

# BEYOND THE POLAR BEAR

Mike Atherton (@mikeatherton)

[www.reduxd.com](http://www.reduxd.com)

*Designing Large-Scale Web Sites*

**3rd Edition**  
Introduces Tagging and  
Advanced Findability Concepts



# Information Architecture

*for the World Wide Web*

**O'REILLY®**

*Peter Morville & Louis Rosenfeld*



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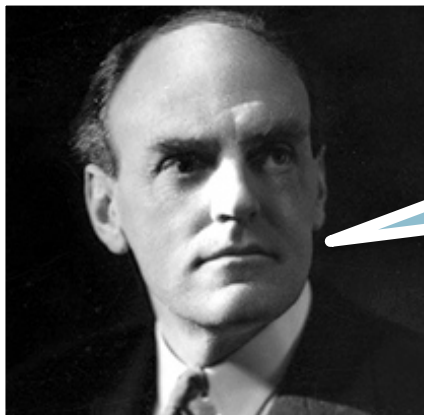


android



BOXEE

**BBC**



**“inform, educate and entertain”**



# **2. THE PROBLEM SPACE**

# INFORMATION ISN'T NEAT



• BOOKS  
• FANCY ASHTRAY  
• MILITARY HAT



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Reading, RG30, UK  
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Pages from the UK

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Latest  
Past 24 hours

bbc six nations results

About 1,030,000 results (0.07 seconds)

[BBC SPORT | Rugby Union | Results | Collated](#)

16 Mar 2011 ... Skip to content; Skip to local navigation; Skip to [bbc.co.uk](#) navigation ... RBS Six Nations. England 22-16 Scotland. The LV= Cup ... [www.bbc.co.uk/sport1/hi/rugby\\_union/results/default.stm](#) - Cached

[BBC SPORT | Rugby Union](#)

18 Mar 2011 ... RBS Six Nations, 4 Feb-19 Mar: BBC TV, Red Button, online & 5 live .... See more pictures in BBC Sport's rugby union pool tagged with scrumv ... [Live scores - Fixtures - Six Nations on the BBC - Welsh](#) [www.bbc.co.uk/sport1/hi/rugby\\_union/default.stm](#) - Cached

[BBC SPORT | Rugby Union | Internationals](#)

15 Aug 2006 ... LATEST SIX NATIONS HIGHLIGHTS. France 13-24 England ... Play your own Six Nations. Can you last 80 minutes in our new rugby game? ... [news.bbc.co.uk/sport2/hi/rugby.../international/default.stm](#) - Cached - Similar

News for [bbc six nations results](#)



[Six Nations: Pressure is on Ireland, insists Johnson](#)

17 hours ago  
Ireland narrowly defeated Italy and Scotland and have been on the wrong end of the



**BBC breathing places**

make a place for nature near you

Breathing Places is a major BBC Learning campaign to inspire and motivate you to create and care for nature-friendly green spaces where you live.

**S.W.A.T.**

Find out what happened at our SWAT events across the UK as over 50 spaces were transformed into Breathing Places

do one thing

Get hints and tips about the little things that you can do to make a big difference

Find breathing places near you:

Postcode, place or town

look out for:

**the one show**

weekdays at 7pm on BBC One

Home Blogs Backstage Highlights Gallery Get Involved You

Blogs

This is the place to continue the conversation with The One Show!

Topics 5:14 Elizabeth I

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News

Last updated: Jan 20, 2009

BBC NEWS

Elizabeth portrait fetters

£2.6m

24 Jan 09, 10:25:56 | Jersey

The earliest known full-length portrait of Elizabeth I

Knowledge

Last updated: Jan 20, 2009

BBC ONLINE ARTICLES

Elizabeth I: An Overview

Biography and analysis

BBC iPlayer

TV

Last updated: Jan 20, 2009

**BBC** Text only Help

**Wild about your Garden**

Home | Episodes | Features

Chris Beardshaw's Top Ten of Gardening for Wildlife

1. Allow lawns to grow

Allow areas of your lawn to grow a little longer. Your lawn mower to around 15cm from spring encourage a broad collection of meadow flora (self heal, and salad burnet) to colonise. The attractive jewels in a long lawn but provide vast array of insects, which themselves become prey.

• [More on making a meadow](#) on Breathing Places

2. Plant hedges

A robust hedge offers a wealth of opportunities for food and shelter. From food sources for birds, lots of nesting sites for birds, lots of cover for hibernating hibernating

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Explore the BBC

Scuba diving videos

**OCEANS**

Exploring the secrets of our underwater world

Home Episodes About Oceans & cast Locations 360° experience Ultimate dives Galleries

Oceans: BBC Two, autumn 2008

CLICK TO PLAY

00:00 / 01:15

SHARE

Ultimate dives - video gallery

360° panoramic video

Oceans film locations

## THE BBC: ONE SITE OR MANY?

**blast** BETA - tell us what you think

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get creative

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Reporting Sport

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Fashion

Film

Games

Music & Audio

Writing

Related Links

Documentary

Reporting

Journalism

Blast Links:

Blast Newsletter

U Takeover - 1Xtra

Watch 'Your Label' webisode

**BBC Complaints**

ECU ruling: EastEnders, BBC One March 2008

Publication date: 09 May 2008

complaint

Three viewers complained that the character Max Branning was drugged (and finally being released) by his wife Tara in a pre-watershed drama series which was aimed at a family audience.

BBC Editorial Complaints Unit's response

The potential sensitivity of the story to the programme-makers, and the subject of extensive consultation involved no explicit physical violence. The programme-makers was that it was a weekend, when there is an expectation of a more dramatic, and in the light of the fact that the storylines involving extreme violence exceed the expectations of the programme-makers. Of the response registered (from Ofcom) suggested that the programme was somewhat stronger than it had caused upset, which was neither anticipated nor intended. The programme was upheld.

**BBC** Text only Help

**Bitesize**

Home > ICT

ICT Topics

If you are taking a DIDA qualification please go to the DIDA section of GCSE

Information and communication systems

Hardware

Software

Data communications

Databases

Measurement and control

Modelling

The legal framework

Search

macbeth

Macbeth

Social, cultural and historical factors

SCH factors in Macbeth

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More Makes.

**bbc.co.uk Health**

TV and radio A to Z

Talking to your doctor - At the GP

Who's who at the surgery

Dr Rob Hicks

Most GP surgeries employ receptionists, secretaries and practice managers. But do you know what they do? If you don't, you won't be able to get the best from them.

**BBC RADIO 1Xtra**

Home DJs & Shows Schedule Podcasts News Events Blogs Daytime Hip Hop RnB Garage Dancehall D&B More Styles

Love black music love 1Xtra

ON DAB DIGITAL RADIO, TV & ONLINE

SKY 0137, FREEVIEW 701, VIRGIN 907

On Air Now

1Xtra Breakfast

08:00-11:00

Listen live

NEWS IN BRIEF

Back to 1Xtra News Home

New tests for doctors

Passport workers walkout

Criticism over knife sentences

THE WEEK IN PICTURES

Pay

NEWS ON DEMAND

LISTEN

HEAR THE LATEST



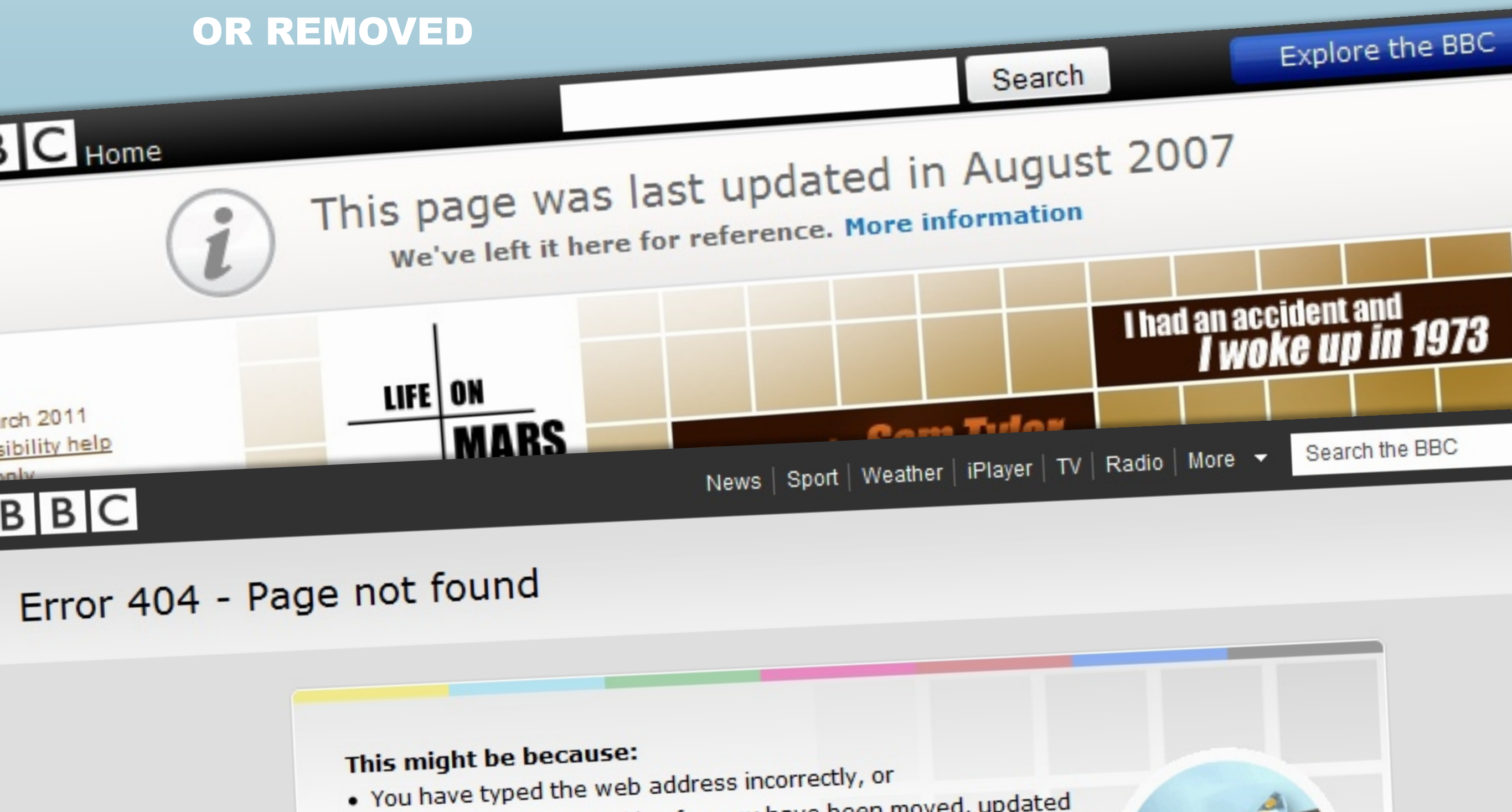


**BROADCASTING OVER  
1500 PROGRAMMES  
EVERY DAY**





## PAGES MOTHBALLED OR REMOVED



## DEEP CUTS ACROSS THE ONLINE DIVISION

- In 2010, the BBC made a commitment to halve the number of 'top level directories' on its site
- In 2011 it reduced the online spend by 25%

BBC to axe radio stations and halve  
website' in strategic review  
Corporation's focus on quality, not quantity, will mean major cut  
the Times claims

Mark Tran

The Guardian, Friday 26 February 2010  
Article history



BBC director general Mark Thompson. Photograph: Richard Saker

The BBC plans to axe two radio stations – 6 Music and Asian Network – cut spending on imported shows and halve the size of its website, it is claimed today. The Times says the measures are part of the BBC's strategic review to be unveiled next month. Under the plan, the BBC intends to shrink overall services and focus more on quality over quantity. There have already been reports suggesting that the BBC will axe the digital radio stations 6 Music and Asian Network.

Quoting BBC Trust sources, the newspaper states that the director general, Mark Thompson, is also being asked to cut the number of imported shows such as...

BBC  
stat  
outp  
pres  
Savin  
foreign  
reinve  
British



## UX EMPHASIS ON THE TOP LAYERS

- ‘User experience design’ has put considerable emphasis on front-end presentation and interaction design
- Yet the elements that contribute to a user’s experience go much deeper
- In ‘tearing down the wall’, many IAs have leaned toward interaction design and away from software design

**CSS / Javascript**

**HTML**

**Controller**

**Business Logic**

**Data Model**


# FAKE ARTIFACTS

- Projects start with static prototypes tested against user stories and personas, not actual users
- The belief is that 'real' technical prototypes are too expensive to develop

BBC

Cold War


Part of: History | Global conflicts | Wars involving the United States | Wars involving the Soviet Union



▶ ◀

Summits Geneva 1985


David Reynolds uncovers the story of how Reagan and Gorbachev helped ensure a peaceful end to the Cold War.



World War II: Behind Closed Doors Episode 2

Secret history of Stalin's dealings with Churchill in the wake of the German invasion of the Soviet Union.

▶ Watch now



World War II: Behind Closed Doors Episode 1

This episode focuses on the secret history of the non-aggression pact between Hitler and Stalin.

▶ Watch now

COMING UP

The Soviet Union's Last Stand BBC Four, 28 Nov 2008

Panorama: Should We Be Scared of Russia? BBC One, 01 Dec 2008

Smiley's People BBC Four, 07 Dec 2008


Moscow Olympics of 1980: Cold War BBC One, 08 Dec 2008

more programmes ▶

BBC NEWS

Chavez courts Russian influence 25 Nov 2008

Russia's naval exercises with Venezuela highlights growing ties between the two nations, says the BBC's Will Grant in Caracas.




Culture of Cold War power games 3 Oct 2008

Jack Masey and Vladimir Bukovsky discuss the role of culture in power games played between countries.

▶ Listen now

China signs trade deals with Cuba 19 Nov 2008

FROM BBC HISTORY




World Wars

The Cold War


The global stand-off that threatened the world to the destruction.

Inside the Cold War




The Korean War

How the Cold War turned hot, on the Korean peninsula in the 1950s.




John F Kennedy

The US president's role in the Cold War that brought the world to the nuclear war.



Weapons of War

The 'weaponisation' of smallpox perfected by the Soviets during the Cold War. Is this science still a threat?



Fall of the Soviet Union

The reforms, rebellions and revolutions behind the collapse of the Soviet Union.

click on a concept to see relationships

Figures

Global conflicts

USA

Joseph Stalin

Communism

Karl Marx

Cold War

Figures

Mikhail Gorbachev

Reagan

Related concepts for Cold war

[USA](#), [USSR](#), [Ronald Reagan](#), [Mikhail Gorbachev](#), [Communism](#), [Joseph Stalin](#), [Karl Marx](#)

HEADLINES FROM AROUND THE WEB

Russian navy conducts war games in the Arctic

Telegraph.co.uk 25 Nov 08

Obama likely to opt for strategic retreat in Iraq

Reuters 22 Nov 08

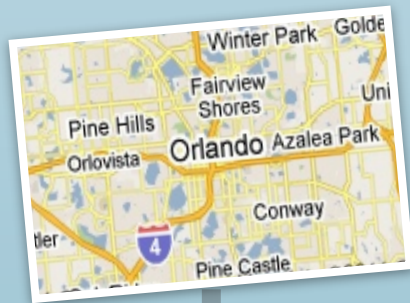
# **3. MODELLING SUBJECTS**



## AVOIDING SORTING BY DOCUMENT TYPE

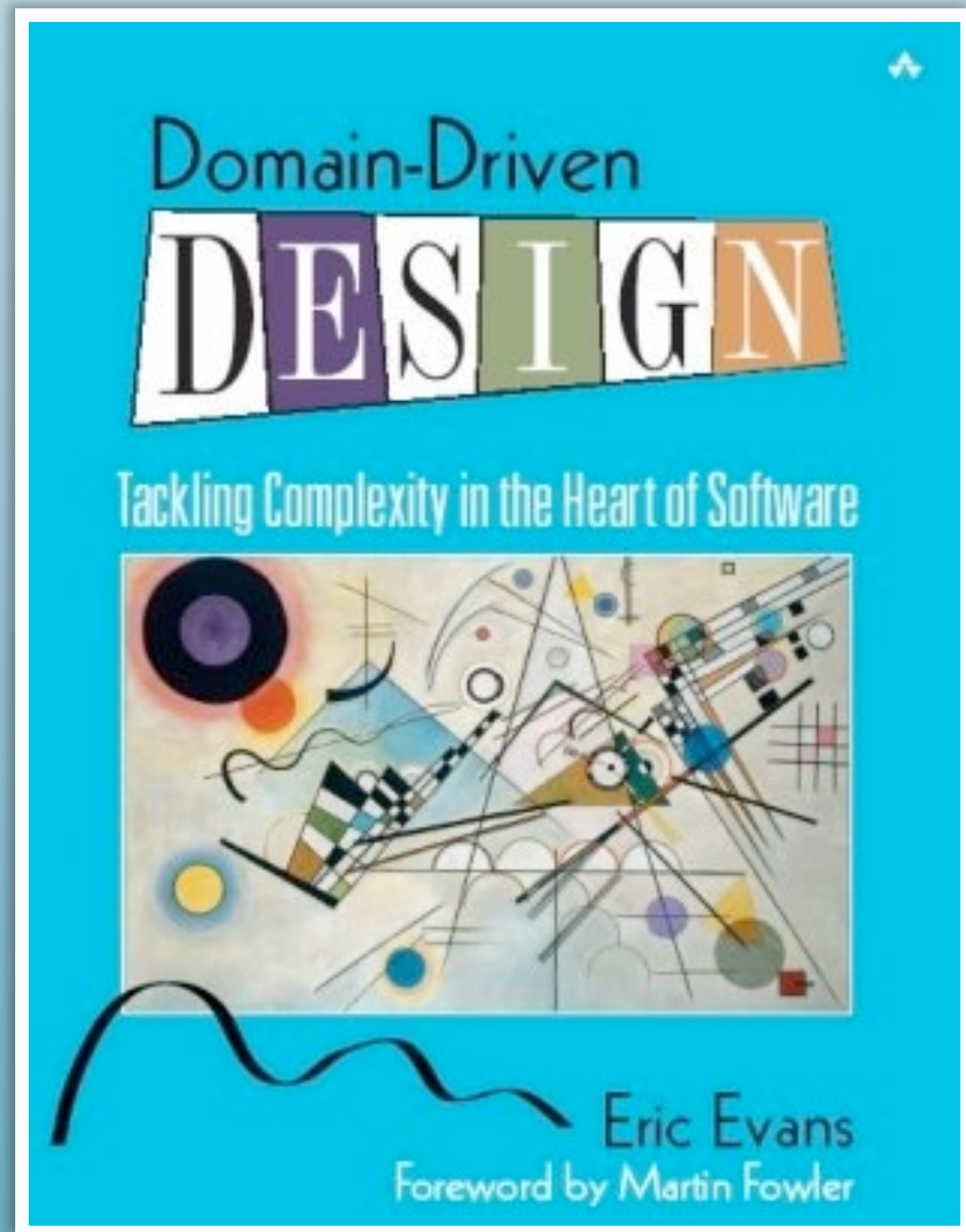


# A WEB OF CONNECTED THINGS



# WHAT IS DOMAIN MODELLING?

- **A way of capturing a mental model about a subject**
- **Focuses on important things and relationships**



