Distributed GML Management with SVG Tools

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OUTLINE

- Project OneMap
- Gateway
- GML Editor
- Clearinghouse
- Demo
- Remarks

Project OneMap

- Open/free source
- Open/free content
- Open managment
- Open standards/formats

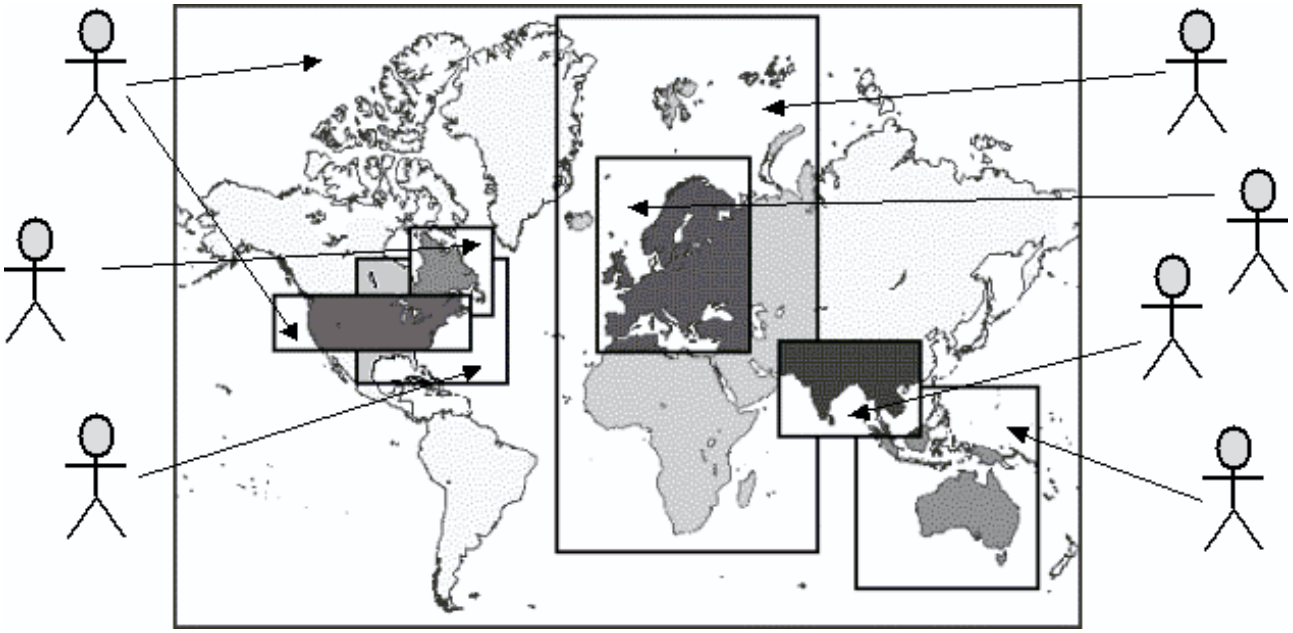
OneMap Objectives

- Provide public access to free-of-charge geodata with global, consistent coverage of high detail by
  - Building a large, global map, rich with feature types and detail
  - Implementing a scalable, redundant and distributed architecture, both for storage and processing
  - Compiling the map incrementally and uncoordinated by many submissions
  - Combining efforts from several contributing parties
- Offer a testbed and focalpoint for further development of methods and tools needed for reaching the primary goal
- Offer an environment for education and training in the construction, maintainance, management and use of the GeoWeb
- Have fun ☺

...piece of cake, eh?

