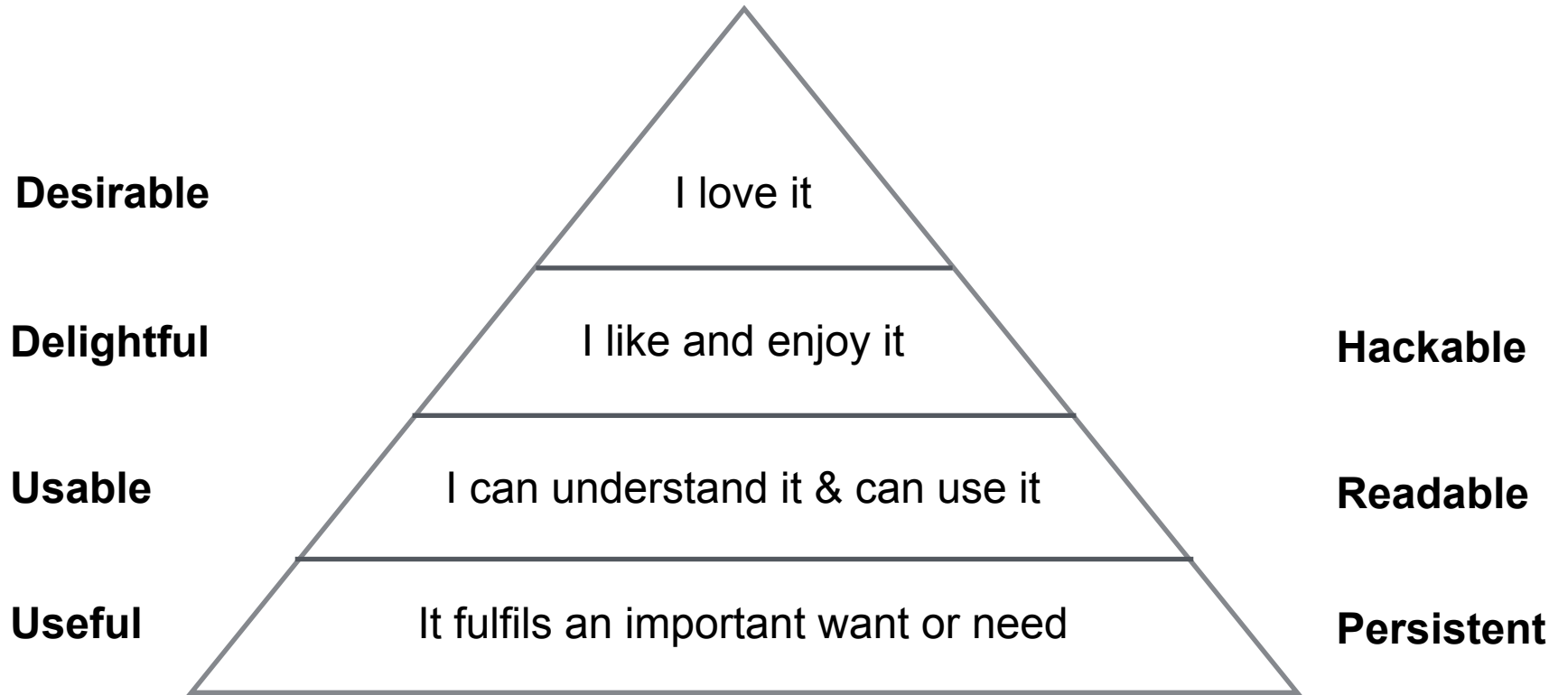
If it doesn't have a URL, it's invisible

Discoverable, searchable, linkable, sharable from anywhere

Cool URIs don't change

Design for persistence, then readability, then hackability

http://www.w3.org/Provider/Style/URI.html

Each URL is a promise to your users.

Don't be the one to break the promise.

