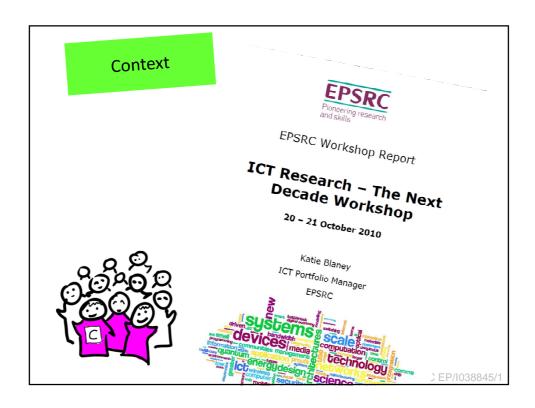
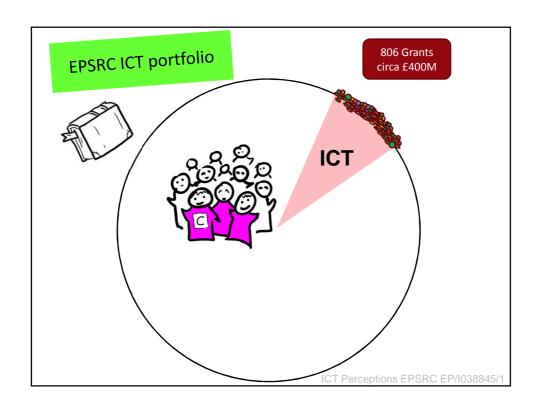
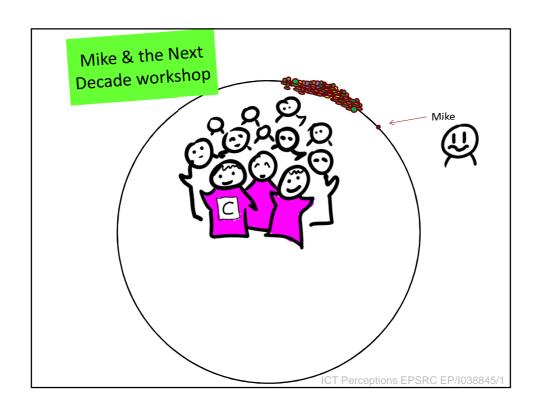
# **ICT Perspectives**

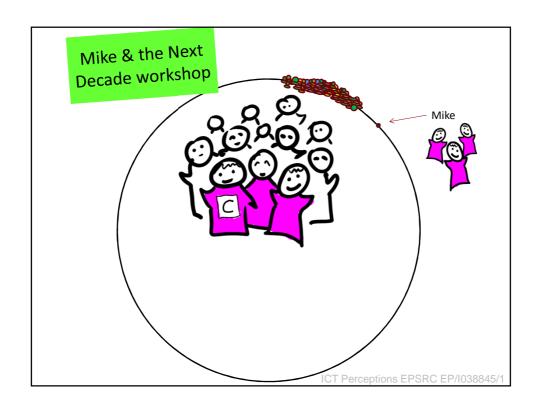
Mike Chantler, David Corne, Fraser Halley