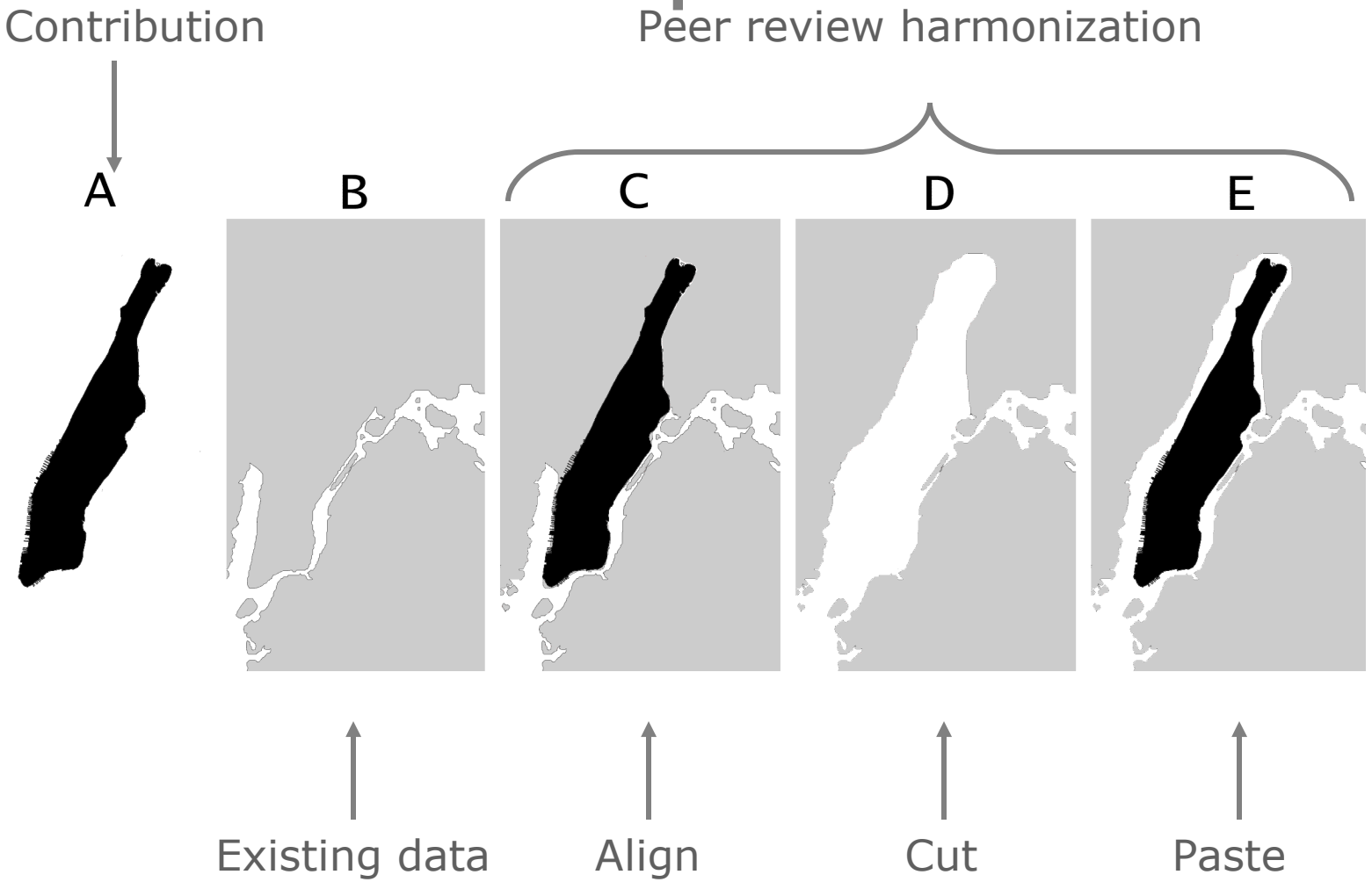
Incremental Map Construction - I

Submissions will be harmonized and accepted/rejected in peer review processes.



The Feature Catalog will be dynamically constructed and maintained...also by peer review processes.

