Mobile Social Software for Cultural Heritage: A Reference Model

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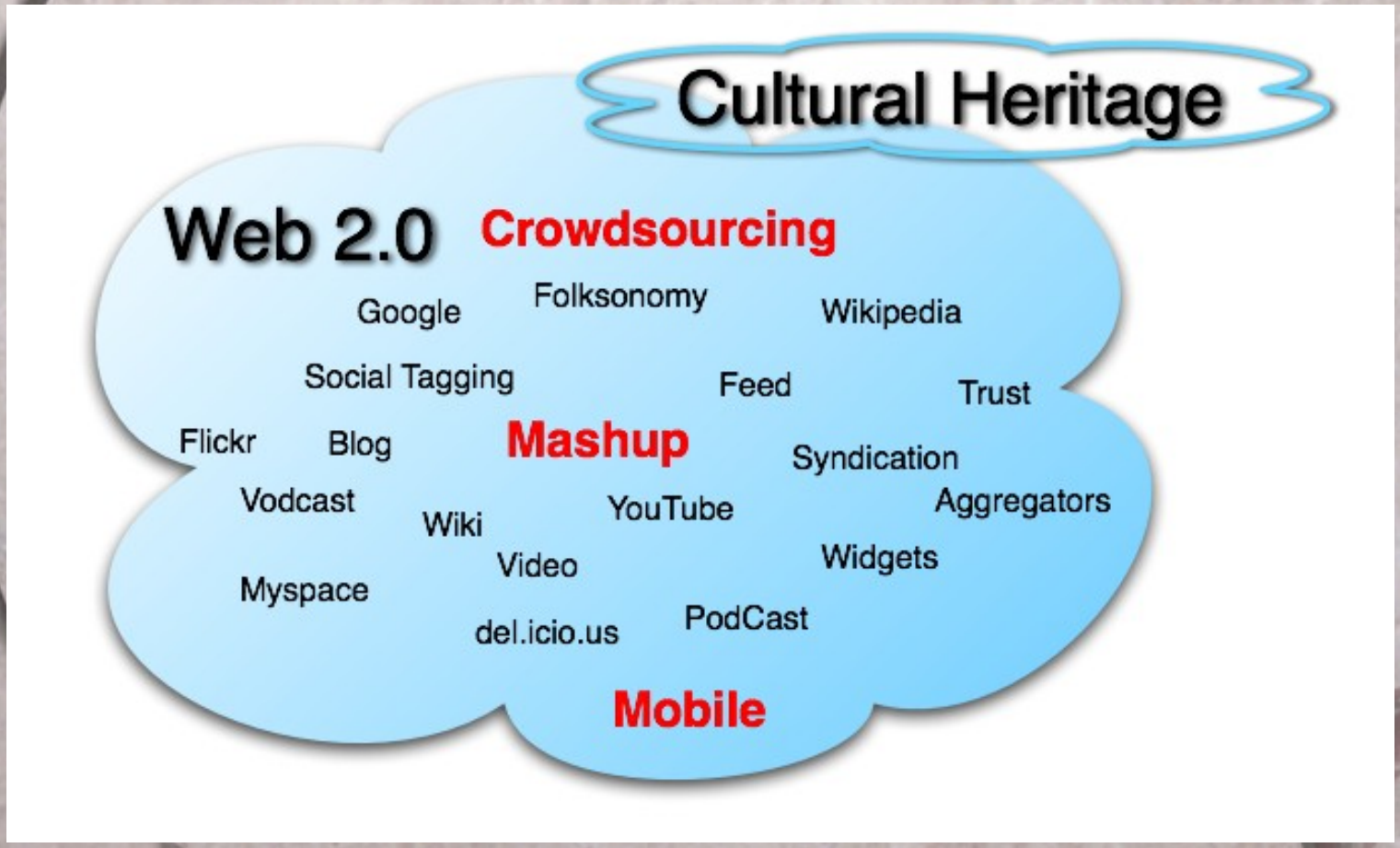
Background

- e-Dvara Project
  - a web platform for Indian cultural heritage content management
  - financed by FIRB (Italian Fund for Basic Research)
- Our Project:
  - 3 years project started in November 2007
  - Preliminary work
  - Reference Model for developing Mobile Social Software for Cultural Heritage Systems
  - m-Dvara 2.0 implementation