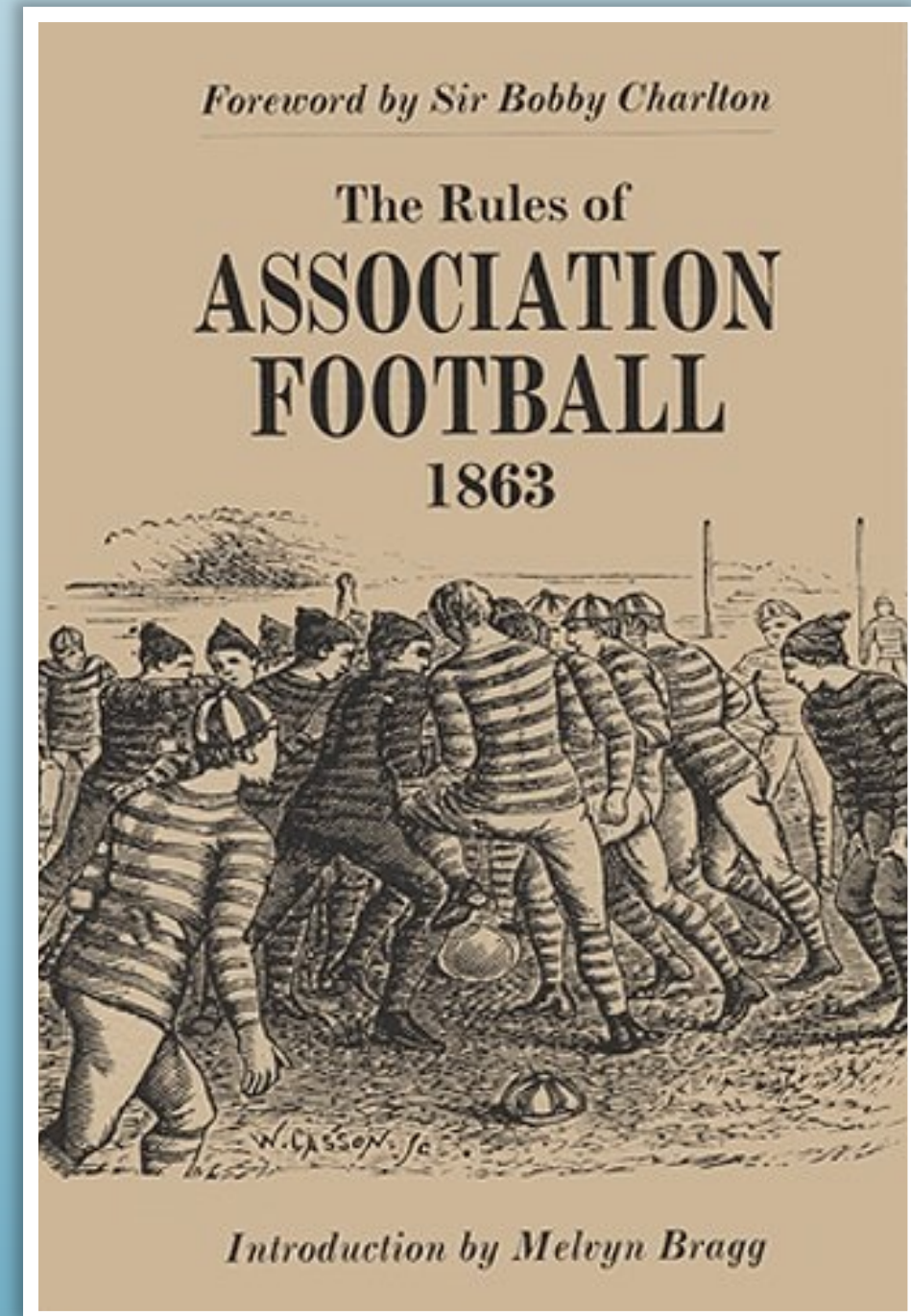


# SKETCHING A MODEL TO DEFINE RELATIONSHIPS



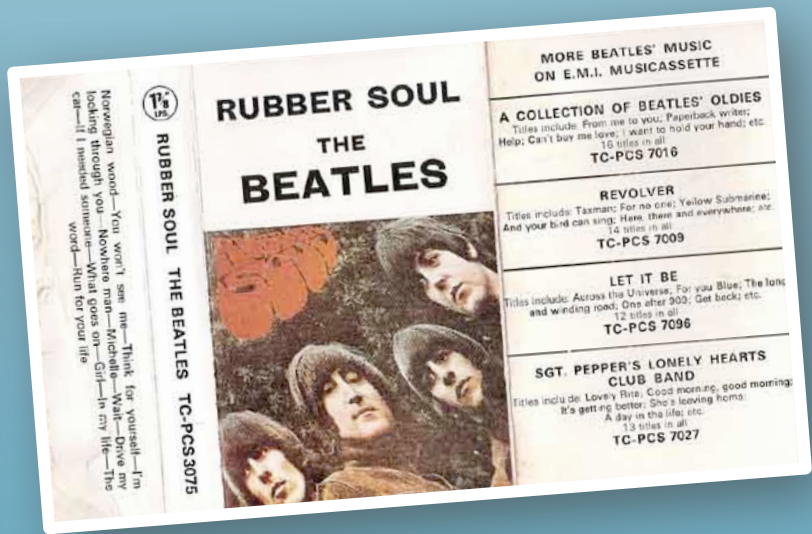
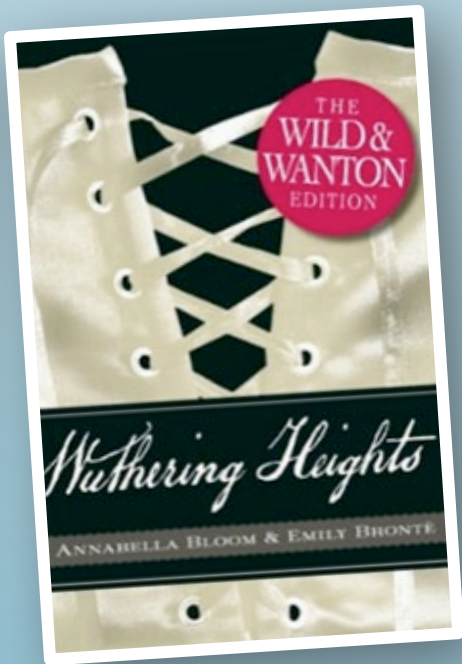
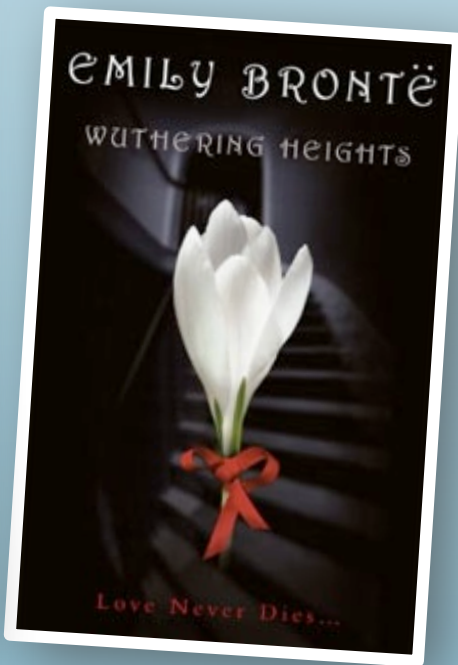
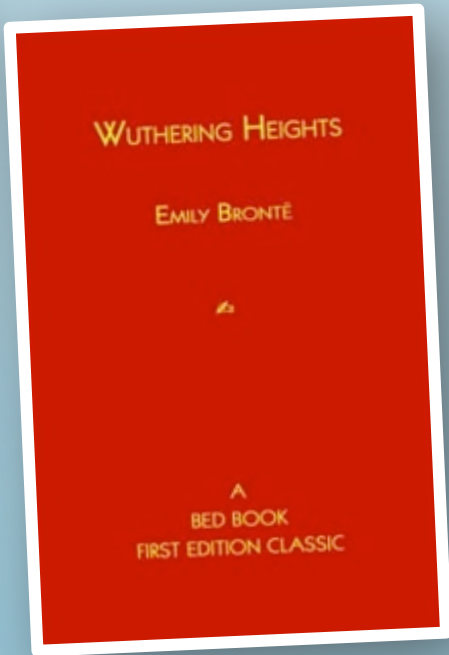
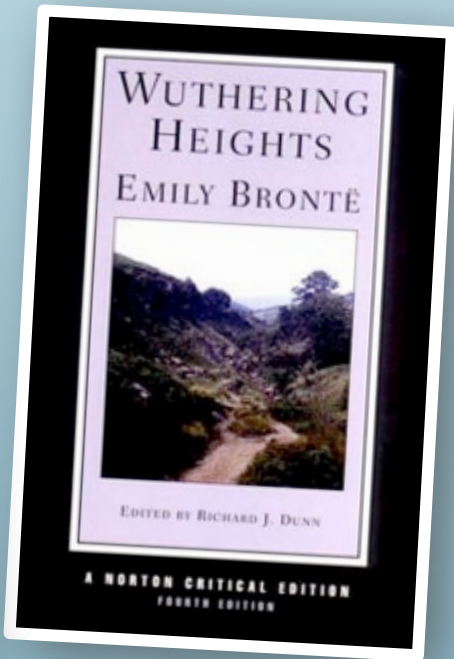
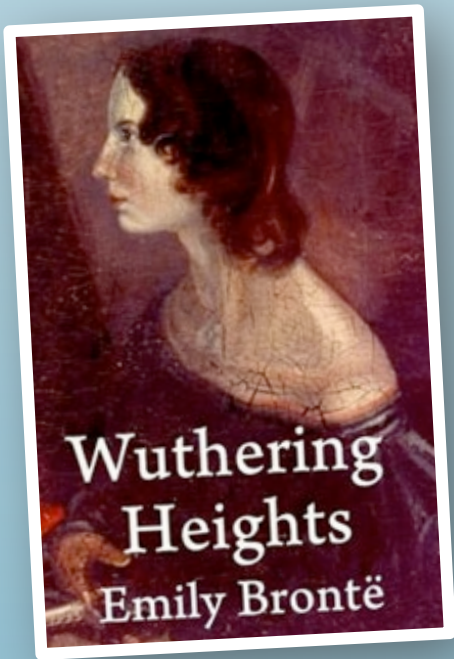
## TALKING TO EXPERTS AND USERS

- **Domain experts need not be technical**
- **Users may have a simpler view of what's important**
- **Find a model and a language that works for both**





# THE DIFFERENCES BETWEEN THINGS



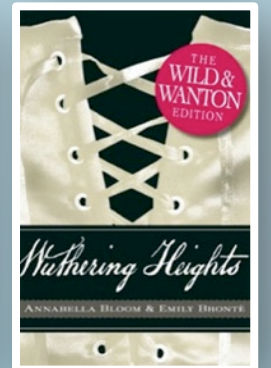
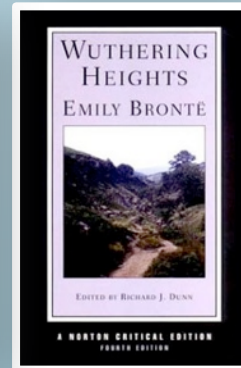


# THE CANONICAL THING

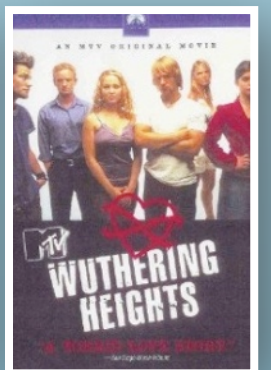
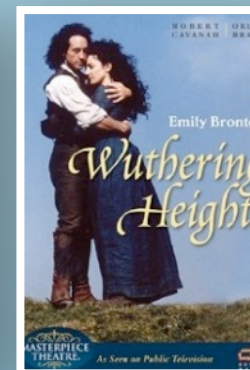


How about something like  
[bbc.co.uk/works/wuthering\\_heights](http://bbc.co.uk/works/wuthering_heights)  
?

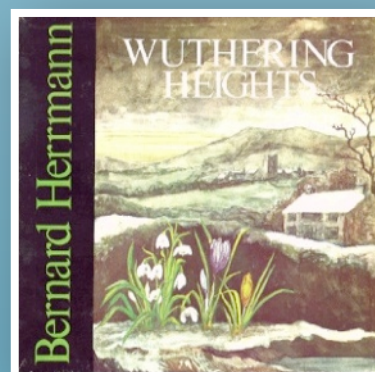
## Novel editions



## Film adaptations



## Musical adaptations



**Wuthering Heights**  
**The 'Master Work'**

*Has a general sense  
of wuthering.*



**SHARED MODEL**

**+**

**SHARED LANGUAGE**

**+**

**SHARED UNDERSTANDING**

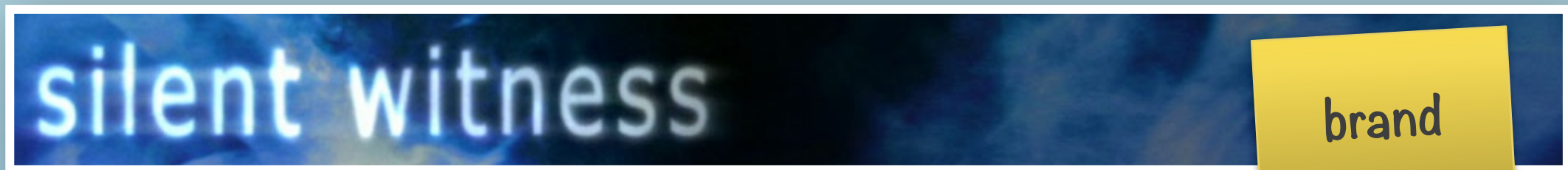
**=**

**CONSISTENT USER  
EXPERIENCE**

# **4. BBC PROGRAMMES**



# THE COMPLEX WORLD OF TELEVISION SHOWS



series 14



sub-series

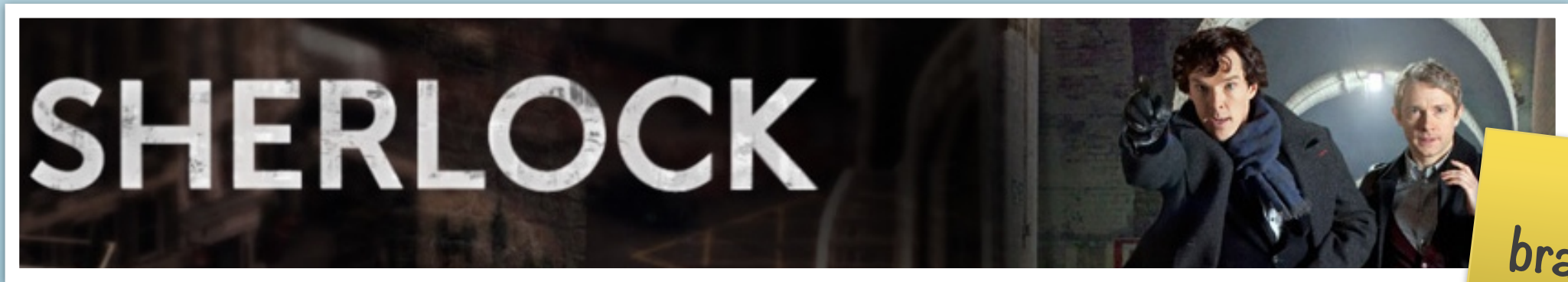


episode



version  
(sign language)

