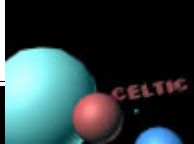


**Sharing a 3D model to inform information discovery**

Luis Borges Gouveia



**Away Day**

PhD student presentation

CSEG Group  
12 November 1999

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**The Problem**

- difficulty to translate user information needs to a make a query
- need to deal with data that does not have a well defined structure and semantics
- data source can be vast and almost unknown
- in some cases absence of a well defined underlying data model
  - this can lead to information definition and structure of low quality

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**The Problem**

- some users are experts and can take advantage of a data source to get the information they need
- some users can get the information from the data source but they can not put it in context
- some users do not know how to get information they need from a data source



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## Approach

- the user must have knowledge about the subject to be searched and ability to do the search (novice users dont have it!)
- assist users searching a data source can be done by sharing information from more experienced users (experts on a given subject)
- the knowledge sharing in a specific area can be organised and used by structuring abstract information, as a visual representation to be integrated with a data source

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## Challenge

- how can we provide a user-guided system to support information discovery with 3D facilities?
  - although it can be intuitively, there is no much evidence in the literature that the use of 3D systems can better help
- can computer mediated 3D visual representations be useful in helping individuals help creating and analysing results from a data source with the help of a shared concept space (as context knowledge about a subject) ?



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## Research Approach

- share a concept space as an interactive 3D virtual world to support information discovering on a data source using an information visualisation
- information discovering is supported by search and browse tactics generated from concept space data
- the search results are used to render an information visualisation that serve as a data source analysing tool

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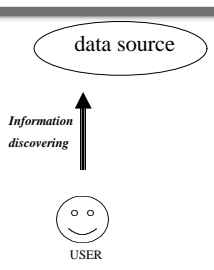
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**The model**



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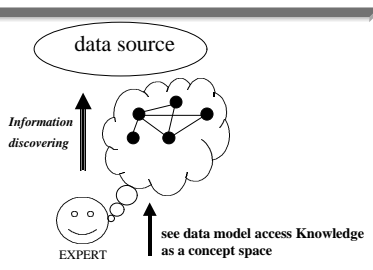
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**The model**



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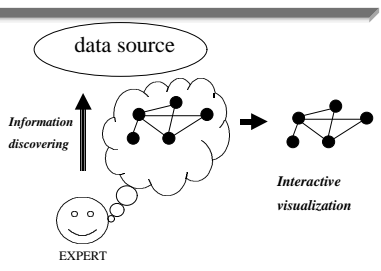
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**The model**



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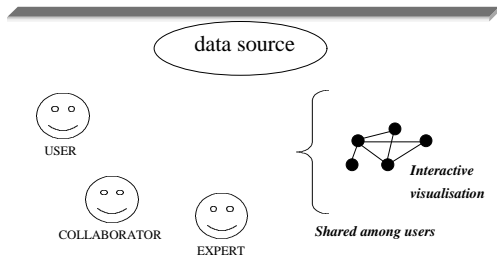
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### The model



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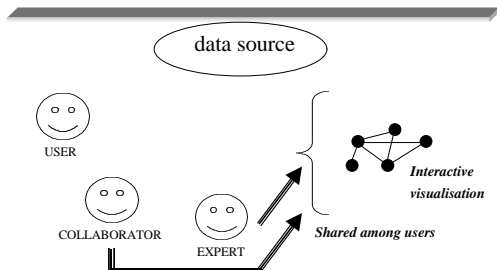
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### The model



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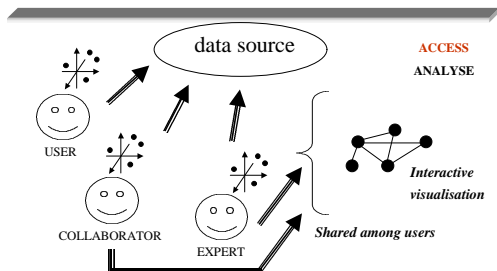
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### The model



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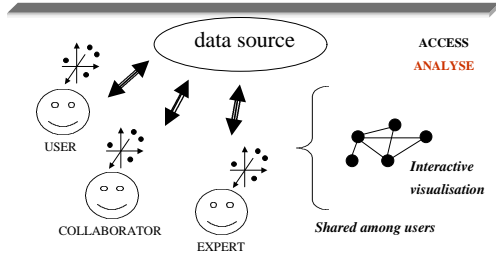
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## The model



Part II interactive visualisation integrates an information visualisation

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## concept space data management




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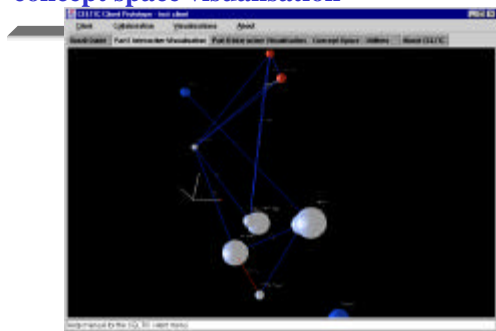
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## concept space visualisation




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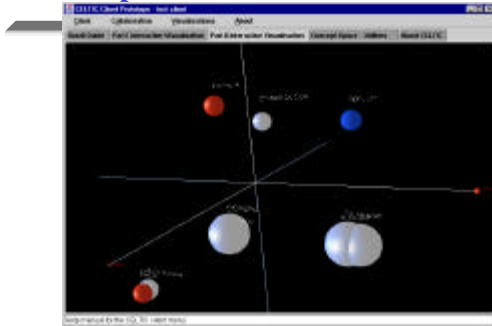
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## criteria space visualisation



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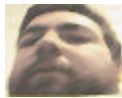
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## Expected results

- help users in search and browse activities
- help users sharing expert knowledge about a given subject to support search and browse activities
- help users analysing results from a given data source against a particular concept space
- helps the learning process across a group by sharing a concept space for support information discovery

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