Presented by
Dr Renato Iannella

n2Mate

Exploiting social capital to create a standards-rich semantic network

- **David Peterson**
  BoaB interactive
  david@boabinteractive.com.au
- **Anne Cregan**
  National ICT Australia
  anne.cregan@nicta.com.au
- **Rob Atkinson**
  CSIRO Land & Water
  rob.atkinson@csiro.au
- **John Brisbin**
  BoaB interactive
  john@boabinteractive.com.au

What's the great thing about standards?

There are so many to choose from....

and if you can't find one you like, you can always create your own.

...the *Standard* problem with Standards...

For the semantic web to take off...

- A minimal (or at least manageable) number of vocabularies for tagging open data
- Highly re-used
- Densely interlinked

Otherwise

- we get killed by the n-squared mapping problem....
- very sparse network with minimal interoperability

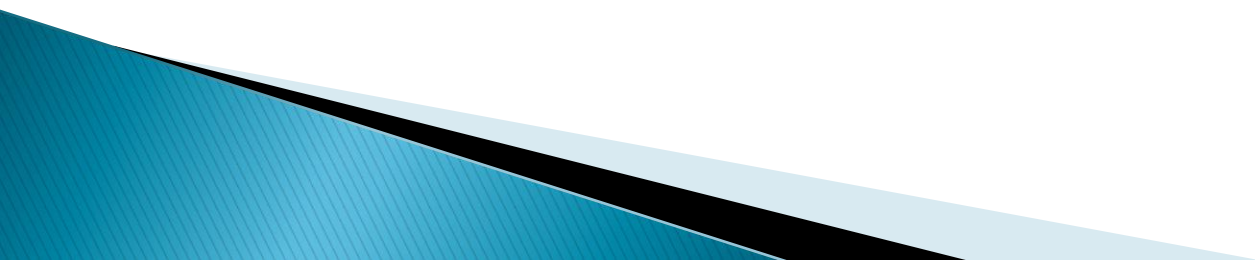# Some angles on the problem

1. **Foundational Angle**
   Create foundational techniques for concept definition, so you get interoperability for free

2. **Automated Matching Angle**
   Improve automated matching techniques

3. **Social Angle**
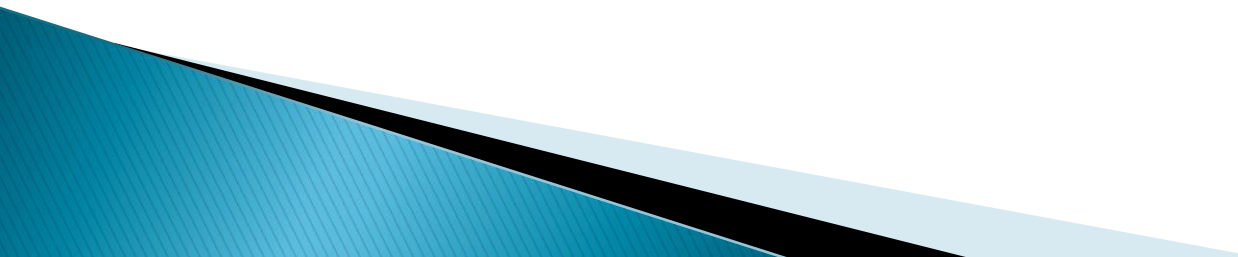   Encourage more people to use the same ontologies to describe their data, not create new ones.

Why don't ontologies get reused more often?

Currently, it is too hard to answer the question "Is there an ontology out there that is right for me?"

The rankings for ontologies only reflect the likelihood that a surfer will navigate to the document.

We would like a rank based on frequency of use as a Semantic Web document, and we would like to be able to assess suitability for our intended use case

Metadata about metadata

Ironic as it sounds, we need metadata about the vocabulary to make an informed choice about whether it suits the purpose

- **Who?**
  - ◦ owns it, created it, maintains, uses it, endorses it?
- **What?**
  - ◦ domain, context, process - intended to use, suitability?
- **Quality of Service?**
  - ◦ accurate? reliable? verifiable? up-to-date? available?