"One thing we do know is the importance of links to Page Rank and if URLs move, links break and Page Rank evaporates…

Keyword stuffed URLs suggest to users that they're hackable when they aren't. So we didn't and /programmes doesn't seem to have suffered in the eyes of Google et al…

*"…**cost is the big factor in all of this.** For large data volumes you need human intervention to allocate URL keys. And human intervention is expensive. And humans make mistakes and change their minds. So you need to start storing history to generate redirects. Which adds storage and code complexity and makes things more expensive."*

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- There is a key difference between the **structure** of a site, and the **appearance** of a site.

- Aim for a website structure that is persistent as possible.

- Any form of categorisation should be held as structured metadata.

- Then, presentation & user journeys can be flexible, whilst SEO benefit is maintained.
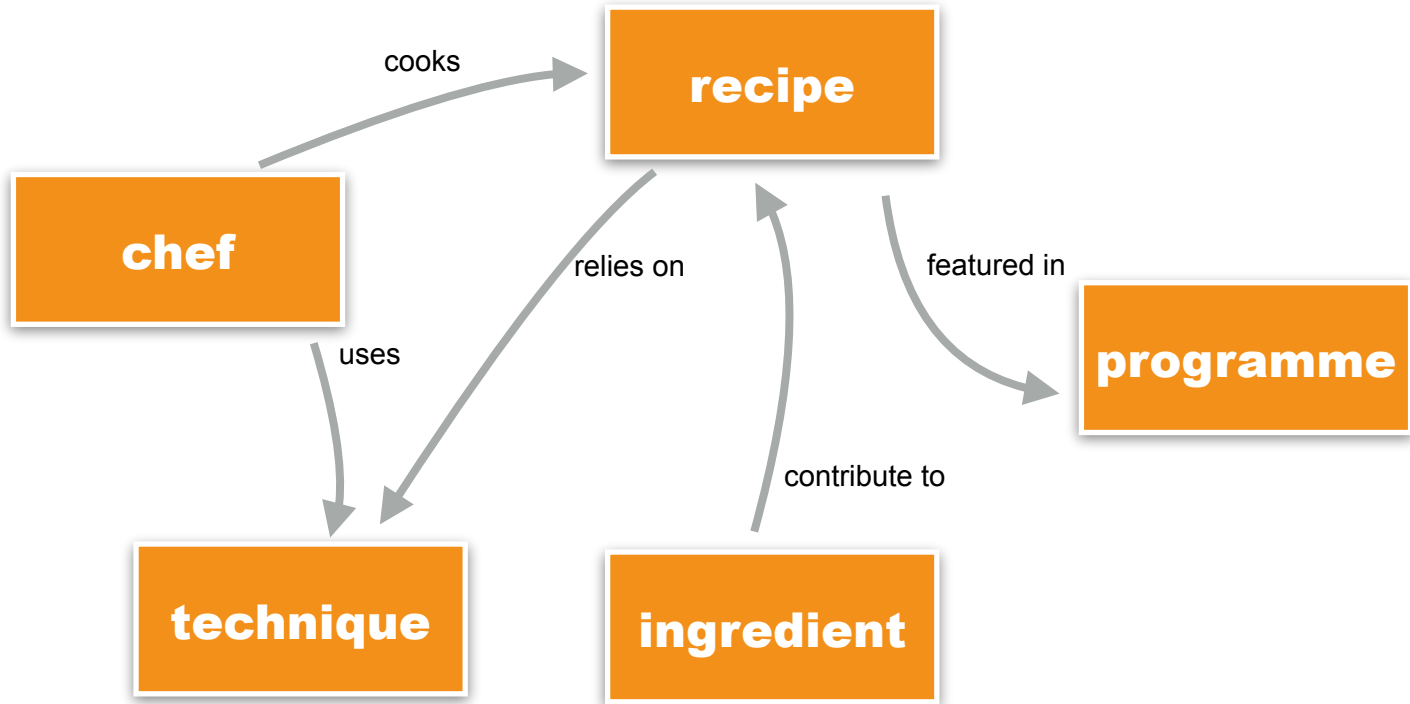
THREE TYPES OF URL STRUCTURE

