



WP7c Social TV

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Brickley (VU) and members of WP 7c

Scenarios

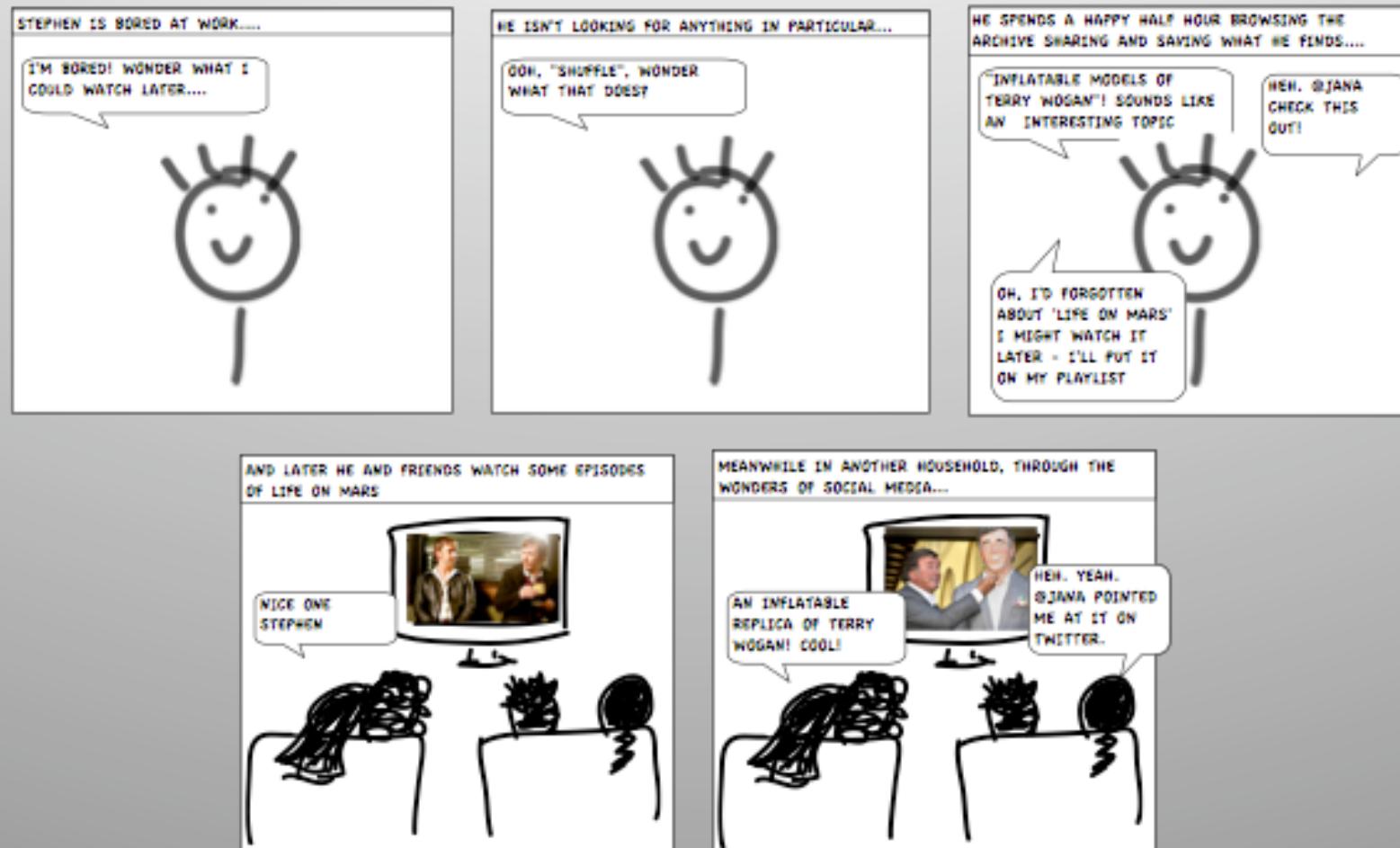


- How can I find something interesting to watch?
- How can I share what I'm watching with others?
- How can I share my emotional reactions to a programme with a wider group?

