

Overview of I2D2, and “A Plea for more analysis and less metric tuning”

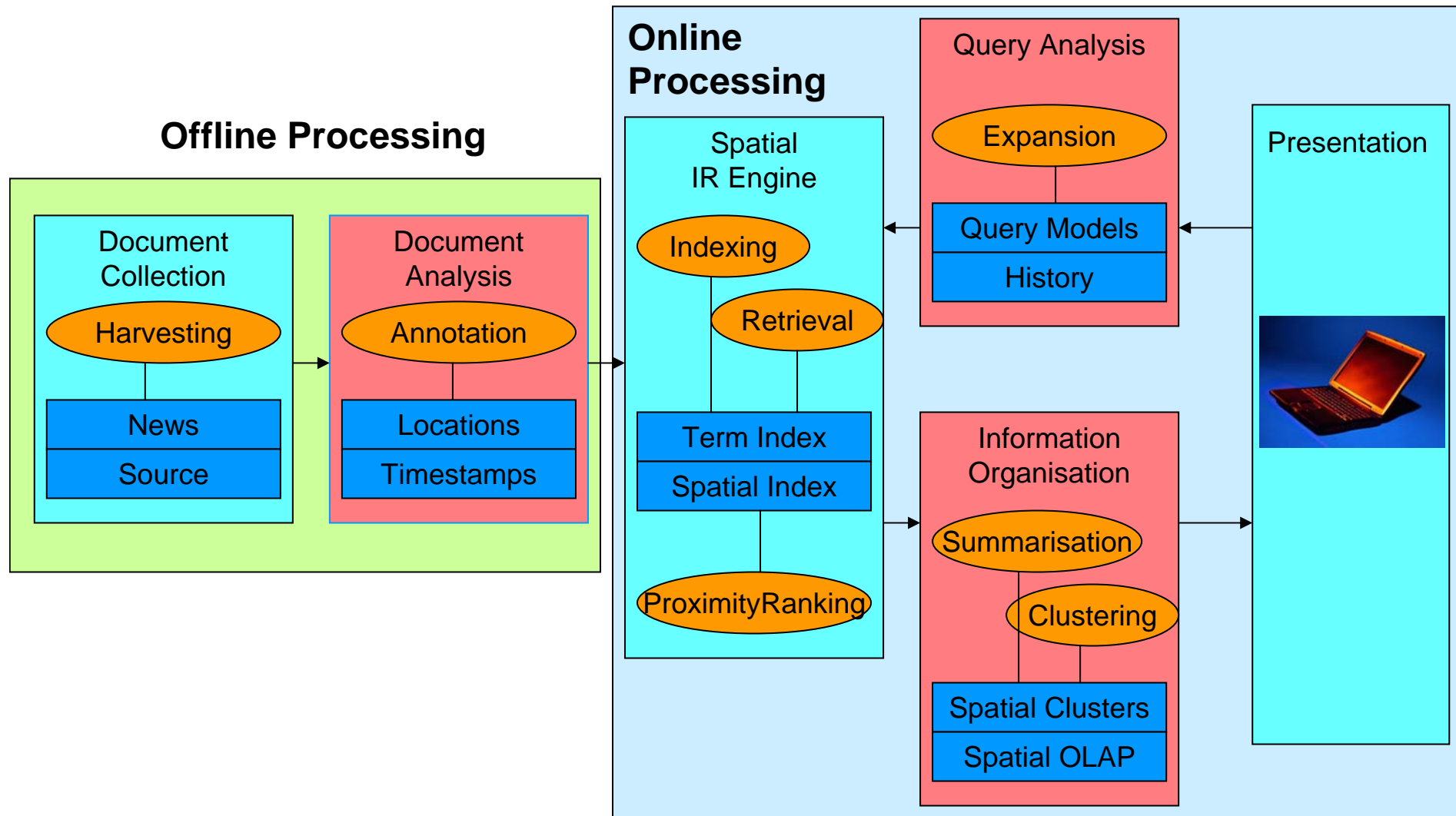
Nicola Stokes
NICTA, Victoria Research Lab

