

Personalizing Relevance on the Semantic Web

through Trusted Recommendations from a Social Network

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search results, personalised to you

overview

- a traditional approach to personalisation
- re-defining relevance
- our approach (work in progress)
 - personalising relevance in information seeking
 - recommendations from people we trust
 - semantic web as deployment platform

personalisation: a traditional approach



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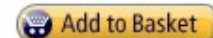
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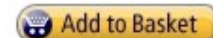
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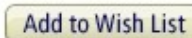
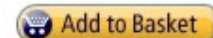
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personalisation: a traditional approach

- operates in a closed world
- **the task supported is poorly defined**

can we personalise a very specific task?



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back pain treatment, Consultant, Maidenhead (Private) Slough (NHS) ... **Back** surgery, Consultant, **Milton Keynes** (NHS/Private), Orthopaedics, **Back** surgery, ...

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- irrelevant to the topic
- **irrelevant to me**

the nature of relevance

- topical relevance: **query** ↔ **pages**
- personal relevance: **my info need** ↔ **items**

a system for personalised relevance

“known person recommendation”

- **ask people I know and trust**
 - source-centric
 - allows for more complex reasoning
- **knowledge required**
 - who is known?
 - what’s the task/situation?
 - **who is most trusted?**

who is most trusted, and why?

...it depends on

- **five trust factors**
 - expertise, experience, impartiality, affinity, track record
- **the nature of the task**
 - how critical the task, how subjective the solution
- (Heath, Motta and Petre, 2006)

implementation

a system for personalised relevance

- domain: **travel/tourism**
 - non-critical, highly subjective
- **significant trust factors**
 - *affinity* between the info seeker and info source
 - *experience* of each person of particular domains
- **data requirements**
 - who do you know? (FOAF)
 - how trustworthy are they?
 - a pool of potential results

system components

- **reviewing/rating system, for “travel objects”**
 - provides pool of potential results
 - outputs RDF/XML according to Review vocab
- **trust kb, computes trust relationships:**
 - affinity
 - experience
- **search system**
 - search index
 - relevance reasoner

workflow

1. users provide FOAF files and ratings of travel things
2. system infers trust relationships
3. rated travel things are added to search index
4. user does keyword search
5. search system looks for results rated by known people
6. relevance reasoner ranks results based on inferred trustworthiness of the source

future work

- complete the implementation
- evaluate the importance of affinity vs experience in trust inferences
- evaluate the relevance of search these *personalised* results

thankyou

<http://kmi.open.ac.uk/people/tom>