Something that's *new* and *unusual* – taking the next steps for social TV rather than duplicating existing commercial work

DEMONSTRATIONS

Recommendations Browser



http://labs.notu.be/1/dev_search



[Give me a new random selection](#) [View my playlist](#)

[NoTube Archive Browser](#) [Shuffle!](#) [My Playlist](#) [Questionnaire](#) [About](#) [Help](#) [Report bug](#)

Ou : James May's 20th Century : Blast Off [+]



Looking at the airplane that created the European mini-break and the Ford Cortina. *From Tuesday, 10 July, 2007 at 19:07PM, BBC Two*

[View video](#) [Play video](#) [more information](#) [More from this series](#)

Related Programmes

[Ou : James May's 20th Century : Blast Off \[+\]](#)
Tuesday, 18 September, 2007 at 02:00AM



James May investigates what the Space Race did for all of us.
Related by: moon (astronomy), applied sciences, satellite dishes, lunar transport vehicles, landings (space vehicles) (vehicular motion), moon landings, historical presentation, history (recent period) (1500 to 1913ad)

[Nasa : Triumph And Tragedy : One Small Step \[+\]](#)
Wednesday, 24 June, 2009 at 20:06PM



The story of Neil Armstrong and Buzz Aldrin's trip to the moon.
Related by: moon (astronomy), landings (space vehicles) (vehicular motion), moon landings, historical presentation

Add to playlist

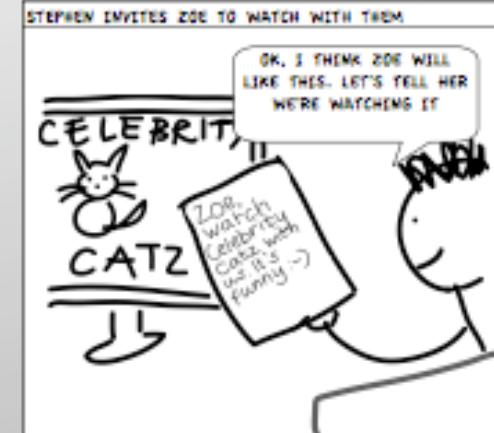
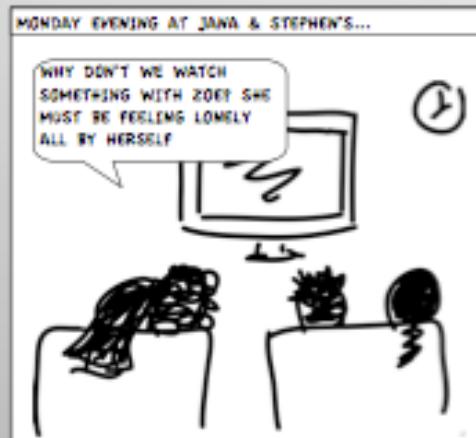
Related categories

[Secondary Schools : History : 20th Century World \[+\]](#)
Tuesday, 15 April, 2008 at 03:04AM



Did the World Wars change Britain? Has the nature of poverty changed?
Related by: history (recent period) (1500 to 1913ad)

'N-screen'



<http://jabber.notu.be/dd/>



Hello Player 2!