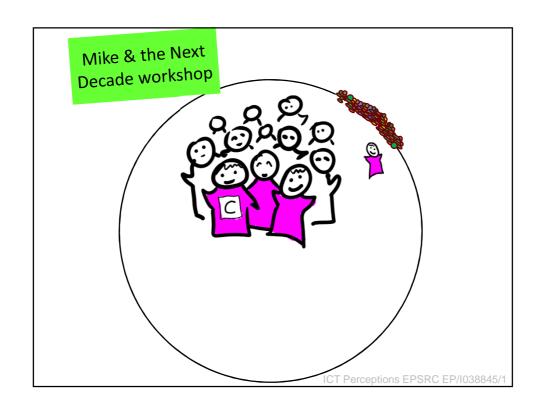
21 March 2012

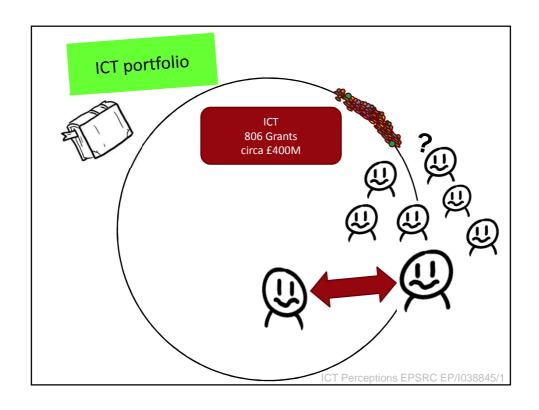


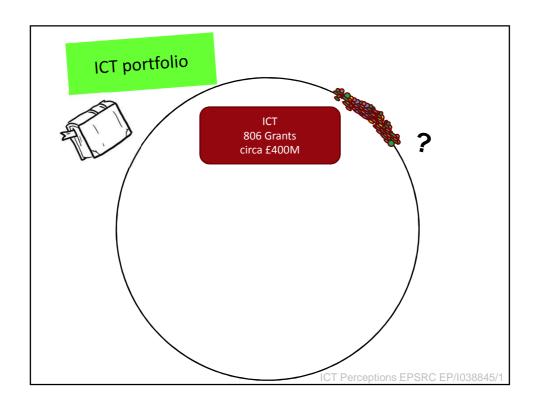


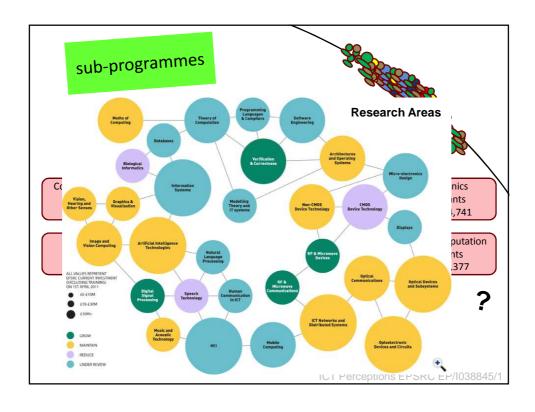


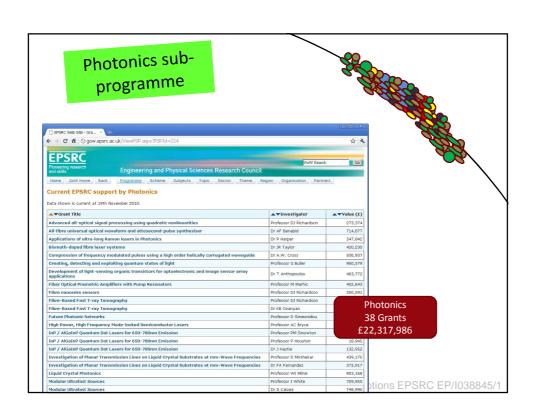


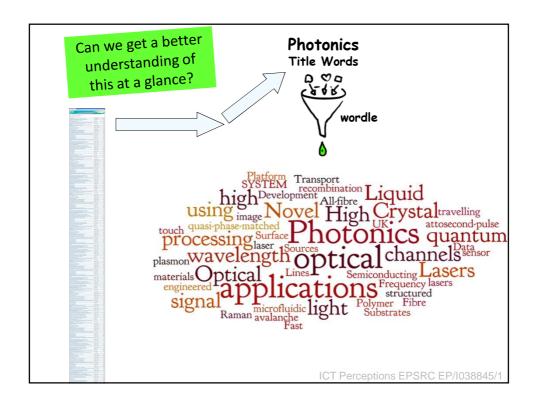


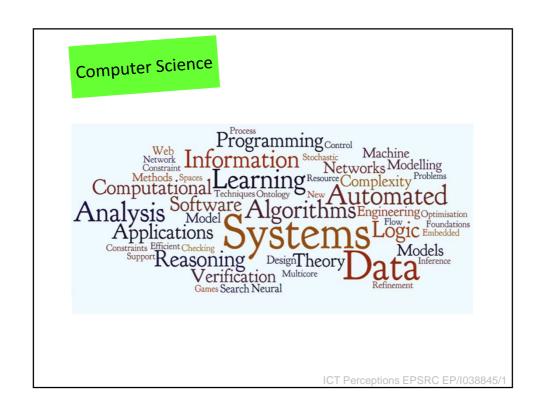




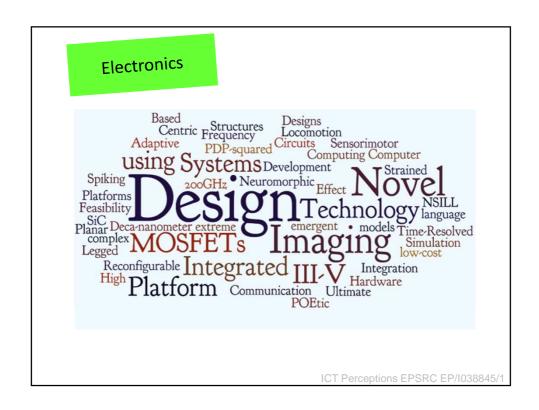


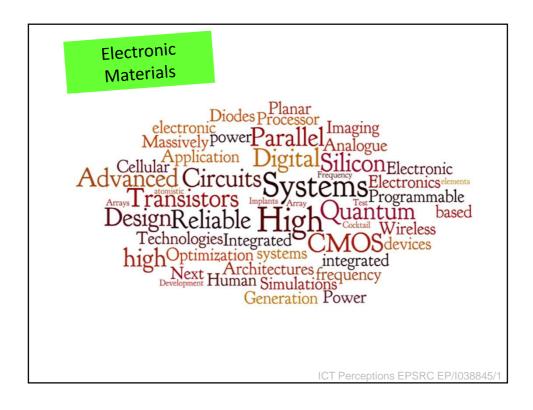




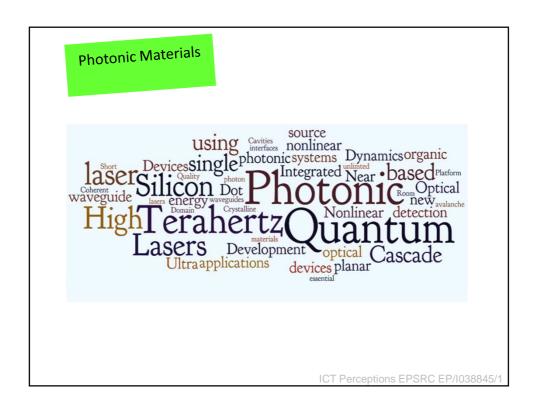


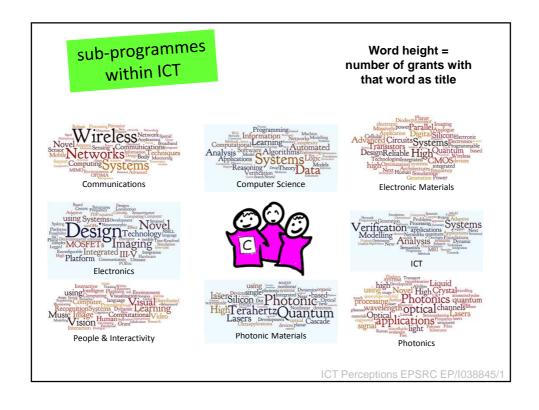




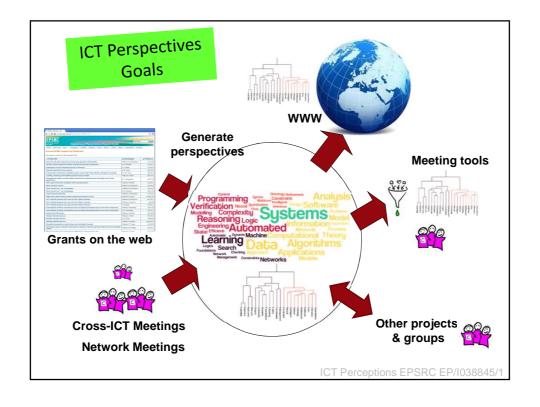






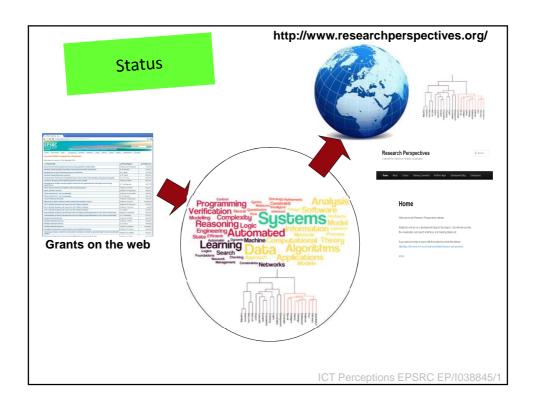


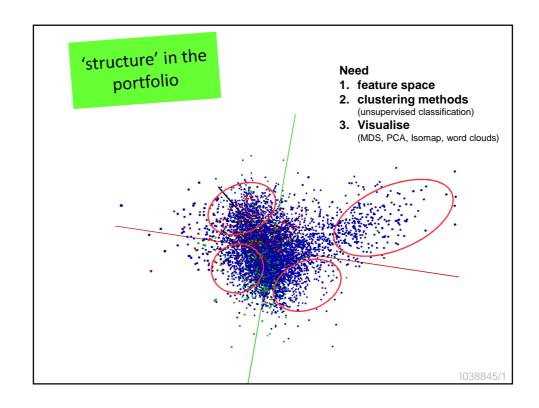
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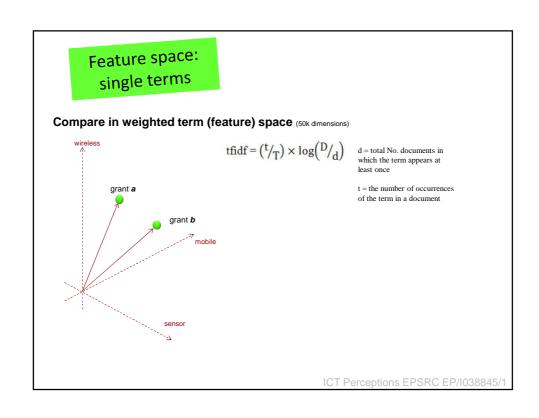