- http://www.example.com/recipes   Resource Aggregations

- http://www.example.com/recipes/:id   Resources

- http://www.example.com/recipes/:id/ingredients   Aggregation in Context

Never hack back to a hole. No 404s, please!
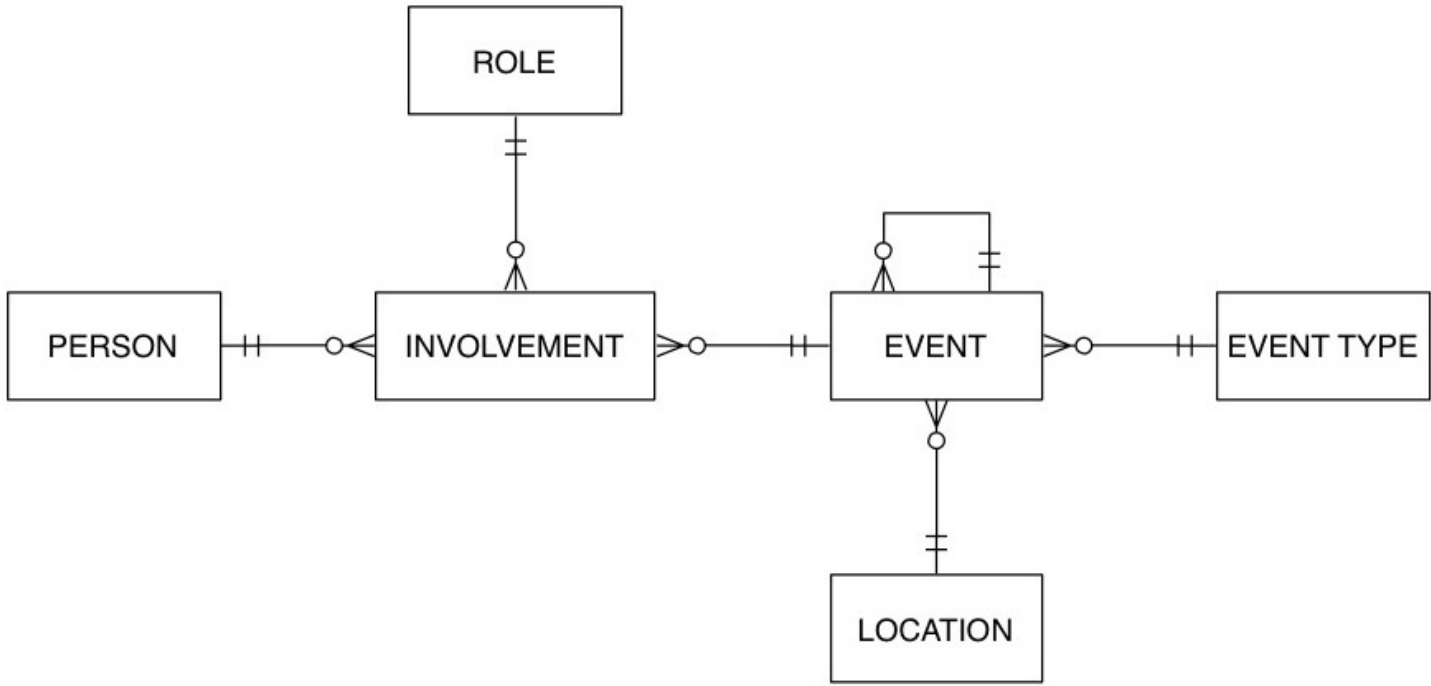
CONFERENCE DOMAIN MODEL