Drag and drop to play

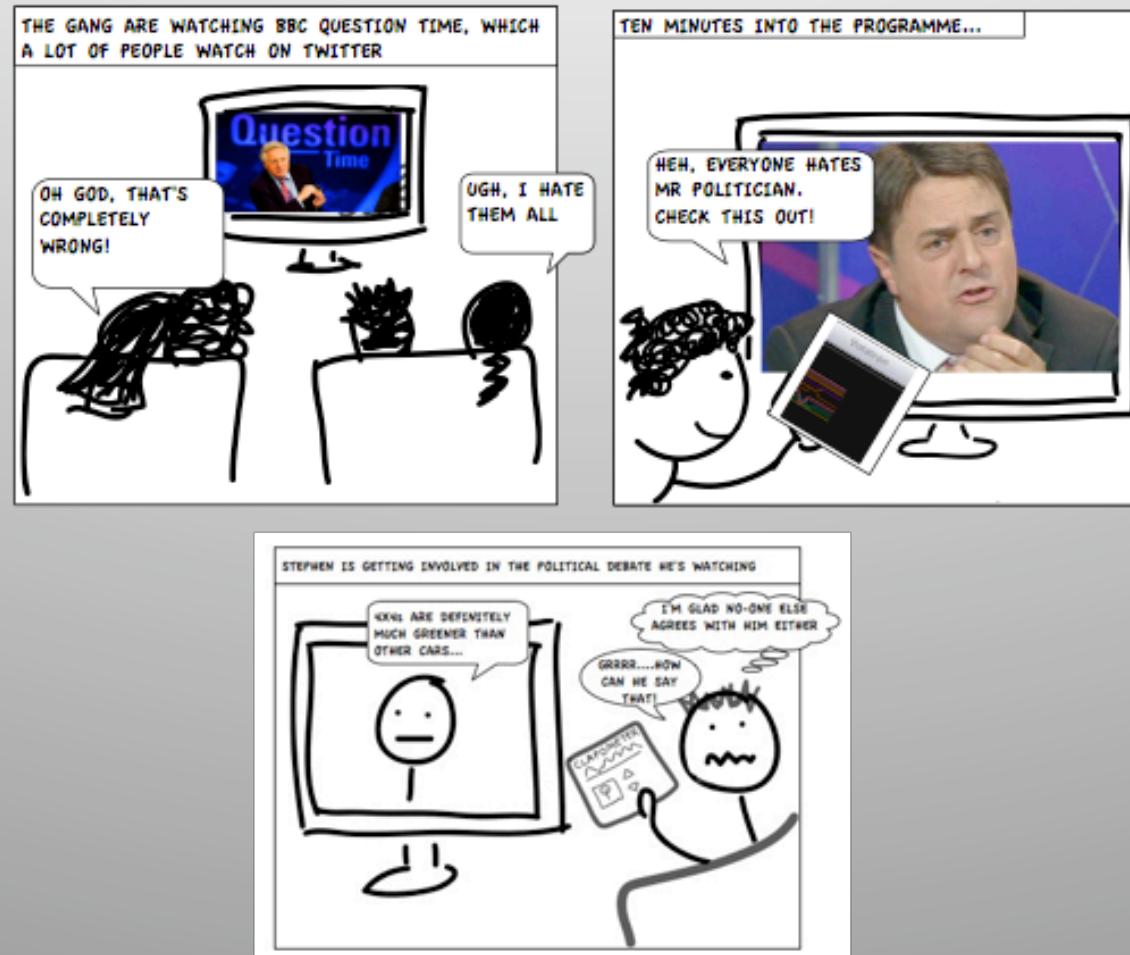
Sounds Of The Sixties : 1 : The First Steps

Player 3 - available

Drag and drop to share

Player 1	Player 2	Player 3
Sounds Of The Sixties : 1 : The First Steps		

Twitter-integrated Voting Application



[http://jabber.notu.be/ the_killing](http://jabber.notu.be/the_killing)



Votatron

real-time graph

friends tweets tagged with appropriate tag

Your vote counts!

vote for options

Vote for David Dimbleby

Vote up

Vote down

What's happening?

notube Sign out of twitter

googlenews Toads detect radiation above limits for infants in Tokyo water - CNN International <http://bit.ly/f5T66V> 49 minutes

johanoomen wow - New York City Judge Rejects Google Books Deal <http://nyti.ms/dOf42E> #googlebooks #opencontentalliance #europeana 1 hours

googlenews Diplomas, and an Uncertain Future, for Japanese Pupils - New York Times <http://bit.ly/fifju01> 5 hours

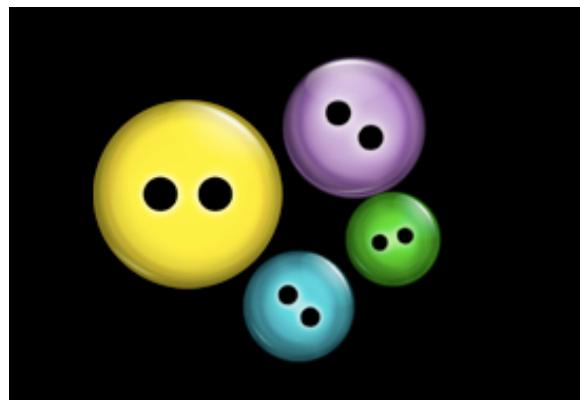
jahendler Sigh - Lufthansa has a great lounge, but horrid seats on plane - gonna be a long flight to Munich (on way to Genoa) 9 hours

