

DOMAIN DRIVEN DESIGN AND THE SEMANTIC WEB AT THE BBC

DATE

14/10/2011

SPEAKERS

PAUL RISSEN, JAMES HOWARD, SILVER OLIVER



THE GOOD OLD DAYS?
TOO MANY MANUALLY MANAGED PAGES



CLEAR YOUR MIND
WHAT IS DOMAIN DRIVEN DESIGN, ANYWAY?



GET INSIDE THE HEADS OF YOUR USERS
USER RESEARCH - TALK AND SKETCH OUT HOW THEY SEE THE WORLD



USE THEIR LANGUAGE
WELL, PERHAPS NOT ALL THEIR LANGUAGE...



ASK QUESTIONS
NEVER STOP TRYING TO UNDERSTAND THE DOMAIN

Kew Association									
Polytechnic 5th	20	7	6	7	42	47	-5	30	
Carshalton 5th	20	8	1	11	54	47	7	27	
West Wickham 4th	20	7	4	9	43	49	-6	25	
Civil Service 6th	20	6	4	10	38	47	-9	25	
Old Wilsonians 4th	20	5	4	11	32	43	-11	22	
West Wickham 5th*	20	3	2	15	27	78	-51	19	
(*West Wickham 5th deducted 3 points)								8	

RESULTS

Date		Opposition	Result
Sep 12th 2009	A	Polytechnic 5th	D 2-2
Sep 19th	H	Weybridge Rangers 4th	W 4-2
Sep 26th	H	West Wickham 4th	W 4-1
Oct 3rd	H	SAL4	W 3-0
Oct 10th	A	HSBC 4th	W 5-4
Oct 17th	H	Old Actionians Association 6th	W 5-2
Oct 24th	A	Northborough 4th	L 1-4
Oct 31st	A	AFA6	W 5-3
Nov 7th	A	Civil Service 6th	W 3-2
Nov 21st	H	West Wickham 5th	W 6-4
Nov 28th	H	Polytechnic 5th	W 3-2
Dec 5th	H	Royal Bank of Scotland [AFC] Reserves	L 0-5
Dec 12th	A	South Bank Cuaco 6th	W 4-1
Jan 23rd 2010	A	AFA6	W 3-1
Jan 30th	A	Carshalton 5th	D 2-2
Feb 6th	H	Old Wilsonians 4th	W 4-0
Feb 13th	A	Winchmore Hill 6th	W 3-2
Feb 20th	A	Old Actionians Association 6th	W 3-1
Mar 6th	A	West Wickham 5th	W 2-0
Mar 13th	A	West Wickham 4th	W 4-1
Mar 20th	H	Kew Association 4th	W 4-1
Mar 20th	A	Kew Association 4th	W 4-0
Mar 27th	A	Civil Service 6th	W 6-2
		Polytechnic 6th won the AFA Intermediate Novice Cup	
	H	League	
		Civil Service 6th	
			W 1-0
			W 3-2

LONGEST WINNING STREAK

TEN

LAST MINUTE WINNERS

ONE

GOAL CONTRIBUTION OF TAVARES, SMITH & RUSHDEN

63%

Ricardo Tavares	31 goals
Sandy Smith	19
Max Rushden	15
Jean-Baptiste Gaudin	5
Martin Kelly	4
Aden Turna	2
Ian Tapper	2
Norwegian Jan	2
Rob Elliot	2
Chris Byrne	1
Chris Walton	1
Dominic Weeks	1
John Keane	1
Nick Bond	1
Artur Sidlo	1
Richard Craig	1
Simon Swain	1
Own Goals	1