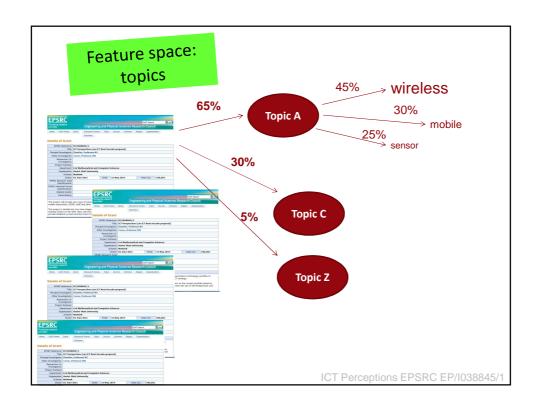
### **Ethos**

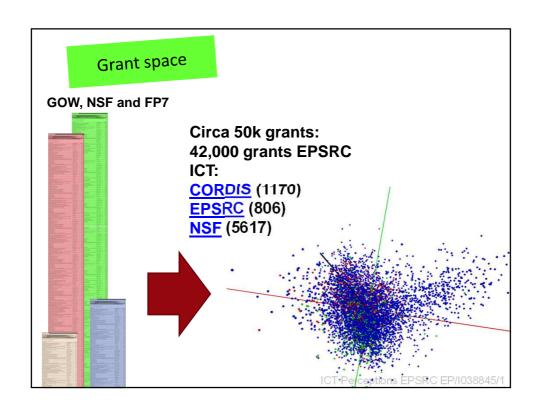
- Transparency/trust
  - use well-known, easily understood approaches & algorithms
  - use public data
  - make all data/analysis/algorithms public
  - make URL available to follow-on project
- Use existing tools where practical
- Recognise that that there are many possible 'perspectives'
- Encourage 3<sup>rd</sup> party 'perspectives'





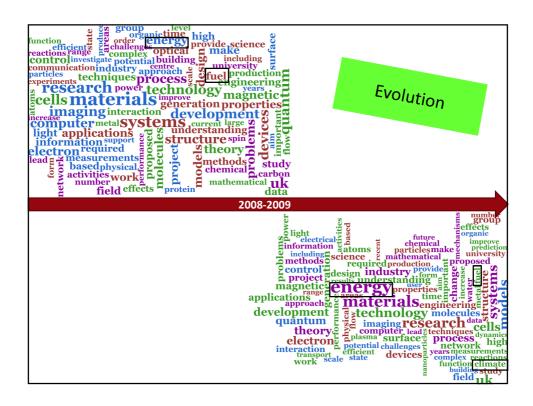


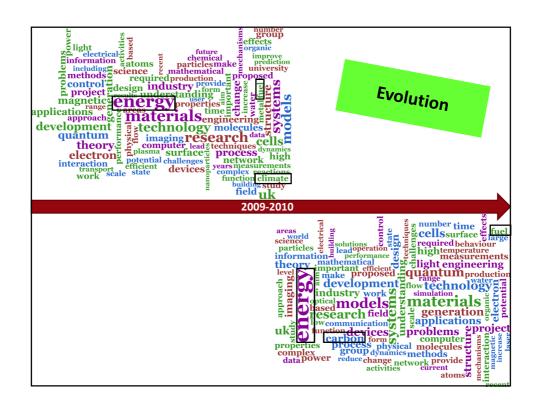


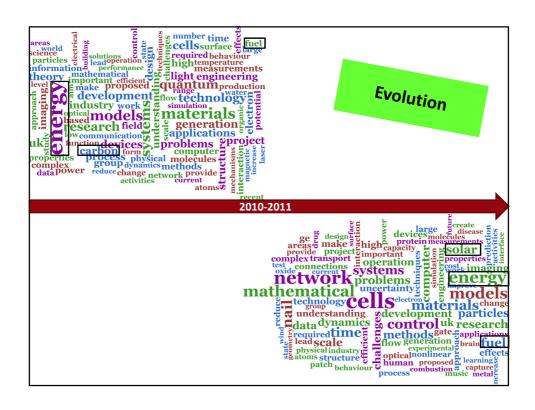


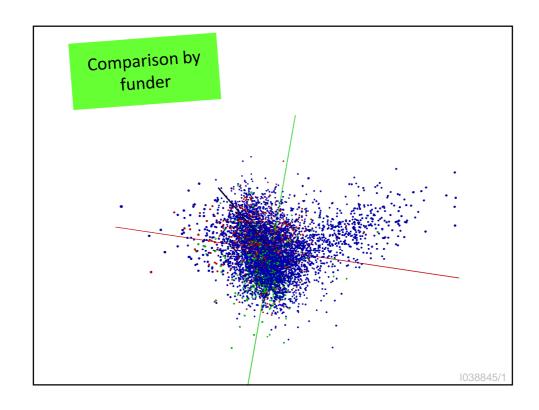
# Visualisation & navigation

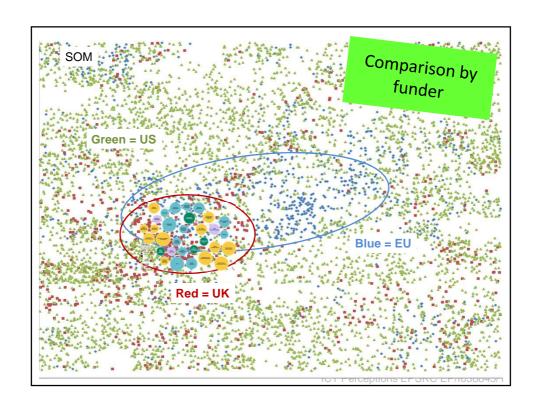
- Global view
  - Evolution over time
  - Comparison of funders (FP7/EPSRC/NSF
  - By sub-programme
  - Cluster visualisation
- Local view
  - Drill down to grants
  - 10 'nearest' grants
  - term search