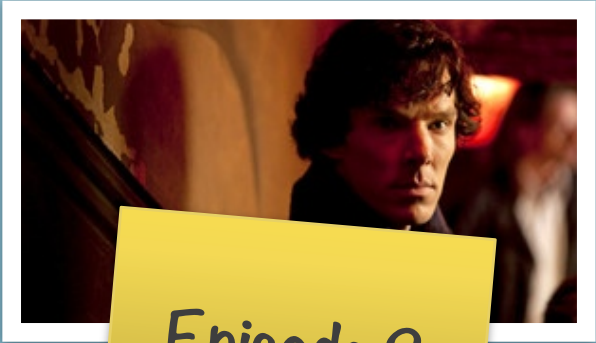
SHERLOCK



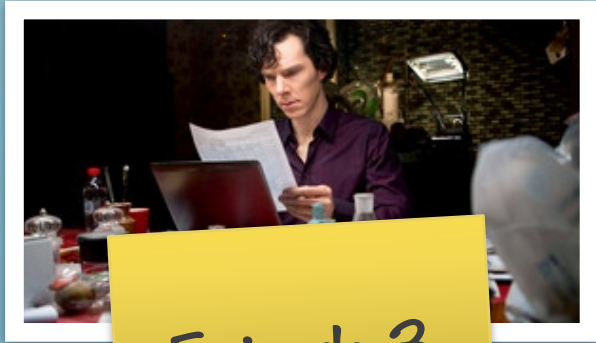
brand



Episode 1



Episode 2



Episode 3

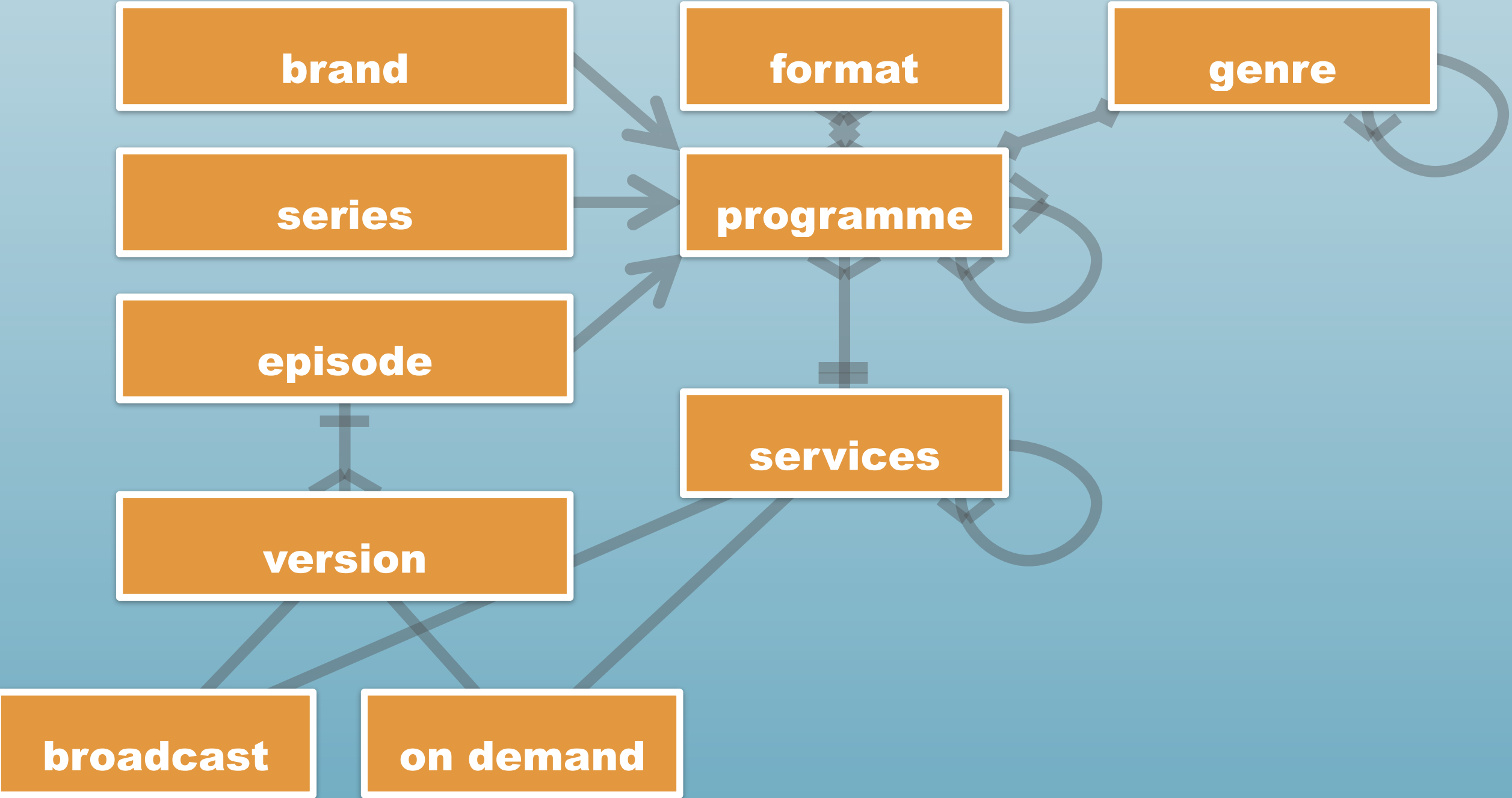




# SHERLOCK'S FUTURE

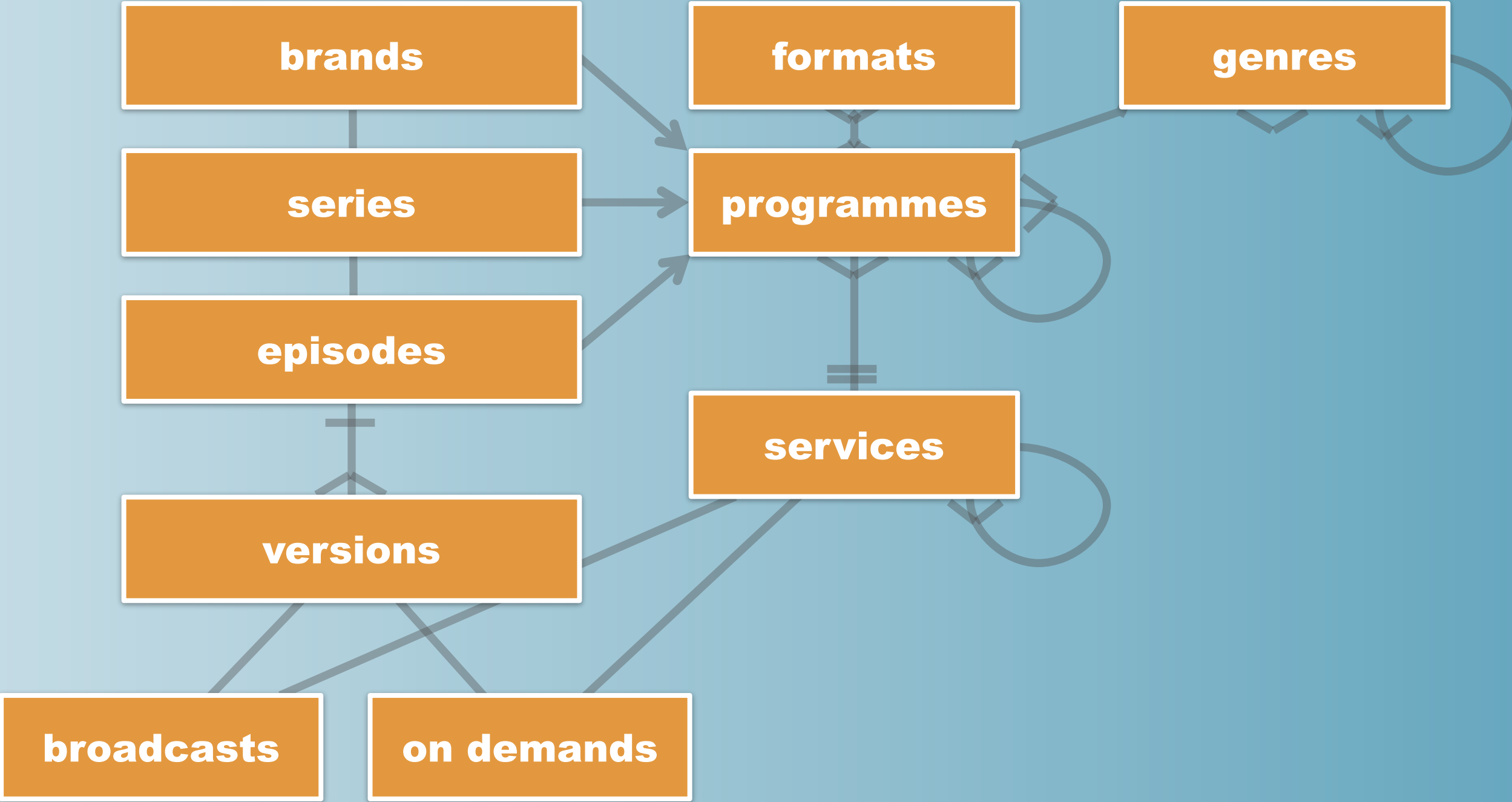


BBC PROGRAMMES  
DOMAIN MODEL





**BBC PROGRAMMES  
DOMAIN MODEL**



# PAGES FOR BRANDS, SERIES AND EPISODES

Lead Balloon |

## Lead Balloon



Sitcom about comedian and his plan

PROGRAMME  
PREVIOUS P

Available now on BBC iPlayer



Series 3  
Panda

MORE: [programme information](#)

[Watch now](#) (30 minutes)

Available since **Monday** with **2 days left**.

2/7. Rick is invited to feature in a TV series

## Series 3



Sitcom about

PROGRAMME  
PREVIOUS P

Available now on BBC iPlayer



Panda

MORE: [programme information](#)

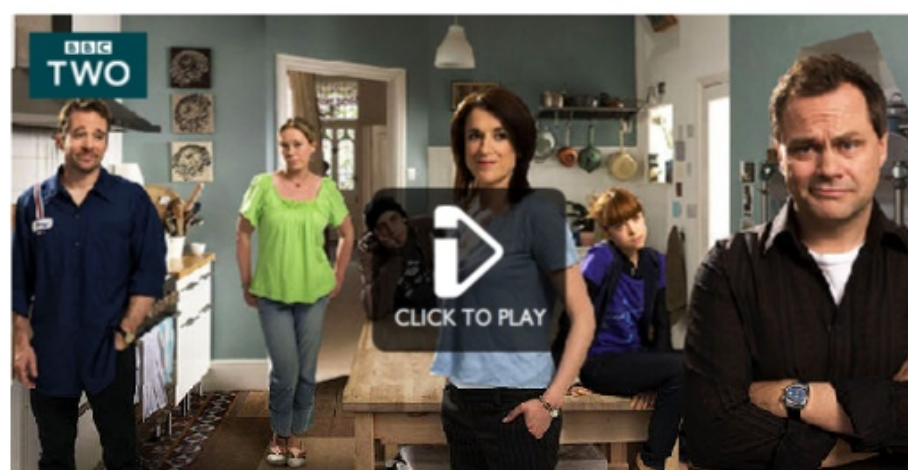
[Watch now](#) (30 minutes)

Available since **Monday** with **2 days left**.

2/7. Rick is invited to feature in a TV series

Lead Balloon | Series 3

## Panda



**G** Guidance: Contains adult humour.



AVAILABILITY:

2 days left to watch (or [download at BBC iPlayer](#)).

Last broadcast on Monday, 22:30 on BBC Four (see [all broadcasts](#)).

When Rick is invited to feature in a TV series that traces celebrities' family trees, his real name is revealed and why it caused him so much misery at school. The pain is nothing compared to what's in store when the researchers uncover the truth about his ancestors.

Meanwhile, Magda is still waiting for her boiler to be fixed, and Rick is still waiting for her to move out.

SERIES 2:

Find out more about the last series of Lead Balloon.

## More details

EPISODE 2 OF 7 FROM

• [Lead Balloon](#) > [Series 3](#)

IN THIS SERIES

Previous:  
< [Gas](#)

Next:  
[Fax](#) >

DURATION

30 minutes


## More from BBC Two

• [Comedy](#) > [Sitcoms](#)



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## Polar bear

From Wikipedia, the free encyclopedia



## Denver

From Wikipedia, the free encyclopedia

Coordinates:  39°44′21″N 104°5′



## BBC

From Wikipedia, the free encyclopedia



## Toilet paper orientation

From Wikipedia, the free encyclopedia

There are two choices of **toilet paper orientation** when using a [toilet roll holder](#) with a horizontal [axle parallel](#) to the wall: the [toilet paper](#) may hang *over* or *under* the roll. The choice is largely a matter of personal preference, dictated by [habit](#). In surveys of [American](#) consumers and of bath and kitchen specialists, 60–70% of respondents prefer *over*.<sup>[1]</sup>

Despite being a trivial topic, people often hold strong opinions on the matter. Advice columnist [Ann Landers](#) said that the subject was the most controversial issue in her column's history. Defenders of either position cite advantages ranging from aesthetics, hospitality, and cleanliness; to paper conservation and the ease of detaching individual squares. Celebrities and experts are found on both sides. The reasons behind each person's choice have been analyzed by several studies with theories ranging from age, sex, socioeconomic status to political philosophy. It has also been suggested that preference for *under* may correlate with ownership of a [recreational vehicle](#) or a cat.<sup>[2]</sup>

Solutions range from compromise, to using separate dispensers or separate bathrooms entirely. One man advocates a plan under which his country will standardize on a single forced orientation, and at least one inventor hopes to popularize a new kind of toilet roll holder which swivels from one



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# CAPTURING SOCIAL BUZZ

BBC

EastEnders

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Search the BBC

## Buzz about this programme

### DISCUSSIONS ON BLOGS

Listed below are blogs discussing EastEnders. They are found automatically, and some are **highlighted** as being particularly relevant to the programme they're discussing. [Report a problem](#) if you think a link breaks [our guidelines](#).

7 days ago

- The Monograph: [Walk Like a Panther Photos Revealed](#)

Fri 11 Mar 2011

- EastEnders Blog: [On set with... Marc Elliott](#)

Tue 8 Mar 2011

- About the BBC blog feed: [BBC Chairs Cultural Diversity Network](#)

Sun 6 Mar 2011

- THE LIFE OF MRS. C: [BBC - EastEnders](#)

Sat 26 Feb 2011

## Most buzzed about episodes

#1



Thu 21 Oct

#2



Tue 14 Dec

## Twitter

**#eastenders**

Seen a better hashtag for EastEnders on Twitter? [Tell us about it](#)



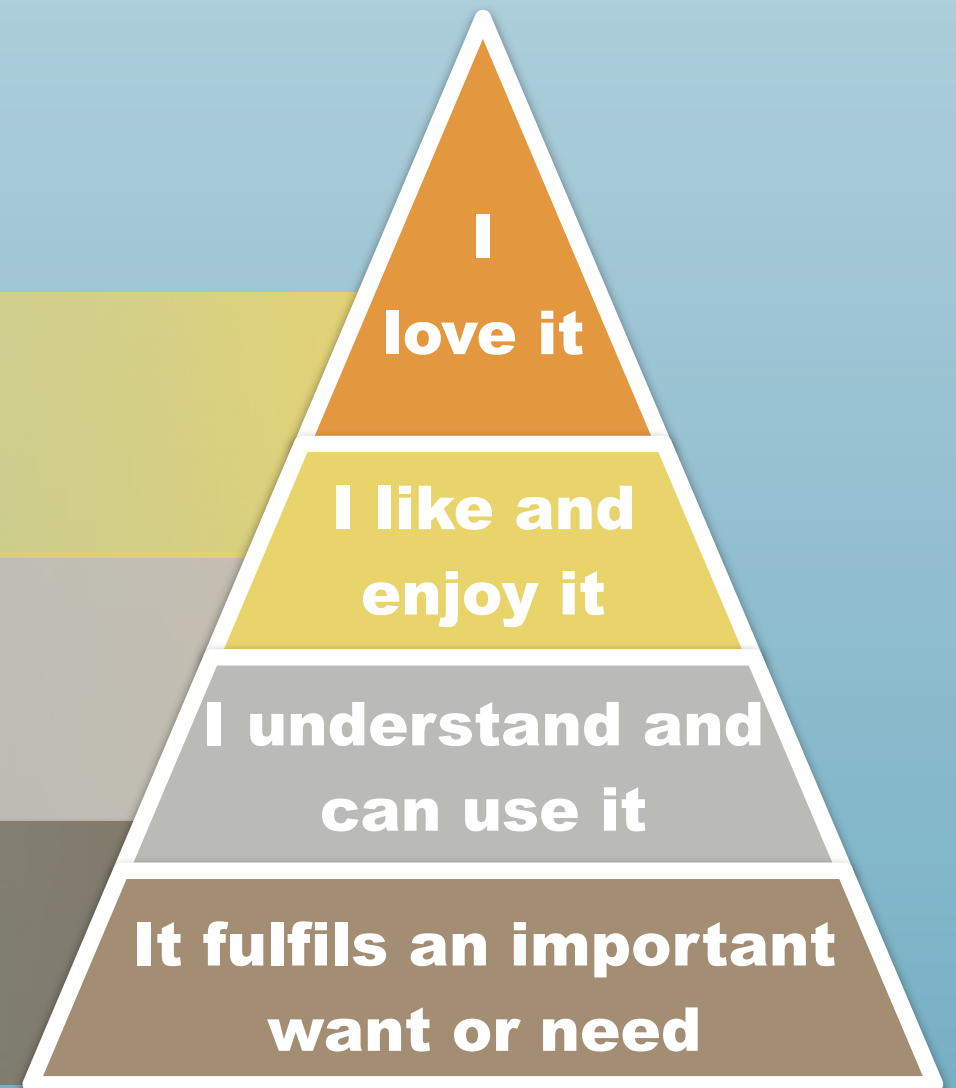
# PRINCIPLES OF URI DESIGN

*Cool URIs should be*

**Hackable**

**Human-Readable**

**Persistent**



**Cool URIs don't  
change.**





# CHOOSING A NICE URL DESIGN PATTERN

<http://www.bbc.co.uk/bbccone/sherlock/series1/episode1.shtml>



Don't expose your technology. No-one cares and it might change anyway.