BACK-HEEL EFFICIENCY

Dominic Rowles 100%



GET THE BALANCE RIGHT
COMPLEXITY BEHIND THE SCENES, SIMPLICITY UP FRONT



THINGS, NOT PAGES
PEOPLE DON'T CARE ABOUT THE DOCUMENTS



IT'S THE LINKS THAT MATTER

"EVERYTHING IS DEEPLY INTERTWINGLED" - TED NELSON



AN EXAMPLE - THE FOOTBALL DOMAIN



COMPETITION



GROUP



STADIUM



MATCH



TEAM



PLAYER

AN EXAMPLE - THE FOOTBALL DOMAIN

COMPETITION

STADIUM

GROUP

MATCH

TEAM

PLAYER

THE THINGS
THE DOMAIN OBJECTS



END OF THE LINES
SOMETHING, NOTHING, OR LOTS OF THINGS



One and only One



Zero or One

END OF THE LINES

SOMETHING, NOTHING, OR LOTS OF THINGS



One or Many



Zero or Many

END OF THE LINES

SOMETHING, NOTHING, OR LOTS OF THINGS



One to One

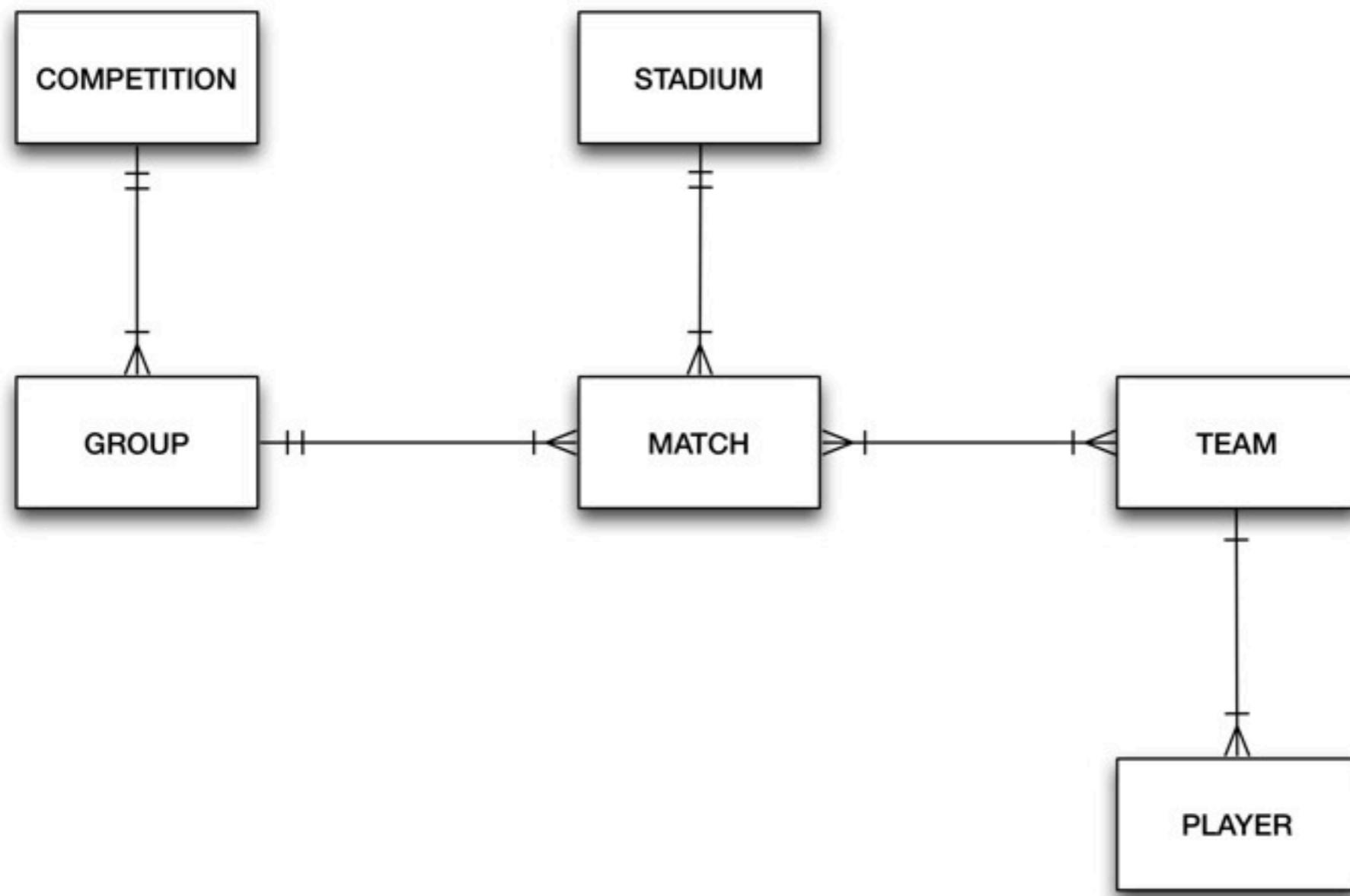


One to Many

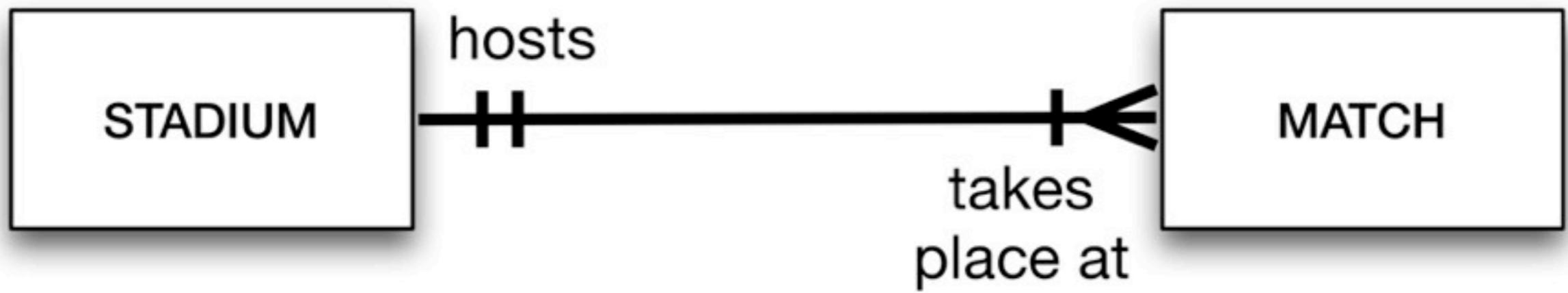


Many to Many

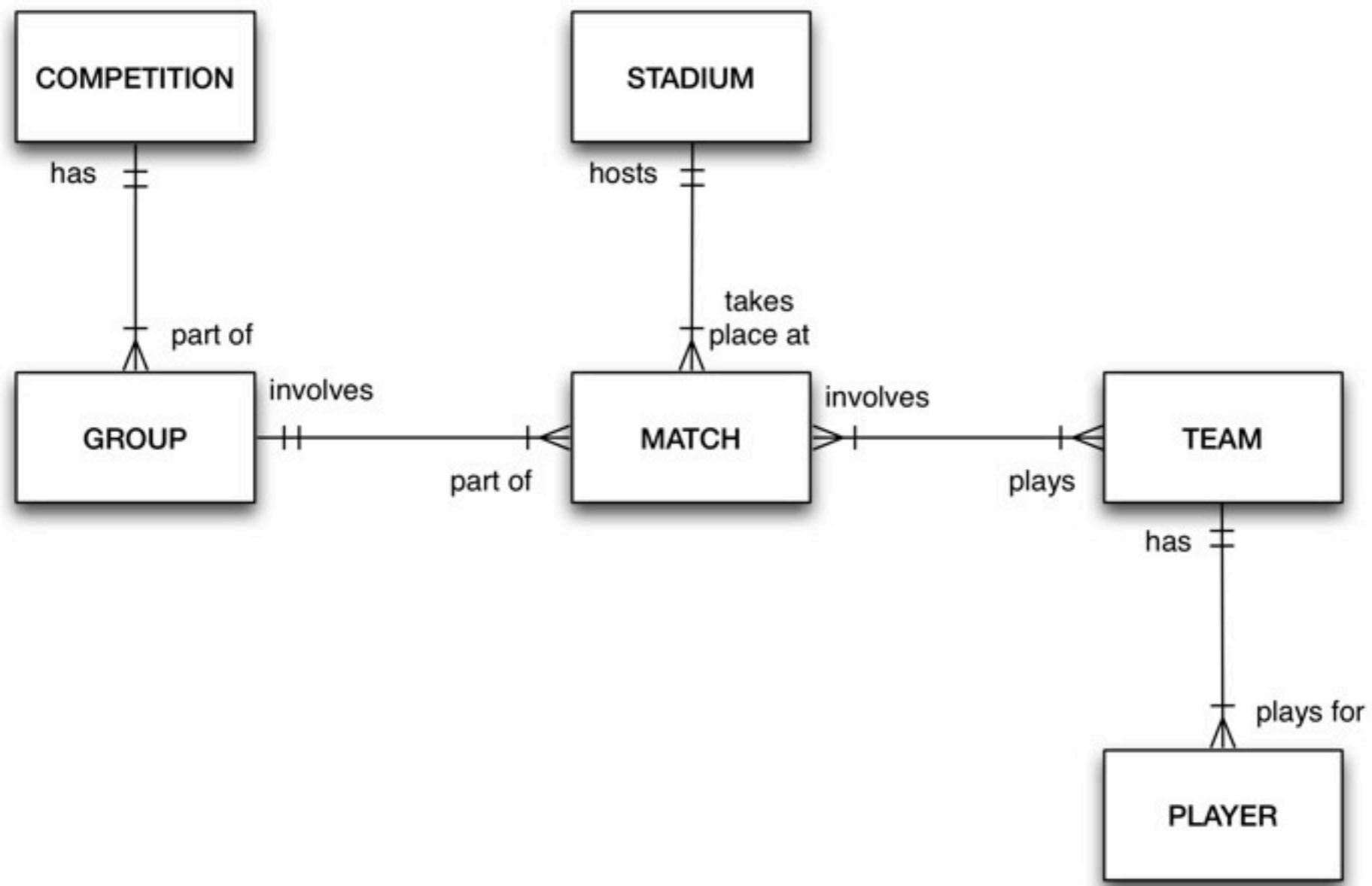
CONNECTING COMBINATIONS
THE MOST COMMON ONES