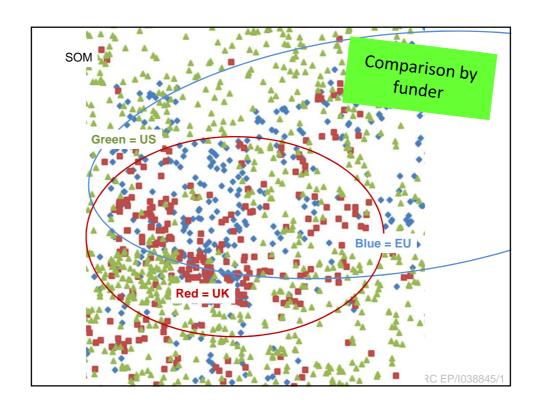


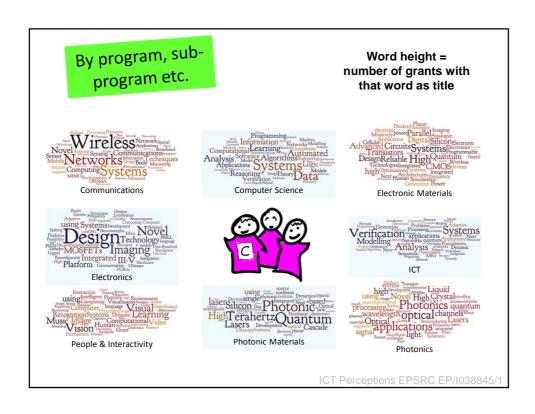


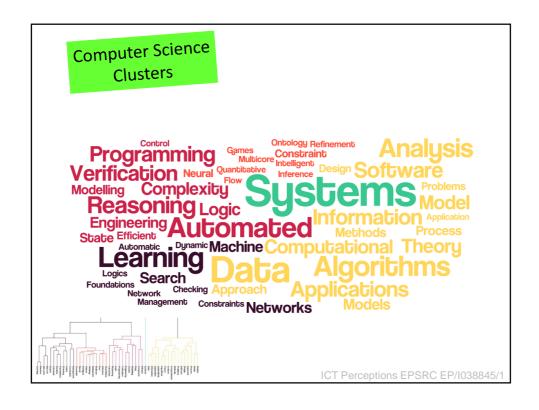


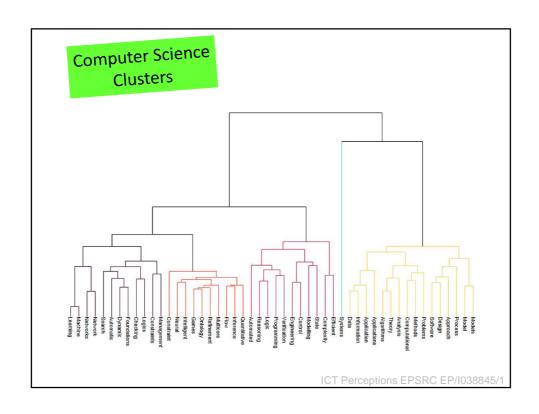


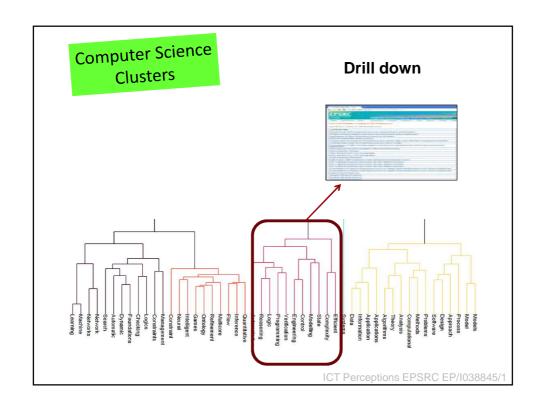


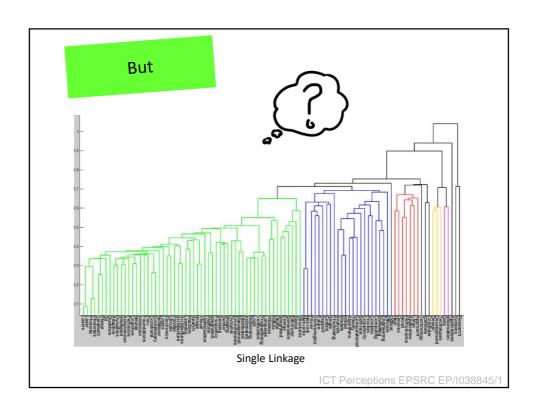


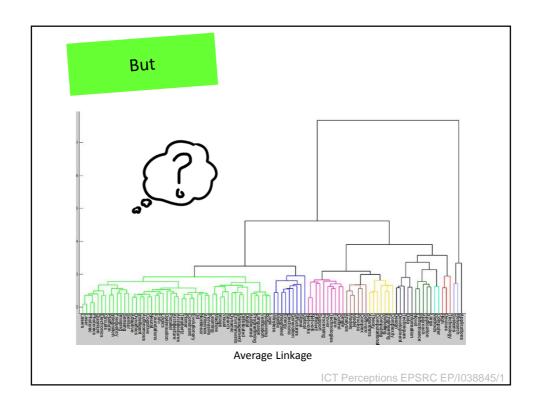


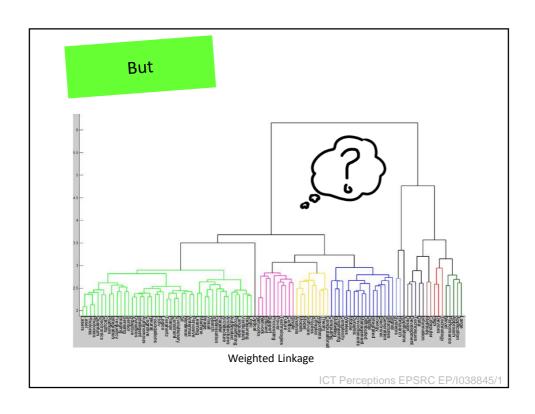


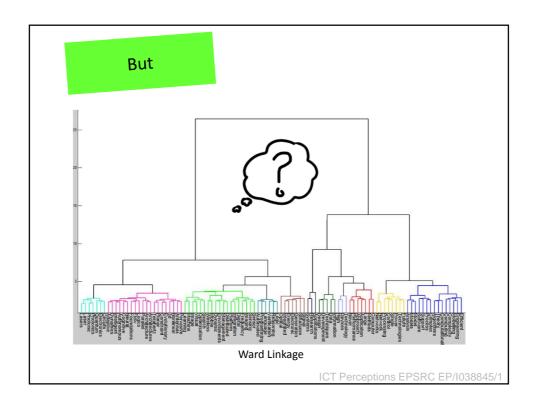










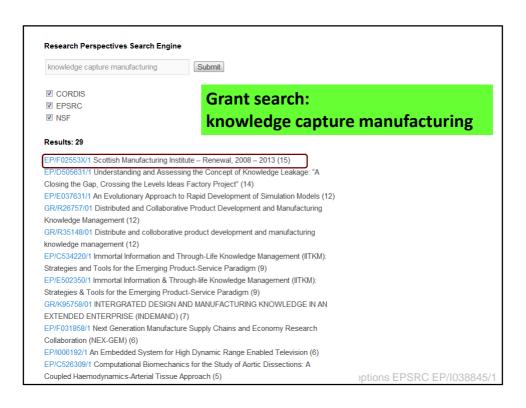


# There is no unique solution

- So need lots of Perspectives
- Use to stimulate discussion
- Not end result

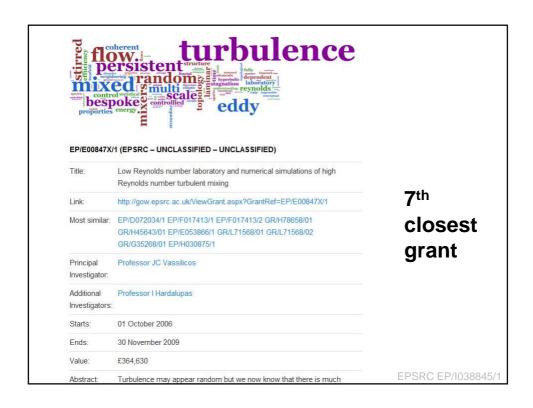
## **Browsing**

- Browsing and
- drilling down into the grants & investigators

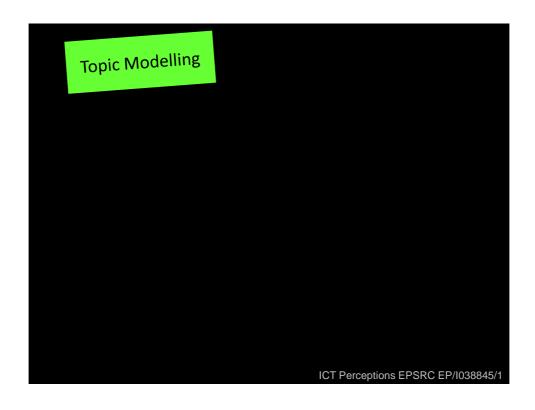


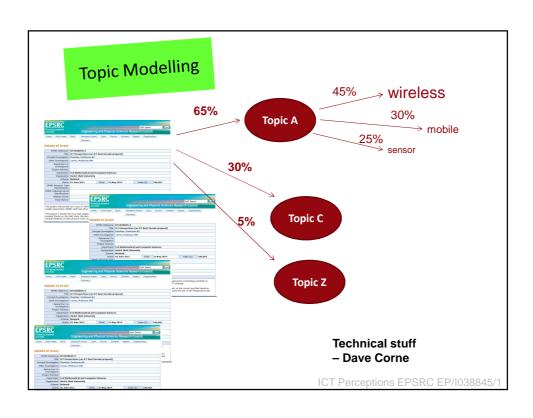






Stopped: actual advantages assume attempted based behaviour bespoke bespoke bespoke characterised classes coherent coherent components conceptual consists consume consumotion control control controlled controlled controlled controlling controlled create create date dependence dependence dependencies derive design detailed difficult dimensions disorder eddies eddies eddy eddying effectively effiicient elements elements elliptic embedded energy energy energy energy enormous experiments firstly flawed flow flow flows flows flows flows flows flows flows flows fluid fractal framework fully fully fundamentally good ground high hyperbolic impact imposed impossible knowledge laboratory laboratory laboratory laminar Match laminar lot low maintained