Introduction

Motivation
• Humans lack perception when faced with large amounts of data
• Knowledge Discovery and Data Mining techniques are useful but complex
• Personalisation and User Modelling have potential
• Challenge: Use implicit and explicit user modelling to balance subjective expert perspectives to aid users’ exploration

Objectives & Goals
• Model a user’s intent as he interactively explores a knowledge space
• Reconcile interactions with constant updates to his model
• User to become aware of new films

State of the Art
• Personalisation
• SARA (Semantic Attribute Reconciliation Architecture)
  • Semantic Attributes
    • discrete characteristics of a domain encoded by experts
    • allow making semantically meaningful queries across heterogeneous information sources

Design and Implementation

Film Domain Exploration Client

Architecture:
- STAGE/UI
  - Films
  - Posters
  - Poster Loader
- User Modelling Component
  - Reasoning Engine
- SARA Communication Module
  - SARA

Film Domain Exploration Services

Visualisation Techniques

Empowering Exploration

Select initial focus film

Application populates stage with film posters

User explores and rates (likes, dislikes) films

User Model is created as films are gathered

Semantic Attributes
• Popular Grossing across World
• Award Winner
• Popular Grossing across World to Budget Ratio
• Popularity Rating

Technologies
• Java
• Tomcat
• XML
• Flash
• Flex
• ActionScript3

Evaluation

User trials
• Phase 1: Users explore to find films they like which is supported by expert knowledge and user modelling
• Phase 2: Examples of what the application modelled are shown to users and their opinions are evaluated

Conclusion

• Expertise helps to guide users in their exploration
• Exploration along axes that a user is not necessarily aware of based on subjective expert users definitions is beneficial

Future Work

• Increase number of axes and variety of semantic attributes
• Expose explicit modelling and show how films are related

M.Sc. in Computer Science
(Networks and Distributed Systems)