<http://www.bbc.co.uk/bbccone/sherlock/series1/episode1>



Is it really series 1 until there's a series 2? Will it be the same overseas?

<http://www.bbc.co.uk/bbccone/sherlock/episode1>



What if this show moves to BBC TWO or another network later?

<http://www.bbc.co.uk/sherlock/episode1>



What if Radio 4 decide to do a programme called 'Sherlock' in the future?

<http://www.bbc.co.uk/episode1>



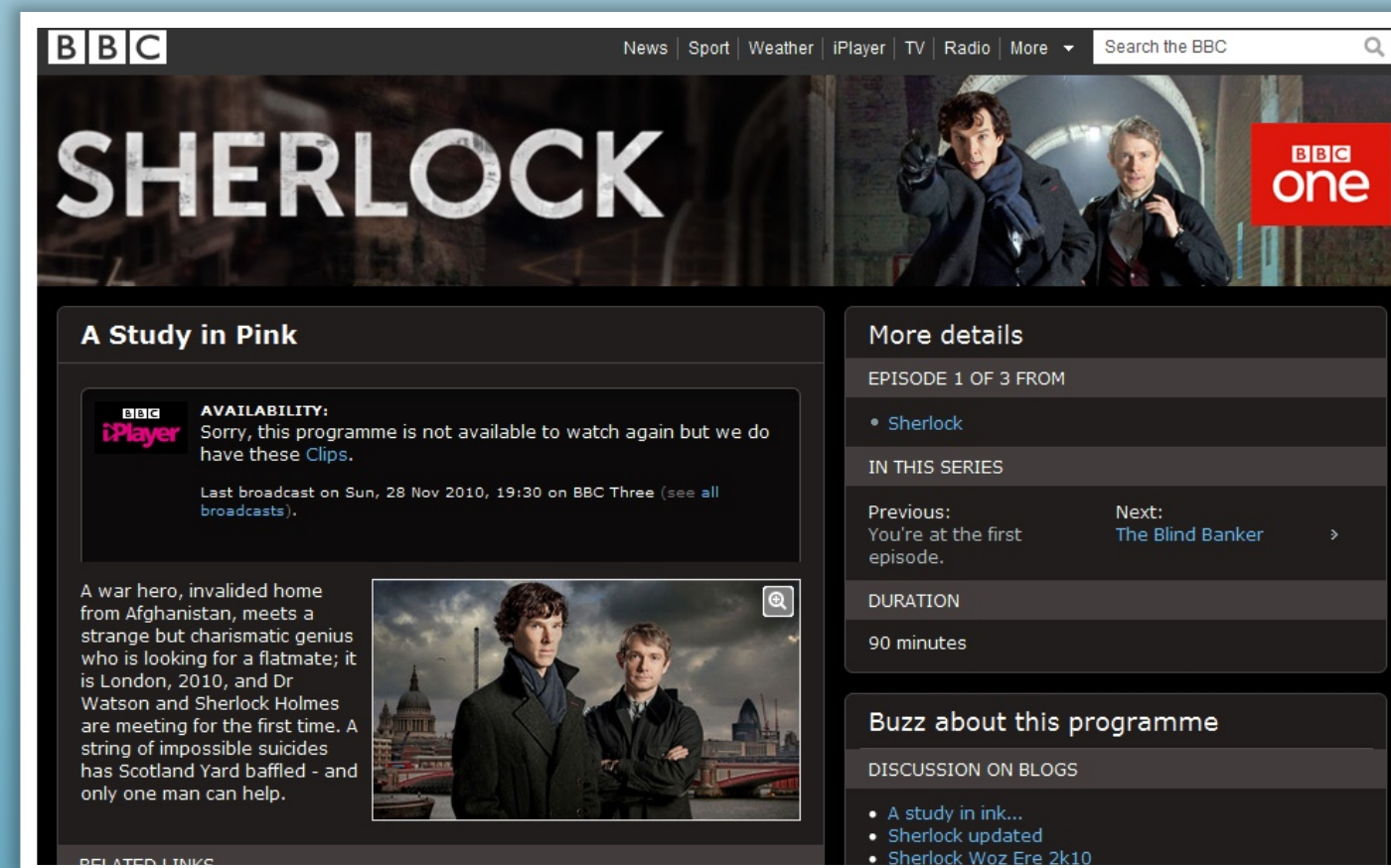
Hmm, well now that doesn't make much sense at all!

## THE RESULTANT URL

<http://www.bbc.co.uk/programmes/b00t8wp0>



- Leaves the only thing we know for sure
- Not so pretty, but certainly persistent
- 301 redirects can be used for a more marketing-friendly URL





# A PAGE FOR EVERY PROGRAMME

BBC

News | Sport | Weather | iPlayer | TV | Radio | More ▾

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## Programmes

### Welcome

This site aims to ensure that every TV & Radio programme the BBC broadcasts has a permanent, findable web presence.

Find out more [about this site](#), read our [commitment to accessibility](#) and discover [our plans for the future](#).

### Programmes for you

Whether it's [games & quizzes](#), all new [drama](#) or the full suite of [music](#), we've got the programmes for you.

Explore the links below to find programmes you're interested in. Browse by name, category or schedule.

### A to Z

Use the A to Z to find a programme by name.

0-9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

# FROM THE EDUCATIONAL...

BBC

2

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Search the BBC

TV Programmes A-Z

0-9	A	B	C	D	E	F	G	H	I	J	K	L	M
	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

BBC TV Guide

[Home](#) | [Watch Live](#) | [Schedule](#) | [Programmes](#) | [Channel Trailers](#) | [FAQ](#) | [Contact Us](#)

## A History of Britain by Simon Schama

History series presented by Simon Schama

PREVIOUS PROGRAMMES: [by series](#) (3) | [by year](#) (15)

### Last on

**Series 1**  
King Death

[programme information](#)

### Coming up

Sorry, no programmes coming up.

### More from BBC Two

- [Factual](#) > [History](#)
- [Documentaries](#)



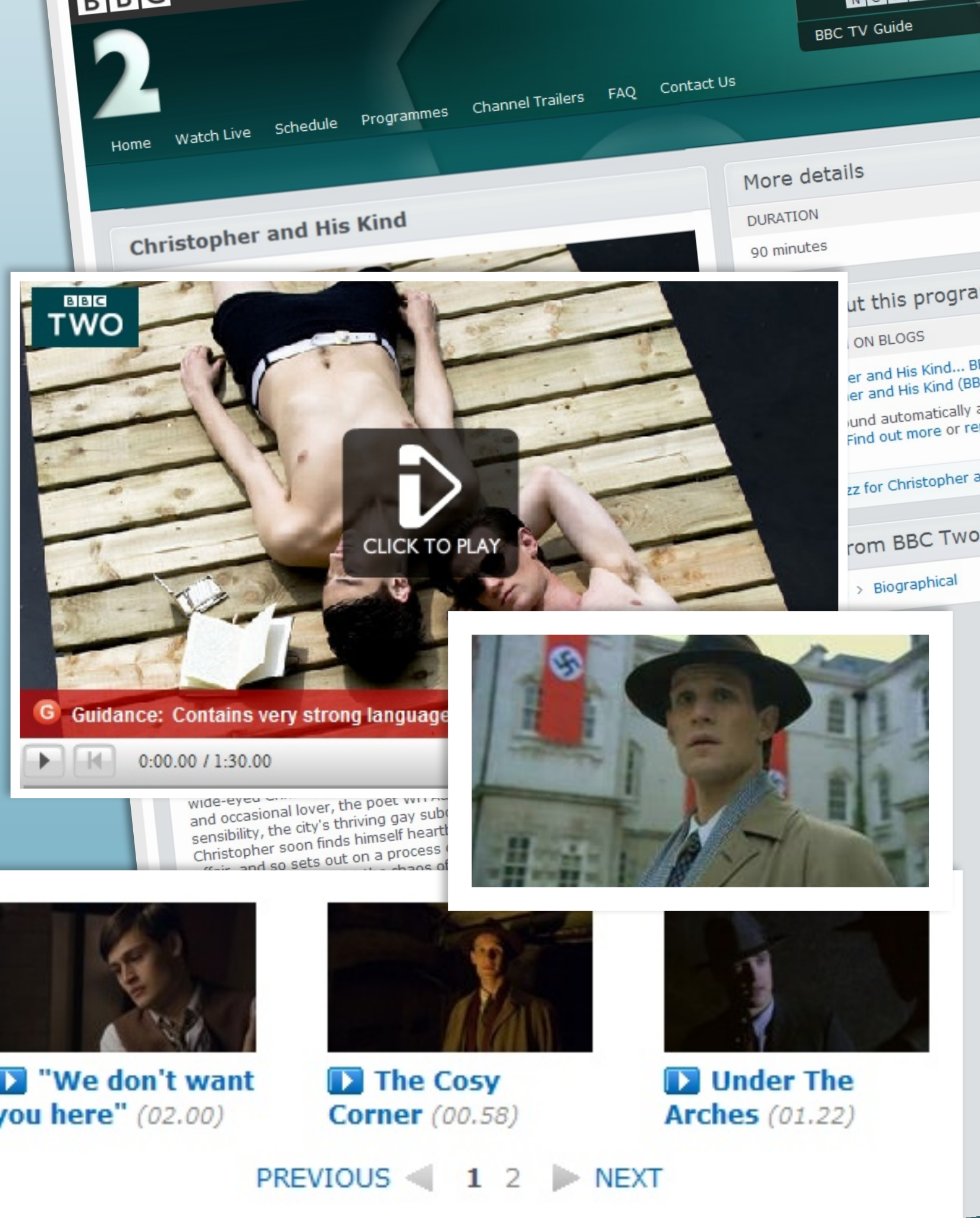
...TO THE POPULAR.



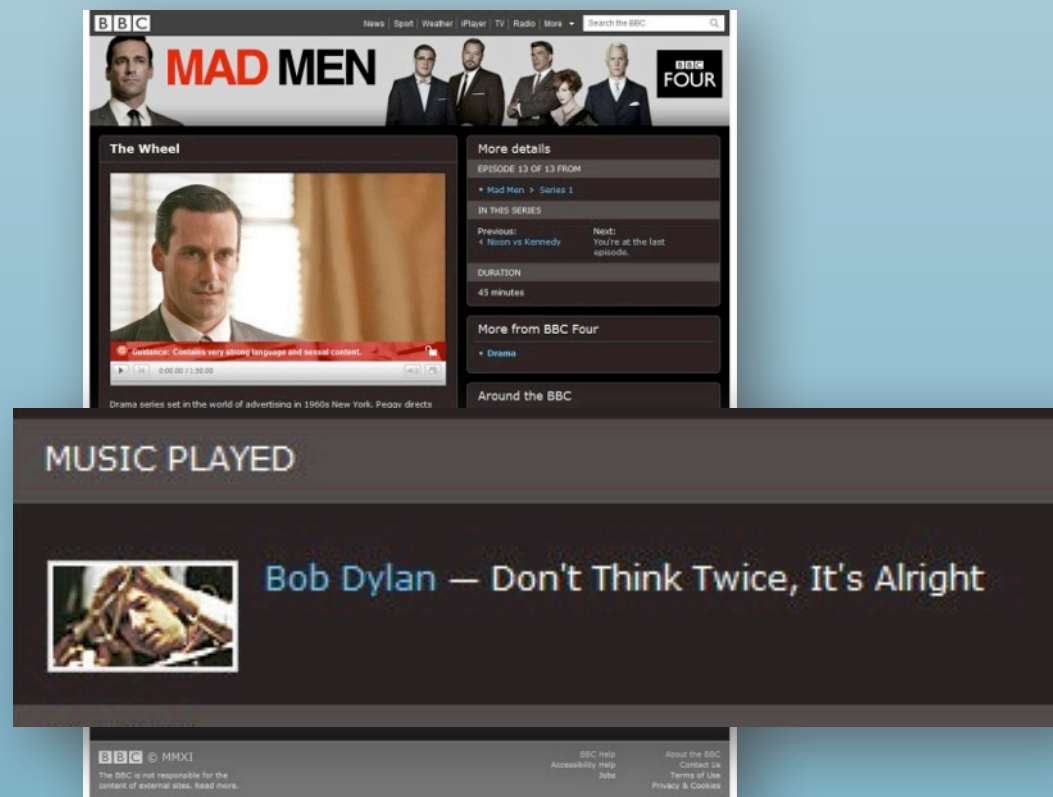


## MEDIA RICH PAGE

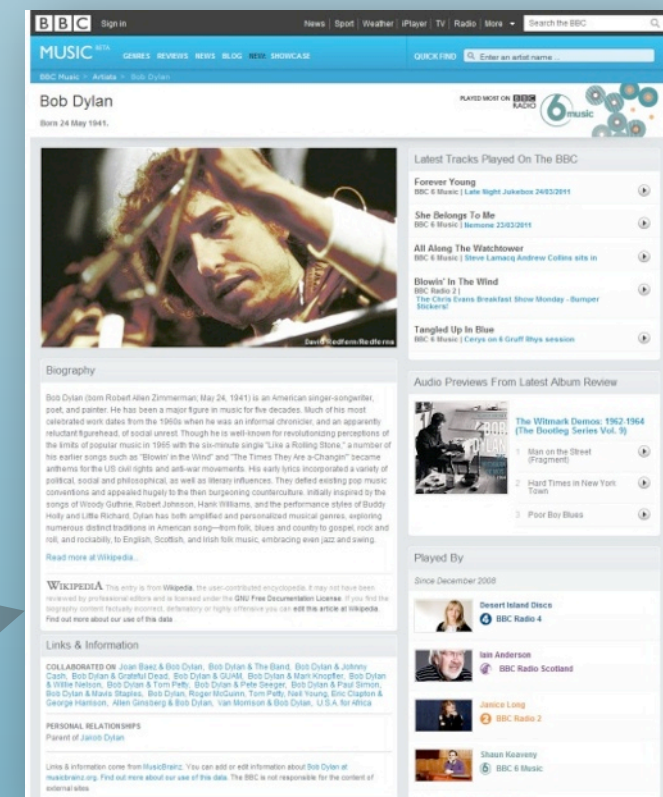
- Embedded video
- Episode synopsis
- Programme clips
- Production stills
- Contributors list
- Web links
- List of broadcasts
- Track listings



# LINKS ACROSS TO OTHER SUBJECT DOMAINS



PROGRAMME PAGE  
WITH TRACKLISTING

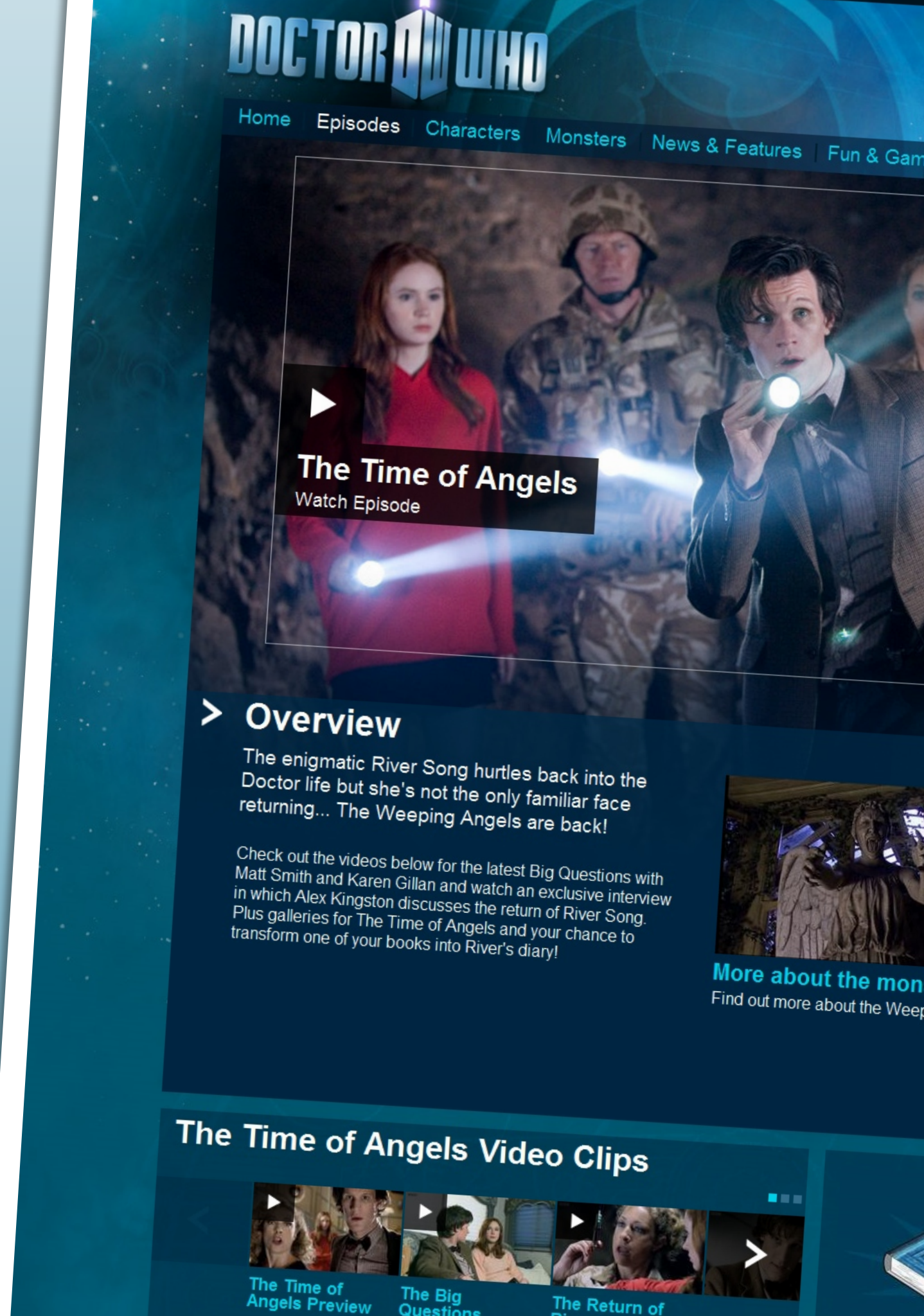


BBC MUSIC ARTIST PAGE



## MAKING MICROSITES

- Fully-skinned and even restructured pages
- Additional material for brand, series or episode
- User experience is enhanced without undermining the structure





# TELLING THE STORIES WITHIN STORIES

BBC

The Doctor Who Mythology Engine

Prototype by BBC R&D Prototyping

Home

Stories

Characters

Places

Things

Story

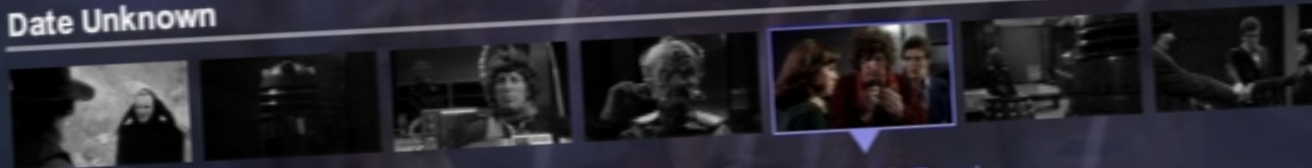
## Genesis of the Daleks

Next: Remembrance of the Daleks

### Story Timeline

Do I Have the Right?  
Kaled Bunker, Date Unknown

Date Unknown



Click to visit Event

### Characters



Click to visit Character

The Fourth Doctor is overwhelmed by the implications of destroying the Daleks

### Synopsis

In the Kaled Bunker on Skaro, the Doctor prepares to fulfil his mission for the Time Lords by destroying the embryonic Dalek creatures created by Davros. But, at the crucial moment, the Doctor doubts his actions...