measuring mix mix mixer mixers mixers mixing mixing mixing mixing mixing mixing models models explanation models monitoring multi multi multi multi multi multi multi multi neighboring number number numerical order order persistence persistent persistent persistent persistent points potential procvide properties properties proporties propose purpose random random random random randomness randomness rate rates relations require research result resulting revnolds revnolds scale scale scale scale scale scale scale scale scale separation simulations sizes space spatio spectra stage stagnation statistics statistics stirring stirring strring streamline structure structure structure structure structure study subsequent temporal terms time time time time tools topological topologies topology topology turbulence turbulence turbulence turbulence turbulent turbulent turbulent turbulent turbulent turbulent turbulent turbulent twofold type understand understanding understanding virtuallly whilst ICT Perceptions EPSRC EP/I038845/1





# Topic Modelling

- Statistical model for discovering hidden or latent 'topics' in a collection of documents
- Latent Dirichlet allocation (LDA) allows documents to belong to a mixture of topics
- Probability dist. function determines likelihood of document belonging to a topic and therefore its topic 'proportions'

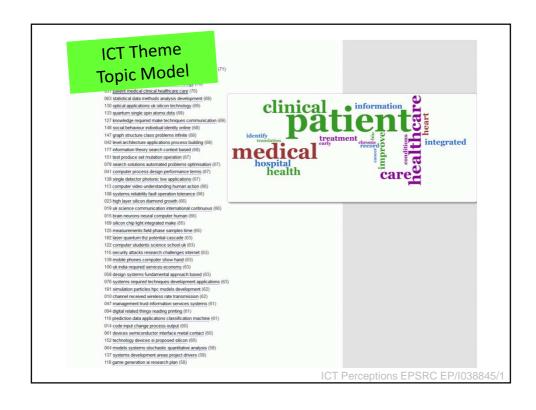


ICT Perceptions EPSRC EP/I038845/1

# **RP Topic Model**

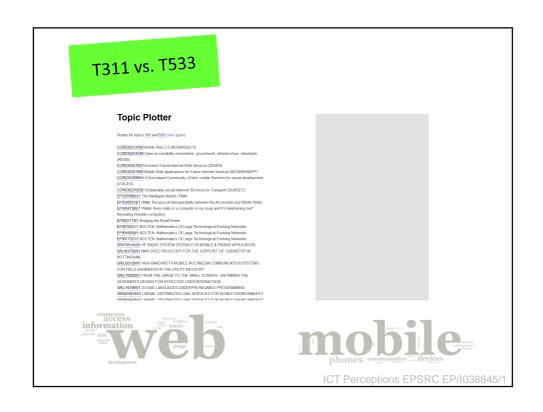
## RP Topic Model:

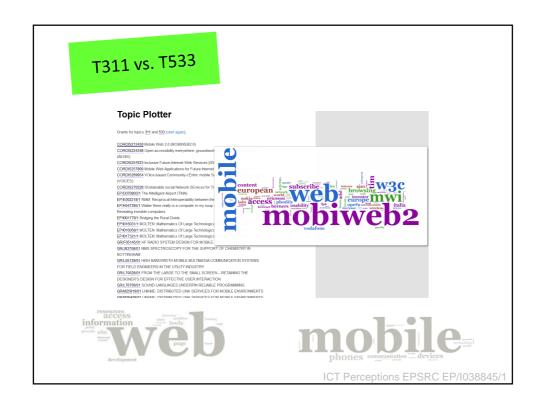
- 48,387 grants
- EPSRC (all pgms), CORDIS (ICT) & NSF (ICT) Generated 600 Topic Model:
- 20 words per topic
- Weighted by occurrence in associated grants
- Ordered by EPSRC ICT Theme relevance

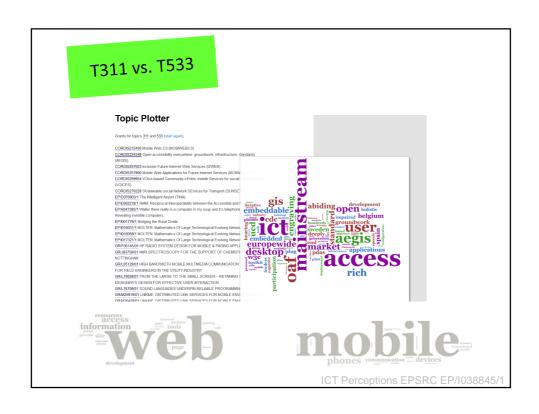


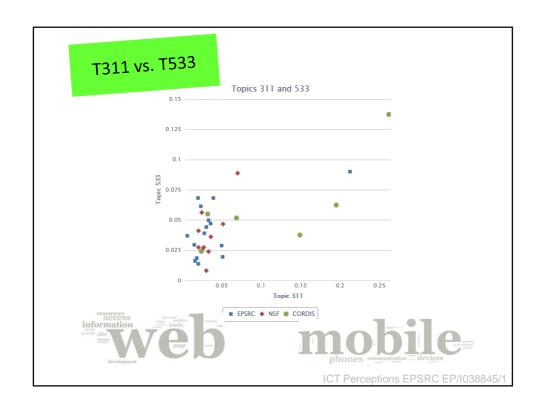


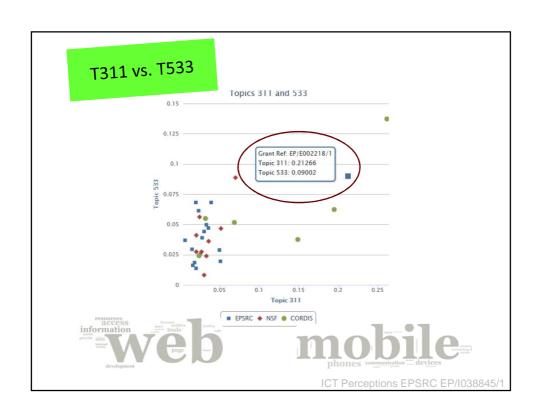


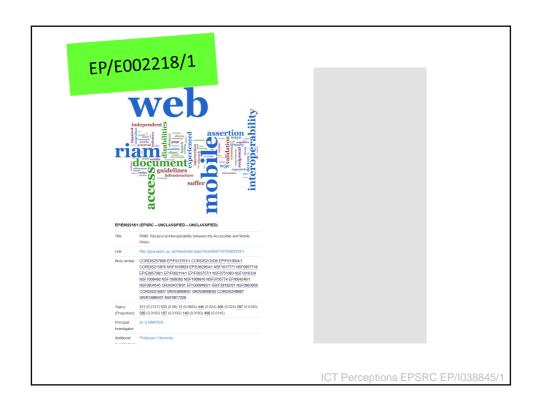


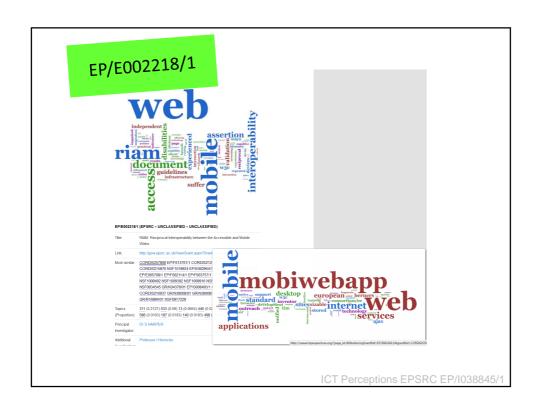


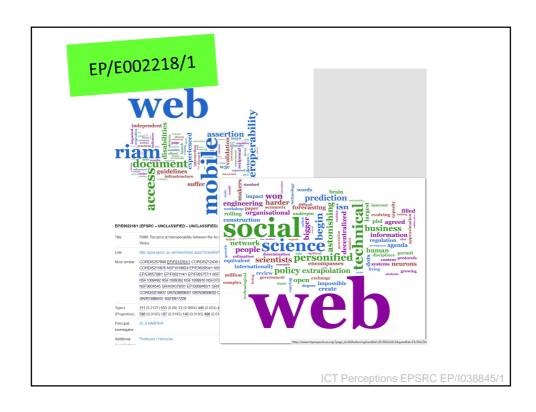


