**Map Plasticity**

**Why?**
- User interface plasticity [01,02]: concept from HCI research, defined as "a property of adaptation to different contexts (device properties, means of interaction, physical environment)
- Map plasticity: capability of a map-based system to support different contexts of use while preserving usability and functionality of the map

**What?**
- Environment model describes general aspects of context of use plus representation of world
- Interactors model defines interactions that are available for specific, concrete instances of a map
- Platform model encapsulates physical characteristics and resources of target platform
- Concrete/physical map contains raw spatial data (e.g. spatial database)
- Abstract map model describes actual content of map independent of how it is presented and how the user interacts with it

**How? (model)***
- User task model formally describes goals and activities of the user
- System task model describes how tasks can be realised by map-based system
- Environment model describes general aspects of context of use plus representation of world
- Interactors model defines interactions that are available for specific, concrete instances of a map
- Abstract map model describes actual content of map independent of how it is presented and how the user interacts with it
- Concrete/physical map contains raw spatial data (e.g. spatial database)

**How? (info. flow)**
- User perceives concrete map, forms plan of action, carries it out by interacting with concrete map
- Result of actions performed on abstract map need to trigger the corresponding manipulation of the corresponding entities in the spatial data repository
- Specific interaction with concrete map needs to be translated to actions on abstract map

**So?**
- Realising map plasticity could greatly reduce effort to create usable maps for different contexts and facilitate intelligent geovisualisations [04]
- UI plasticity can serve as template and integrate existing approaches for map interaction (e.g. interaction primitives [03])
- Further research needed to fully specify all sub-models, to create a prototypical implementation and to evaluate it
- Map plasticity opens new opportunities for reasoning about various aspects of map interaction

**Refs.**