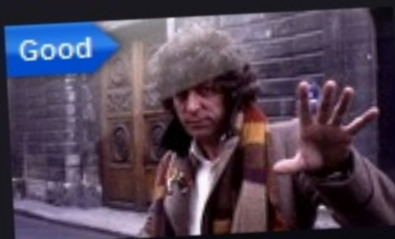
### Story Information

When Date Unknown

#### Synopsis

The Time Lords transport the Doctor, Sarah and Harry to Skaro at a point in time just before the birth of the Daleks. The Doctor's

### Features



The Fourth Doctor



Sarah Jane Smith  
Companion to the Doctor



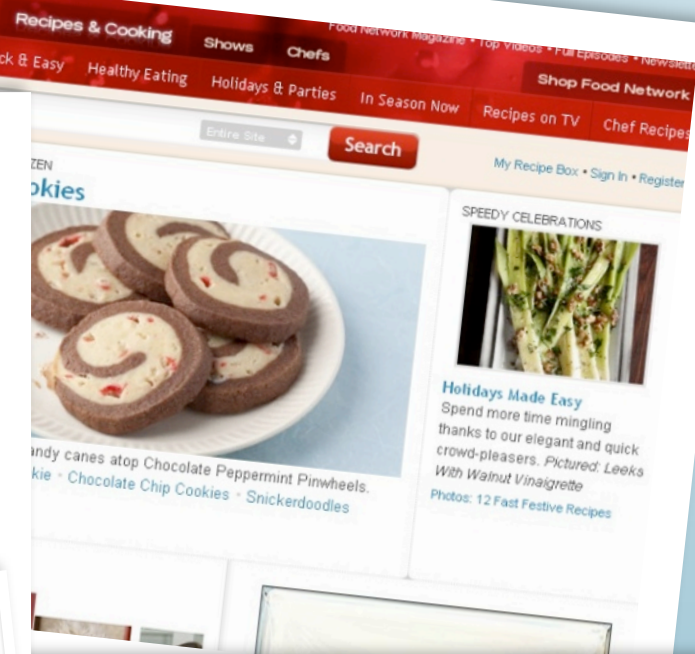
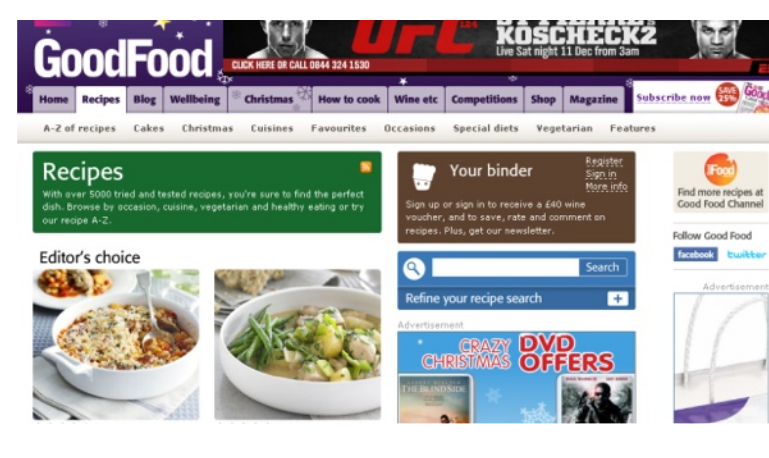
Harry Sullivan  
Companion to the Fourth



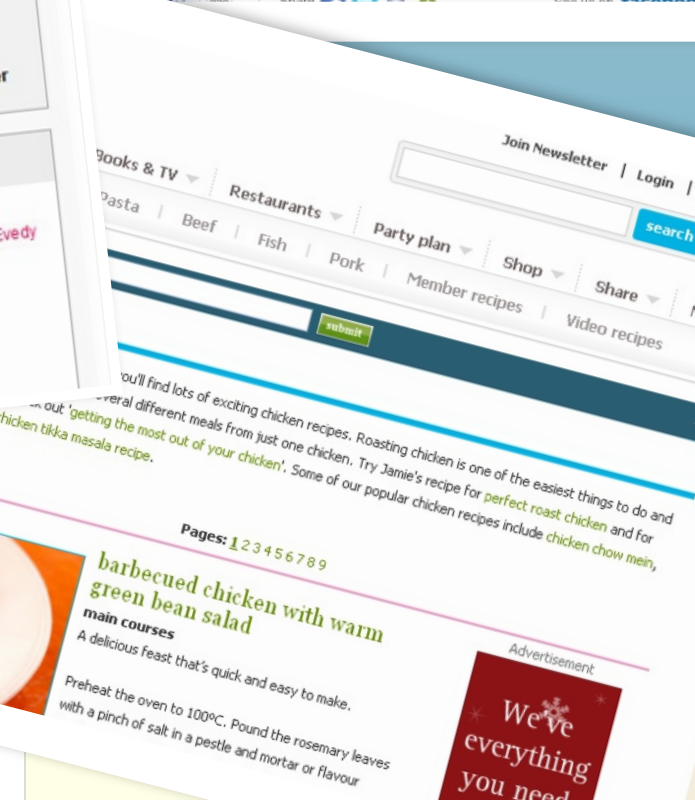
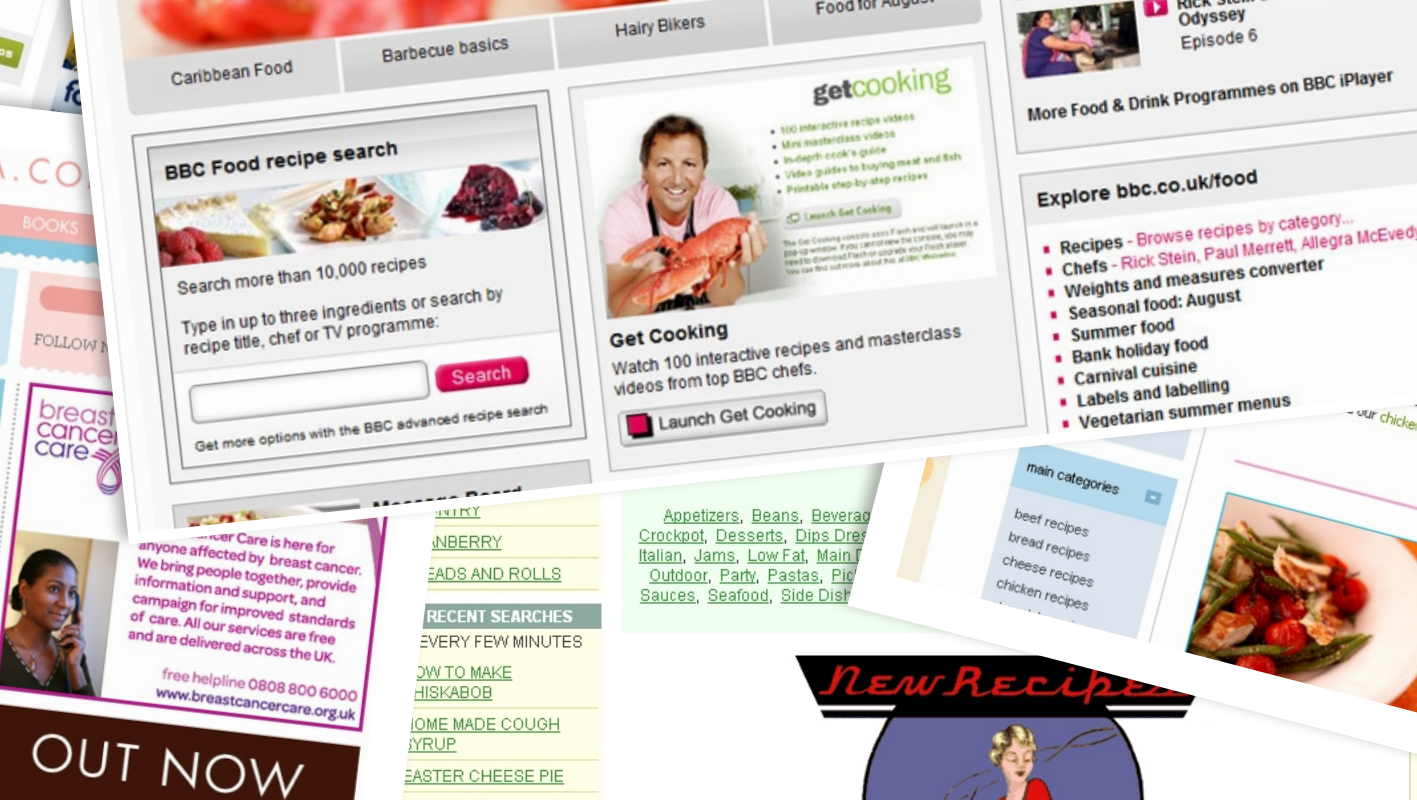
Davros  
Creator of the Daleks. A Kaled scientist

# 5. BBC FOOD





# A CROWDED MARKETPLACE





## HOW GOOGLE SAW THE SITE





WHAT DO WE  
THINK ABOUT?

ingredient

saturday  
kitchen  
programme

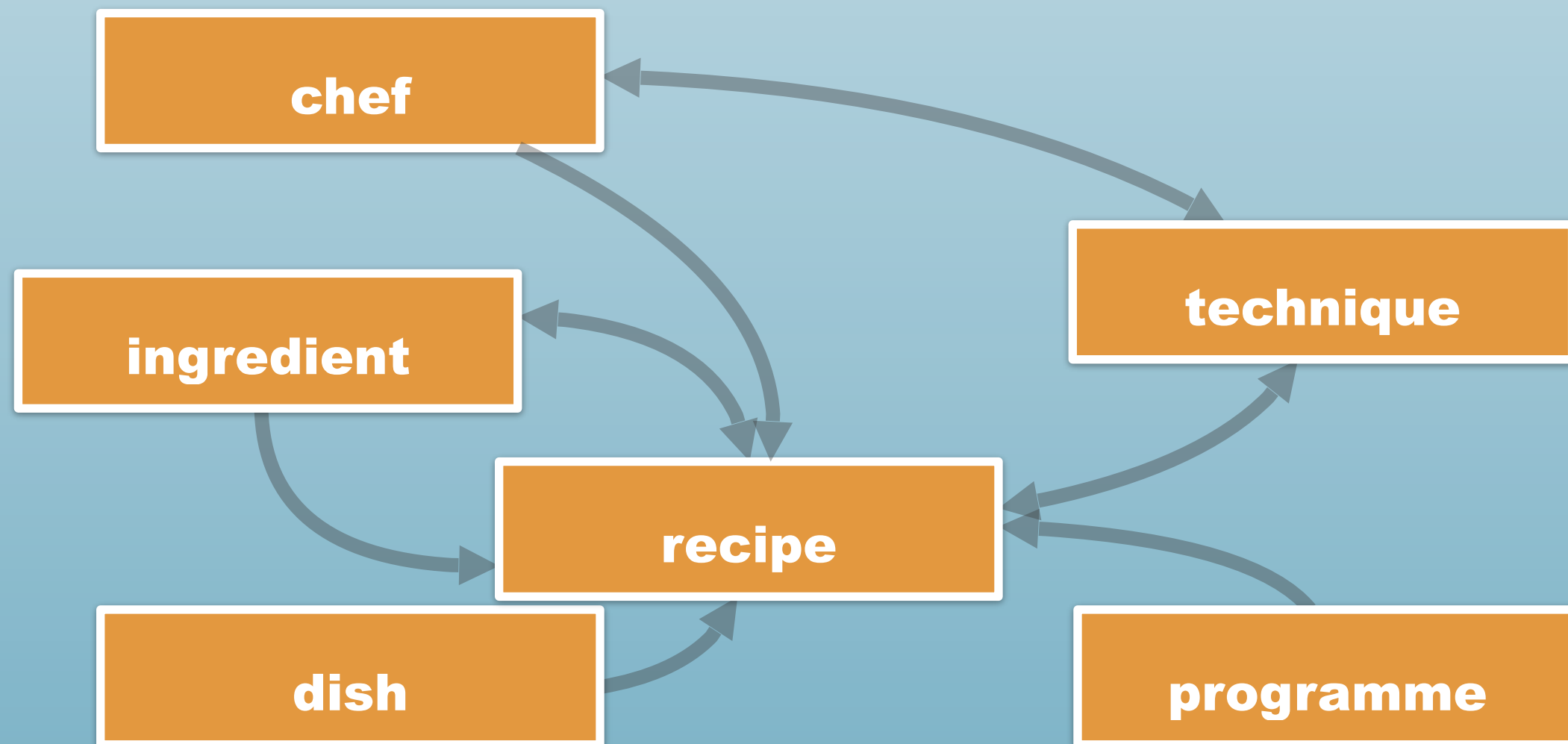
chef

recipe

dish



## BBC FOOD DOMAIN MODEL\*



\*simplified version

# Roasted lobster with champagne souffle

## Ingredients

1 cooked lobster  
30g/1oz butter  
30g/1oz plain flour  
150ml/ 1/4 pint champagne  
150ml/ 1/4 pint milk  
1 tbsp Dijon mustard  
1 free-range egg, separated

# Roasted lobster with champagne souffle

## Ingredients

1 cooked lobster  
30g/1oz butter  
30g/1oz plain flour  
150ml/¼ pint champagne  
150ml/¼ pint milk  
1 tbsp Dijon mustard  
1 free-range egg, separated  
salt and freshly ground black pepper

## To serve

small bunch chervil  
small bunch chives  
crusty bread

## Preparation method

1. Preheat the oven to 200C/400F/Gas 6.
2. Using a large sharp knife, chop the lobster in half so that the head and the body are separated. Chop the head into two lengthways and remove the brains using a spoon. Clean the empty shell in cold water. Bash the body of the lobster with a rolling pin to crack the shell, then remove the lobster meat from the shell and slice into pieces. Place the flesh inside the empty head shells.

**Technique** Removing the meat from cooked lobster

3. Melt the butter in a small pan. Add the flour and stir over the heat for 2-3 minutes.
4. Add the champagne, milk and Dijon mustard to the pan. Whisk the heat until the sauce has thickened and is smooth.