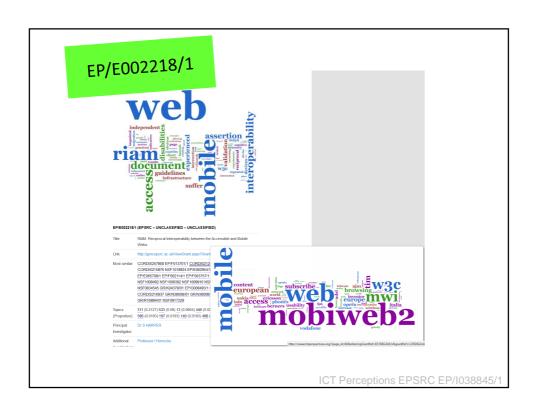


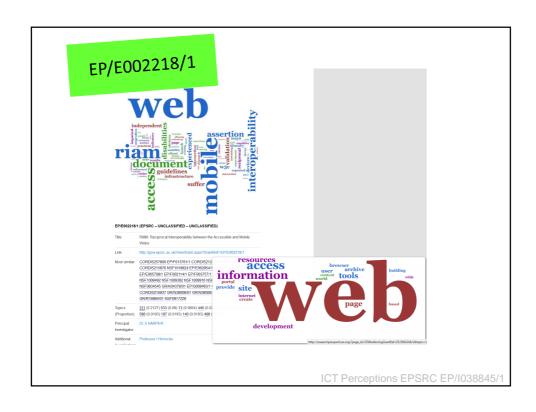


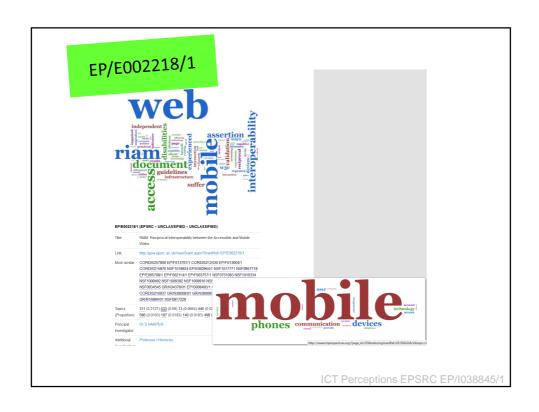


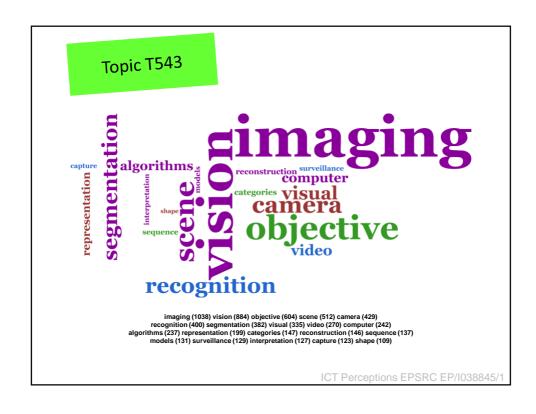




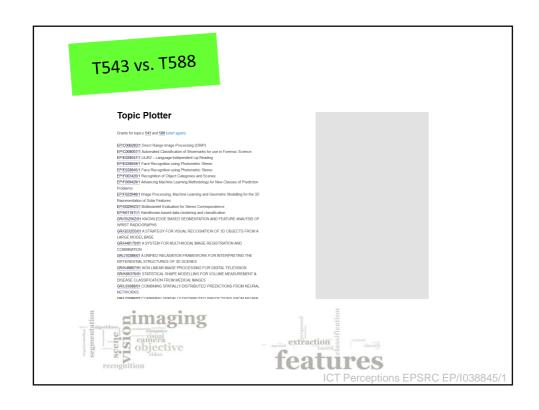


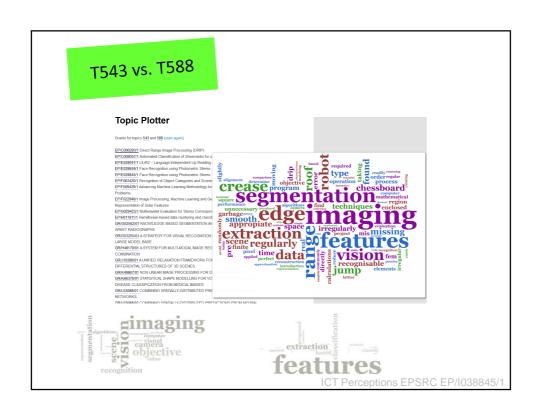


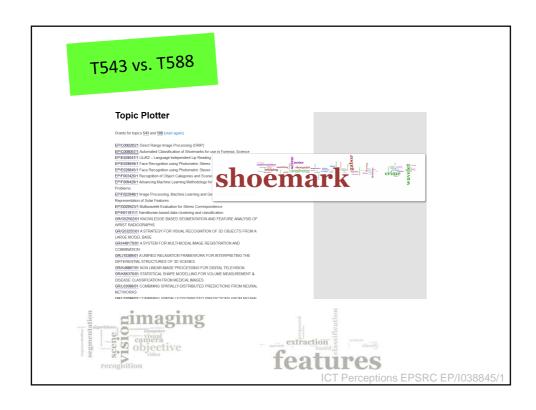


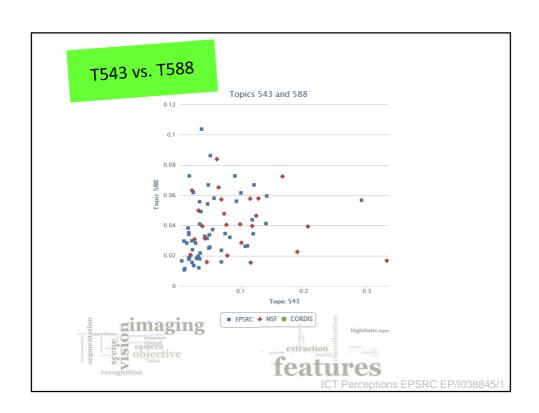


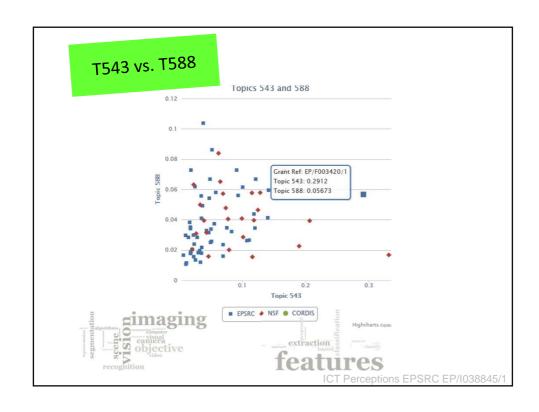


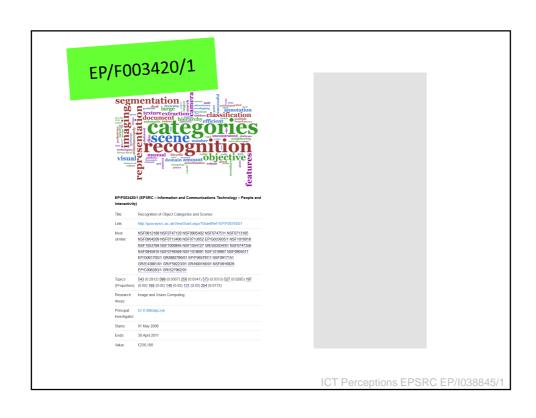


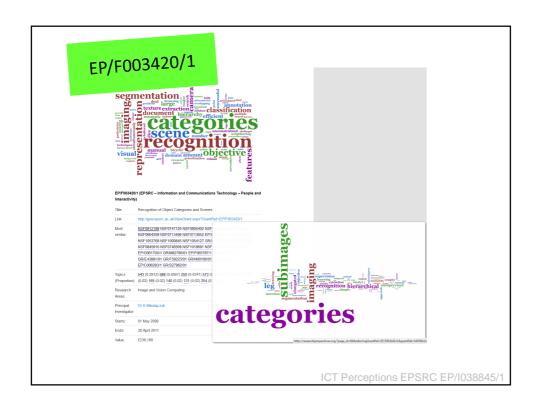


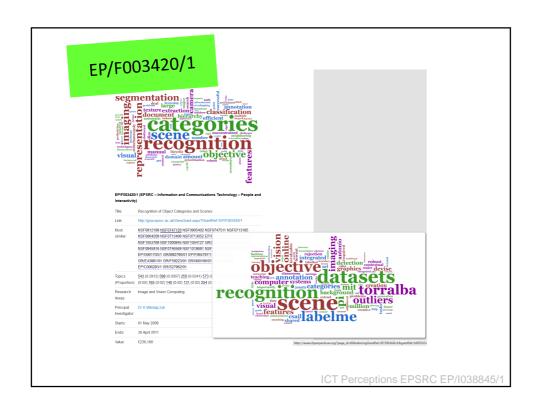