We propose to exploit social networking techniques
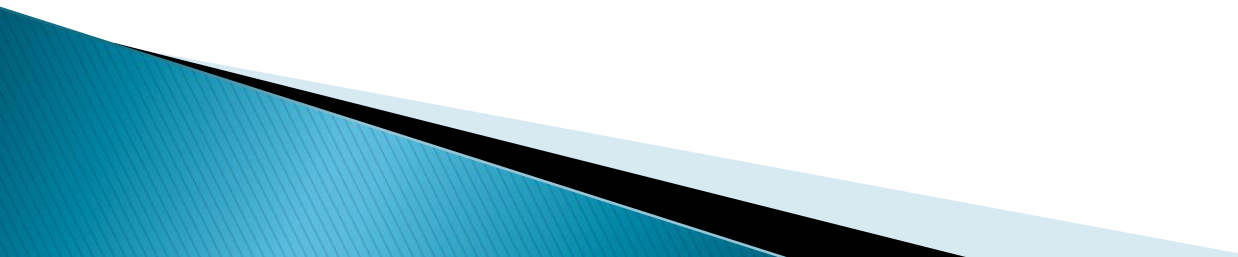
- **Popularity Rankings**
  - How many SWDs reference this vocabulary/artefact?
- **Authority Badges**
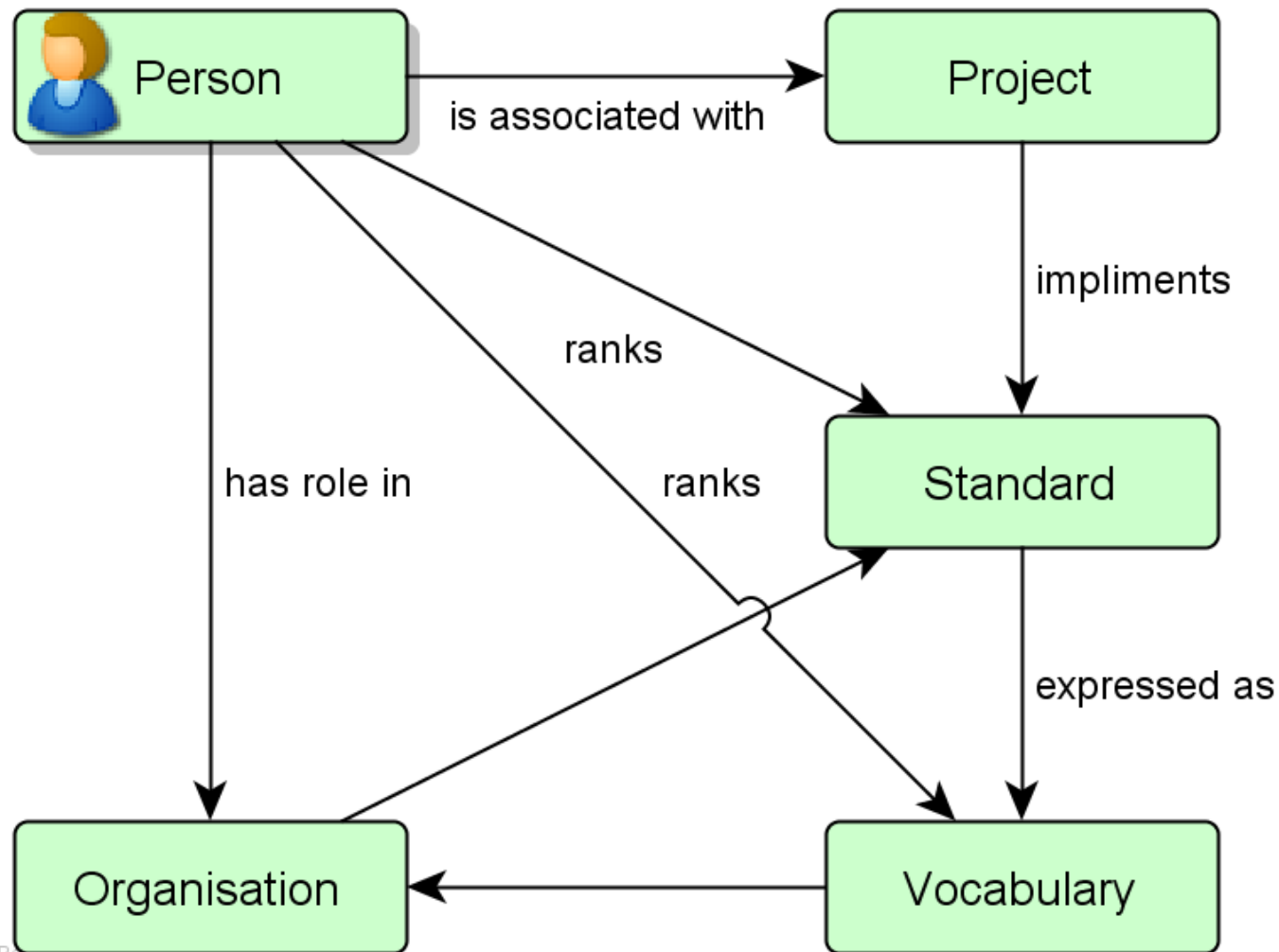 - A way to assert an authority claim over an artefact
