The role of cartographic competences optimizing the creation of Internet maps

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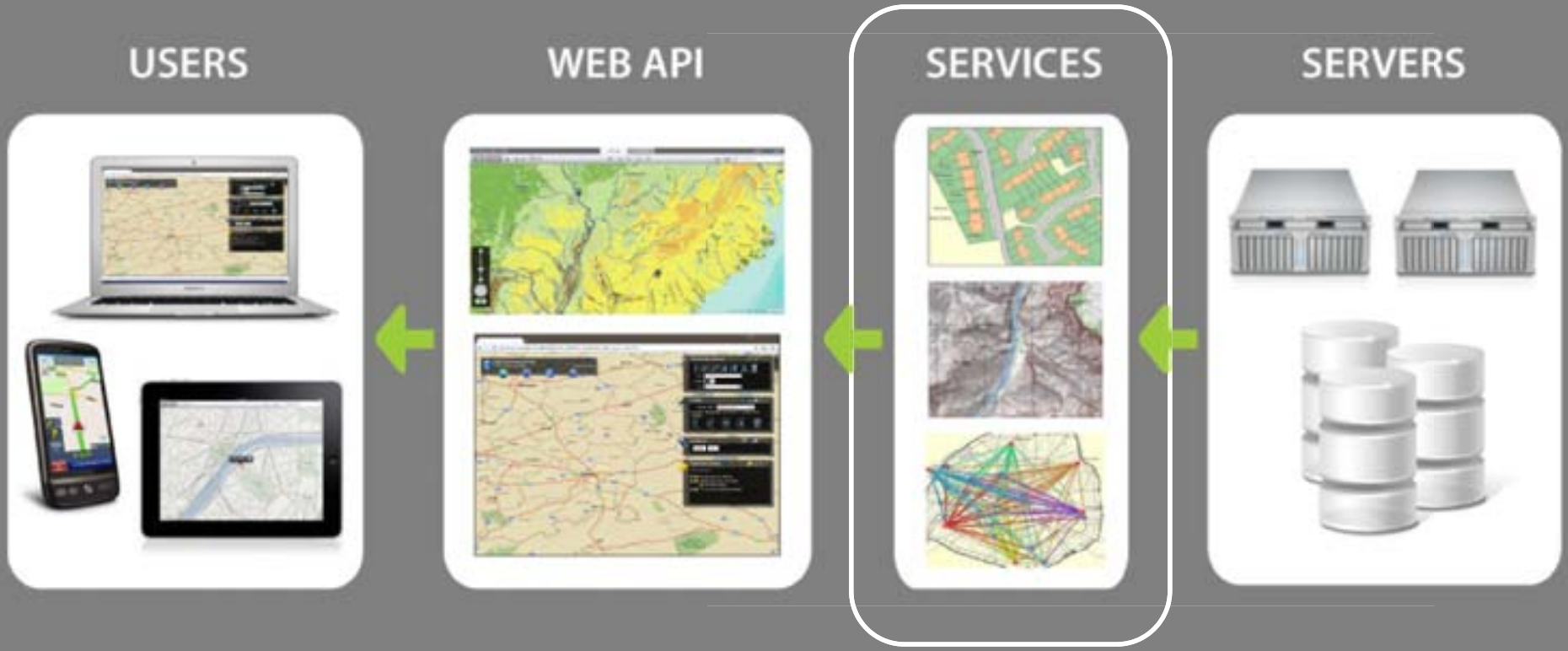
Presentation outlines

1. New challenges in cartographic competences
2. Research, development and optimization levels of Internet maps
3. Specialization of cartographic competences creating Internet maps
4. Expression possibilities for cartographic competences