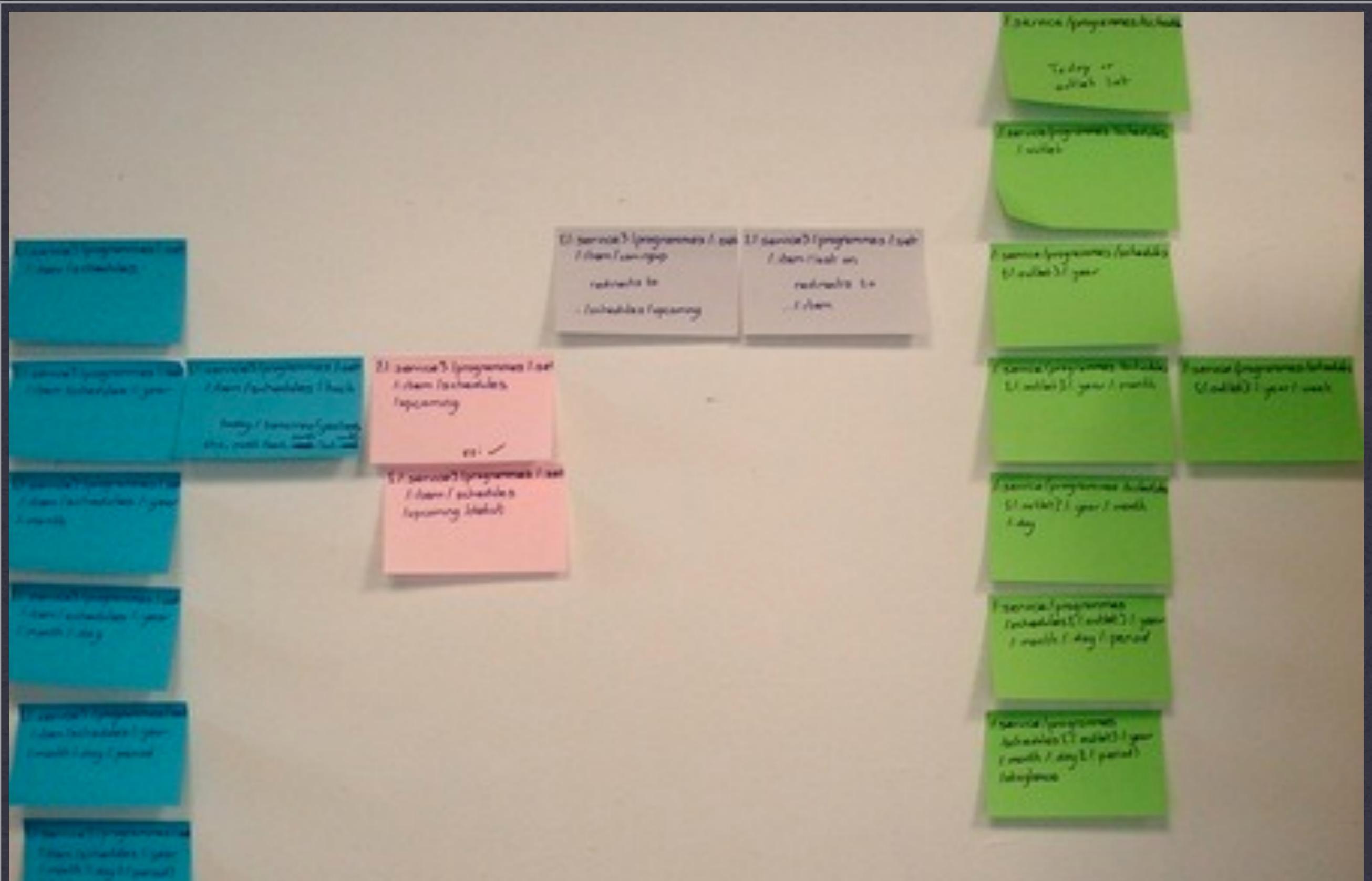
THE CONNECTIONS
...BUT HOW ARE THEY CONNECTED?