	B	C	D	E	Red
1					
2	**Page ID**	**Page**	**Further Definition (if required)**	**URL**	
3	*IASP1*	Homepage		http://iasummit.org	
4	*IASP2*	About the IA Summit	This is for general IA Summit (non-year specific) information	http://iasummit.org/about	
5	*IASP2a*	Vision & Values		http://iasummit.org/vision-and-values	
6	*IASP2b*	Code of Conduct	The overall Code of Conduct for IA Summit events.	http://iasummit.org/code-of-conduct	
7	*IASP3*	IA Summit (Year) Redirect	This is a year-specific IA Summit Homepage URL purely for marketing purposes	http://iasummit.org/:year	YES (to /
8	*IASP4*	IA Summit Blog	The main IA Summit Blog	http://iasummit.org/blog	
9	*IASP5*	IAS Blog Post	A particular IA Summit Blog Post	http://iasummit.org/blog/:id	
10	*IASP6*	Events Directory	A list of all the IA Summit Events, to be decided to which hierarchy level	http://iasummit.org/events	
11	*IASP7*	Event Profile	A particular IA Summit Event - this can be a session page, or indeed the IAS15 'homepage'	http://iasummit.org/events/:id	
12	*IASP8*	About the Event	This is for information about an Event - e.g. the IAS15 specific conference-level information	http://iasummit.org/events/:id/about	
13	*IASP9*	Event Testimonials	A list of testimonials about this particular Event.	http://iasummit.org/events/:id/testimonials	
14	*IASP10*	Event People Directory	All the people for an Event	http://iasummit.org/events/:id/people	
15	*IASP10a*	Event People by Role Type Directory	All the people fulfilling a particular role at the Event - mainly used for Speakers & Staff	http://iasummit.org/events/:id/people/[role-type]	
16	*IASP11*	Event Locations Directory	All the locations for an Event	http://iasummit.org/events/:id/locations	
17	*IASP12*	Event Topics Directory	All the topics for an Event	http://iasummit.org/events/:id/topics	
18	*IASP13*	Event Sponsors Directory	All the sponsors for an Event	http://iasummit.org/events/:id/sponsors	
19	*IASP14*	Event Call for Submissions	The Call for Submissions for a specific Event	http://iasummit.org/events/:id/cfp	
20	*IASP15*	Event Blog Posts Directory	All the blog posts for a specific Event	http://iasummit.org/events/:id/blog	
21	*IASP16*	Event Schedule	All the events within an Event, in date/time order	http://iasummit.org/events/:id/schedule	
22	*IASP17*	Event Type Directory	All the types of event present within an Event (ordered by type - Session, Workshop etc.)	http://iasummit.org/events/:id/schedule/by	
23	*IASP18*	Filtered Event Type Directory	All the events of a certain type, within an Event	http://iasummit.org/events/:id/schedule/by/[event-type]	
24	*IASP19*	People Directory	A list of everyone involved with the IA Summit, regardless of year or event type	http://iasummit.org/people	
25	*IASP20*	Person Profile	The canonical, non-year-specific, page for a Person involved with the IA Summit.	http://iasummit.org/people/:id	

CONFERENCE SITE MAP

URL Structure

We aim to support permanent URLs for the main domain objects of the IA Summit 2015. We also intend to create a space for the IA Summit going forward, regardless of a particular year's event. This is especially important for three main things:

- General, non-year-specific information about the IA Summit
- Consistent, permanent presence for people involved with the IA Summit
- Topic aggregation pages, so that users can find interesting content about a topic, regardless of which year a session was presented. (*to be added to the domain model in a future version*)

<u>General IA Summit Information</u>

http://iasummit.org
http://iasummit.org/about
http://iasummit.org/people
http://iasummit.org/people/:id
http://iasummit.org/people/:id/events

