

Museum of the Future – Research analysis

Problems (current situation)

1. Non-interactive museum
 - Only watching artwork
 - (Almost) no interaction between visitors
2. Web 2.0 Transition
 - User becoming producer
3. Description being too short / insufficient
 - Often only short description below artwork
4. Simple AR interfaces
 - No real AR UI's with integration for linked data, etc.
5. Museum experience limited to museum location
 - Experience often ends when leaving museum
 - No (easy) way of looking further into seen matter / doing further research at home
6. Generic museum experience
 - Most museum experiences are generic and non individualized
7. Complex museum routes

Solutions (possibilities)

Interactive museum

- What
 - Visitors can **augment** artworks
 - Adding notes
 - Answering questions
 - Drawing figures & lines
 - User interaction with other visitors
- Solves
 - Non-interactive museum experiences
 - Visitors usually can only watch the artwork
 - School kids have to fill in paper questionnaires, ...
 - Not really learning (➔ get source!)
 - User being only the consumer of media
 - (transition to being a producer ➔ Web 2.0)
- How
 - Adding notes, questions to interface
 - ...

Linked information access

- What

- Using **semantic databases** to show users **linked data**
 - Semantic databases (as DBPedia)
 - Museum specific digitalized artwork databases
- Solves
 - The usually short / insufficient description below the artwork
- How
 - Artworks act as anchorpoints (connected to a semantic wiki)
 - User can make queries
 - Examples
 - 'Who are these persons on painting'
 - 'Tell me about the painter'
 - Adding relevant extra information
 - Videos
 - 'How do you do restaurations'

Explorative AR interface

- What
 - Offering an **intuitive** and **explorative** UI
 - with integration of available data (from semantic database, ...)
- Solves
 - Current lacking AR user interfaces for applications like this (get source!)
- How
 - Interface encourages user to view additional information
 - Simplistic UI at first
 - Small icons etc.
 - Expands to several relevant information sources / features

Community-driven visitor guidance

- What
 - Visitors with different kinds of **expertise** can **add information** to artworks
- Solves
 - //
- How
 - Adding notes, ... (see Interactive Museum experience)
 - Linking it to semantic database

Extending experience beyond museum visit

- What
 - Enable users to **bookmark** artwork, notes, ... to view them later at home
 - Look up more information about something you've seen
- Solves
 - Visitors forgetting what they've seen the minute they walk out of the museum

- How
 - Snapshotting a particular artwork
 - With notes or state of system (when snapshot was made) added to metadata
 - Synchronising with online platform
 - Connecting to personal cloud
 - Uploading it to web service
 - ...

User Context

- What
 - **Personalize** experience by allowing user to input preferences
- Solves
 - Generic, non-individualized museum experiences
- How
 - Specify what user likes (or doesn't like)
 - 'I like paintings'
 - 'I don't like sculptures'
 - Personalizing museum route based on preferences (out of scope for thesis)

Museum Navigation (out of scope of this thesis)

- What
 - System can **guide** visitor to specific locations in museum
- Solves
 - Complex / illogical routes visitors often have to follow
 - Finding specific artwork quickly
- How
 - Showing holographic arrows indicating the route
 - Context aware system
 - It could ask 'Do you want to see other paintings of this artist'