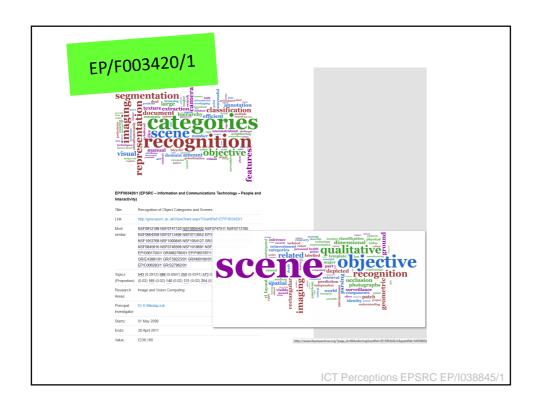


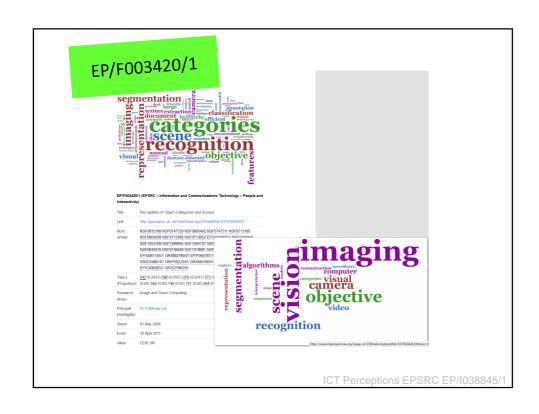


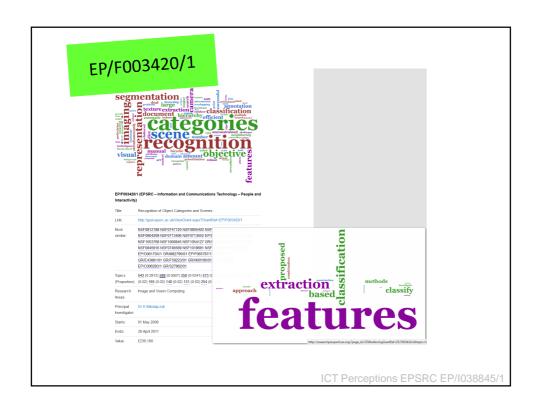


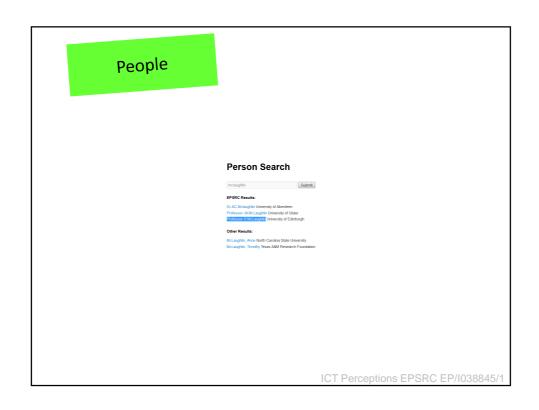


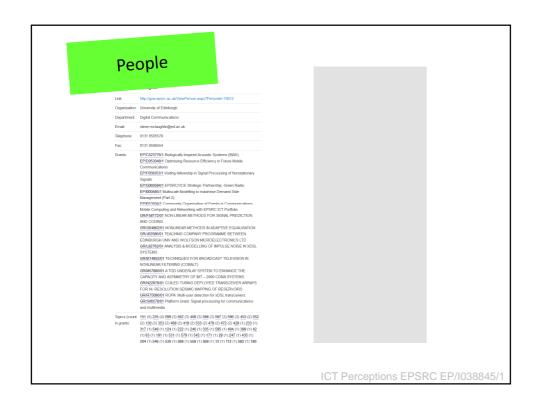


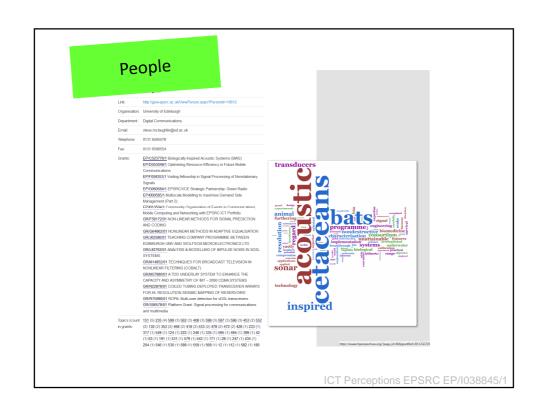


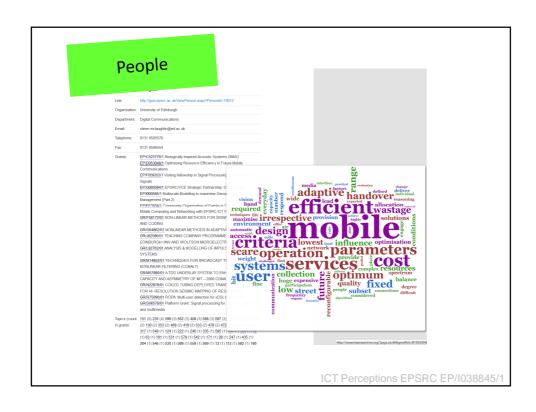


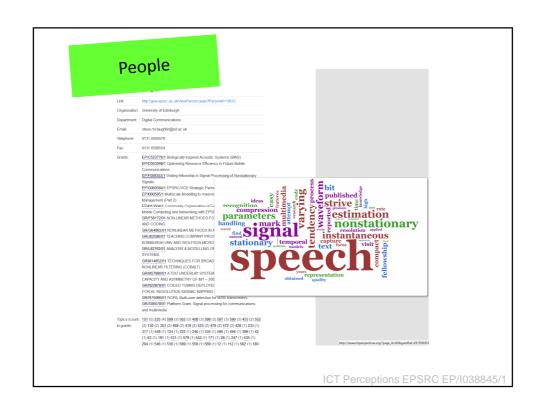












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Email:	steve.mclaughlin@ed.ac.uk			
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