Year specific information *(sticking with established pattern for now, exact wording to be discussed)*

http://2015.iasummit.org

http://2015.iasummit.org/people (a list of all the people, regardless of role)

http://2015.iasummit.org/people/[role-type] (a list of all the people with involvements that match a specific role)

http://2015.iasummit.org/people/:id (the year specific information about a person, including a list of all their involvements)

http://2015.iasummit.org/people/:id/events (a list of all the events a specific person is involved in)

http://2015.iasummit.org/events (a list of all the events for a specific year, regardless of type *{timetable view?}*)

http://2015.iasummit.org/events/[event-type] (a list of all the events which match a specific event type)

http://2015.iasummit.org/events/:id (a specific event, including a list of all the people involved)

http://2015.iasummit.org/locations (a list of all locations - i.e. the rooms *do we need this?*)

http://2015.iasummit.org/locations/:id (a specific location/room *do we need this?*)

- What concept does this page represent?

- What is the H1?

- What is the prioritised order of information on the page, regardless of layout?

- Designing for your least able user *first*.

- Accessibility is baked in, not an after thought

THE FUTURE OF INFORMATION ARCHITECTURE

- Answer: the machine.

COMPUTERS ARE STUPID.

- Computers can't understand the world.

- All they see is strings of letters and numbers.

- But we can 'teach' them about the world, by feeding them our domain models in a language they understand - an **Ontology**
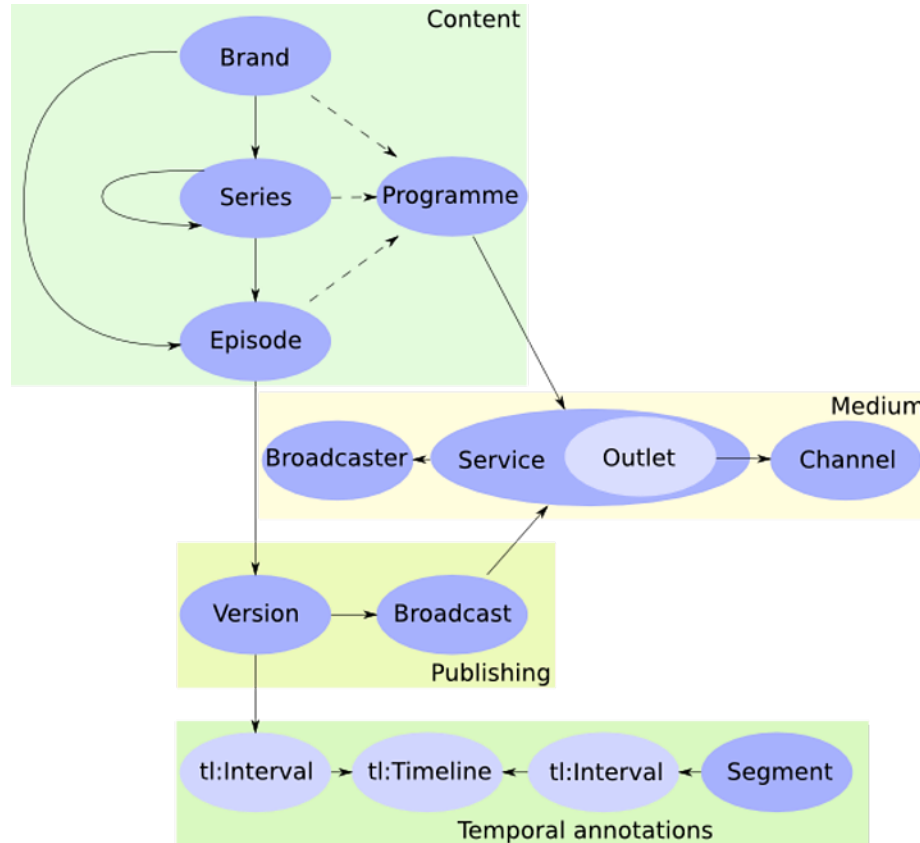
- Computers speak in *triples*

- Subject, predicate, object

- **The cat, sat on, the mat.**

- '*Fugitive of the Judoon*' was broadcast on BBC One.

- '*Fugitive of the Judoon*' was first broadcast on Sunday 26th January 2020.