READING THE RUNES
SUBJECT, PREDICATE, OBJECT

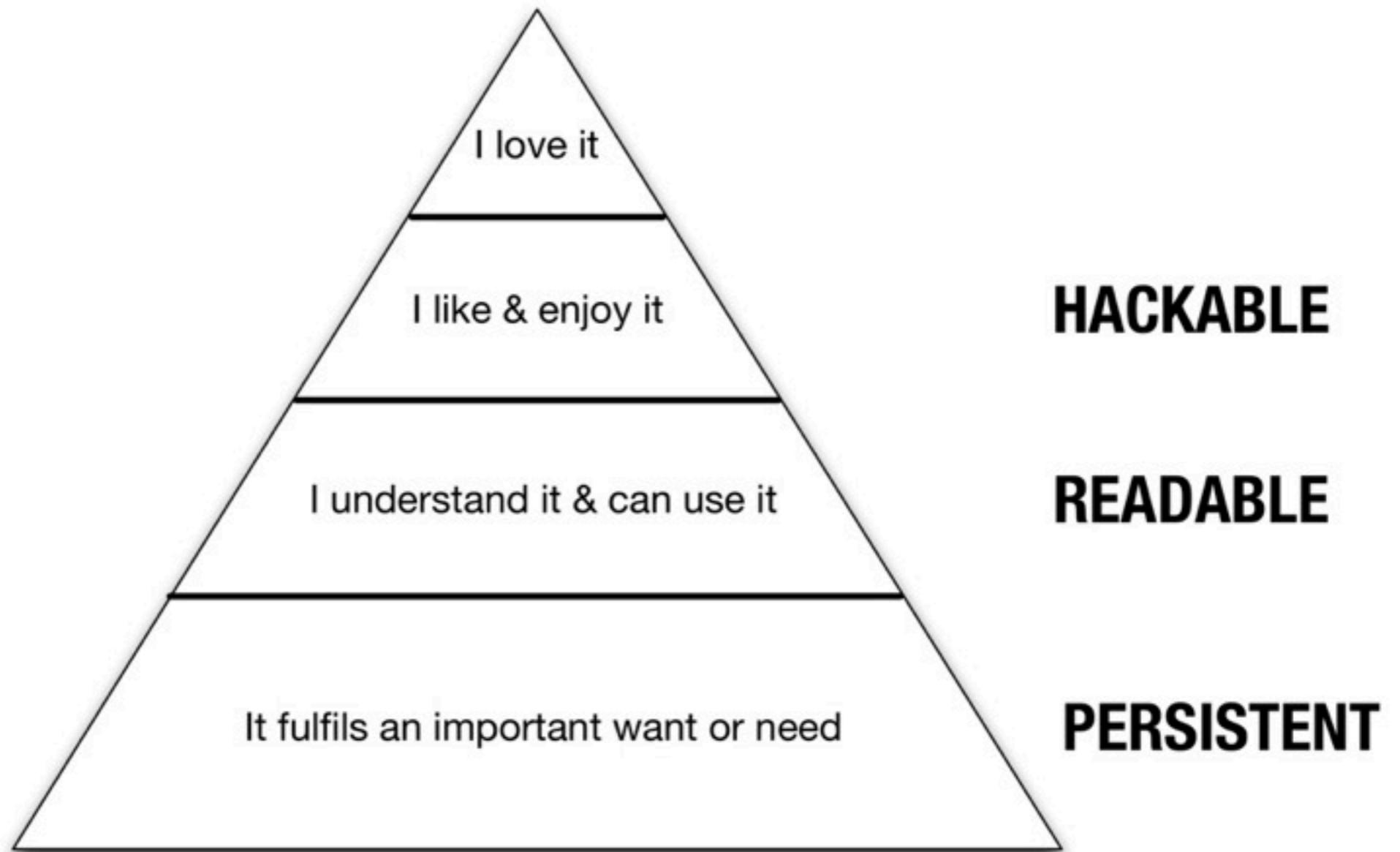


THE FIRST MODEL
COMMUNICATION IS THE KEY



URL DESIGN

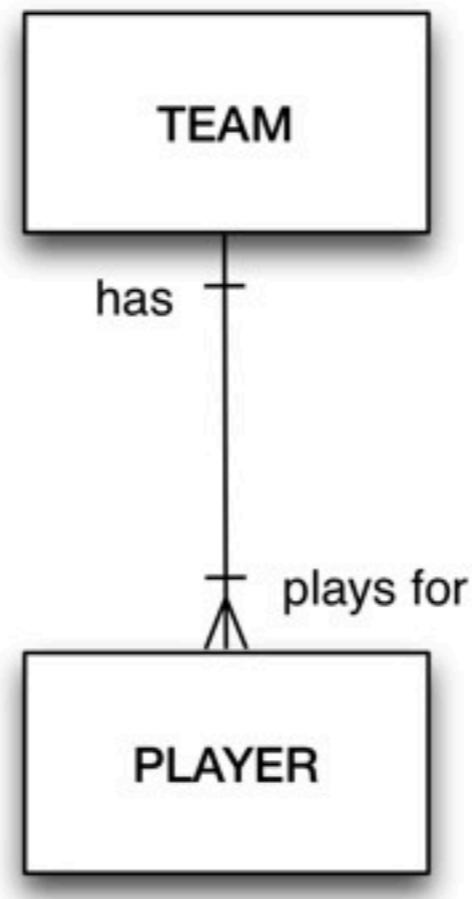
WHY YOU SHOULD CARE ABOUT URLs



URL DESIGN
IT'S WHAT THE WEB WAS MADE FOR

<http://www.bbc.co.uk/sport/football/teams>

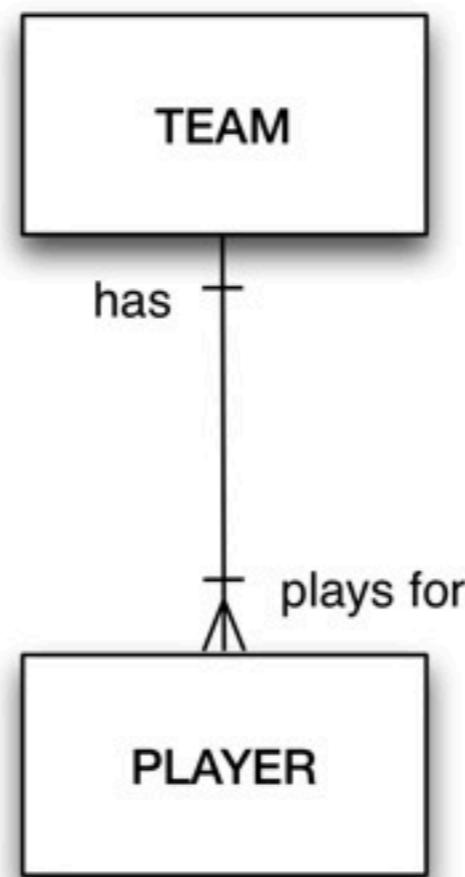
<http://www.bbc.co.uk/sport/football/teams/:id>



**A PAGE FOR EVERY TEAM
...AND A PAGE AGGREGATING ALL TEAMS**

<http://www.bbc.co.uk/sport/football/teams>

<http://www.bbc.co.uk/sport/football/teams/:id>



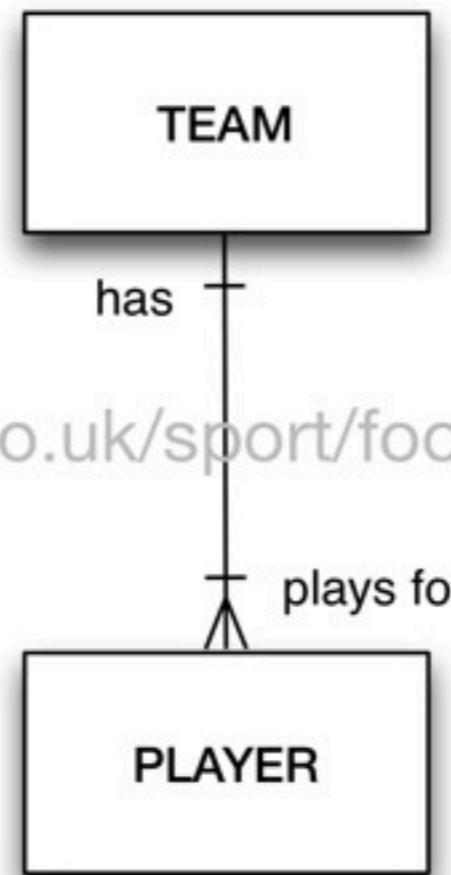
<http://www.bbc.co.uk/sport/football/players>

<http://www.bbc.co.uk/sport/football/players/:id>

A PAGE FOR EVERY PLAYER

<http://www.bbc.co.uk/sport/football/teams>

<http://www.bbc.co.uk/sport/football/teams/:id>



<http://www.bbc.co.uk/sport/football/teams/:id/players>

<http://www.bbc.co.uk/sport/football/players>

<http://www.bbc.co.uk/sport/football/players/:id>

A LIST OF PLAYERS FOR A TEAM

`http://www.bbc.co.uk/sport/football/teams`

`http://www.bbc.co.uk/sport/football/teams/:id`

`http://www.bbc.co.uk/sport/football/teams/:id/players`

`http://www.bbc.co.uk/sport/football/players`

`http://www.bbc.co.uk/sport/football/players/:id`

A PAGE PER THING
...AND AGGREGATIONS, TOO



Programmes

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The wire

Show: All | [Current](#) | Available on BBC iPlayer

(5 programmes in total)

A to Z of programmes

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WHICH WIRE SHOULD YOU CUT?
COOL URIS DON'T CHANGE - DESIGNING FOR THE LONG TERM

RADIO

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ON AIR

COMING UP

Listen

12:00 - 13:00 **Composer of the Week**

Donald Macleod focuses on the period following the death of Szymanowski's father in 1904.

Listen In HD

The Wire



Showcase for works that push the boundaries of drama and narrative.

PROGRAMMES: [on BBC iPlayer \(1\)](#) | [coming up \(1\)](#)

PREVIOUS PROGRAMMES: [by year \(47\)](#)

Available now on BBC iPlayer



Seven Scenes

MORE: [programme information](#)

Listen now

(50 minutes)

Available since Saturday with 4 days left.

Monologue-based drama by Nicola Baldwin set over seven years after a girl goes missing.

Coming up

SATURDAY, 21:20 on BBC Radio 3

The Last Executioner

A play imagining applicants to be the executioner of a triple murderer in Switzerland.

Links

- [Episode details - archive](#)
- [Episode details - recent](#)

More from BBC Radio 3

- [Drama](#)

THIS ONE?

<HTTP://WWW.BBC.CO.UK/PROGRAMMES/B006TS0G>



ON RADIO 4 NOW | You and Yours

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The Wire



Availability:

Sorry, this programme is not available to listen again. ([why?](#))

Last broadcast on Sun, 2 Jan 2011, 13:30 on BBC Radio 4.

The Music of the Wires:
wildlife sound recordist Chris
Watson is captivated by the
extraordinary sounds of the
wind and the weather as they
play on vast lengths of
fencing wire stretched across
the Australian landscape.

Alan Lamb is an artist,
biomedical research scientist and composer who has long been
fascinated by the vibrating qualities of telegraph wires. As a young boy he



MORE DETAILS

Duration

30 minutes

MORE FROM BBC RADIO 4

- Factual [Science & Nature](#)
[Nature & Environment](#)

THIS ONE?

<HTTP://WWW.BBC.CO.UK/PROGRAMMES/BOOK338L>



The Wire



Critically acclaimed American crime drama series set in Baltimore, telling the story of inner-city drug culture as seen through the eyes of drug dealers and law enforcement. Created by David Simon

PREVIOUS PROGRAMMES: [by series](#) (5) | [by year](#) (60)

Last on

Series 5

-30-

MORE: [programme information](#)

Broadcast **Sat, 12 Sep 2009, 02:50** on BBC Two (except Northern Ireland (Analogue), Wales (Analogue)) but **not available** on BBC iPlayer.

10/10. As a wake for a departed officer is held, the seeds of the future are sown in Baltimore.

THIS ONE!