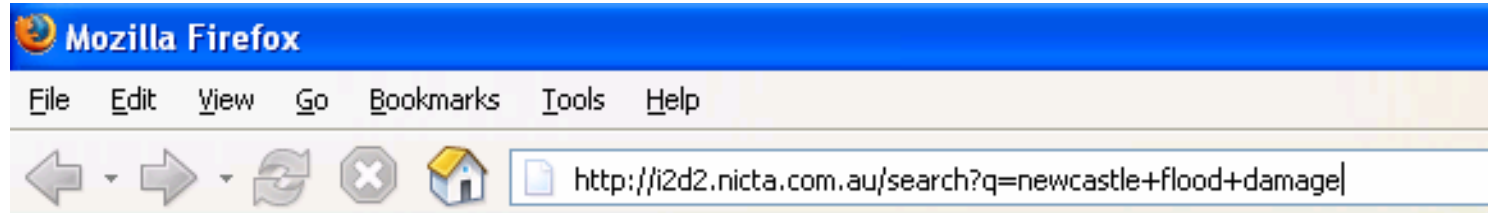
September 21, 2006

I2D2 Project Aims

- **People:** Steven Bird, Tim Baldwin, James Bailey, Lawrence Cavedon, Alistair Moffat.....
- Language Technology, Information Retrieval, Data Mining and Document Clustering
- Combining techniques to more effectively solve the information access problem
 - Discover relationships between entities in news
 - Detect geospatial/temporal references and ground them
 - Organize information presentation for more effective consumption
 - Clustering
 - Summarization
 - Contextual IR: user behavior - Clickthrough data

Architecture





Did you mean [Newcastle in The United Kingdom](#)

[BBC NEWS | England | Tees | Hospitals hit by **flood damage**](#)

Hospital services on Teesside are thrown into turmoil after **flood damage** caused ... in Hartlepool and **Newcastle** after **flood** water cut off electrical power. ...

[DISASTER RESEARCH: Issue 148](#)

... efforts to mitigate **flood damage** under the National **Flood** Insurance Program. ... The University of **Newcastle** Centre for Architectural Research and ...

[more](#)

Did you mean [Newcastle in New South Wales, Australia](#)

[\[PDF\] with LIVING **FLOODS**](#)

File Format: PDF/Adobe Acrobat - [View as HTML](#)

flood occurred, and there would be about \$23 million in direct economic **damage**. Issues. Half the properties in **Newcastle** (approx. 25000) could be flooded ...

[Grafton, Kempsey and NE NSW: Gales and **Floods**](#)

Printed Press - **Newcastle** Herald Printed Press - The Land ... Estimates of the **damage** done in these **floods** indicated a total economic cost of at least ...