HOW WE GOT HERE

Last Year



Buttons API for broadcast



Second screen – finding related / interesting content

This Year



- Buttons API for on-demand content
 - Standards collaboration
- Many screens, group interaction, watching together
 - Face to face and remote
 - Social TV of the future
- Serendipitous content discovery
 - Applicable in many areas – e.g. archives, on-demand, EPG

Connecting Principles



- Rethink the role of metadata
 - It's a shareable advert for content
- Use URLs for content
 - To help people share using social media
- Use open APIs for TV control and communication
 - For device independence and better UI

Architectural Considerations



- Make it easy to replace components
- Use well-understood formats and separate the APIs from the UI

COLLABORATIONS

WP1 / KT Collaboration



Torchwood: Countryside

Search



The team investigate some gruesome deaths in the Brecon Beacons.

[BBC website](#)

Categories: 납치 (abduction) 식인 (cannibalism) 죽음 (death) 두려움 (fear) 총격 (firing (gunnery)) 모살 (murder)

Korean Wordnet mapped to BBC classifications using English wordnet

Blue Peter



In Alaska Helen helps make a totem pole for the Blue Peter garden. From Thursday, 30 October, 2008 at 11:10AM
[BBC Website](#)

Linked by [두려움 \(fear\)](#)

M.I High: Operation Flopsy



Linked by [납치 \(abduction\)](#)

The Sarah Jane Adventures: Enemy Of The Bane: 2



Luke is kidnapped by Mrs Wormwood. Sarah Jane prepares for a showdown at a stone circle. From Friday, 03 April, 2009 at 07:04AM
[BBC Website](#)

Linked by [납치 \(abduction\)](#)

WP3 Integration

NoTube Archive Browser

Shuffle! My Playlist Questionnaire About Help Report bug

Put Your Money Where Your Mouth Is : Series 3 Eric Knowles V Charlie Ross : Foreign Market [+]



Is Paris ready for a whirlwind of antique buying with Eric Knowles and Charlie Ross?

Related Programmes

[Put Your Money Where Your Mouth Is : Series 3 Eric Knowles V Charlie Ross : Foreign Market \[+\]](#)



Is Paris ready for a whirlwind of antique buying with Eric Knowles and Charlie Ross?

[Put Your Money Where Your Mouth Is : Series 3 Eric Knowles V Charlie Ross : Showdown \[+\]](#)



In the final challenge, Eric Knowles and Charlie Ross compete at a charity showdown.

[Best Of Homes Under The Hammer : Episode 14 \[+\]](#)



Martin Roberts and Lucy Alexander visit an old Mini Mart in Derby and a house in Kent.

[Hospital Heroes : Series 2 Episode 13 \[+\]](#)



The air ambulance races in a teenage girl thrown from a horse.

[Put Your Money Where Your Mouth Is : Series 3 Curtis Dowling V James Lewis : Antiques Market \[+\]](#)



James Lewis takes on Curtis Dowling at Swinderby Antiques Fair.

[Put Your Money Where Your Mouth Is : Series 3 Katherine Higgins V John Cameron : Auction \[+\]](#)



Katherine Higgins and John Cameron find out who bags the best lots at an antiques auction.

Various recommendations strategies showing in the browse interface



WP3, 7a Integration



Showing recommendations from various sources in the N-screen interface

Hello libby!

<p>History</p>  <p>Little Britain Emily and Florence go on a stag night and the Prime Minister's moustache tickles Sebastian. This item features 'David Walliams', who's influenced by 'Monty Python' and in turn influenced by 'Spike Milligan' (who is in your user profile).</p>	<p>Your Recommendations</p>   <p>Little Britain</p>	<p>Related / Shuffle Results / Search Results</p>   <p>Little Britain</p>   <p>Gavin And Stacey</p>
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UC and real time data



Hello Player 1!