[HTTP://WWW.BBC.CO.UK/PROGRAMMES/B00JNWL](http://www.bbc.co.uk/programmes/b00jnwlc)

Coming up

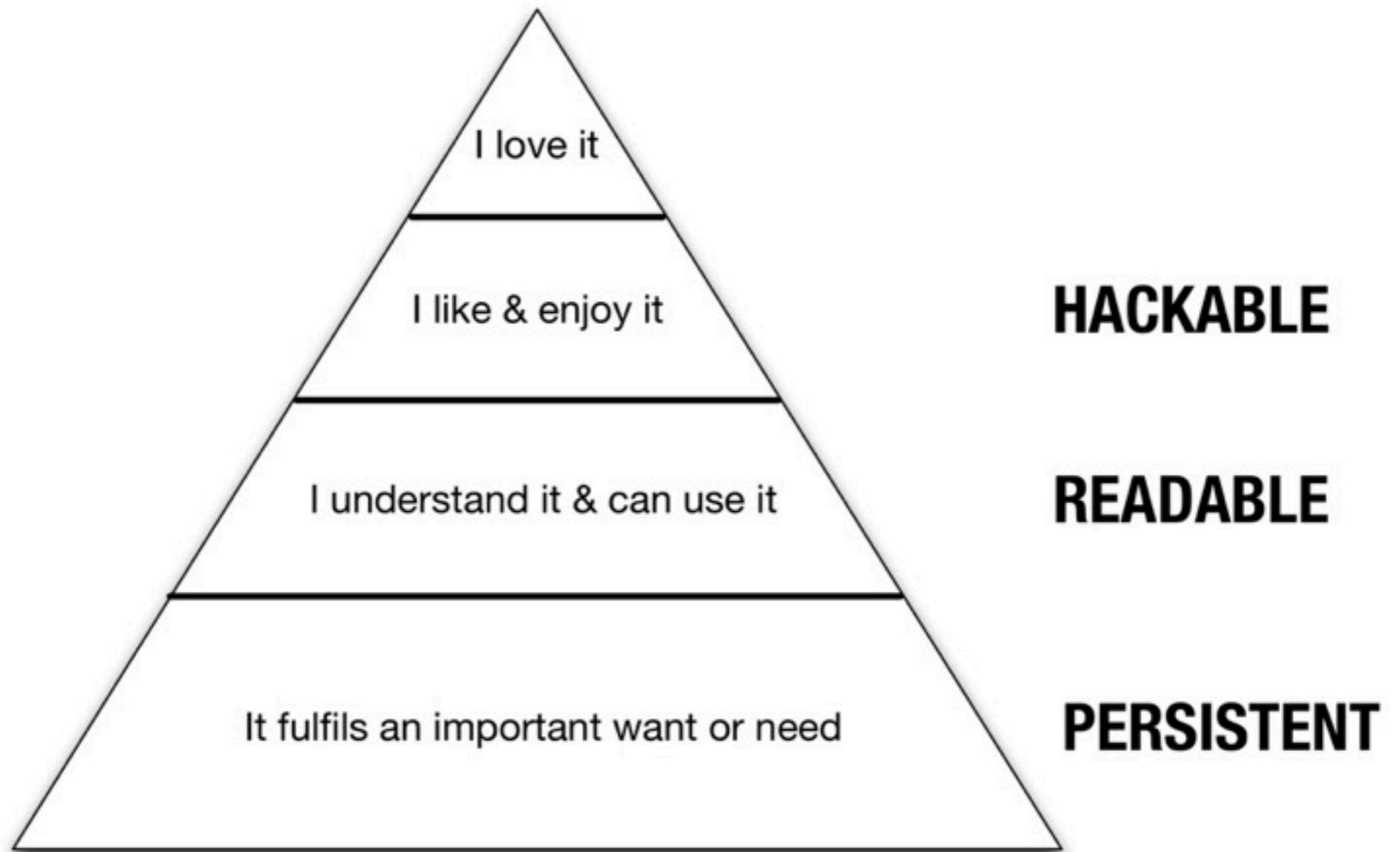
Sorry, no programmes coming up.

Links

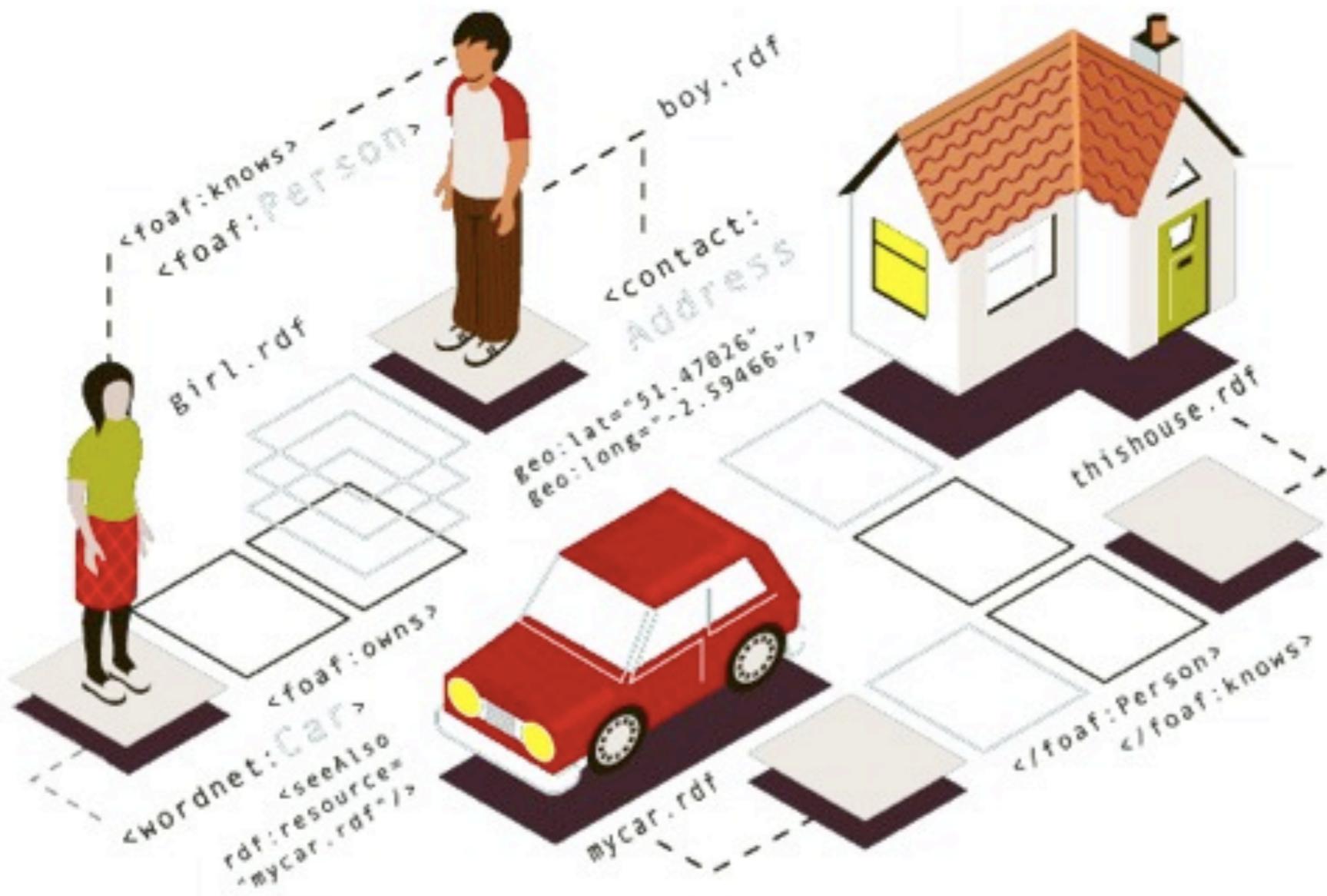
- [Newsnight Review: How good is The Wire? The panellists debate with John Wilson \(BBC News\)](#)
- [Newsnight: The Wire - best thing on TV? Marina Hyde explains why she thinks it is \(BBC News\)](#)
- [Radio 4 - Today: Dominic West and Andrew Billen discuss the success of the show](#)

