PhD research
Variable-scale geo-information

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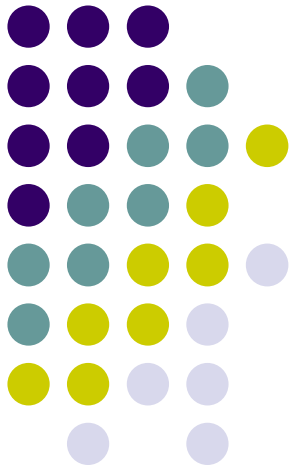
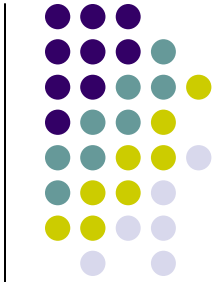


Introduction



- Introduction
- Motivation
- Goals
- Methods
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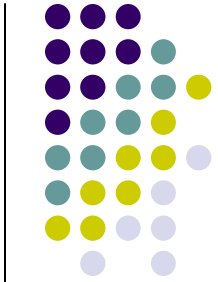
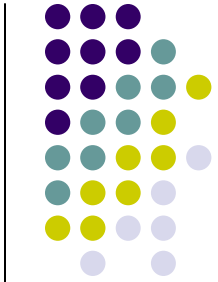
Motivation



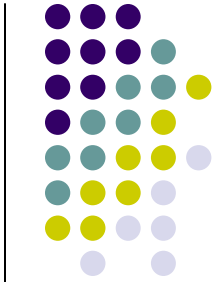
- Variable-scale geo-information
  - Vector based
  - Multiple ‘outlets’
  - Non-predefined levels
  - Dynamic
- tGAP structures
  - Currently implemented, but limited
- Master thesis: prototype implementation

Goals (1)



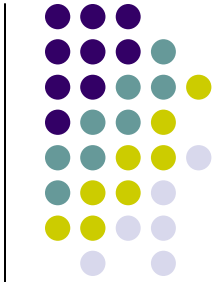
- Focus: server-side / geo-DBMS
- tGAP: dynamic structure
  - Add, edit, delete on-the-fly (consistent data)
- More advanced ‘build’ methods
  - Collapse of objects, constraints, …
- Task profiles
  - At least: support

Goals (2)



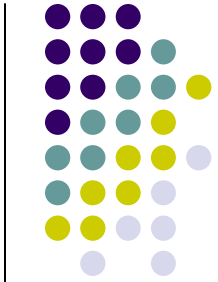
- Formalization of semantics of data structures
  - Input / Output / Pre- & post-conditions
- More formally capture objects
  - Instead of representations, like faces, edges and nodes, ‘real’ objects
- Semantics of geographic objects
  - Classes, collapse of objects, class hierarchies

Methods



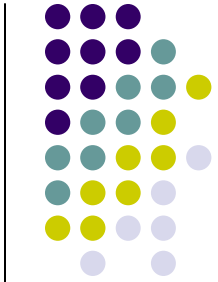
- Prototype implementation:
  - Oracle / PostGIS DBMS
  - 1Spatial Radius Topology / Clarity
  - C / Python
- Formalized description
  - E.g. based on propositional logic
- Study: ontologies, formal semantics, neural networks

Contribution



- Server side (Geo-DBMS) → Variable-scale support
- Networks → Progressive vector data transfer (first coarse, later on refine)
- User → Task profiles

Wrapping up



- Questions / discussion?
  - Now
  - Or later:
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