Incremental Map Construction – II



GML

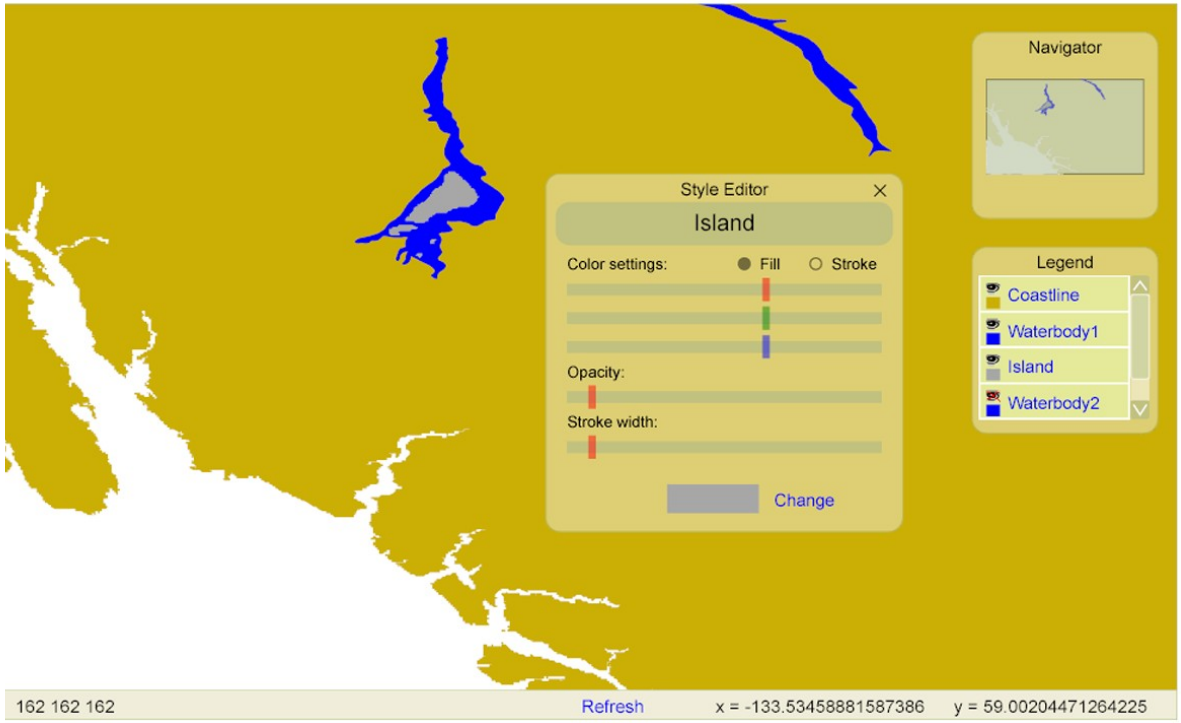
- OpenGIS Consortium (OGC)
- Metastandard
- Need to define your own application specific profiles and/or extensions
- Project OneMap uses GML extensively, from storage level to presentation level

WFS

- OpenGIS Consortium (OGC)
- Web Feature Service
- Web Service protocol for quering and retrieval of geodata
- NOT maps as images, but as vector/attribute data
- Used (or planned to use) as the main interface for querying, retrieval and updating in OneMap