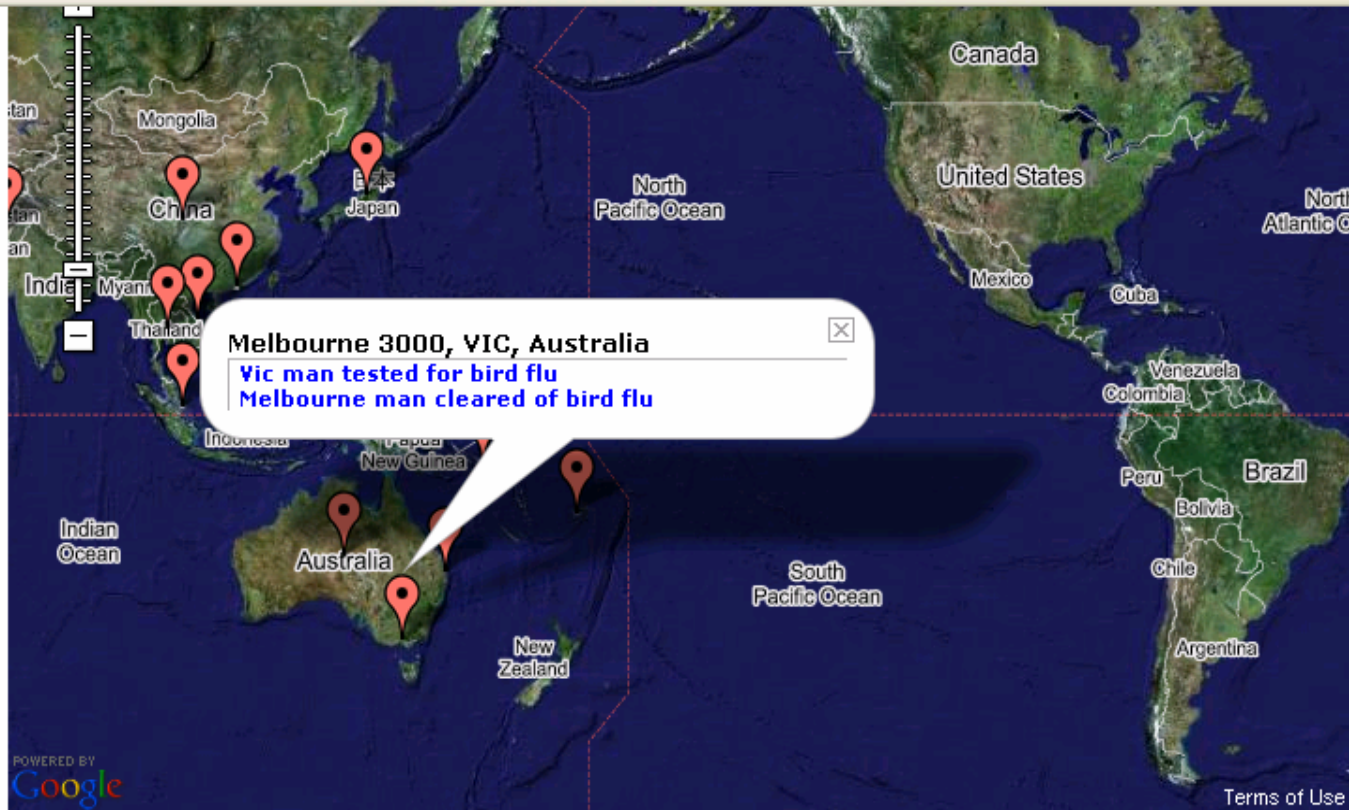
[more](#)

Did you mean [Newcastle in Canada](#)

[Freshwater Website: **Flood Damage** Reduction Program \(New Brunswick\)](#)

New Brunswick was the first province to join the **Flood Damage** Reduction Program signing General, ... Miramichi (Chatham, **Newcastle**), Lower Miramichi River ...

(Other) (8)



8 | [APEC plans bird flu preparations test](#)