- '*Fugitive of the Judoon'* was directed by Nida Manzoor.

'*Fugitive of the Judoon*' was broadcast on BBC One.

<https://www.bbc.co.uk/programmes/m000dtqx>

<http://purl.org/ontology/po/broadcast_on>

<http://www.bbc.co.uk/bbcone>

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Fugitive of the Judoon
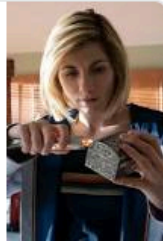
Doctor Who: Season 12, Episode 5

An eccentric yet compassionate extraterrestrial Time Lord zips through time and space to solve problems and battle injustice across the universe, travelling via the TARDIS (Time and Relative Dimensions in Space), an old and occasionally unreliable spaceship that resembles a blue police phone box (bu… **MORE** ⌄

Show: Doctor Who

Air date: 26 January 2020

Previous episode: Nikola Tesla's Night of Terror

Next episode: Praxeus

Available on

▶ Google Play Movies & TV — From £1.99

People also search for

View 15+ more

- Nikola Tesla's Night of...
- Orphan 55
- Spyfall, Part 2
- Spyfall, Part 1
- It Takes You Away

Paul Rissen

Books: Experiment-Driven Product Development: How to Use a Data-Informed Approach to Learn, Iterate, and Succeed Faster

Profiles

Twitter

Feedback

Event

Thing > Event

An event happening at a certain time and location, such as a concert, lecture, or festival. Ticketing information may be added via the offers property. Repeated events may be structured as separate Event objects.

[more...]

Property	Expected Type	Description
Properties from Event		
about	Thing	The subject matter of the content. Inverse property: subjectOf.
actor	Person	An actor, e.g. in tv, radio, movie, video games etc., or in an event. Actors can be associated with individual items or with a series, episode, clip. Supersedes actors.
aggregateRating	AggregateRating	The overall rating, based on a collection of reviews or ratings, of the item.
attendee	Organization or Person	A person or organization attending the event. Supersedes attendees.
audience	Audience	An intended audience, i.e. a group for whom something was created. Supersedes serviceAudience.
composer	Organization or Person	The person or organization who wrote a composition, or who is the composer of a work performed at some event.

- Design from the **bottom-up**, focusing on making your 'thing' pages understandable when accessed directly

- Consider the **needs of each device** and keep content structure a separate concern from interface design

- Use **machine-readable, structured data** to teach computers what your content is about and what other things it's related to