By Phil  
From  
Cook

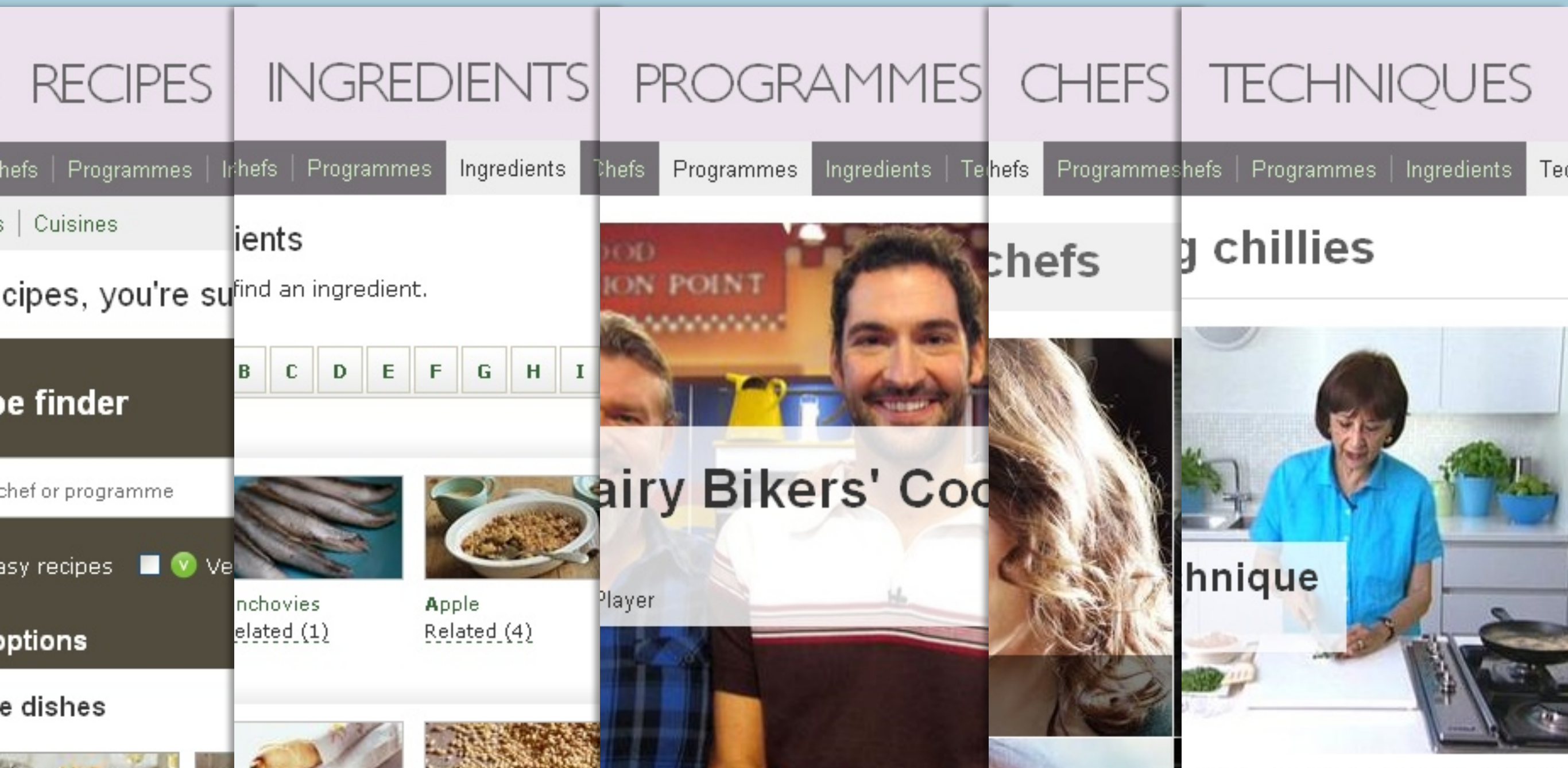
Less  
prepa

10 to  
cook

Ser

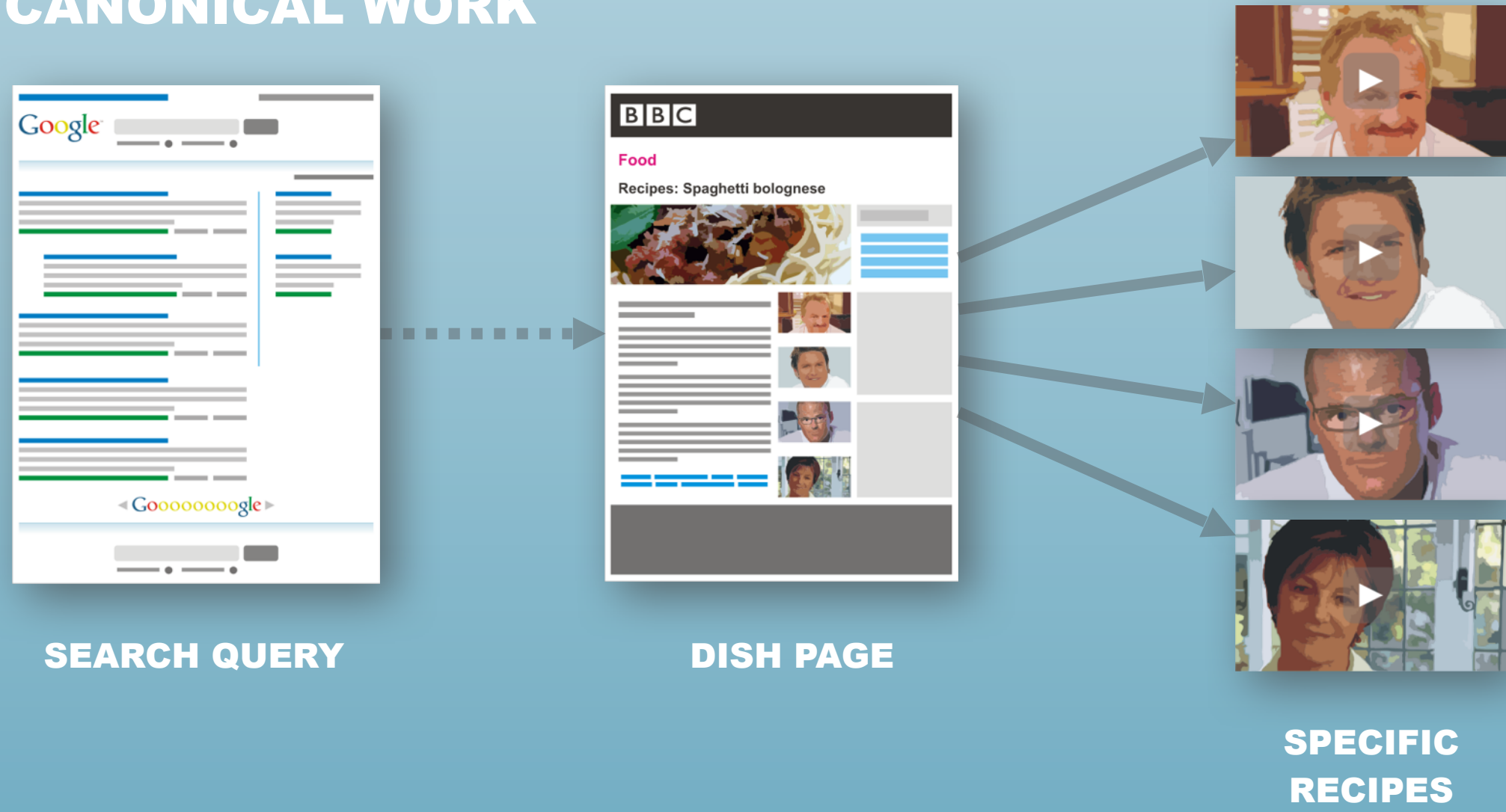


# UNLOCKING NEW WAYS TO EXPLORE





# THE DISH AS A CANONICAL WORK



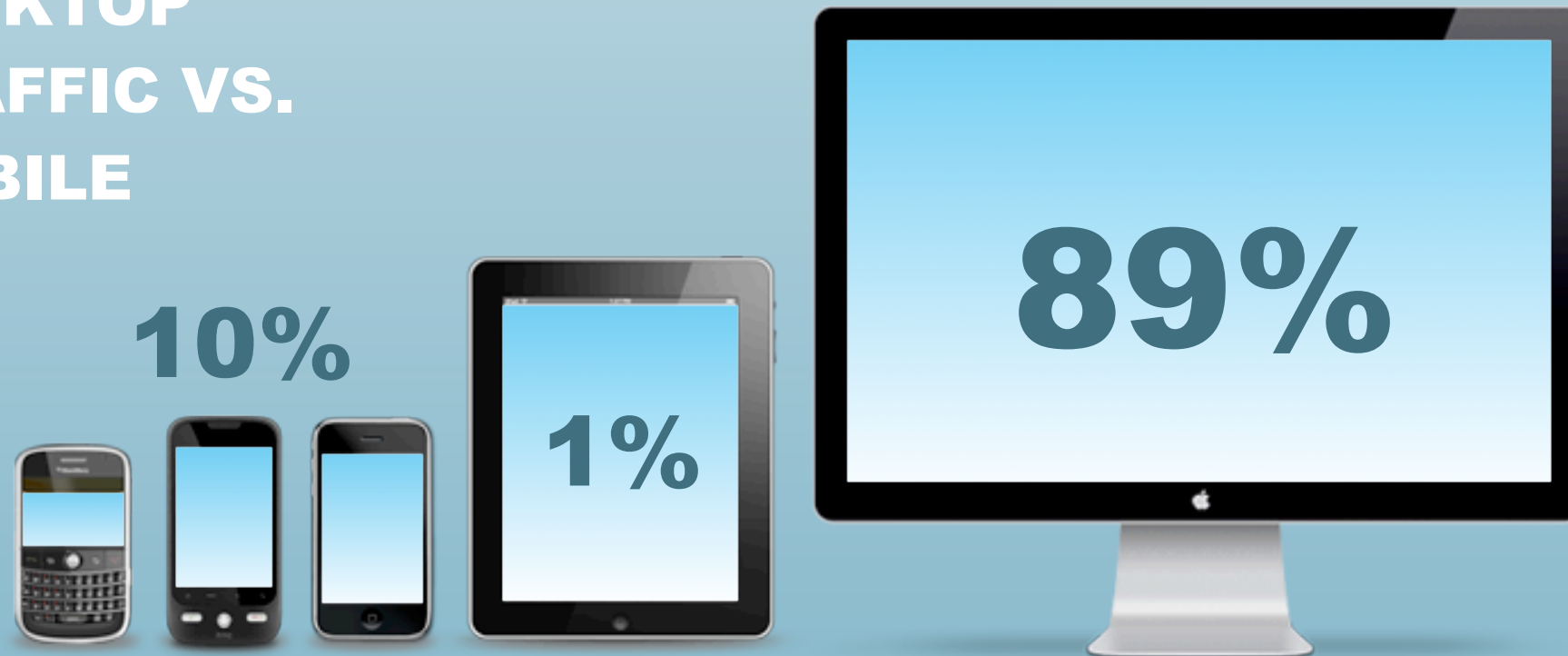
## RESULTS



- **NetPromoter improved post-relaunch (58)**
- **150,000 extra users each week from search engines alone**
- **~20% share of UK recipes market**



## DESKTOP TRAFFIC VS. MOBILE



**Of the top 2500 search queries November 2010 saw over 20% of searchers arriving via smartphones alone - an increase of 20% since October.**

## WHERE DOES FOOD TRAFFIC COME FROM?



**Most visitors arrive into the middle of a site, via a deep link, not via the homepage.**



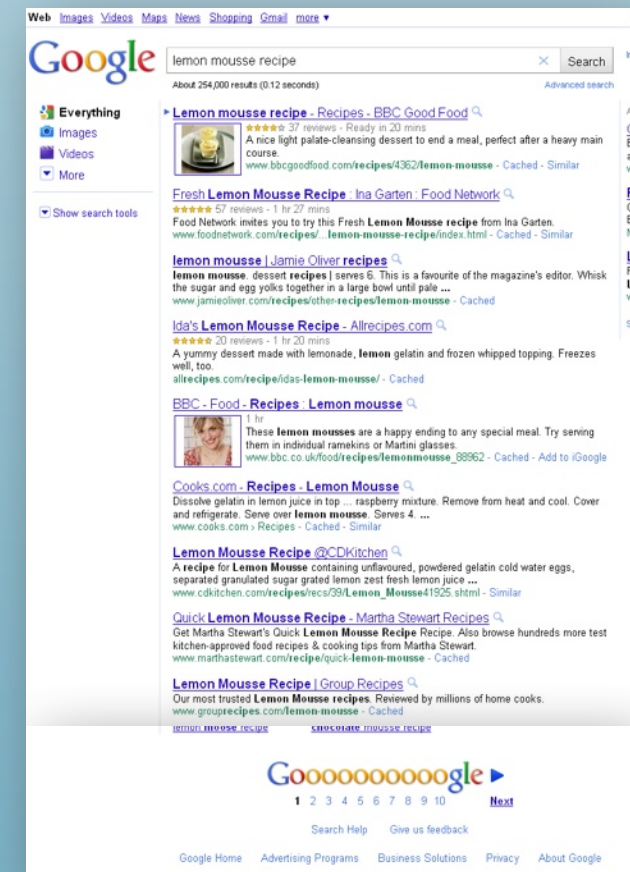
# SO WHICH IS THE REAL FOOD HOMEPAGE?



DESKTOP



MOBILE



GOOGLE

# **6. BBC WILDLIFE**



# SHOWING HOW THE NATURAL WORLD JOINS UP

- Showcasing the BBC Natural History archive
- Unlocking the value contained in complete programmes
- Presenting content in new and useful ways





# GIANT PANDA (AILUROPODA MELANOLEUCA)

[Nature](#)[Species](#)[Giant panda](#)

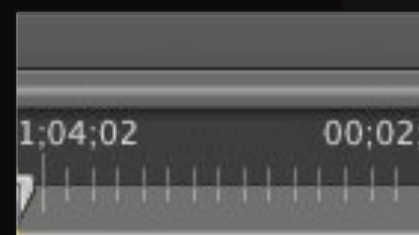
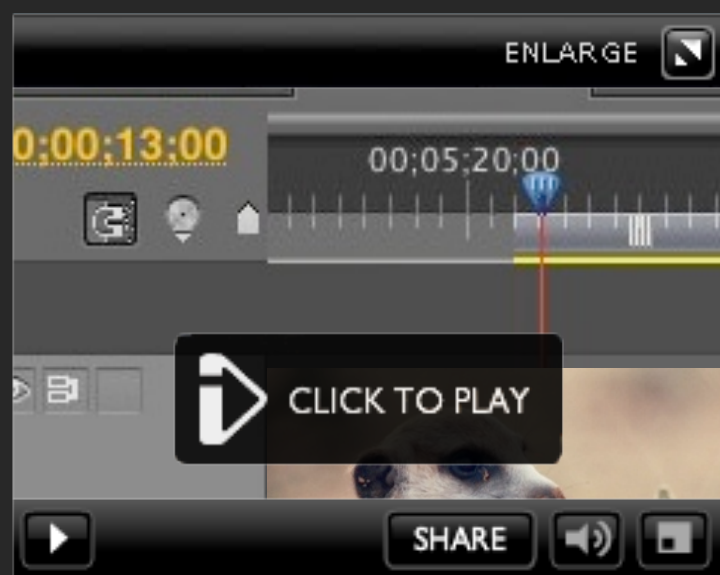
Giant pandas are rare and elusive, yet are one of the most popular of all animals. Famous for their love of bamboo, little else is known about their behaviour in the wild, and their breeding success in captivity is poor.

WHAT DO THEY SOUND LIKE?

Giant panda calls



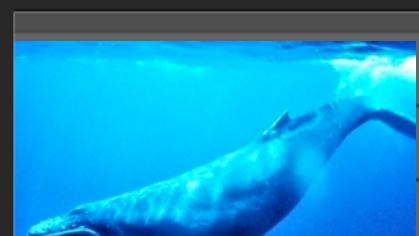
## WATCH VIDEO CLIPS FROM PAST PROGRAMMES



### ► Panda cub

Planet Earth

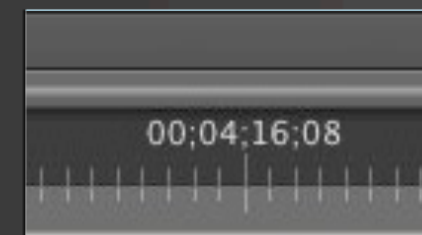
First footage of a new born panda and its mother in their cave den.



### ► Panda profile

Wild China

Rare sightings of the elusive and shy wild panda doing what it does best - munching bamboo.



### ► Mating pandas

Wild China

The holy grail of panda behaviour: courtship and mating filmed in its entirety.



# UNLOCKING NEW WAYS TO EXPLORE

## SPECIES

Wildlife Finder > Species

### What is a species?

A species is a group of organisms that can breed. Wolves and dogs can breed together. Mules are usually sterile so they cannot breed. Species are defined by their body shape and other characteristics.



Snow Leopard

### All Species

Aardvark  
Adder  
Adelie penguin

## ADAPTATIONS

Wildlife Finder > Adaptations and behaviour

Adaptations help organisms survive in their environment. They can be anatomical, behavioural or physiological.

Anatomical adaptations are physical features. Behavioural adaptations can be inherited or learnt and physiological adaptations include the ability to regulate body temperature.

### Adapted to extremes

Adaptation to extremes encompasses all the things an organism needs to withstand the planet's harsh conditions. At high altitudes, the low levels of oxygen and the searing heat of deserts mean that animals and other organisms have evolved special adaptations.



Altitude tolerant



Chemical tolerance

## HABITATS

Wildlife Finder > Habitats

A habitat, or biome, is the type of environment in which an organism lives. Habitats are defined by what kinds of plants and animals are found there. Reefs and the tundra are all habitats.

### Terrestrial Habitats

Terrestrial habitats include forests, grasslands and deserts. They are defined by factors such as plant life, climate and soil. Forests are defined by the presence of trees, grasslands by the presence of grass and deserts by the lack of water.

