# Facilitating exploratory search by combining multiple search paradigms
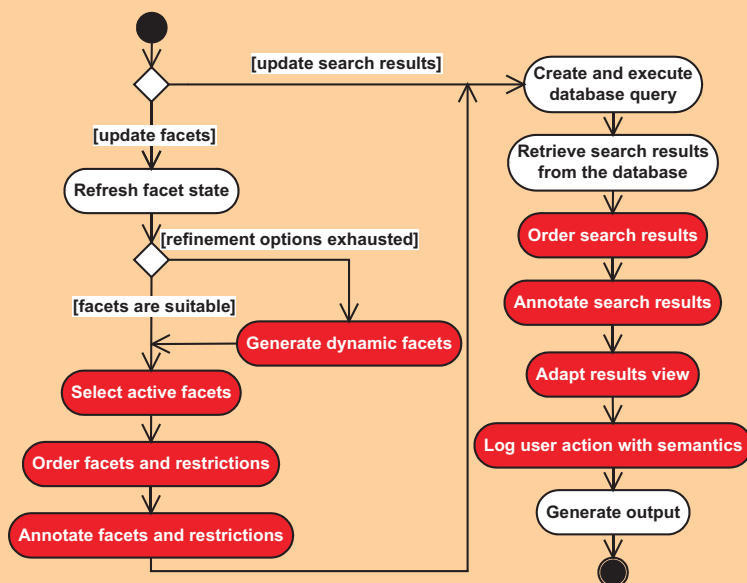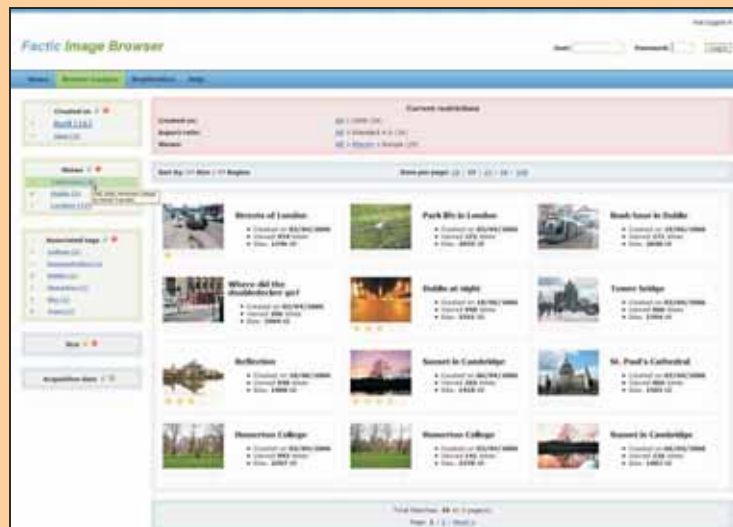
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S T U
F I I T

## (1) Personalized Faceted Navigation



Workflow diagram labels:
- [update search results]
- [update facets]
- Refresh facet state
- [refinement options exhausted]
- [facets are suitable]
- Generate dynamic facets
- Select active facets
- Order facets and restrictions
- Annotate facets and restrictions
- Create and execute database query
- Retrieve search results from the database
- Order search results
- Annotate search results
- Adapt results view
- Log user action with semantics
- Generate output