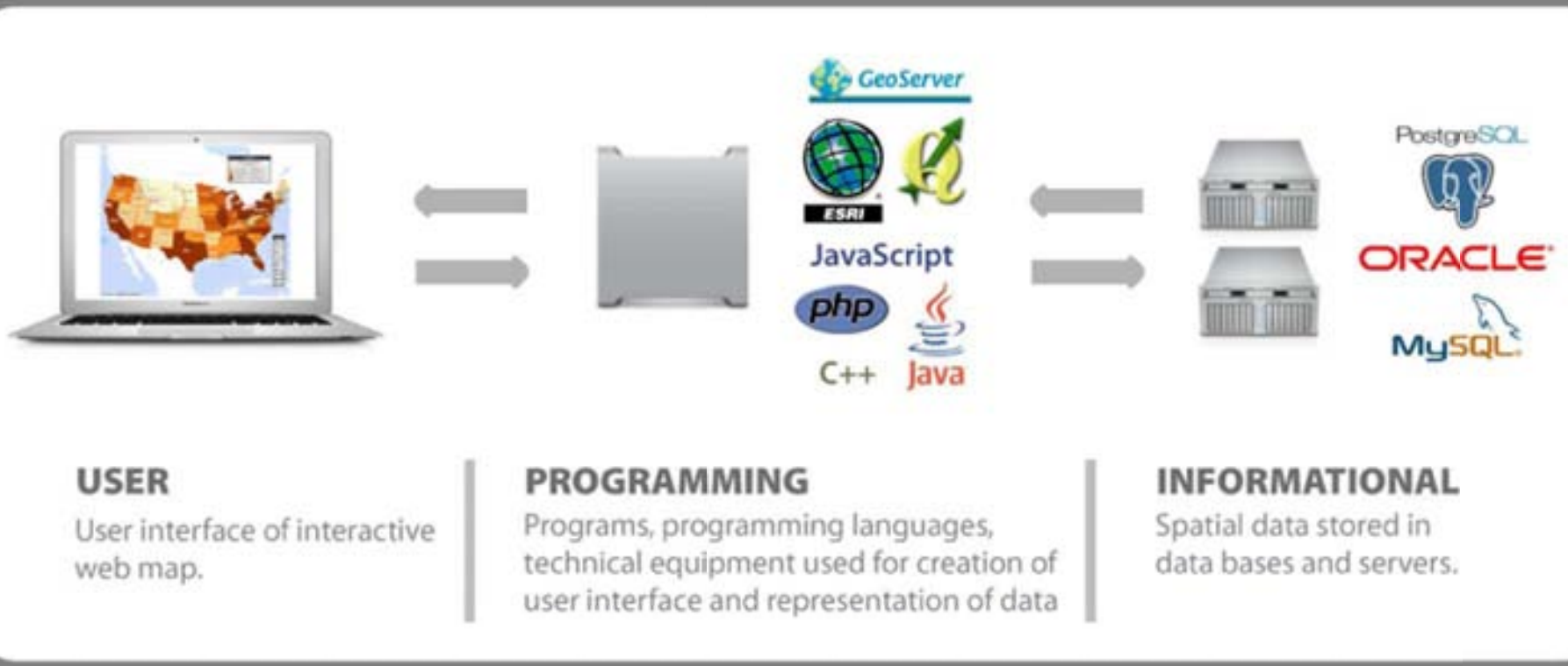
Technology challenges for cartography of XXI century

- Technologies change the essential forms of maps
- Technologies change the communication processes between user and map
- Technologies change the ways of maps using – new experiences for users
- Technologies change the ways of maps applying – new possibilities for cartographers

Cartographical expression in the Internet maps workflow?



Research and optimization levels of Internet maps



Cartographical optimization field

Cartographic competences implementation

- Optimized maps services preparation for Internet maps application
- Quality research and assessment of Internet maps interfaces

Cartographic competences creating optimized map services

Cartographic competences importance

Classical cartographic competences creating optimized Internet map services

- Maps design: symbolization, colours, texts, main composition...
- Semantic quality of maps: creating meaningful relations between map elements and real world elements.
- Data quality: data structure meaningfulness, objects topology, annotations propriety...
- Informational load optimum: maps graphical elements rendering quality, positions effectiveness...
- Mathematical basis of maps








USGS
Viewer

Specific cartographic competences creating optimized Internet map services

- Map performance: light symbolization, web safe colours, avoidance of graphical elements overloading.
- Multiscalability: optimal generalizations at different scale levels, zoom function implementation.
- Data and Internet map interface functionality adjustment
- Data as layers structure implementation
- Texts placement optimization

Interface functionality of Internet map must describe possibilities of user, not the map itself.

Cartographic competences in Internet maps researches

Traditional research techniques

- **Monitoring**
  User's ability to manage the map. Map usability
- **Examination**
  User's ability to receive necessary information by managing the map
- **Feedback registration**
  Drawbacks of map usage
- **Experiment**
  Quality of map system operation

Cartographic competences in Internet maps researches

New research techniques

- Conversion
  Quality of communication between user and map interface elements

- Qualimetry
  Quality of map functionality

Main goals of Internet maps researches

- Optimize workflow and expenditure of Internet map creation processes
- Ensure quality control of Internet map requirement implementation
- Increase usability quality and provide new experiences of Internet maps
- Ensure the application of effective functionality in order to ensure quality communication

Thank You!

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