Shuffle! Search

 The World At One	 BBC ONE	 BBC TWO	 CBBC Channel
 BBC Radio 1	 BBC Radio 2	 BBC Radio 4	
 BBC R5L	 BBC 6 MUSIC	 BBC Asian Net.	
 NoTube 2 nd review			

Uses the Data Warehouse and BBC's 'Universal Remote' version of MythTV



EVALUATION

Three Evaluations Planned



- Playlists length, time spent browsing 
- Second screens
- Comparative recommendations evaluation

Playlist Length



NoTube Archive Browser [Shuffle!](#) [My Playlist](#) (circled in red) [Questionnaire](#) [About](#) [Help](#) [Report bug](#)

Dr Who : School Reunion [+] Do people build longer playlists with random or similar programmes? (circled in red)

 Related Programmes

[Dr Who : Doomsday](#) [+] (circled in red)
Wednesday, 19 August, 2009 at 18:08PM

As the human race is caught in an intergalactic war, the Doctor faces a greater dilemma.
Related by: travel and exploration, time travel (circled in red)

[Play For Today : The Flipside Of Dominick Hide](#) [+] (circled in red)
Saturday, 26 July, 2008 at 18:07PM

A time traveller from 2130, studying London, sets off on a quest of his own.
Related by: travel and exploration, time travel

[Ashes To Ashes](#) [+] (circled in red)
Thursday, 20 March, 2008 at 21:03PM

Can Alex prevent Gene going off the rails just when she needs to stay in control?

The Doctor runs into an old companion in a London school. From Wednesday, 15 August, 2007 at 18:08PM, BBC Three
[Play video](#) [More information](#) [More from this series](#)

More programmes about: [travel and exploration](#) [time travel](#)

Experiment



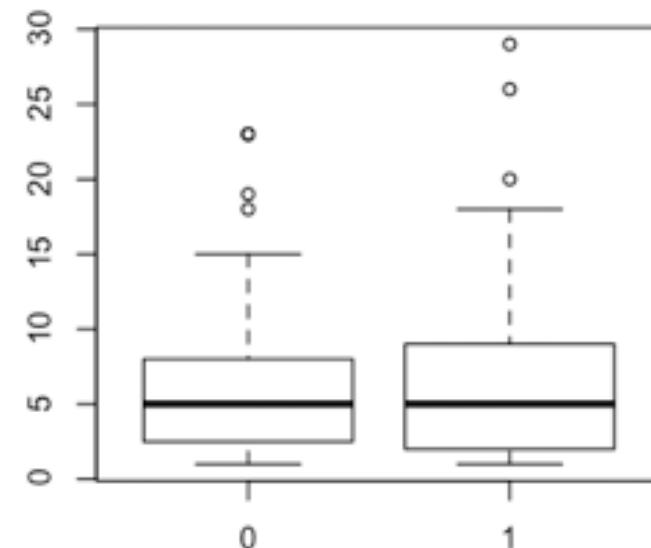
- Four randomised groups, totalling 96 participants
- Measured playlist length and time spent browsing
- Asked them to do a questionnaire

QUANTITATIVE EVALUATION

Result: random vs similar



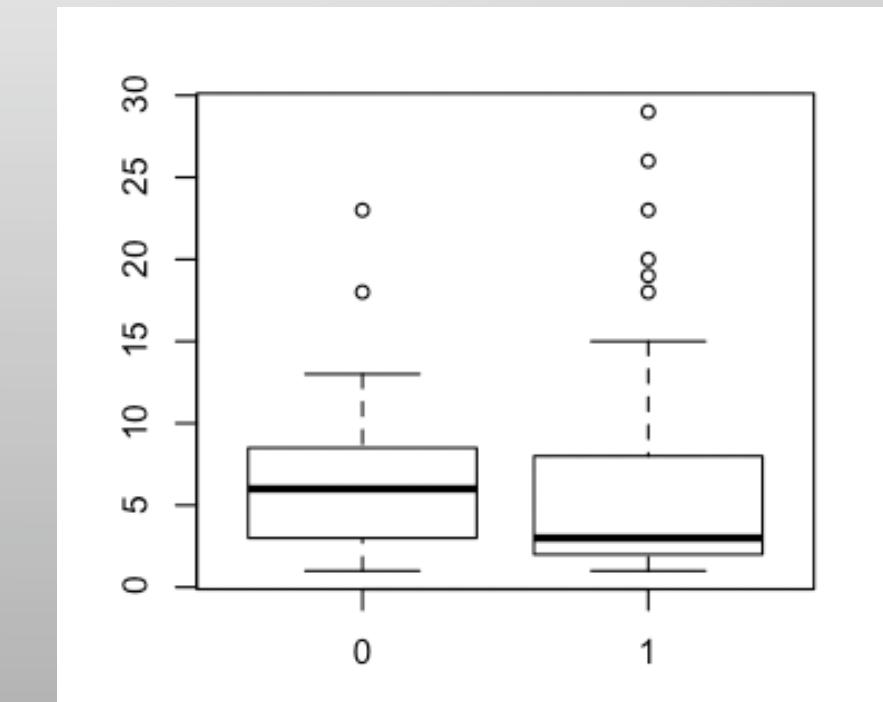
For random vs similar, playlists size has greater standard deviation and more outliers, but identical means – no significance was found