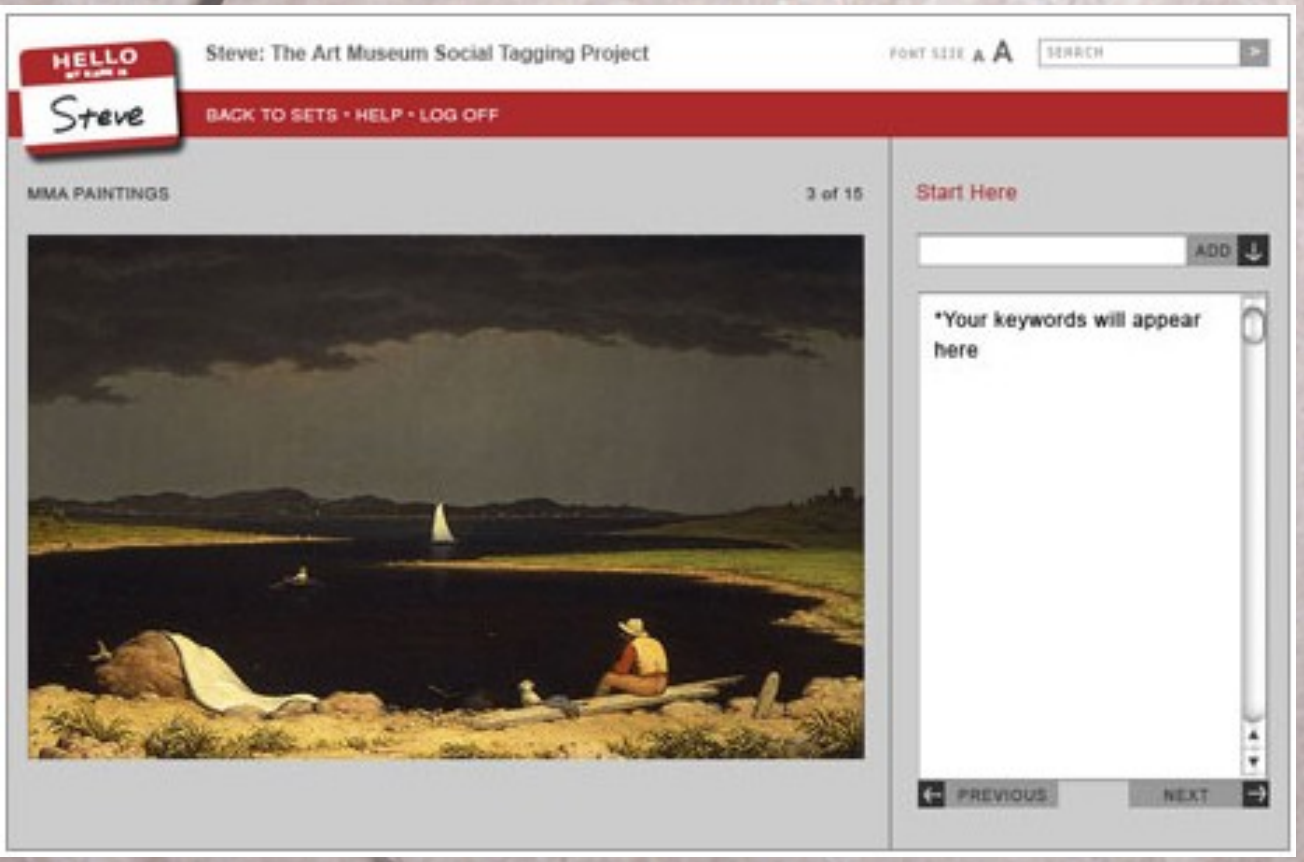
Agenda

- Introduction
- Related Work
- Our Reference Model for Cultural Heritage
  - Description
  - Scenarios
- Open Problems
- Conclusions and Future Work