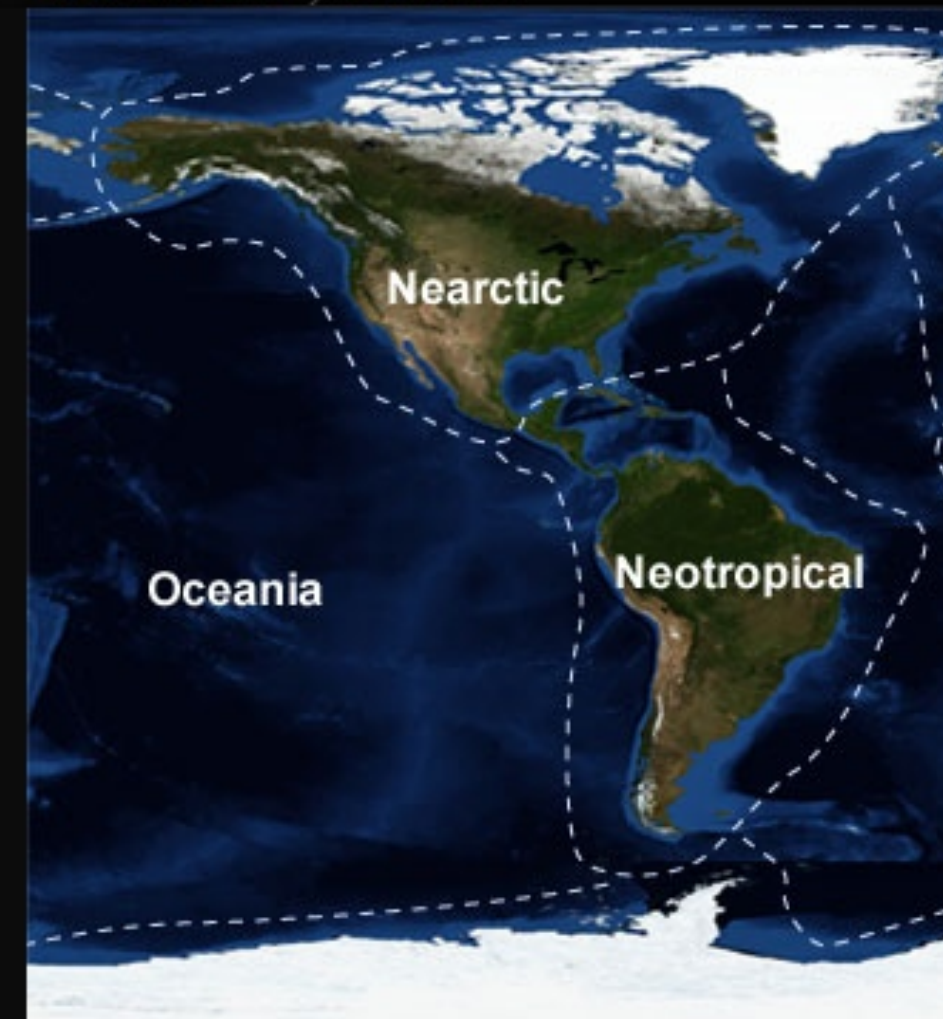


Beech wood



## ECOZONES

Wildlife Finder > Ecozones



To understand the diversity of life it is helpful to consider the different ecozones of the world.



# WHAT DOES THE POLAR BEAR SHARE WITH...



[News](#) | [Sport](#) | [Weather](#) | [iPlayer](#) | [TV](#) | [Radio](#) | [More](#) ▾

Search the BBC



## POLAR BEAR (URSUS MARITIMUS)

[Wildlife Finder](#) > [Animals](#) > [Mammals](#) > [Polar bear](#)

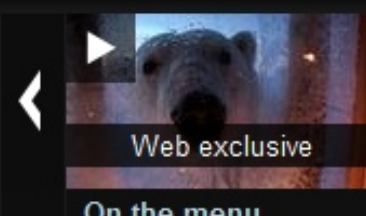


TOM MANGELSEN / naturepl.com

Remarkable adaptations allow polar bears to live in the frozen Arctic, but global warming is destroying their habitat and leaving them seriously endangered. Despite being born deaf and blind beneath the snow, cubs eventually grow into the most powerful of all four-legged animals. Using their incredible sense of smell to track their prey, adult polar bears spend most of their lives alone, wandering over the vast tracts of frozen ice in search of blubber-rich prey such as seals, walruses and even whales. They are also remarkably good swimmers and have been spotted over 60 miles from shore.

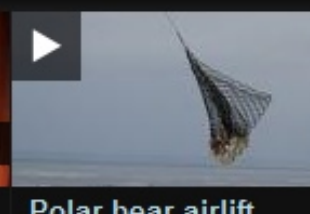
Scientific name: *Ursus maritimus*

Rank: **Species**



Web exclusive

On the menu



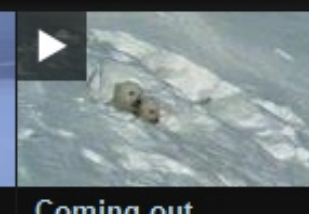
Polar bear airlift



Clever Polar Bear



Wild Polar Bears



Coming out



# THE BARN OWL?



[News](#) | [Sport](#) | [Weather](#) | [iPlayer](#) | [TV](#) | [Radio](#) | [More](#) ▾

Search the BBC



## BARN OWL (TYTO ALBA)

[Wildlife Finder](#) > [Animals](#) > [Birds](#) > [Barn owl](#)



LYNN M. STONE / naturepl.com

Barn owls have over 30 subspecies and, with a few exceptions, they are distributed world-wide. The barn owls which live further north in Europe are a darker shade than the race found in the UK. Barn owls do not hoot, instead they emit a long, eerie screech (its alternative name is the screech owl). They also hiss, snore and yap. As well as rodents, they eat other small mammals, such as young rabbits and moles, and they also catch frogs and small birds.

Scientific name: *Tyto alba*

Rank: **Species**

Common names: Common barn owl, Screech owl, White owl



Rodent bones



Real estate



Passion for wildlife



Young parents



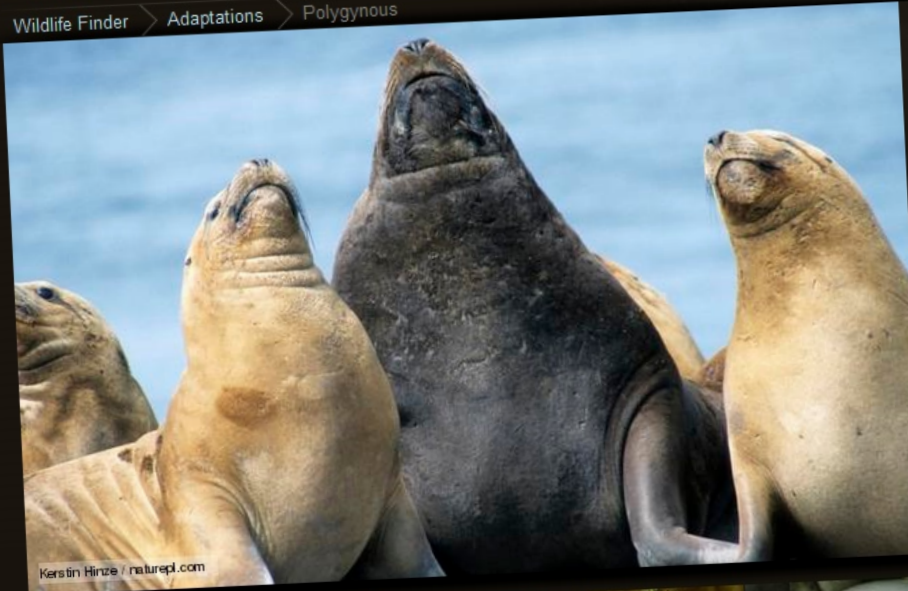
Size matters



# BOTH ARE POLYGYNOUS

## POLYGYNOUS

Wildlife Finder > Adaptations > Polygynous



Polygynous sexual behaviour is the system in which a single male mates with multiple females, but each female mates with only one male. This usually entails fierce competition between the males during the breeding season. Females invest more heavily in their offspring and all the parental duties fall to the mother. They become much more choosy about their mate as a result, while the males attempt to have as many mates as possible in order to leave a maximum number of offspring. However many males fail to win or impress a female and remain unmated their entire lives.

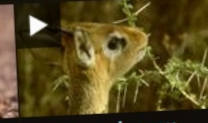
Kerstin Hinze / naturepl.com



Introduction



**Scandalous birds**  
Birds Britannia  
Drab and sombre-looking, the dunnock indulges in just about every sexual strategy there is.



**Home and away**  
Living Planet  
Small dik-diks pair up for life while larger impala have open relationships.



**Family guy**  
Living Planet  
The male rhea incubates a huge clutch of eggs laid by several females.



**Parallel pacing**  
Living Britain  
Fallow deer bucks strut shoulder to shoulder to size each other up.



**Clash of the titans**  
Living Britain  
Red deer stags focus their energy on maintaining status.

### Animals with this behaviour

#### Mammals



Armadillo



Platypus



Common blossom bat



Common vampire bat



Antarctic fur seal



Baikal seal



Black bear



Brown fur seal



Common seal



Galápagos fur seal



Grey seal



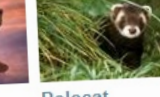
Leopard seal



North American river otter



Polar bear



Polecat



Puma



Red fox



Sea otter



South American coati



Southern Elephant Seal



### Behaviours

Other Reproductive strategy behaviours

- Active at birth
- Asexual reproduction
- Co-operative breeding
- Egg layer
- Flowering
- Helpless young
- Hermaphroditic
- Monogamous
- Ovoviviparous
- Parthenogenetic
- Polygynandrous
- Polygynous
- Semelparous
- Spawning
- Viviparous

Share f t

### Find wildlife

Search for your favourite wildlife



### Earth News

**Promiscuous apes make more sperm**

Chimpanzees produce 200 times more sperm than the world's largest primates, scientists reveal.

### Video collections

Take a trip through the natural world with our themed collections of video clips from the natural history archive.



### Elsewhere on the BBC

- Gorilla growing pains

### Elsewhere on the web

- Definition of polygyny (stanford.edu)
- Polygyny (wikipedia.org)



# HIPPOPOTAMUS

## BBC HIPPOPOTAMUS (HIPPOPOTAMUS AMPHIBIUS)

Life Finder > Animals > Mammals > Hippopotamus

News | Sport | Weather | iPlayer | TV | Radio | More ▾ Search the BBC

### Habitats

The following **habitats** are found across the Hippopotamus distribution range. Find out more about these environments, what it takes to live there and what else inhabits them.



Flooded grassland



Lakes and ponds



Rivers and streams



Tropical dry forest

### Behaviours

Discover what these **behaviours** are and how different plants and animals use them.



Predation defence



Adapted to swimming



Hierarchical



Acoustic communication



Herbivorous



Maternal care



Nocturnal



Polygynous

### Conservation Status

LC

Least Concern

NT

VU

Vulnerable

EN

CR

EW

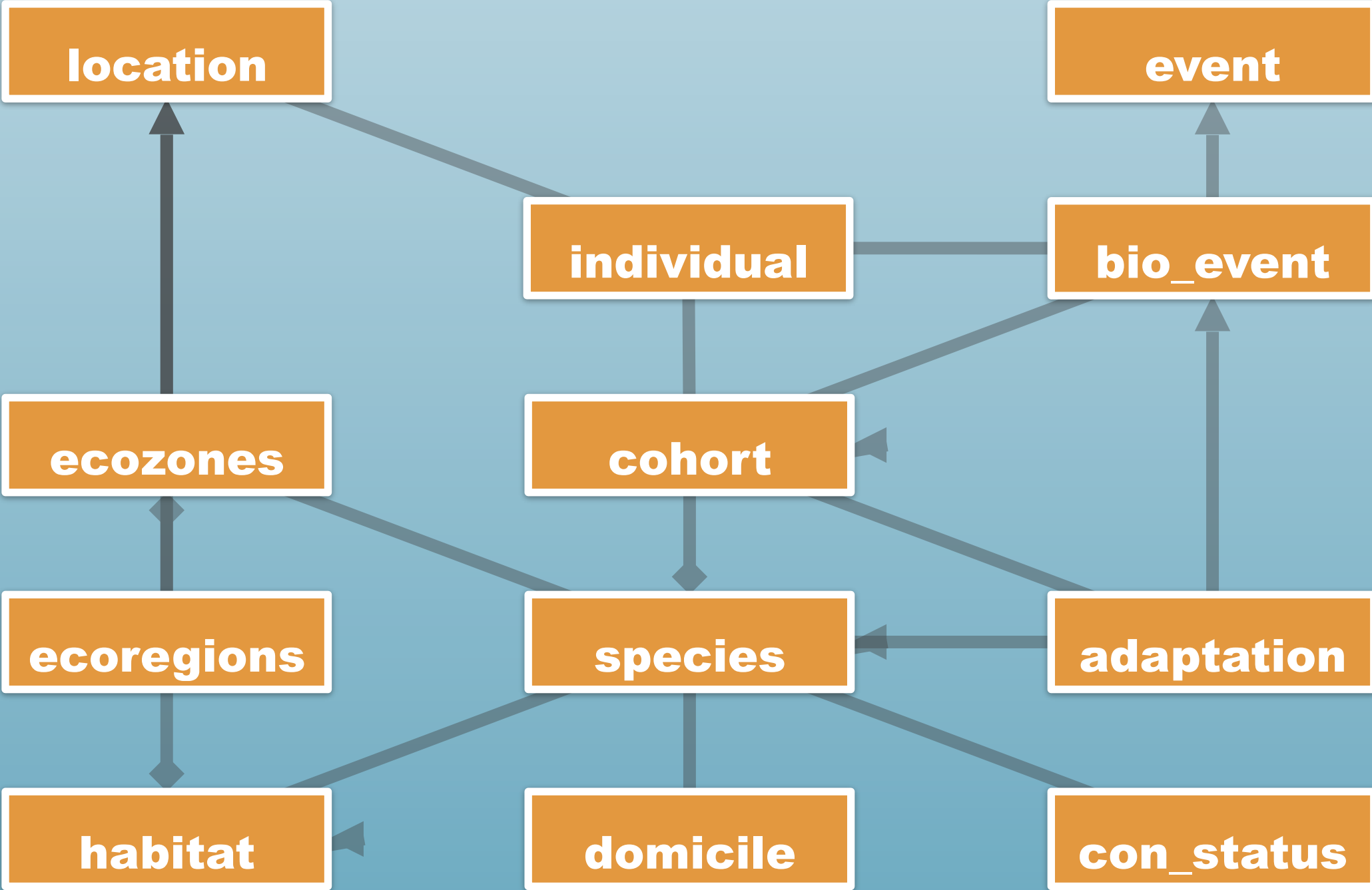
EX

Extinct

Population trend: ↓ Decreasing Year assessed: 2008 Classified by: IUCN 3.1



**BBC WILDLIFE  
DOMAIN MODEL**



# USING THE WEB AS A CMS



Article **Discussion**

Read

Edit

View history

Search

## Editing Hippopotamus

From Wikipedia, the free encyclopedia

**B** **I**



Advanced

Special characters

Help

Cite

```
{{dablink|"Hippo" redirects here. For other uses, see [[Hippo (disambiguation)]].}}
{{dablink|This page is about the species ''Hippopotamus amphibius''. For the genus ''Hippopotamus'', see [[Hippo
(genus)]].}}
```

```
{{pp-move-indef}}
```

```
{{Taxobox
```

```
| name = Hippopotamus
```

```
| status = VU
```

```
| status_system = iucn3.1
```

```
| status_ref = <ref name="Redlist"/>
```

```
| trend = down
```

```
| image = Hippo pod edit.jpg
```

```
| image_width = 250px
```

```
| image_caption = Hippopotamus, ''Hippopotamus amphibius''
```

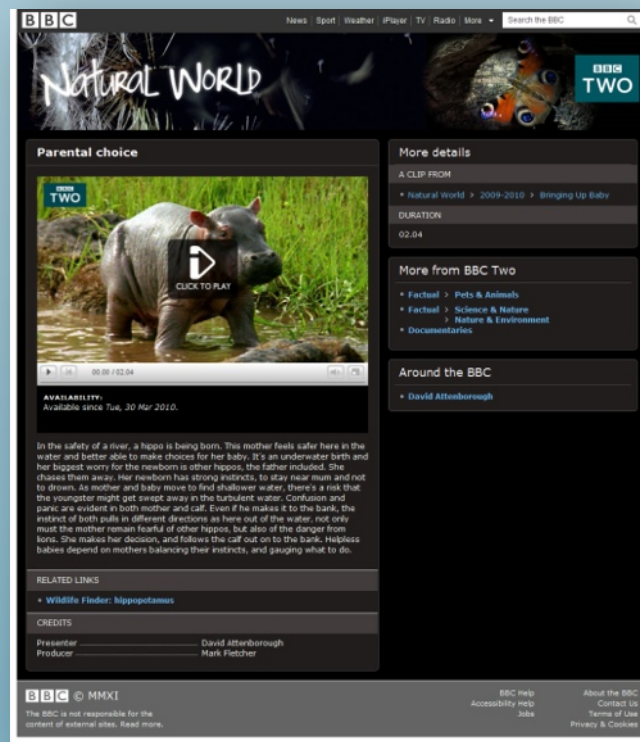
```
| regnum = [[Animal]]ia
```

```
| phylum = [[Chordata|Chordata]]
```