CASE STUDY: BBC NEWS

What we can do with traditional tagging
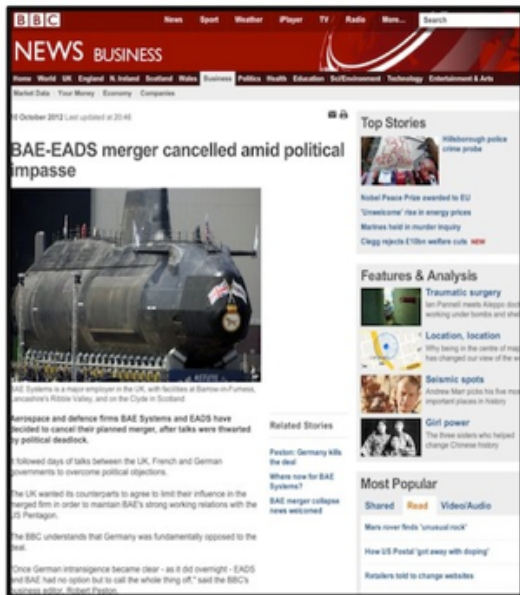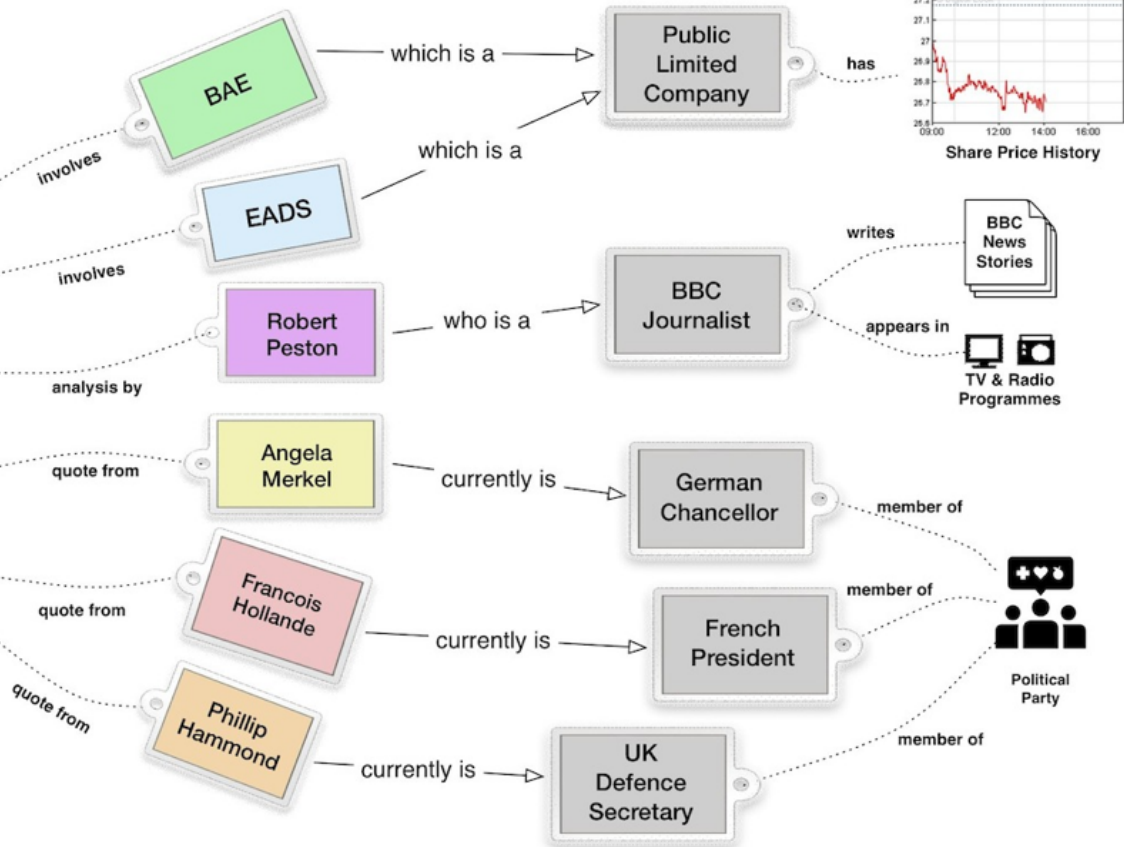

BAE

EADS

Robert Peston

Angela Merkel

Francois Hollande

Phillip Hammond

With traditional tagging, we can easily aggregate stories that have been tagged with the same thing, but that's about it.

These tags have no meaning, and their relationship to the story is unclear.

So, we can ask:
"Find me all the stories tagged with..."
but not much else.

What we can do with Linked Data

BAE — which is a → Public Limited Company — has → Share Price History

EADS — which is a → Public Limited Company

BAE — involves
EADS — involves

Robert Peston — who is a → BBC Journalist — writes → BBC News Stories
BBC Journalist — appears in → TV & Radio Programmes

Robert Peston — analysis by

Angela Merkel — currently is → German Chancellor — member of → Political Party

Francois Hollande — currently is → French President — member of → Political Party

Phillip Hammond — currently is → UK Defence Secretary — member of → Political Party

Angela Merkel — quote from
Francois Hollande — quote from
Phillip Hammond — quote from

With Linked Data, we know that these tags are meaningful concepts to the audience & to our journalists.