OneMap Gateway

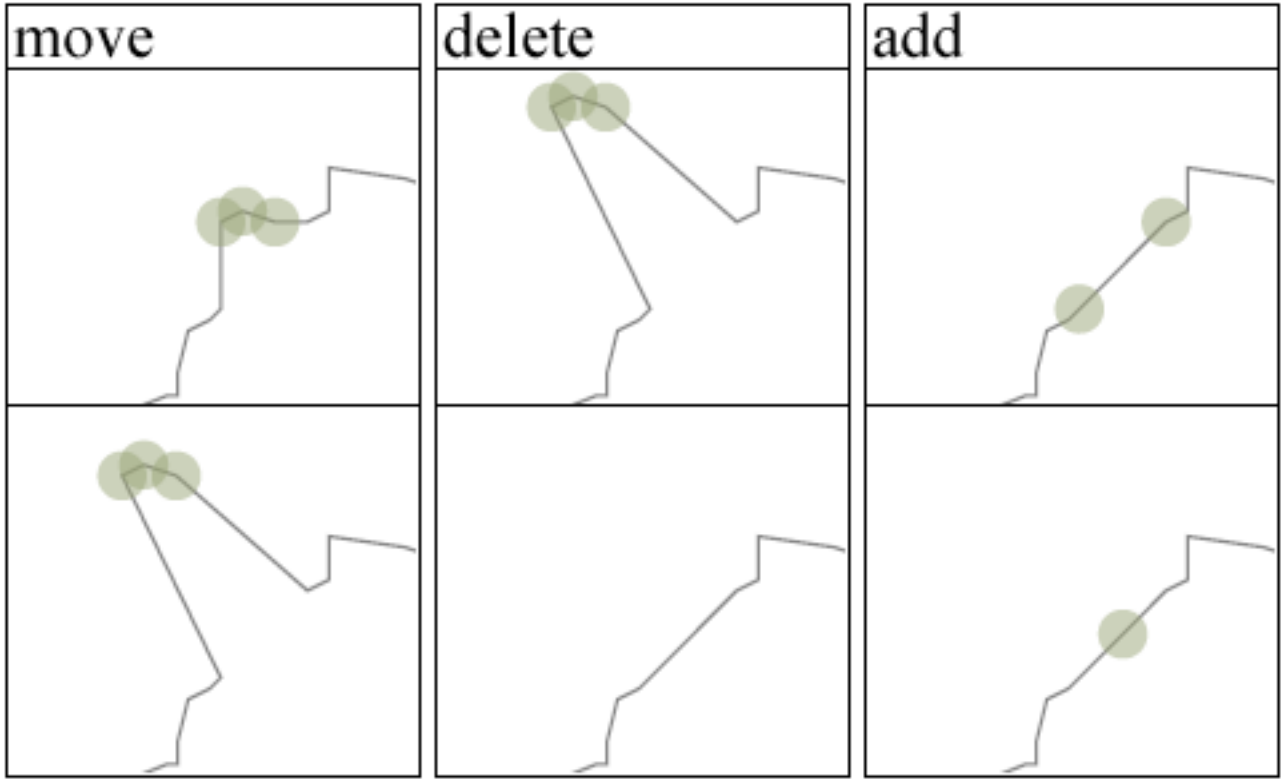
- GML viewer: Browser base SVG client
- XML architecture



