Finding Collaborators: Towards Interactive Tools for Research Social Networks

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Motivation: How can we make collaborator search more interactive?

Introduction

Most research networking applications focus on importing publications and leveraging co-authorship found therein. However, we should consider other techniques to assist collaborator search. Can we use a person's existing research network (e.g. email, FaceBook, Google+, LinkedIn, etc.) to bootstrap the search? What visualizations will help researchers find collaborators?

Background

The work for this project grew out of two previous studies: Lunch with a Scientist[1] and Digital Vita Collaboration Tool.

Lunch with a Scientist

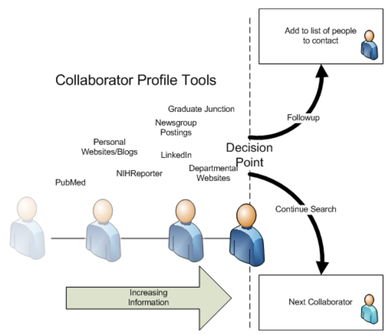
- Interviewed 26 researchers from several schools within the University of Pittsburgh.

Digital Vita Collaboration Tool digital vita

- Created a prototype based on the data available from the Digital Vita system
- Conducted semi-structured interview with 10 members of DBMI
- Collected data about participant's methodology for finding collaborators

Observed Search Model

- Search starts with limited data (e.g. name, publication data)
- Iteration over diverse web resources
- Add data to build "profile" for the potential collaborator
- Search reaches a decision point: contact collaborator or continue search

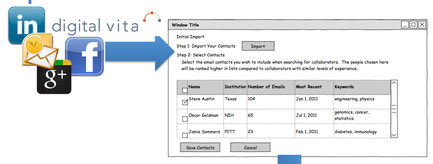


- Co-authorship does not fully represent researchers
  - Publications do not tell whole story
- Search collaborators using your prior contacts
  - Import from email, Facebook, LinkedIn, etc.
- Search for collaborators using a "profile"
  - Junior vs. Senior, cross-disciplinary experience, etc.
- Use visualizations to narrow search field quickly

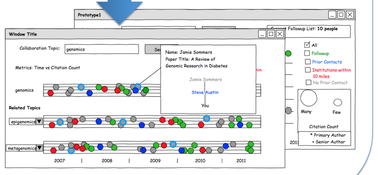
Contact Based Prototype

"I want to find collaborators based on prior relationships."

Import Contacts



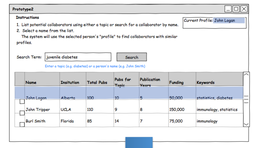
Leverage Contacts



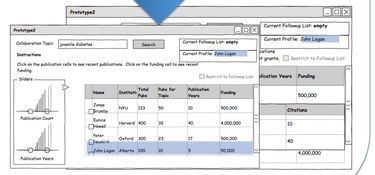
Profile Based Prototype

"I want to find collaborators similar to 'researcherX'."

Select Profile



Find Similar Investigators



Participants Wanted!!

WANTED: 30 participants for the initial phase.

- Interviews will be conducted using WebEx
- Interviews last one hour
- Please contact Chuck Borromeo (chb69@pitt.edu) if you are interested in participating.
- **Access this poster online:**

Methods

Multiple Wireframe Prototypes[2]

- Participant view parallel designs
- Accelerates evaluation process
- Avoids "fixating" participant on one prototype

Semi-structured Interviews

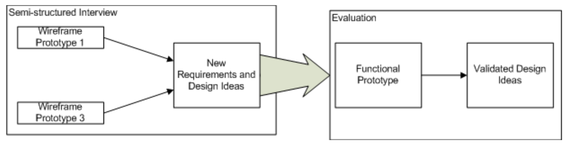
- Interviews cover a participant's prior collaboration experiences
- Use the multiple wireframe prototypes to help focus interview dialogue
- Interaction produce new ideas and open ended design discussion

Functional Prototype Evaluation

- Evaluate semi-structured interviews
- Design elements derived from interviews and wireframe prototypes

Overall Study Design

1. Utilize prior results to assemble wireframe prototypes
2. Conduct semi-structured interviews employing wireframe prototypes
3. Categorize interview results into design and functionality requirements
4. Build and evaluate a functional prototype derived from the wireframe interview results



References

1. Schleyer T, Butler BS, Song M, Spallek H. Conceptualizing and advancing research networking systems. ACM T Comput-Hum Int. Forthcoming 2011.
2. Dow S. How prototyping practices affect design results. interactions. 2011 May;18(3):54.

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