Introduction

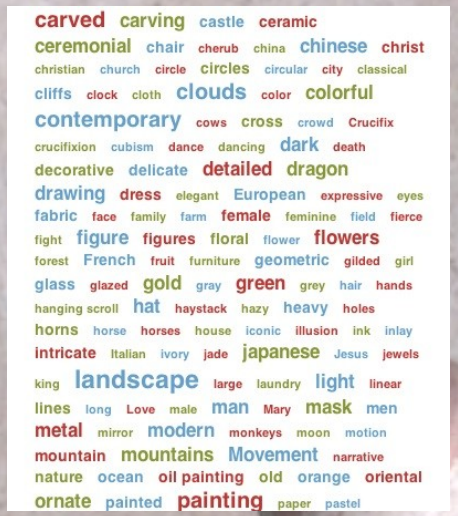


Related Work: Web 2.0 applications examples



- Social Tagging

  Steve.museum



Related Work: Web 2.0 applications examples

- Community Multimedia Sharing
  - Brooklyn Museum
    - Blog
    - MySpace.com
    - Flickr.com
    - Facebook
    - YouTube

Related Work: Web 2.0 applications examples

- Virtual Worlds
  - SecondLife
  - Ad hoc 3D environments

Related Work: Web 2.0 applications examples

MoMAudio

- Mobile Guides
  - MoMA Audio (http://www.moma.org)
    - On-site
    - Web

Related Work: Analysis and Limits

- Pros:
  - Large research interest
    - Management support
    - Better visitor experience
    - Communication, sharing and collaboration among visitors
- Contra:
  - Professional curators remain the content authority
  - User role in content production is marginal
  - Fragmentation of services, no general vision

Related Work: Analysis and Limits

- Needs:
  - User as the main content creator
  - Fully Web 2.0 approach
  - A reference model

Reference Model: Research Questions

- Can the crowd become an effective and reliable content producer for Cultural Heritage?
- How can users be motivated to participate?
- Can we achieve these goals by means of appropriate Web 2.0 and Mobile 2.0 tools already existing?

Reference Model: Description

- Reference Model of Collaboration and Participation in Cultural Heritage
  - Mashup model for a cultural heritage system
  - Reuse & Mix of Web 2.0 / Mobile 2.0 applications
- Minimum implementation
- “Social Web” Oriented Design
- Anytime and Anywhere Access

Reference Model: Functionalities

- Live Upload
- Live Tagging
- Evalutation and Rating
- Social Tour
- Social Guides
- M-Teach
- Wiki
- 3D collaborative environment
- Personal Profile and Social Network
- Moblog
- …

Reference Model: Application Context

- Location
  - On-site
    - es: in the museum, in an archeological site, …
  - Off-site
    - elsewhere
- Technology
  - Mobile devices (pda, smartphone …)
  - Desktop
  - Laptop and Notebook

On Site Scenario

- **LIVE UPLOAD**
- Description: to let users capture contents at the point of inspiration and upload it in real-time
- Suitable web 2.0 applications to integrate:
  - Video: YouTube Mobile (m.youtube.com)
  - Picture: Flickr (m.flickr.com)
  - Short Text:
    - Jaiku (m.jaiku.com)
    - Twitter (m.twitter.com)
  - …

On Site Scenario

- **SOCIAL TOURS**
- Description: to suggest ideal tour to tourists
  - custom tour (activities, profile)
  - dynamic tour (suggested by community)
  - contextual tour (specific topic)
- Suitable web 2.0 applications to integrate:
  - MoBe (www.mobe.it)
    - context-aware mobile applications
  - Google Mobile - My Location (www.google.com/gmm)
  - …

Off site with mobile device Scenario

- **MOBLOG**
- Description: to publish blog entries directly on the web from a mobile phone or other mobile devices
- Suitable web 2.0 applications to integrate:
  - MoBlog:UK (moblog.co.uk) similar
  - YouTube Mobile (m.youtube.com)
  - Flickr (m.flickr.com)
  - Jaiku (m.jaiku.com) or Twitter (m.twitter.com)
  - …

Open Problems

- Realizing Aggregation
  - Selection of services to integrate
  - Data management
  - Data Portability (standard for interchange data)
    - how transfer data between applications
    - how keep up a unique user profile through apps
    - user identification policies

Open Problems

- User participation and content creation
  - Involvement
  - Quality
- External Service Dependency
  - What would happen if integrated services stopped to exist?
- Copyright and Legislation

Conclusion and Future Work

- Analysis of the state of the art
- Proposal of Reference Model for Cultural Heritage sector:
  - New pattern of user participation in cultural heritage
    - using already existing and populated services
    - user as real producer of cultural content
  - New scenarios involving Web 2.0 and Mobile 2.0
- Implementation: m-Dvara 2.0

Contact Informations

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