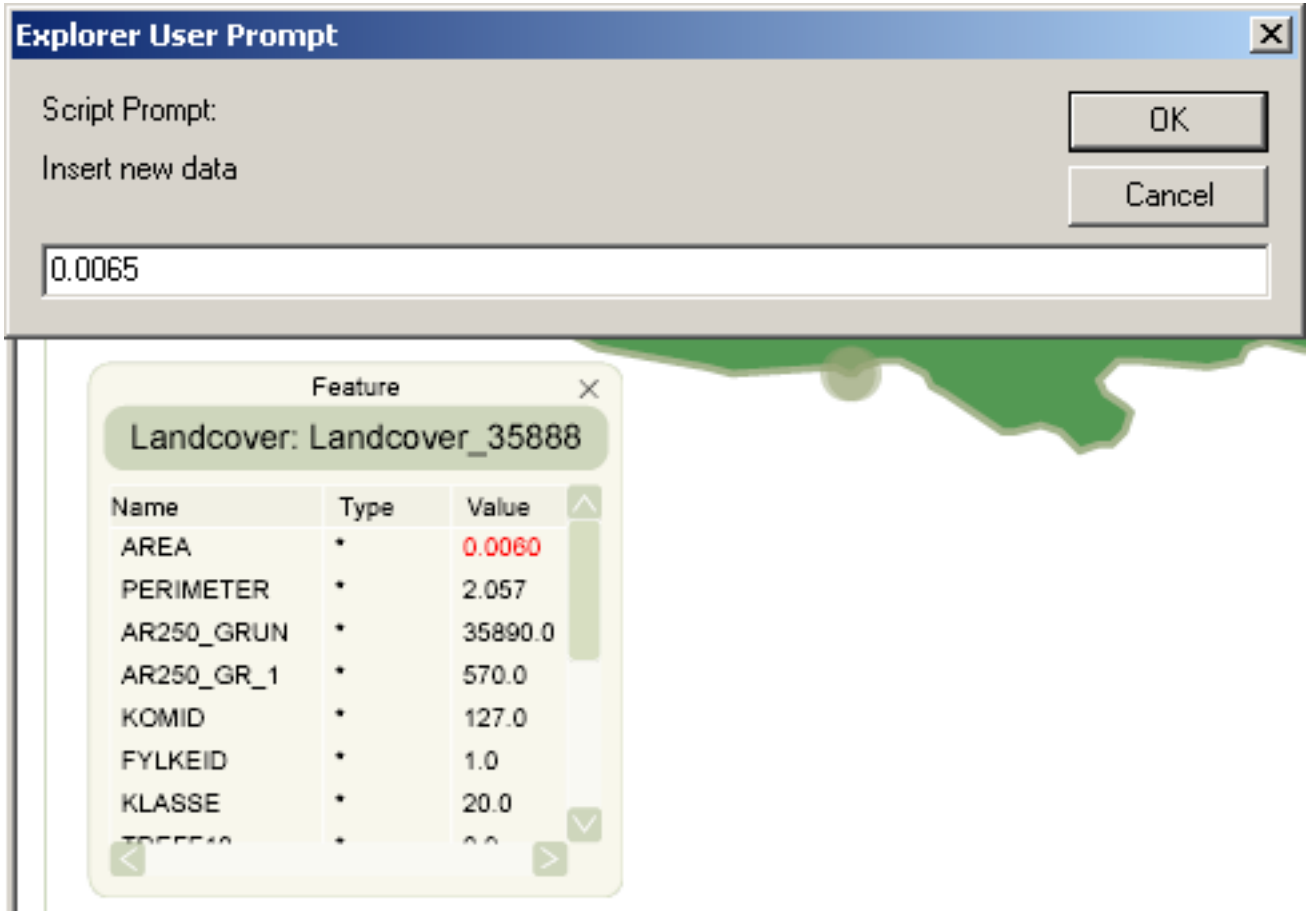
GML Editor

- Architecture
- Move, delete, add point(s)
- Edit properties
- Layer management
- History
- Navigation
- Resizing
- Zoom/pan