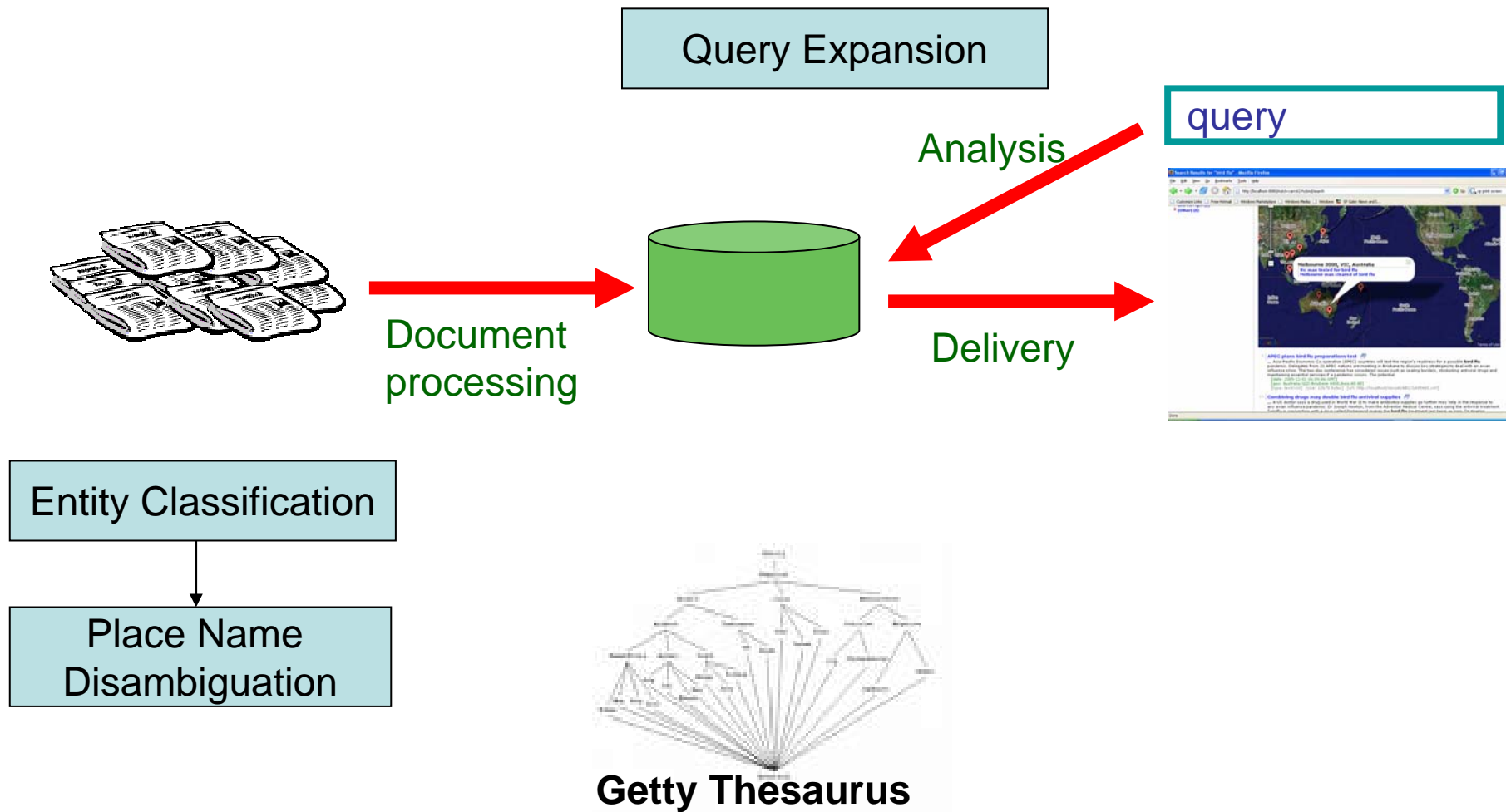
... Asia-Pacific Economic Co-operation (APEC) countries will test the region's readiness for a possible **bird flu** pandemic. Delegates from 21 APEC nations are meeting in Brisbane to discuss key strategies to deal with an avian influenza crisis. The two-day conference has considered issues such as sealing borders, stockpiling antiviral drugs and maintaining essential services if a pandemic occurs. The potential

[date: 2005-11-01 06:09:06 GMT]
[geo: Australia:QLD:Brisbane 4000;Asia:All:All]
[type: text/xml] [size: 12670 bytes] [url: http://localhost/docset/ABC/1495465.xml]

15 | [Combining drugs may double bird flu antiviral supplies](#)

... A US doctor says a drug used in World War II to make antibiotics supplies go further may help in the response to any avian influenza pandemic. Dr Joseph Howton, from the Adventist Medical Centre, says using the antiviral treatment Tamiflu in conjunction with a drug called Probenecid makes the **bird flu** treatment last twice as long. Dr Howton

GeoClef Processing Stages



Next Generation Search

- TREC: The more focused the user response needs to be the greater the benefit of NLP techniques e.g. factoid based QA
- However, little value in combining NLP and IR for ad hoc retrieval
- Two reasons:
 - Poor performance of NLP tools
 - Failure of IR community to investigate why some queries are difficult
 - TREC Robust Track
 - SIGIR workshop on Reliable Information Access – 10 categories of problematic queries (Harman, Buckley, 2004) – benefit from NLU
- NLP may have “niche” role to play in ad hoc retrieval, e.g. GeoIR