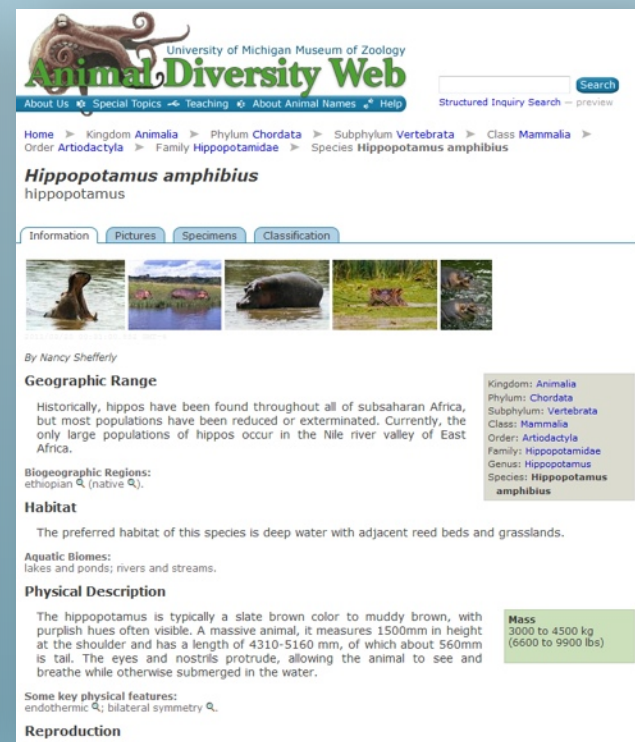
```
| classis = [[Mammal]]ia
```



# LINKING TO OTHER SOURCES OF DATA



CLIPS FROM BBC  
PROGRAMMES  
DOMAIN

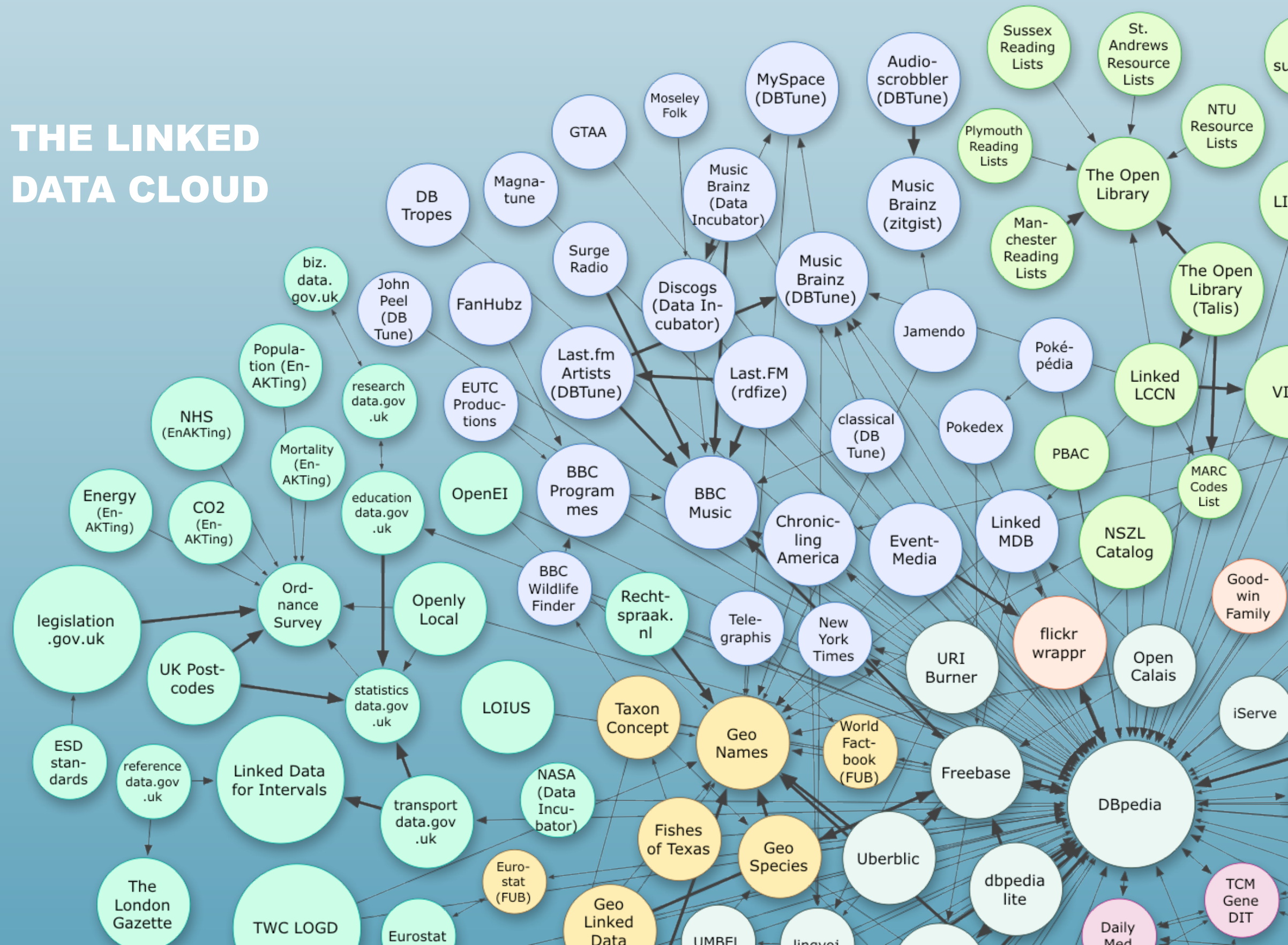


CONSERVATION  
STATUS FROM ANIMAL  
DIVERSITY WEB



DISTRIBUTION FROM  
WWF WILDFINDER

# THE LINKED DATA CLOUD





# CURATION TO ADD CONTEXT AND TRUST

**BBC**

## DAVID ATTENBOROUGH'S FAVOURITE MOMENTS

News | Sport | Weather | iPlayer | TV | Radio | More ▾

Search the BBC



**BBC**

## YEAR OF THE TIGER

News | Sport | Weather | iPlayer | TV | Radio | More ▾

Search the BBC



**BBC**

## WILDLIFE WIND-UPS

News | Sport | Weather | iPlayer | TV | Radio | More ▾

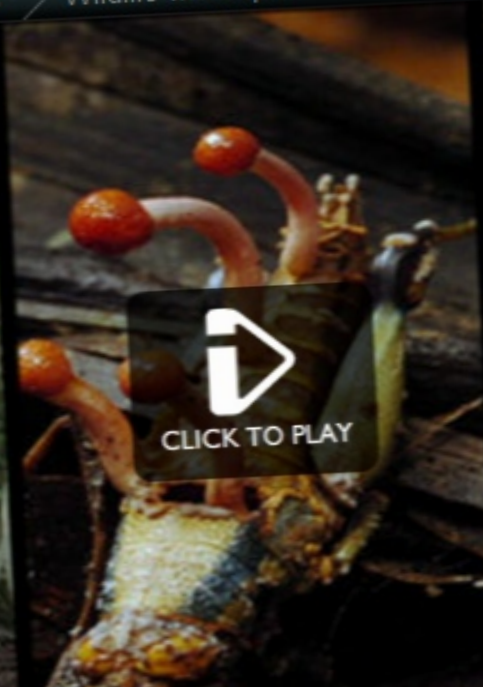
Search the BBC



Wildlife Finder

Video collections

Wildlife wind-ups



CLICK TO PLAY



### Introduction to this collection

It's not only humans that like a good joke, animals play all kinds of tricks on one another in their attempts to gain an advantage. Based around the April Fool tradition, this collection of videos features the weirder side of nature where it's not always easy to tell what's real and what's not. Watch animals play practical jokes on each other and on us, and look back at some real gems from the archives where we've tried to fool you in a wildlife world that's often stranger than fiction.

#### Elsewhere...

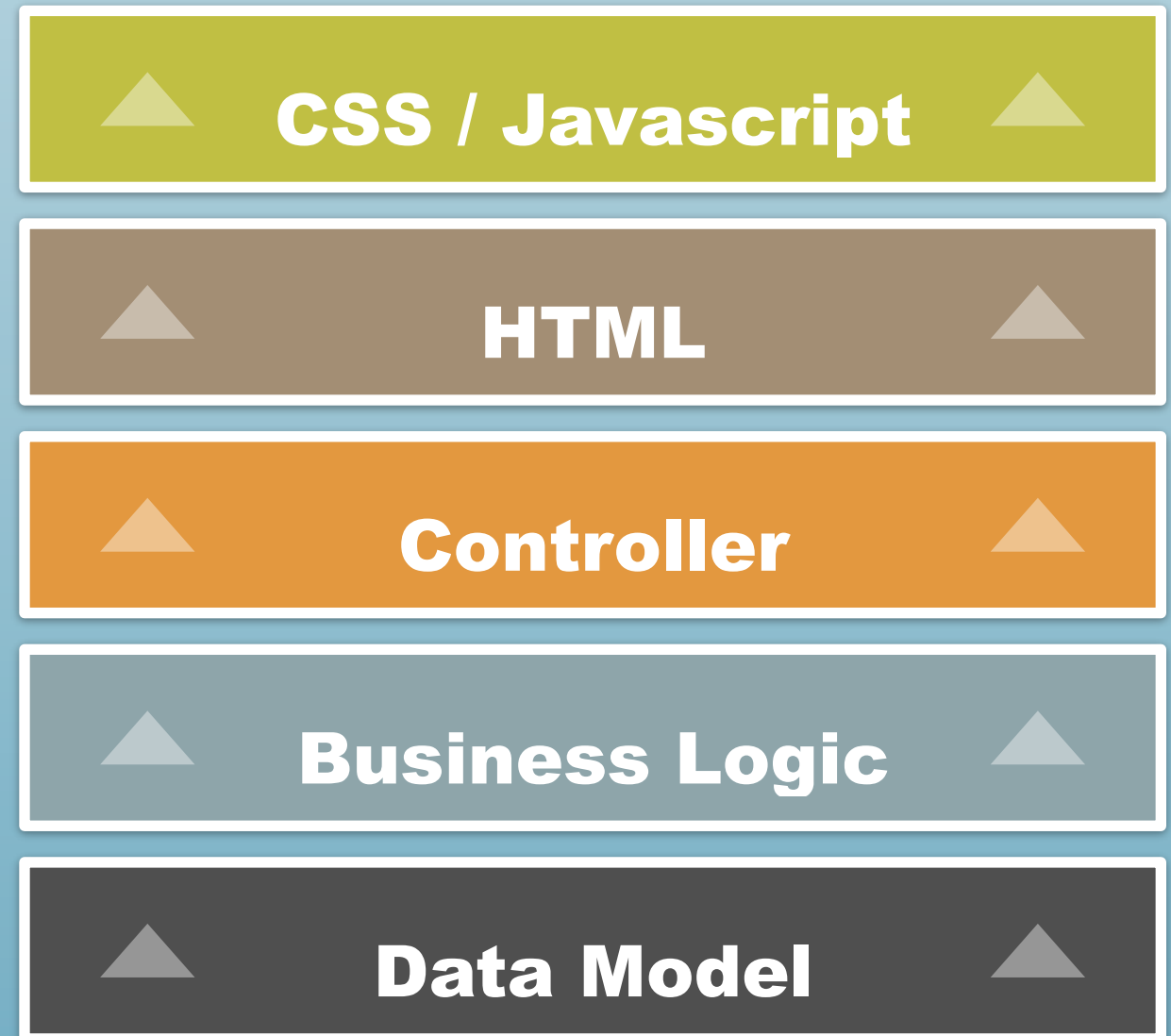
- [Wikipedia: April Fools' origins and history](#)
- [Museum of Hoaxes: Top 100 April Fools](#)

**7. GO AND DO  
LIKEWISE**



## UX THINKING ALL THE WAY DOWN

- **True user experience runs deep**
- **Consider things like business logic, SEO, document design and URI design**
- **Take your rightful place at the heart of service design**



## THINK OF THE WEB AS A SINGLE SHARED SPACE

- The web was designed to be universal
- Design your content to be sharable and used to plug gaps in the Web
- Use the data published by others, and publish data of your own





# THINK BOTTOM-UP EVERYWHERE

- **Don't start from wireframes**
- **Put 70% of your effort into your 'thing' pages**
- **Design for your least-able user first (that's probably the Googlebot)**



# MARKUP, NOT MOCKUP

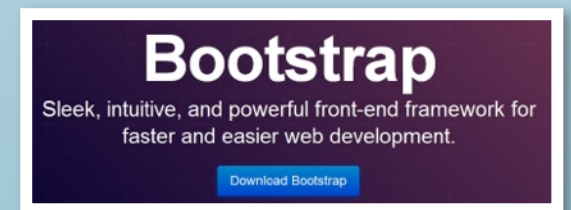
- Design in the browser, using real content
- Keep your prototypes in front of real users
- Focus your personal development on closing the gap between IA and software engineering



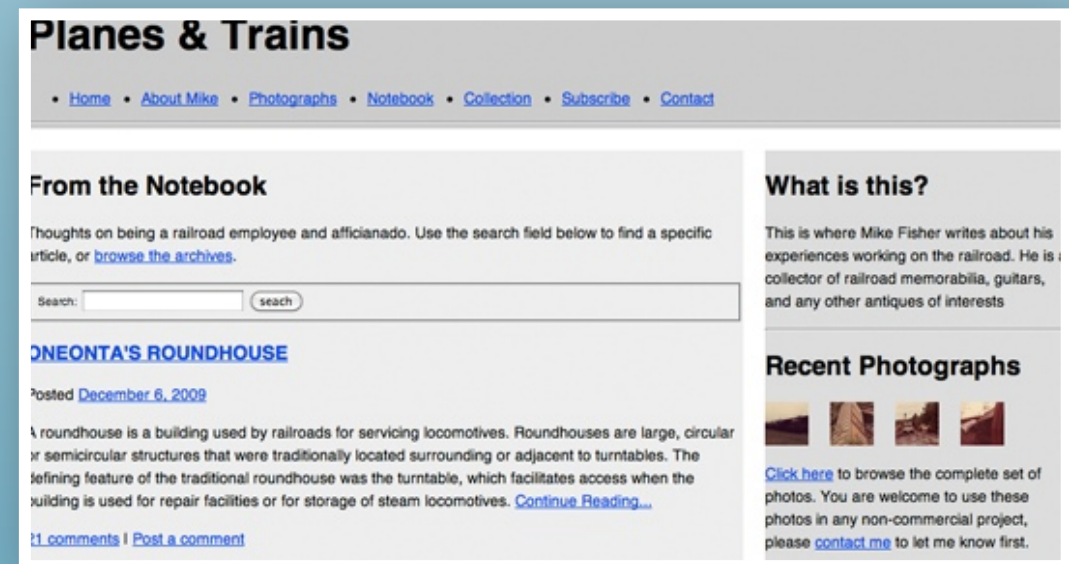
Design in the absence of content  
is not design, it's decoration.  
Jeffrey Zeldman



Standards-based  
web editor



Standards-based  
CSS framework



Living, breathing wireframes!



# **8. IN CLOSING**

## THE NEW DATA DESIGNER...

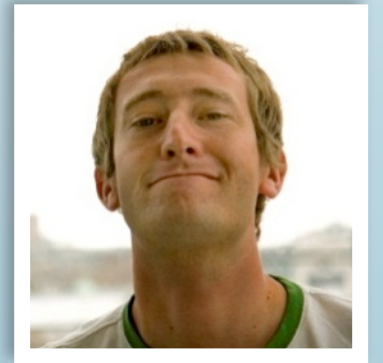
- **Thinks about real-world things**
- **Thinks ‘user-experience’ from the ground up**
- **Designs for the whole web**
- **Focuses on the interplay of content, not the surrounding furniture**





THANKS TO

**Michael Smethurst @fantasticlife**



**Tom Scott @derivadow**

**Silver Oliver @silveroliver**

**Patrick Sinclair @metade**

**Paul Rissen @r4isstatic**

**Chris Sizemore @onpause**

**Chris Thorne @songschris**

## FURTHER READING

**‘How we make websites’ by Michael Smethurst**

**[bbc.co.uk/blogs/radiolabs/2009/01/](http://bbc.co.uk/blogs/radiolabs/2009/01/)**

**‘How does the semantic web change information architecture?’ by Silver Oliver**

**[blockslabpillar.com/2010/09/18/](http://blockslabpillar.com/2010/09/18/)**

**‘Some thoughts on curation – adding context and telling stories’ by Tom Scott**

**[derivadow.com/2010/03/11/](http://derivadow.com/2010/03/11/)**

**‘Narratives and the Semantic Web’ by Paul Rissen**

**[r4isstatic.com/?p=54](http://r4isstatic.com/?p=54)**

# BBC ONTOLOGIES

## Programmes ontology

Yves Raimond, Patrick Sinclair, Nicholas J Humfrey, Michael Smethurst

[purl.org/ontology/po/](http://purl.org/ontology/po/)

## Wildlife ontology

Leigh Dodds, Tom Scott

[purl.org/ontology/wo/](http://purl.org/ontology/wo/)

## Sport ontology

Jem Rayfield, Paul Wilton, Silver Oliver

## SEE ALSO

## Event ontology

Yves Raimond, Samer Abdallah

[motools.sf.net/event/](http://motools.sf.net/event/)

## FOAF vocabulary specification

Dan Brickley, Libby Miller

[xmlns.com/foaf/spec/](http://xmlns.com/foaf/spec/)



# PICTURE CREDITS

## THANKS TO

*flickr.com/photos/*

- *cobalt/4330261604*
  - *dtaylor28/4369801559*
  - *debbcollins/4620829591*
  - *notm/1499506651*
  - *krustysplodge/1297721427*
  - *fcam/2476027735*
  - *peadar/2487923494*
  - *joncandy/3931662699*
  - *smaira/3721669619*
  - *phe999/1180686827*
  - *peterbecker/233071629*
  - *andertoons-cartoons/2517000136*
  - *benmcleod/11391970*
  - *89142790@N00/3212373419*
  - *danbri/2415237566*
  - *rapettif/4399201987*
  - *jjay69/4050882410*
  - *rwr/281039209*
  - *philip\_d/2559996327*
  - *photos/saariy/2612208165*
- 
- *“Linking Open Data cloud diagram, by Richard Cyganiak and Anja Jentzsch. <http://lod-cloud.net/>”*