## (2) Vertical Visual Navigation in Hierarchical Clusters
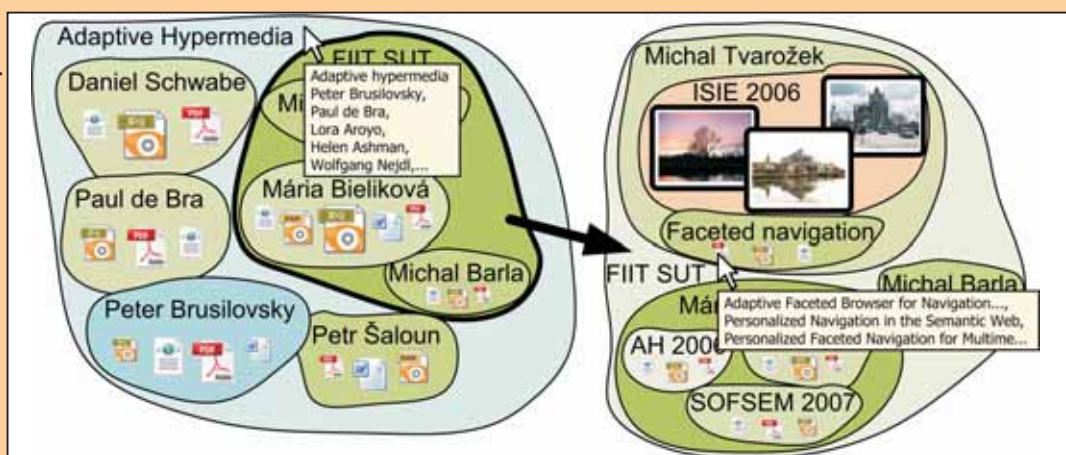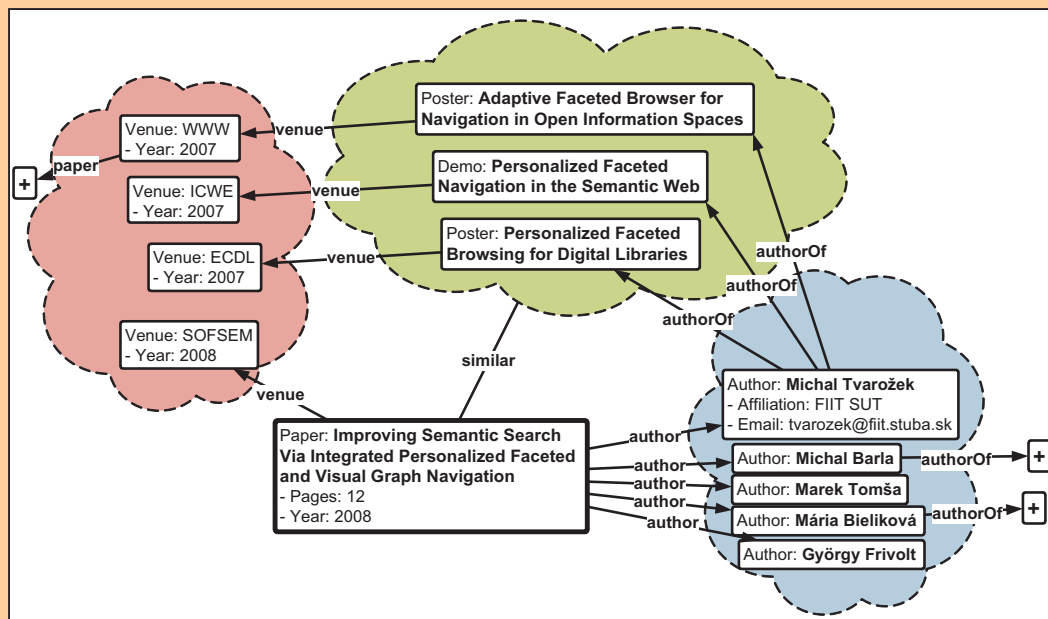
- Bottom-up hierarchical clustering and visualization
- Spring and gravity force based layouting of graphs (relation visualization)
- Cluster annotation (size, type, cluster complexity via labels, tooltips, font size, icons or shapes)
- Multiple instance type support (images, papers, ...)
- Personalization and social networks evaluation (node selection, background color)



## (3) Horizontal Visual Navigation in Instance Details



### Basic principles

- Long-term, short-term and in-session user characteristics
- Individual users, user groups and global statistics; user similarity and social networks
- Keyword-based search in instances, facets, restrictions
- View-based search for further query refinement
- Content-based search (QBE) by selecting positive samples
- Collaborative search via recommendation and annotation of instances, metadata navigation and user contribution