Personalized Information Environments

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Overview

- Problem
- Personalized information environment (PIE)
- Research focus
- PIE architecture
- Specific activities
- Legion metasystem environment
What is the problem?

- vast sources of information
  - organization is *provider*-centric

- want *user*-centric strategy to:
  - select databases for search
  - conduct searches
  - merge results
  - awareness services
    (SDI)
Our solution

Create personalized information environments (PIE) that:

- are persistent
- are user-customizable
- are private or sharable
- provide effective search efficiently
- discreet
User-centric view
Personalized Information Environments

Resource “Palette”

I need X.

PIE

Personalized Collections (PeC’s)

Name
Size
Availability
Term Stats
PIE over Legion

User

Legion

Resource

I need X.
I need Y.

I need X.
I need Y.

Common Interface
Our general research focus

Examine issues related to distributed searching in PIE’s by

- simulation studies
  - strategies for selection and merging
- building, deploying, and measuring prototype systems
  - user studies
  - performance studies
PIE Architecture

Personalized Information Environment components:

- **Personalized Collections (PeC)**
  - user specified information resources

- **Virtual Repositories (VIRP)**
  - uniform encapsulation of information sources
A *VirtualRepository* encapsulates information resources uniformly.
A PersonalizedCollection aggregates information resources.
Composition of components
Research issues

- Exchange information between components of PeC
  - what information?
  - how much?
  - how often?

- Incremental acquisition of information

- SDI state information
Staged PeC prototypes

- NCSTRL
  - homogeneous search
  - homogeneous content

- TREC
  - homogeneous search
  - heterogeneous content

- CS technical reports
  - heterogeneous search
CS Technical Reports PeC
Some specific activities

- Subject browsing
- Authority file generation
  - metadata merging
- Testbed for evaluating DB selection
  - TIPSTER corpus (TREC)
- DB selection filters
Recap

- PIE is user-centric
- Research focus is on effective and efficient distributed searching
  - retrospectively
  - SDI
- Via simulation studies and direct observation of deployed prototypes