- **Related to**
  - Who uses it? Which vocabularies do my friends or respected cohorts use?
- **Trust & Satisfaction rankings**
  - Trusted? How useful? Ratings? QoS?
  - Hero worship - most interlinked
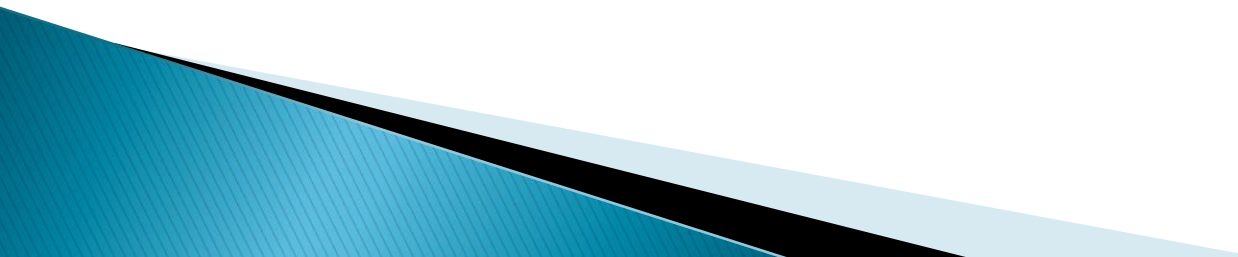
Proposed model for a register of registers