More from BBC Two

- [Drama > Crime](#)

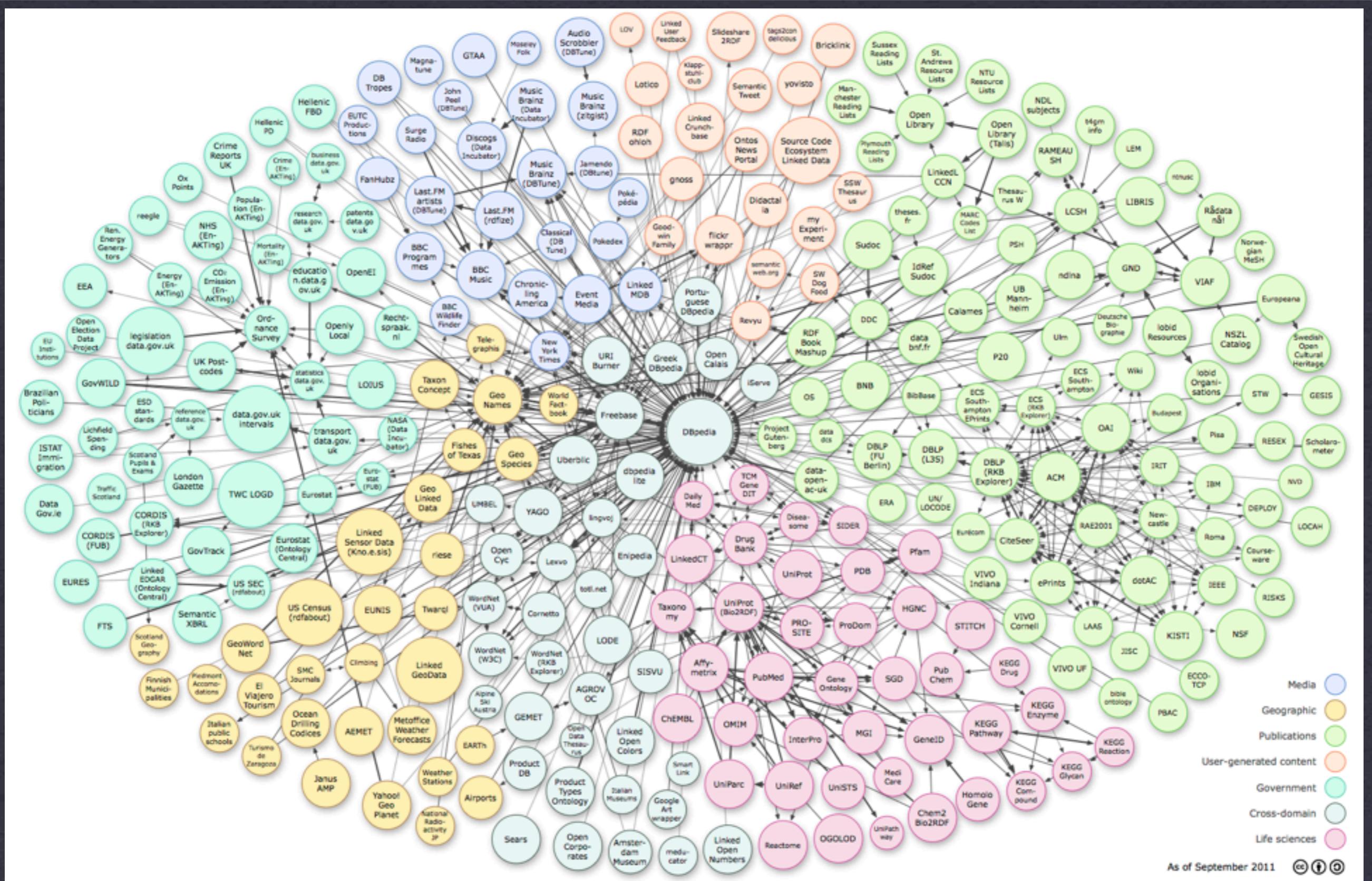


URL DESIGN
IT'S WHAT THE WEB WAS MADE FOR



THE SEMANTIC WEB

IT'S NOT THE DOCUMENTS THAT MATTER, IT'S THE THINGS THEY ARE ABOUT



THE SEMANTIC WEB

STITCHING INTO THE FABRIC OF THE WEB

- INVESTIGATE AND UNDERSTAND THE DOMAIN OF YOUR PRODUCT
- A COMMON LANGUAGE BETWEEN USERS, DEVELOPERS, DESIGNERS, PRODUCT MANAGERS
- A DOMAIN MODEL SHOWS YOU THE MOST IMPORTANT THINGS, AND HOW THEY'RE CONNECTED
- EVERYTHING SHOULD FLOW FROM THE MODEL - DATASTORE, DESIGNS, URL SCHEMAS
- ONE URL PER THING - MUST BE PERMANENT, NICE IF IT'S READABLE & HACKABLE
- SEARCH ENGINES ARE YOUR LEAST ABLE USER - DESIGN FOR THEM & ACCESSIBILITY WILL RESULT
- DESIGN FOR THE WEB FIRST, THEN MAKE APPROPRIATE REPRESENTATIONS FOR EACH PLATFORM

IN SUMMARY, THEN...

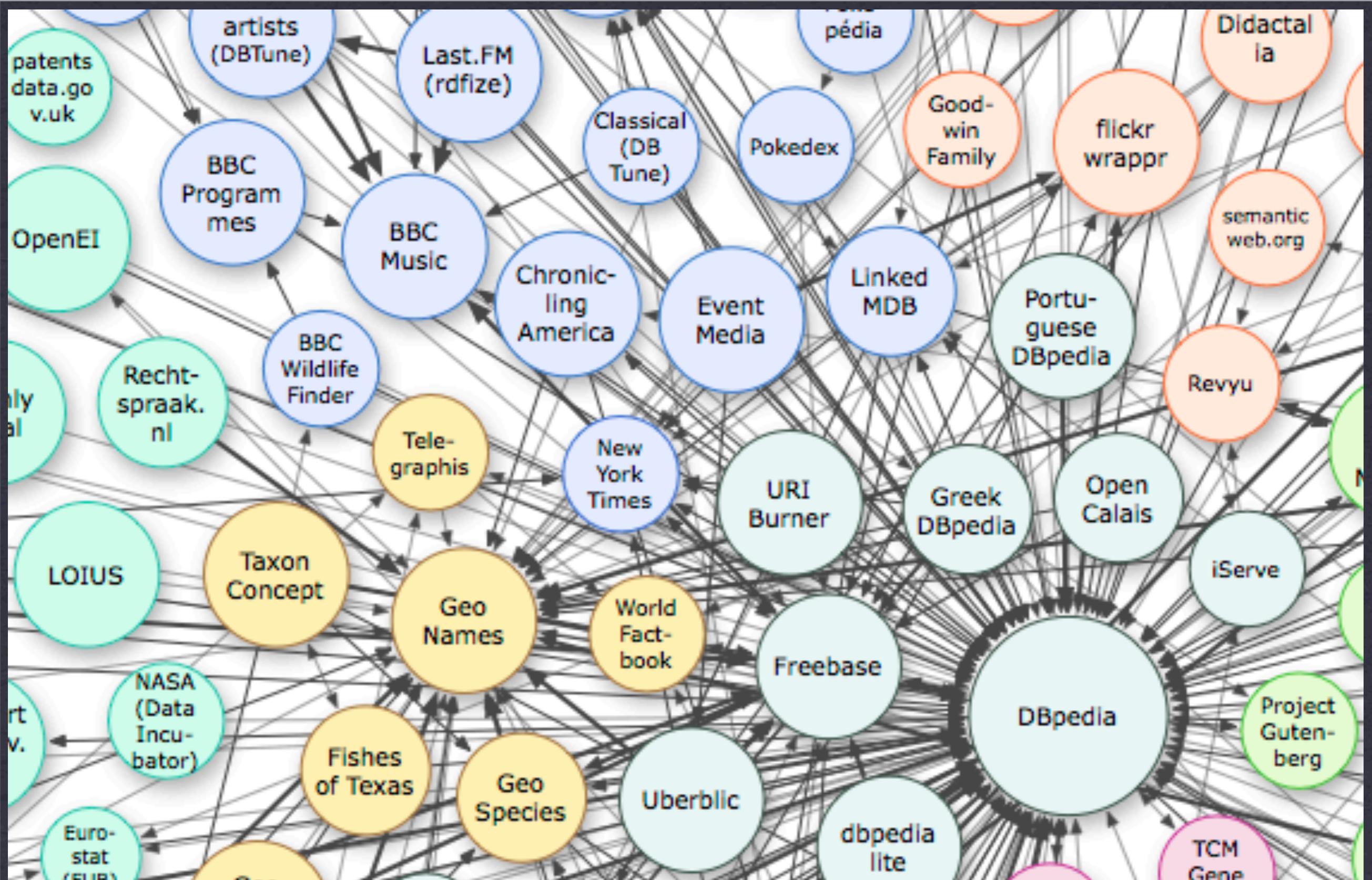
“HOW WE MAKE WEBSITES”

