MyMedia
Dynamic Personalization of Multimedia
November 2007

Consortium:
EMIC, BT, BBC, Telin, Univ. Hildesheim, Tech. Univ. of Eindhoven, Microgénesis
<table>
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<tr>
<th>Participant organisation name</th>
<th>Part. short name</th>
<th>Country</th>
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<tr>
<td>European Microsoft Innovation Center</td>
<td>EMIC</td>
<td>Germany</td>
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<td>British Telecommunications plc</td>
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<td>British Broadcasting Corporation</td>
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<td>University of Hildesheim</td>
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<td>Telematica Instituut (Telin)</td>
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<td>Technical University of Eindhoven</td>
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<td>Microgénesis</td>
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Problem Statement

• “Crisis of Choice”, the problem of information overload
• More and more content becomes available.
• The need to increase the level of relevant content over the “noise” will continue to grow
• How do you find what you care about?
• Information and education lost in the noise
Today’s Efforts

- Recommenders mostly applied to retail trade
- Single purpose algorithms
- Complex TV channel guides
- Poor search experiences on community generated content sites – lack of metadata
- Education and information content on the sidelines
MyMedia Vision

• To research and develop software technologies that impact the end-to-end ecosystem of multimedia content creation, delivery, and consumption by enabling dynamic, highly personalized, easy-to-use experiences that puts the content most relevant to the individual end user first
The Central Experience for the User

- Commercial Content
- Public Domain Content
- User Created Content
- Dynamic Personalization Of Multimedia Through Recommender Systems
- Advertisers
- Media Centric Communities
Example

• User cares about scuba diving
• Wants to view interesting content on scuba diving in the Aegean Sea and share with dive club
• Wants to include personal videos shot on last dive trip.
Today

• Very difficult and disjointed experience
• Single purpose algorithm often gives unsatisfactory results
• Assemble links to various web sites
• Links to DVD content for sale
• Email or posting a list on club site
With MyMedia

• Easily assembles specific set of preferences that reflect interest in scuba diving
• Multiple algorithms allows best set of results from diverse inputs
• User creates a virtual channel by sharing preferences and specific recommendations with scuba club
• User created content simply hosted on community site with appropriate metadata to appear in the users virtual channel
• Closes the loop on tagging – tag for the preferences user has set in the system
• “Mavens” drive user growth and diversity of experience across interests, cultures, and languages
Ecosystem View

Multiple Content Catalogs

- Content Metadata Enrichment
- User Preference Clustering
- Multi-algorithm Hybrid Recommendation Engine

Recommender Web Services

- Recommendation Results
- Linked to content distribution
- Highly relevant ads
- Preferences sharing
- Anonymization and privacy control
- Preferences visualization and editing
- Behavior recording and abstraction
- Abstracted behavior adjusts preferences

Advertisers

Social Networks

Service Side

Content Distribution

Client Side
Multiple Content Catalogs

Content Metadata
Enrichment

User Preference Clustering
Multi-algorithm Hybrid Recommendation Engine

Recommendation Results
Linked to content distribution
Highly relevant ads

Advertisers

BT, BBC, MG

BBC, BT, Telin

EMIC, UH, Telin

TU/e, EMIC

Client Side

Service Side

Content Distribution

Social Networks

Ecosystem View
Outcomes

- Scenarios, Use Cases, Usability
- Preference Model
- Trust/Privacy Model
- Open Dynamic Personalization Framework
  - Architecture
  - Core system
  - Trust/Privacy technology
  - Preferences technology
  - Recommender Algorithms Library
  - Catalog Plug-in Protocol
- Multimedia Social Networking
  - Preference and Recommendation Sharing
- Content Metadata Enhancements
  - Metadata Tools
  - Techniques
  - Schema
  - Standardization
- Field Trial Results
  - Big step toward exploitation
Expected Impact

• Impacts people’s daily life
  – Give users more control over the choices they have for multimedia content
  – Shared media experiences through social networking
  – Dissemination of education and information

• Enable stronger and more connected business models

• Ongoing research platform

• Model for exploitation

• Research leadership opportunities
Summary

• Solving
  – Crisis of choice
  – Connecting people in media centric communities

• Delivering
  – Dynamic Personalization Framework
  – Algorithm library designed to work with framework
  – Researched, implemented and user tested trust/privacy and preferences models and technology as part of framework
  – Content Enrichment techniques and tools
  – User validation through lab study and field trials
  – More relevant content that people care about

• Impacting
  – People’s daily life
  – The dynamics of social networks through powerful socially shared media experiences
  – Business models for multimedia
  – Dissemination of education and information content
  – Distribution of content through multiple means by aggregating to a single user experience