Results: categories vs no categories



For categories vs no categories, playlists size has greater standard deviation and more outliers – but a *lower* mean, and no significance was found



Time spent browsing



- We found the opposite of what we expected – people spent less time browsing when similar content was presented to them and when categories were present.
- Some of this might have had to do with the way random items were generated

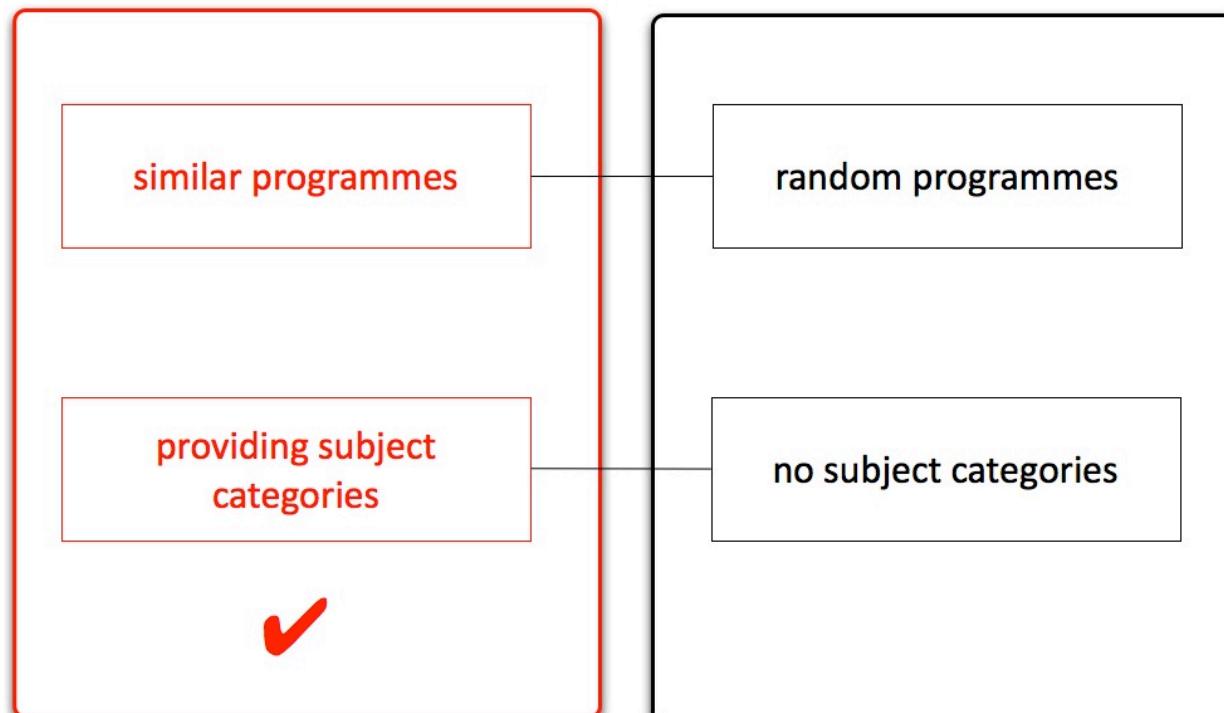
QUALITATIVE EVALUATION

Questionnaire: summary of responses per experimental condition



Condition	Number of responses
0 – Random, no categories (CONTROL)	4
1 – Random, with categories	4
2 – Similar, no categories	8
3 – Similar, with categories (OPTIMAL?)	4
TOTAL	20 (approx 20% of total)

