The Next Generation of Search: a Whole-of-System Perspective

Nathalie Colineau, Cécile Paris and Ross Wilkinson

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Where to look for in the information highway?

- **Current search technology provides us with a list of entry points**
  - home pages
  - key pages
- **Navigation through the space provided by the entry points**
  - Potentially requires a lot of browsing
  - May involve navigating back and forth
  - Is often confusing -
    - to know where the information is
    - to get an overall picture
- **Satisfying complex information needs**
  - Is not well supported
  - Is technically hard
  - Represents a large unmet demand

Google: www.tfhrc.gov/pubrds/05nov/02.htm

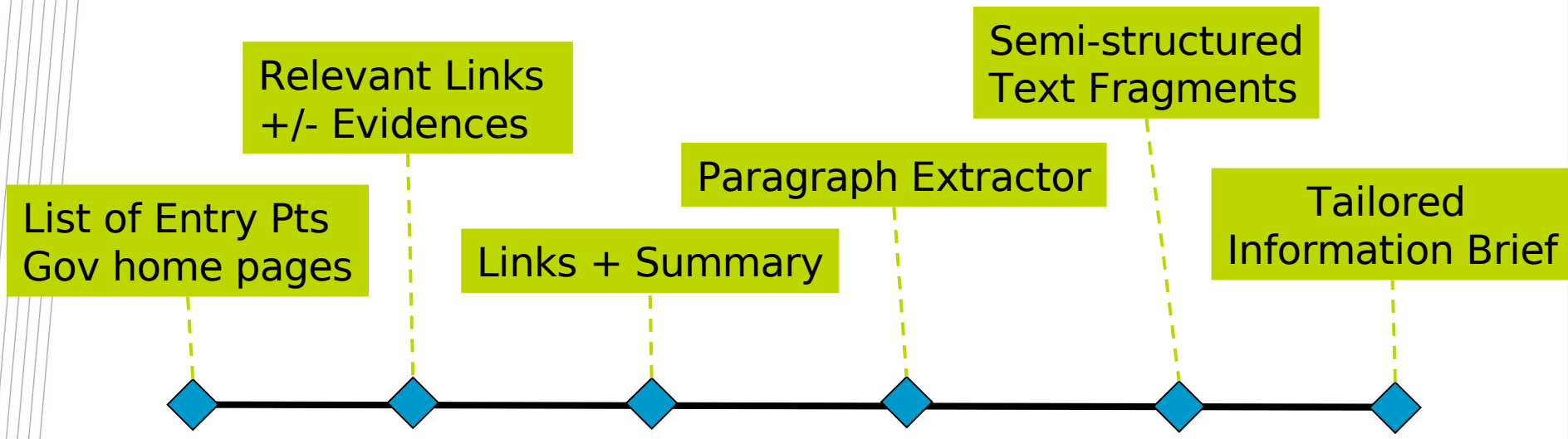
Example: what happens to my super if I die?

- **While the task of the seeker is clear, finding the relevant information is difficult, for various reasons:**
  - It is not clear where to look for information, how to find the relevant entry points and where is the information needed
  - Information is spread across many sites
  - Seekers may not know what words to use to describe their need or may not know what they need to know
  - A search task may comprise several subtasks
  - Because of all of the above, assimilation of information into a coherent whole becomes a challenge

Google: www.foundationnews.org/CME/

Answering a Complex Information Need

- **What information system would best support seekers in their task?**

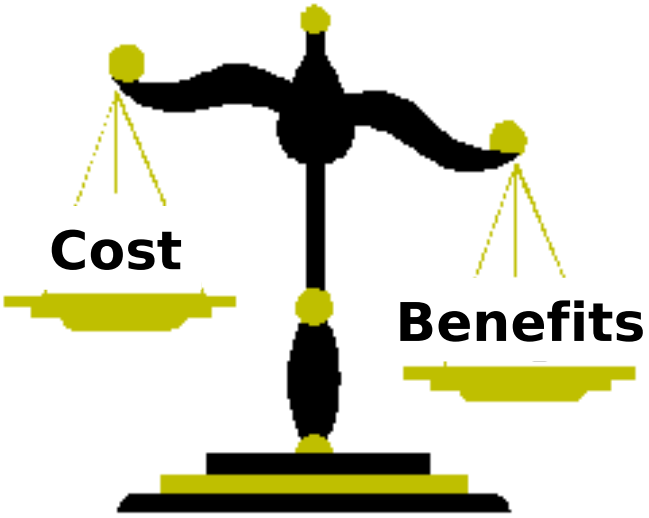


- **How do we know which system is most appropriate?**

Considering the two sides of the coin

- **There is no free lunch!**
  - Benefits usually come at a cost
  - We must recognise hidden costs
  - Improvements do not always equate to impact or benefit

- The ideal equation
  - Maximise the impact
  - Minimise the cost



Cost and Benefit in Context

- **Determining the value of a system/approach without its context is not really meaningful**
  - What is an important benefit in one application may be secondary in another
  - What may be considered as an expensive cost in one application may be acceptable in another

- **It is important to:**
  1. Characterise what benefits a system should provide
  2. Prioritise which are the most important one(s)
  3. Consider benefits in the context of the costs incurred to achieve them

- **This is also useful when comparing systems or approaches**

There is more than one perspective

4 main roles to consider:

- **The information seeker**: traditionally the end-user or consumer of the services offered by the system
- **The information provider**: responsible for the content to be searched, explored and delivered
- **The information intermediaries**:
  - The resource builders
  - The exploration partners
- **The system provider**: responsible for development and maintenance of the technology

Perspective Box 1660-1680, Elinga, Pieter Janssens

Framework of Evaluation

- **Consider a system in its context and that of its stakeholders**
- **Framework can be used to describe an approach**
  - its strengths and weaknesses
  - from a variety of perspectives
- **How to measure them? (*when they need to be measured*)**
  - Might be qualitative or quantitative
  - Might not be a gold standard
  - Might depend on the characteristics

    (e.g., different measure for fluency, task effectiveness, user satisfaction or cost/ease of building a system)

Conclusion

- **Framework aims at enlarging the view of evaluation**
- **Framework to understand and compare to do informed choices and decisions**
- **In turn, then we can compare approaches to choose the most appropriate approach in a given situation**
- **Framework can be used as guidance**

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