Use-case: new researcher

- A researcher is preparing her research plan on a section of the Great Barrier Reef. Although she is an experienced marine scientist, she is new to the GBR and to her host research facility.

Social & technical context

- Semantic project depends on interlinkage of ontologies, vocabularies, and standards
- Humans are central to that effort
- How to get humans involved effectively?

Does anyone have a wheel like mine?

- "Who's doing what" is the central question

- Obvious failures: lack of interlinkage
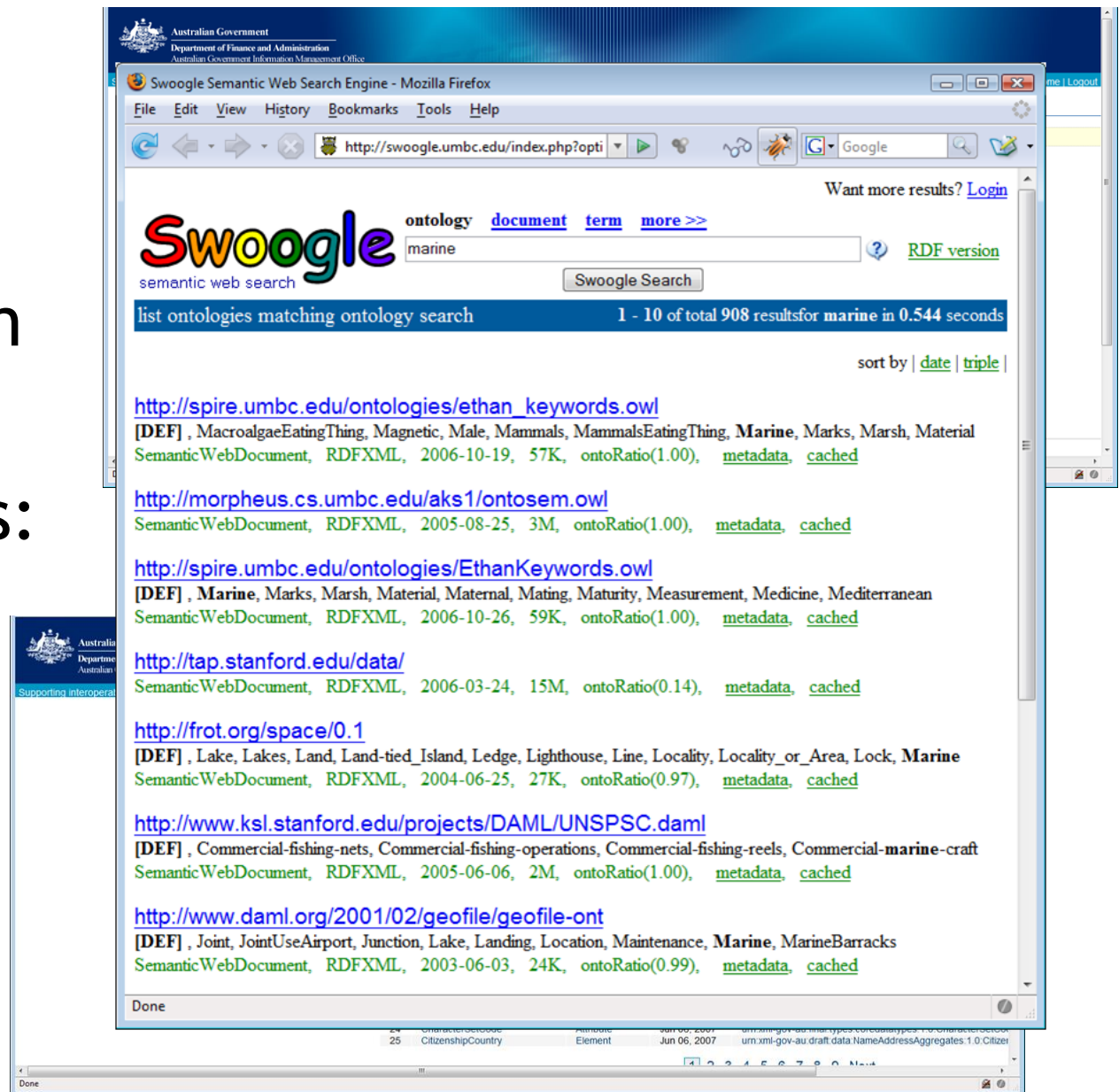
Use-case:
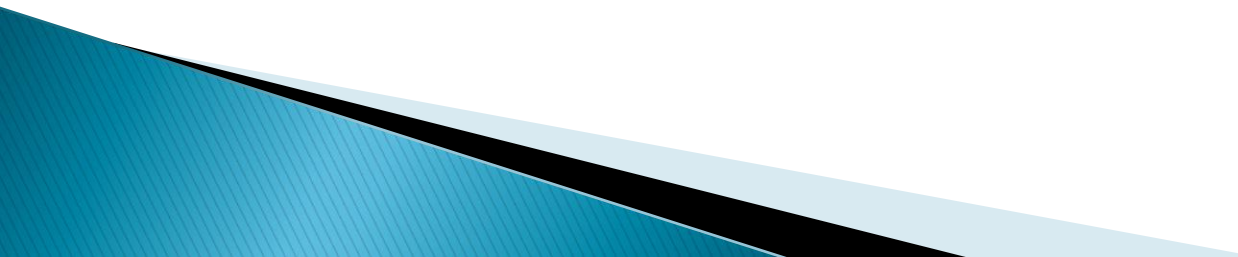
- Social Network: semantic-web@w3.org
- Query
  - "...So the question is, can you give me pointers to any ontologies (in RDF(S)/OWL) used in the e-culture or similar projects?" Daniel Schwabe
- Results
  - 3 People responded with 7 resource links
  - "You might be interested..."
  - "You could also consider..."
  - "May be some useful ontologies..."

Scalable Register Networks

- Recognise existing registers and metadata collections
- Use existing protocols to construct a register of registers network
- Construct facility with social networking devices
- Implementation
  - Re-use and leverage existing tools and standards (self-similarity, fractal integrity)

Key components

- Account and session manager: Drupal
- Bookmarking and annotation tool: gnizr
- Storage of instance data: Sesame
- Semantic interpretation: MOAT
- Policy layer: PLING
- Trust & Governance: POWDER

Bootstrap: using existing content

- Falcons
- Ping the Semantic Web
- Revyu
- Sindice
- Swoogle
- Talis
- Watson
- Govdex (Australian)

In conclusion