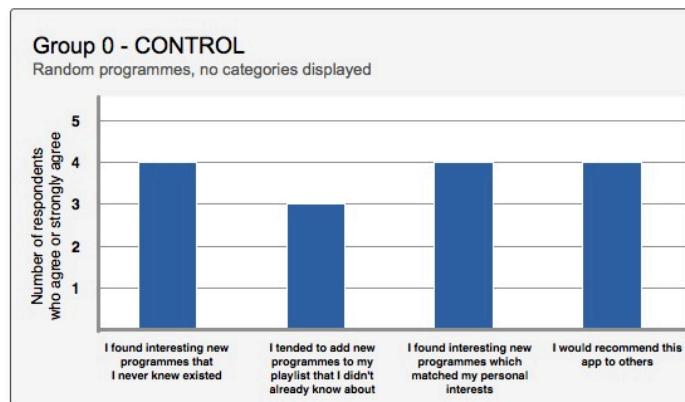
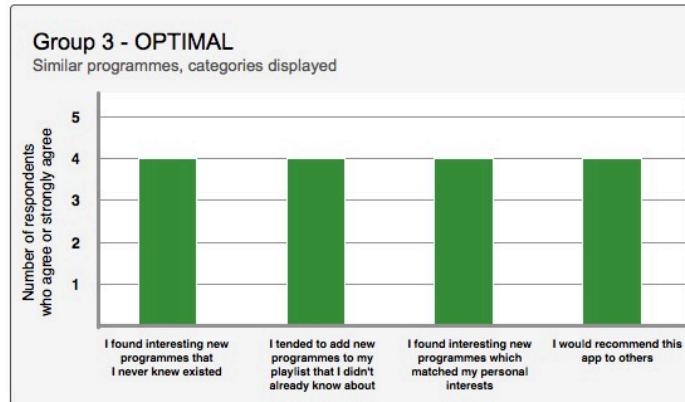
Research questions



Optimal for serendipitous browsing?

Control

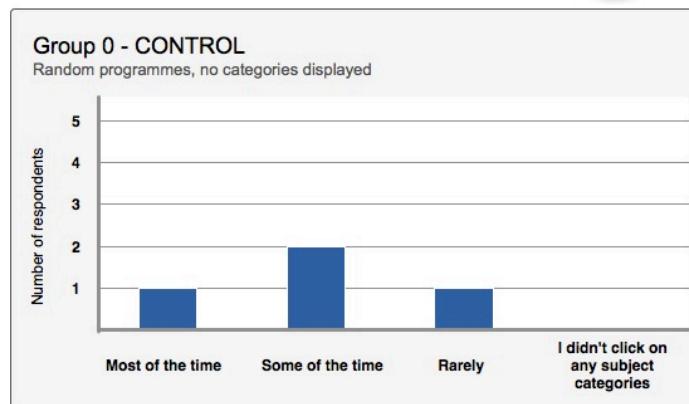
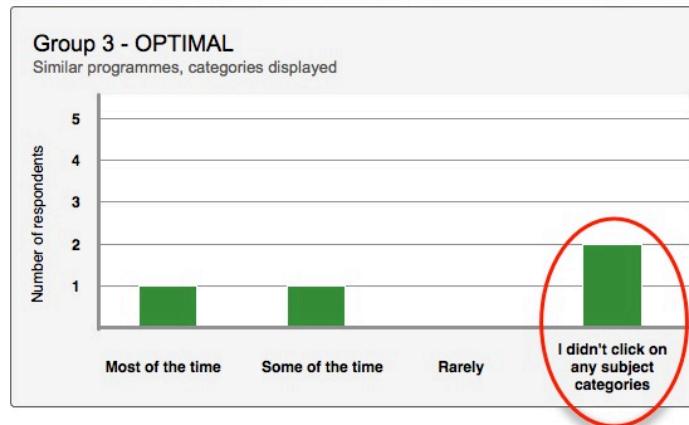
Answer: people found interesting programmes regardless...