This means we can create more meaningful aggregations.

We can ask more intelligent questions of our content.

We can make more meaningful links.

"Find me all stories with quotes from..."
"Find me all stories involving..."
"Find me all programmes featuring..."

"Find me all stories with analysis from..."
"Find me the share price history of..."
"Find me other members of this Party..."

The BBC News App - My News - powered by tags

SUMMARY

- Card Sorting and Hierarchies

- SOUND and page-level IA

- Domain Modelling for user mental model-based site-wide IA

- Persistent URL design as a key part of UX

- Teaching machines to understand our world

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- Does the information on this page make sense to users?

- What about the hierarchy of that information?

- What if you only had one column?

- Does the site hold together in a meaningful way?

- What URL will each thing be at? How persistent will they be?

- If redesigning, how do we ensure current experience won't be disrupted? (redirects, for instance)

- What information is accessible without any CSS or Javascript?

- What information (if any) is machine readable?

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REMEMBER…

- Try not to impose **your understanding** on your audience.

- **Listen** to why people make certain choices

- Expect **disagreement**

- Use **real customers**, not staff

- Remember there is **no perfect answer** - do what works for the majority of your audience, and then help out the others.

  Information Architecture is a conversation with your users.

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…AND MOST CRUCIALLY…

- Information Architecture is a **key part of User Experience**.

- It is most concerned with providing users with **what they want**, when they want it, and showing them **the next step**.

- Good IA **lives or dies** by its' relationship with **users**.

- If it doesn't take into account an **understanding** of the user's world, **it will fail**.

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FURTHER READING
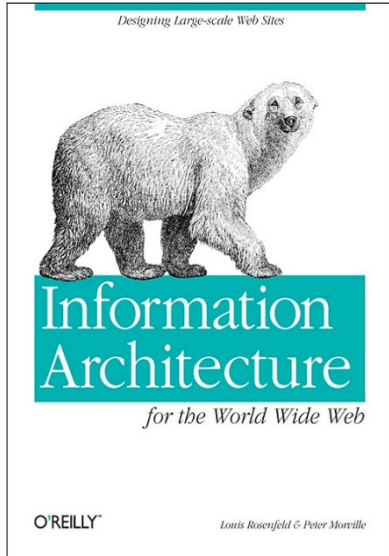
Information Architecture for the World Wide Web
Louis Rosenfeld & Peter Morville
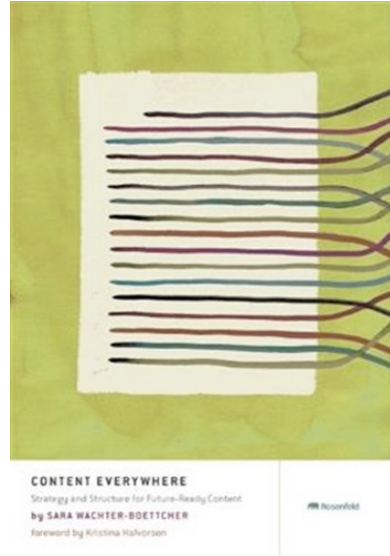
Content Everywhere
Sara Wachter-Boettcher

A Practical Guide to Information Architecture
Donna Spencer

How to Make Sense of Any Mess
Abby Covert

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FURTHER READING

- **How we make websites - BBC Radio Labs**

  http://www.bbc.co.uk/blogs/radiolabs/2009/01/how_we_make_websites.shtml

- **Designing for your least able user - BBC Radio Labs**

  http://www.bbc.co.uk/blogs/radiolabs/2009/03/designing_for_your_least_able.shtml

- http://www.bbc.co.uk/ontologies

- http://www.bbc.co.uk/things

- **Designing a URL Structure for BBC programmes** - an in depth look at URL design considerations: **http://smethur.st/posts/176135860**

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THANK YOU!

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https://www.paulrissen.com

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