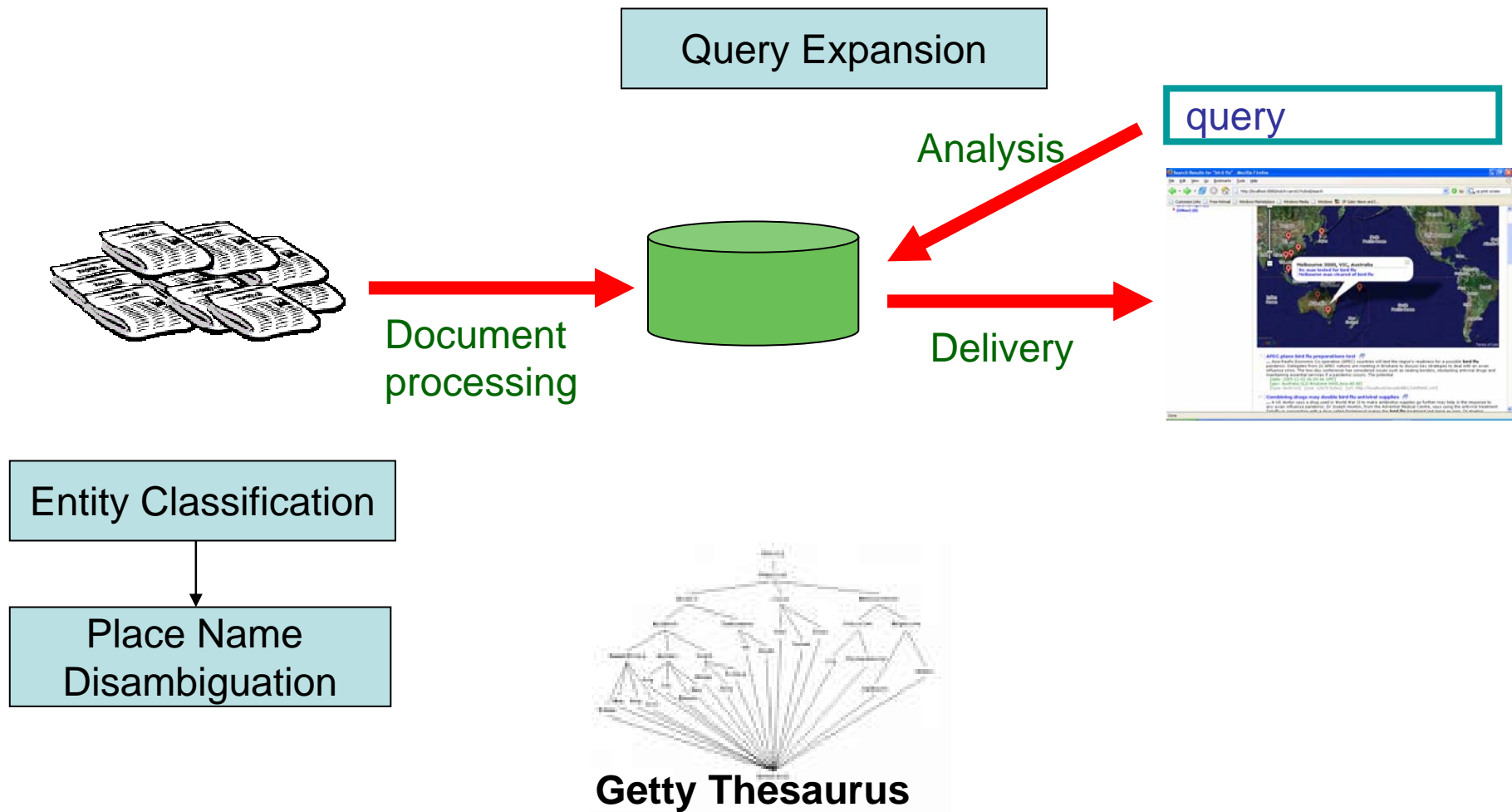
Next Generation Search

- Maybe the next generation search engines will:
 - Take a natural language query
 - Classify query type and send it to appropriate retrieval engine or NLP system
- How can the NLP and IR communities work together to achieve this goal:
 - IR: continue investigating why some queries are difficult – find more niche areas
 - NLP: support IR research initiatives by evaluating their NLP techniques in the context of these real world retrieval scenarios.
- Isn't this why we get involved in DUC and QA TREC?
 - Focus on MAP scores and ROUGE scores
 - But where are the bottlenecks?

Next Generation Search

- Augment current application based evaluation methodologies with component level analysis at different points in the NLP pipeline
- Benefits:
 - Identify NLP components that will make significant gains in performance
 - Also encourage researchers to work on difficult questions like “abstraction” – possible summarization subtask

GeoClef Processing Stages



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GeoClef Processing Stages

