USER-DRIVEN USABILITY ASSESSMENT OF WEB MAPS

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PRESENTATION OUTLINES

1. Do we need another usability research methodology?
   Results of usability research practice analysis

2. User-driven usability assessment methodology
   Principles, research process, possibilities

3. How it works?
   Web application to perform user-driven usability research

4. Future plans
Main questions
Usability research practice in cartography - what information about users needs we get? Do we know what our users want and how to implement that?

Main aims
Improve the process how users are involved in web maps development process. Create usability research methodology to analyse what kind of functionality and GUI users expects from different types of web maps.

Expected results
Usability research process based on participatory design principles. Tools to perform user-driven usability research and analyse trends of users expectations.
ANALYSIS OF USABILITY RESEARCH PRACTICE IN WEB CARTOGRAPHY
Main analysis criteria:
Research objectives, Research orientation, Usability assessment method, Results application possibilities for users needs identifications, map creators, researchers

According results of performed analysis 4 main usability research types were distinguished:
1. Research of concrete functions/tools usability quality
2. Research of maps usability for concrete use cases
3. Research of specialized maps usability quality
4. Comparative usability research of similar web maps

Research types and enviroment are different but methodology is similar - analysis of user interaction with already prepared web map and tools
Program driven usability research approach

Usability quality guidelines based on maps we assess.
Why do we need one more usability research methodology?

# To get information about functions and GUI needs directly from user
# To put user as the main source of usability requirements for web maps
  # To analyse different users need for different types of web maps
# To form guidelines for web maps creation based on users expectations
USER-DRIVEN USABILITY ASSESSMENT METHODOLOGY
The essence of a **user-driven usability assessment process** – provide to the user a freedom to define needed functions, convenient layout, menus and GUI style of web map for the choosed/defined use case.

- # Select or define new functions. Choose main and additional functions
- # Select or choose float layout
- # Select menus, place functions to the desire menu place
- # Style GUI: elements, colors, etc. Define background map type and style
User-driven usability research approach

Usability quality guidelines based on users needs.
CartoUsably - web application to implement user-driven usability research

Pick a map layout
Pick layout you think are most suitable for your [variable - map use case] map:

- Basic: two columns layout
- Basic: two rows layout
- Two columns and one top row layout
- Two columns and one bottom row layout
- Fluid layout

Design your map layout
Below is your web map application layout you chose. First of all, click on the layout element where you want to place background map.

Choose background map for your map application
Research results of user-driven usability assessment would provide a possibility to determine the following:
1. How the user sees optimal user’s interface for the implementation of different tasks.
2. How the user applies his usability knowledge for map development and what is possible source of this knowledge.
3. What is the connection between user’s characteristics and the complexity of the developed interface.
4. Do the users have a formed one GUI image.
5. Possibilities to personalize maps functionality and GUI for different users groups.
FUTURE WORKS AND RESEARCH POSSIBILITIES
User-driven usability assessment methodology development process contains of 4 main stages:

1. The reasoning of methodology development necessity
2. Forming the theoretical and practical base
3. Development of web based research application
4. Perform case study
Thank You! Your questions?

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