[HTTP://WWW.BBC.CO.UK/BLOGS/RADIOLABS/2009/01/HOW WE MAKE WEBSITES.SHTML](http://www.bbc.co.uk/blogs/radiolabs/2009/01/how_we_make_websites.shtml)

“DESIGNING FOR YOUR LEAST ABLE USER”

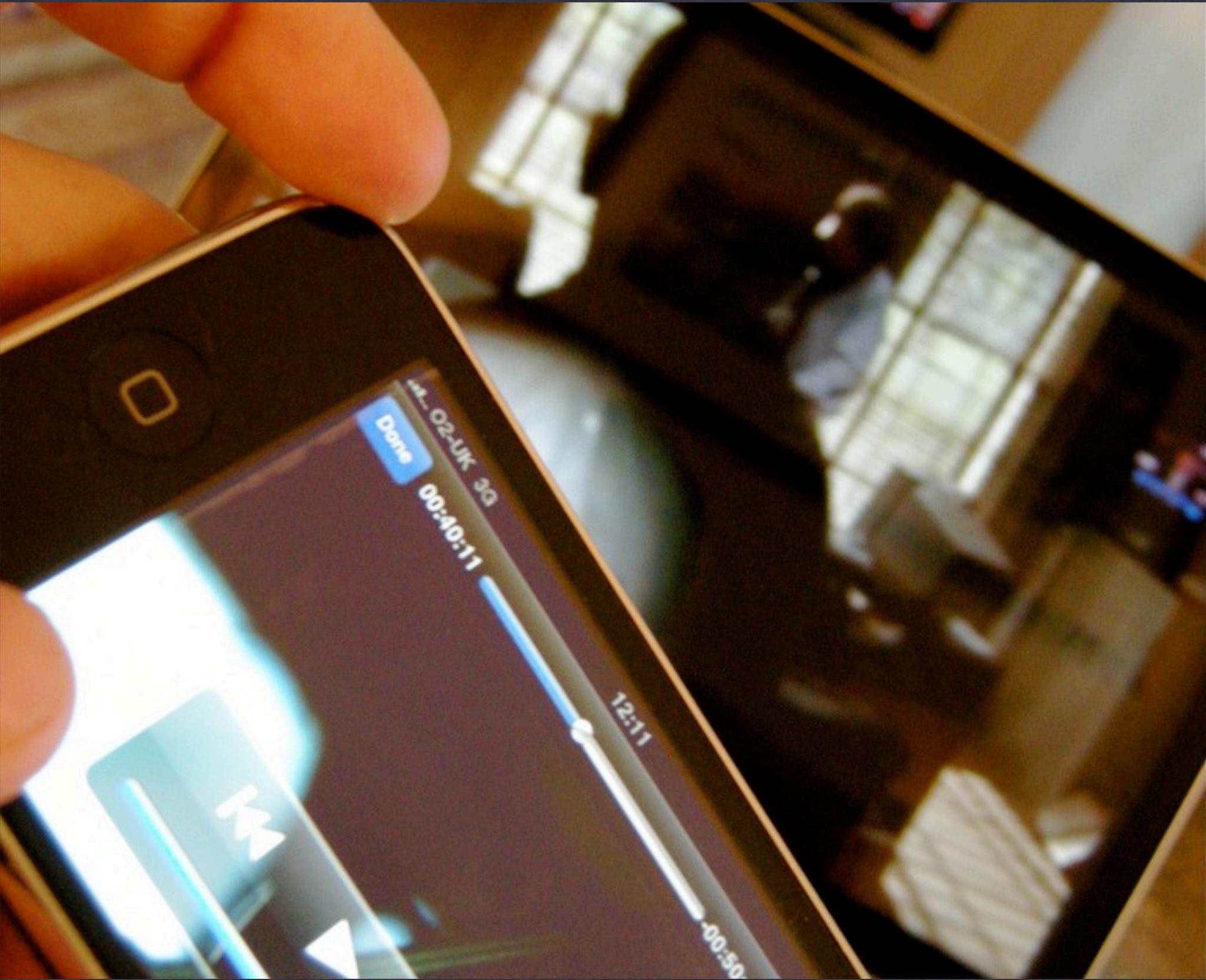
[HTTP://WWW.BBC.CO.UK/BLOGS/RADIOLABS/2009/03/DESIGNING FOR YOUR LEAST ABLE.SHTML](http://www.bbc.co.uk/blogs/radiolabs/2009/03/designing_for_your_least_able.shtml)

IF YOU READ TWO THINGS AFTER THIS PRESENTATION, MAKE IT...