Unexpected effects of the subject categories



When I clicked on a subject category of interest
I found programmes I wanted to watch:



[Who Do You Think You Are? : Julia Sawalha \[+\]](#)

Thursday, 31 December, 2009 at 10:12AM



Julia Sawalha begins a quest to find her mother's Huguenot heritage.
More programmes about: [experiments](#), [ancestors](#), [research into ancestors](#), [entertainers](#), [family trees](#), [tracing ones family tree](#)

[Super Vets \[+\]](#)

Monday, 20 August, 2007 at 18:08PM



At London Zoo, Messy the gorilla needs x-rays to investigate a tumour in her chest.
More programmes about: [specialist establishments](#) ([higher education](#)), [hatfield \(hertfordshire\)](#), [veterinary medicine](#), [veterinary surgeons](#)

[The 800 Million Pound Railway Station : The Devil In The Detail](#)

[+]

Tuesday, 18 December, 2007 at 02:12AM



The story of architect Alastair Lansley, whose expensive vision unnerved the engineers.
More programmes about: [implementation](#), [modernisation \(alteration\)](#), [terminals](#), [the chan](#) [pancras \(london\)](#), [construction of tunnels](#) ([underwater](#)), [channel tunnel](#), [railway stations](#), [pancras station \(london\)](#), [railway services](#)

RAILWAY STATIONS

[Great Railway Journeys: Crewe To Crewe \[+\]](#)

Thursday, 02 October, 2008 at 21:10PM bbcfour



Victoria Wood makes a round trip to the north of Britain from Crewe.

[The Culture Show \[+\]](#)

Saturday, 03 November, 2007 at 19:11PM bbctwo



With an interview with Robert Redford and a visit to the refurbished St Pancras station.

[The 800 Million Pound Railway Station: The Devil In The Detail \[+\]](#)

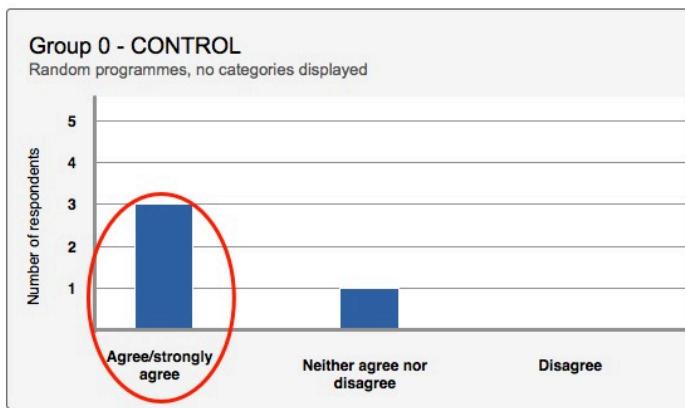
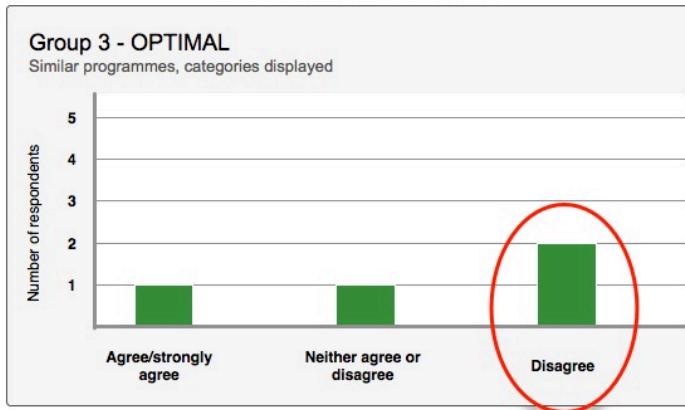
Tuesday, 18 December, 2007 at 02:12AM bbcone



Did the condition affect the time it took to find interesting programmes?



It was **quick** to find programmes
I wanted to watch



General comments



Good, enjoyable app. And frankly, I really liked the random selection and the easy way to shuffle it.

(Condition 0, random, without categories)

It is a good way of discovering interesting content. It is what I would like the iPlayer suggestions to do.

(Condition 1, random, with categories)

I liked the way the app threw up programmes I had forgotten about. I liked the way that on selecting one programme I always found even more interesting programmes on the Related Programmes list.

(Condition 2, similar, without categories)

It is a nice voyage of serendipity

(Condition 2, similar, without categories)

Conclusions



The fact that people enjoyed the application regardless of similar vs random content being presented, and spent less time browsing when related content was presented, suggests that our 'random' selection was actually too good.

NEXT

Next



- Testing
 - Second screen vs on-screen widgets
 - Recommendations comparisons (?)
- Generalisation
 - Graph flattening and similarity metrics
 - Different datasets

Next



- Integration
 - Combining different sources of recommendations with user interfaces
 - Applying recommendations techniques to real time and short-term on-demand TV

Questions?