Geometry Editing



Properties Editing

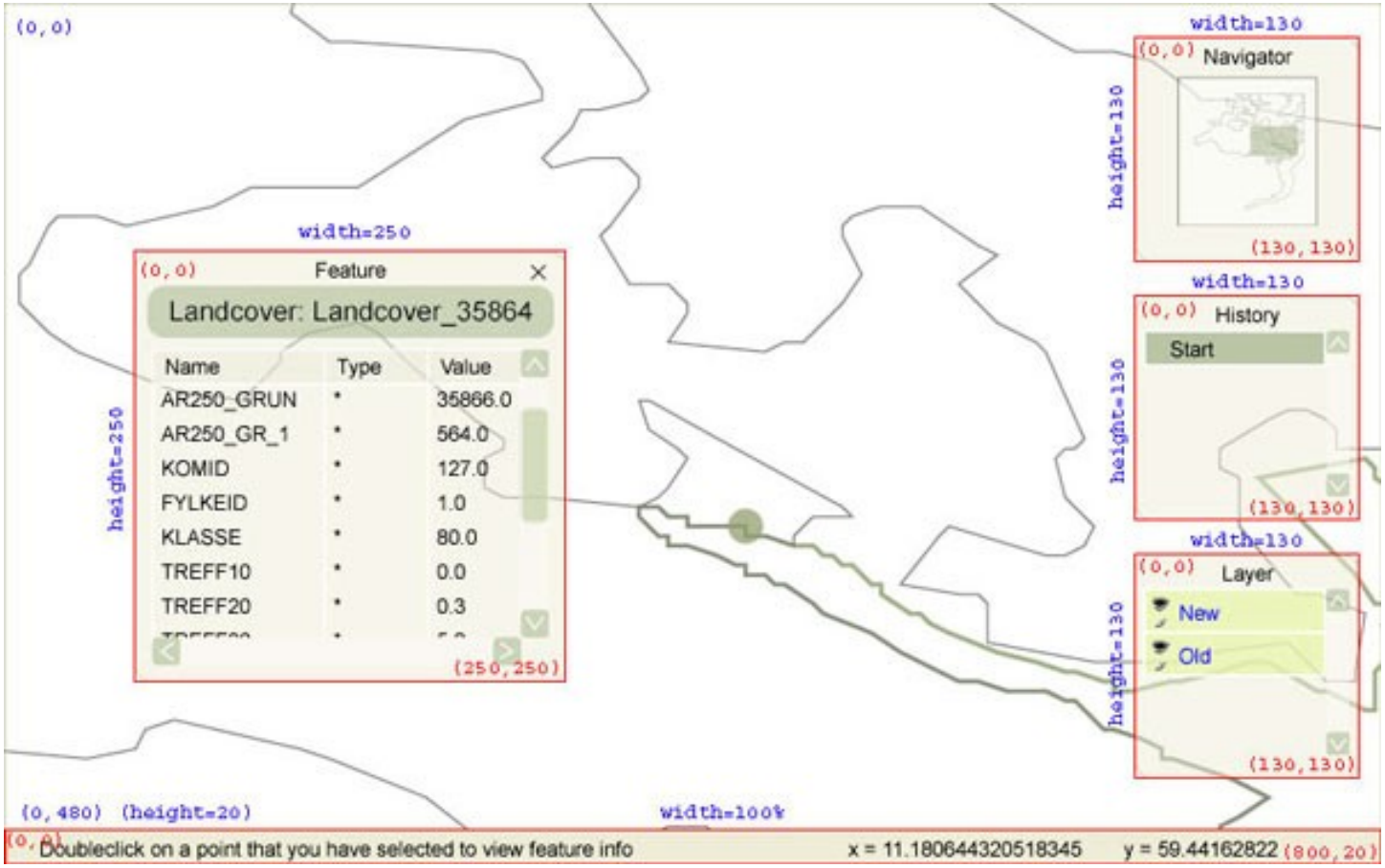


Layer Management

History and Navigation

Resizing

Window Management



OneMap Clearinghouse

- Submission of new data
- Modifications of existing data
- Peer review based
- Review process by online editing of integration maps
- Demo

Final Remarks

- The development of the GML Editor has proved that lightweight client side browsers and editors may very well be implemented with the combination of SVG plug-ins and scripting.
- The open nature of this programming approach makes it easy to learn, borrow and modify from a wide variety of existing applications.
- An XML based development environment makes it possible to choose from a large number of low cost (or free) and high quality tools.
- The main bulk of the implementation has been carried out by a team of students, in short time, with no or little prior knowledge of SVG, digital mapping or even XML technologies, but with a solid foundation in traditional computer science and programming in general.

DO YOU…

- Have some free geodata?
- Have some free, open software?
- Have some ideas?
- Have some students in need of interesting topics for their projects and thesises?
- Have a spare server or two?
- Want to have some fun?

Then, join the OneMap community!

www.onemap.org