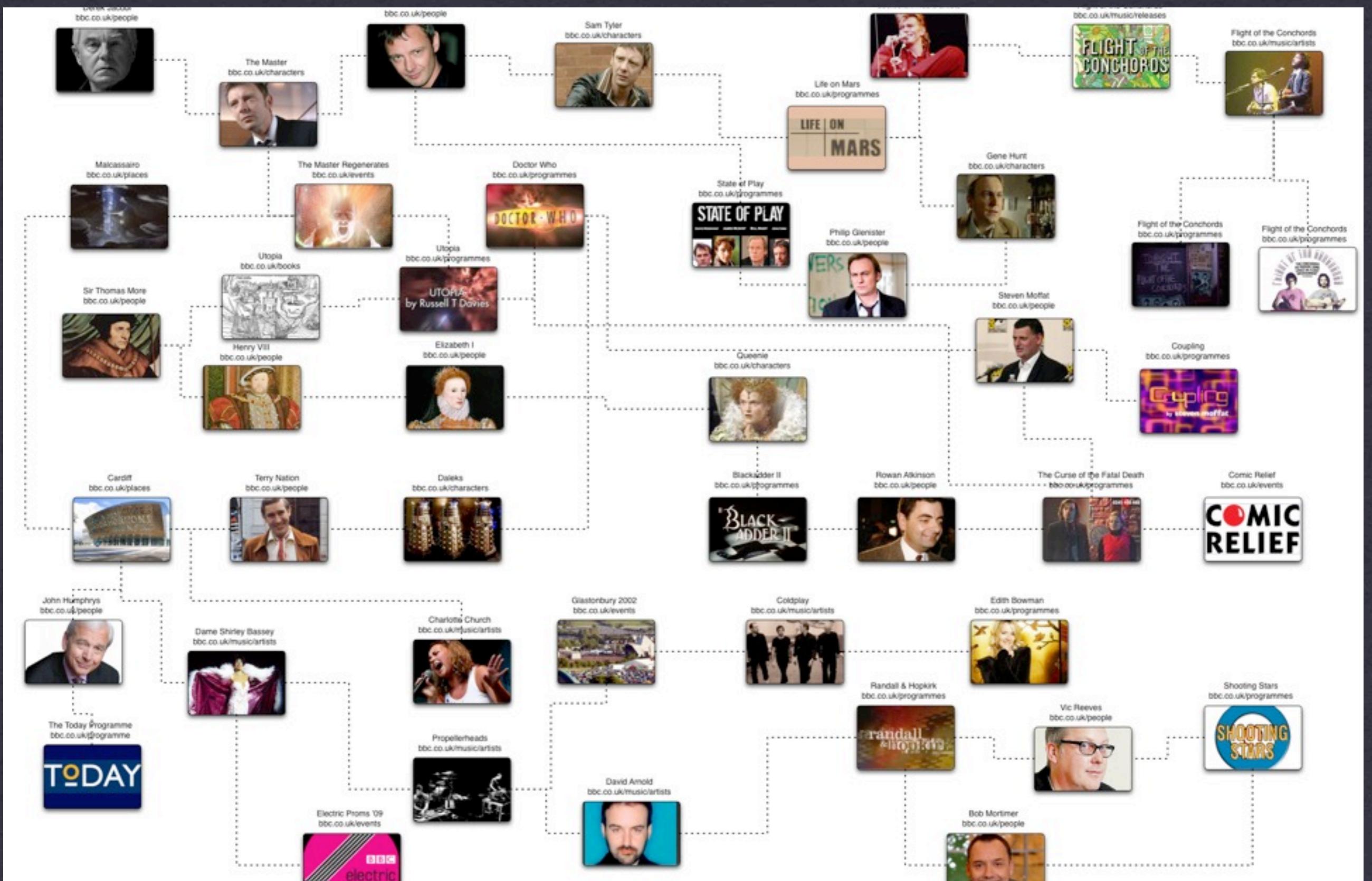
WHY SHOULD WE CARE ABOUT THIS?

WHAT WE'RE DOING NOW...



FOUR SCREENS, TEN PRODUCTS

THE FUTURE OF MULTIPLATFORM



CONTEXTUAL NAVIGATION

NATURAL, RELEVANT WAYS AROUND OUR CONTENT

448

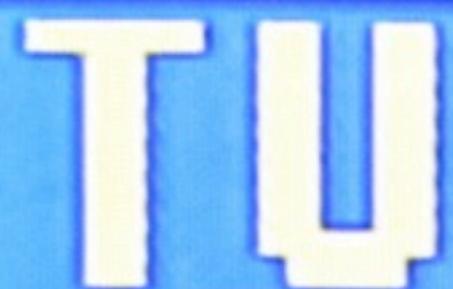
CEEFAX 448

Thu 7 Jan

09:50/45

3/4

TODAY'S



HIGHLIGHTS

BBC1

QED

Magnus Magnusson explains how the BBC found a cure for tuberculosis, how BBC astronauts landed on the moon, and why the BBC is better in bed than you are.

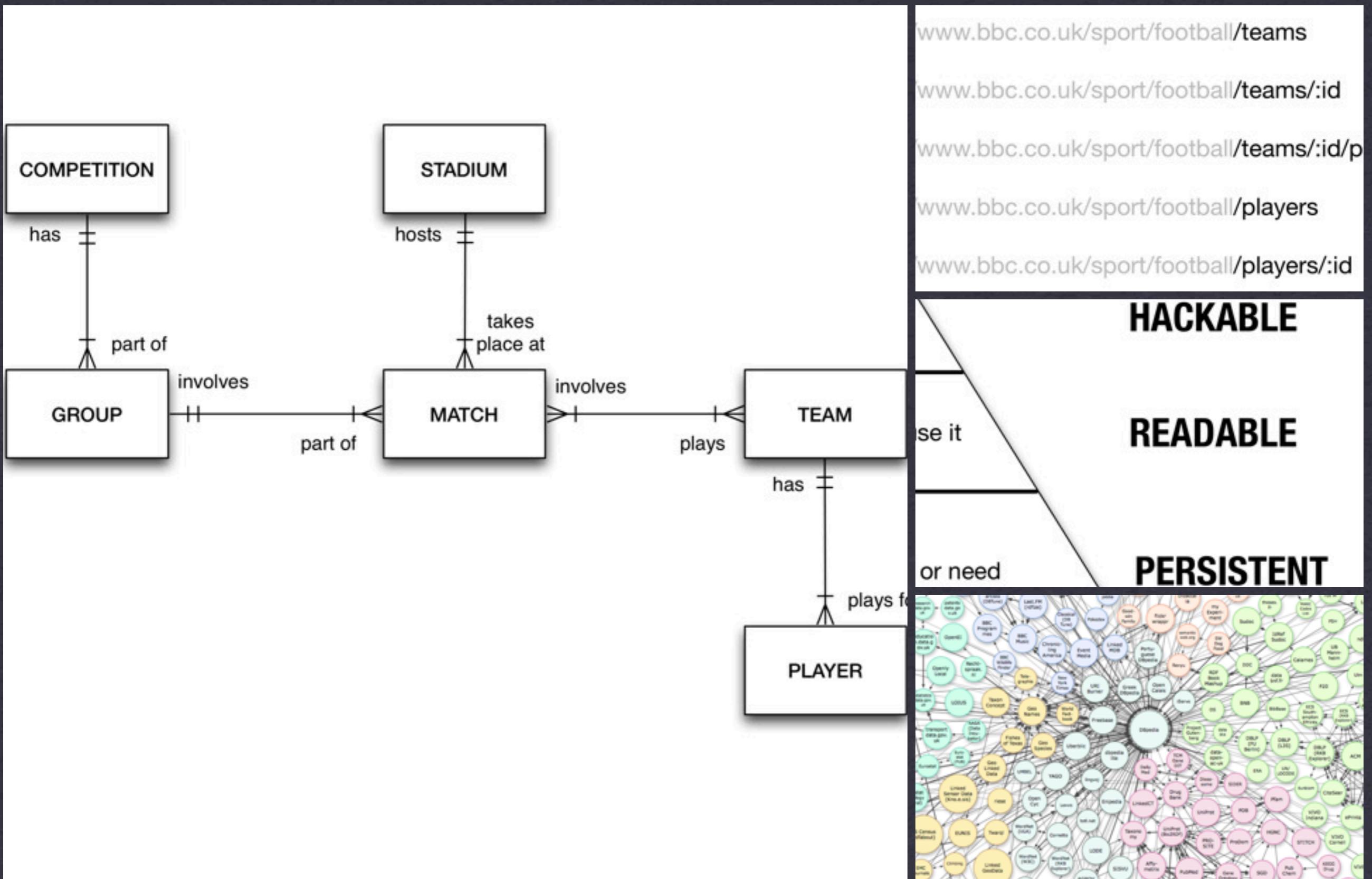
More

BETTER WAYS OF WORKING

WORKING ACROSS TEAMS & PLATFORMS



THE WIDER WEB
PURVEYORS OF FINE INFORMATION



THANK YOU
ANY QUESTIONS?