

Ten Things

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I have three offices and the keys to prove it.

Charge by MFG

- To give a perspective on “the ten most significant discoveries in GIScience”.
- My quick reply was that I wasn’t sure there were any discoveries...

GIScience

- We do basic research, but much of what we do can be viewed as “translational” science
- In medicine the term is “from the bench to the bedside” or “from mouse to man”
- Ours might be “from map to machine”
 - Overlay (light tables)

I'll Use Two Categories

- Perhaps the single biggest thing that we have discovered is “GIScience” itself... but that's kind of nebulous, so I'll turn to abstract categories to make things concrete

1. Abstraction/Theory

Abstraction/Theory

- **Transformational “view”**
 - (Waldo Tobler, map “algebra”)
- **Topological concepts**
 - (initially enabled topological data model, error checking, but then Max et al. relations)
- **Hierarchical data structures**
 - (interleaved binary addresses!)
- **Ontologies**

Operations

- **Geocoding**

- (from text to coordinates: basis for mashups and Web 2.17, aside from affine, the most common transform?)

- **Overlay and other map layer manipulations**

- (band sweep, etc., but basic ops have not evolved)

Topic: Spatial Analysis / Statistics

If you're counting, I only fired nine bullets

- NCGIA supported work in 1990s that, with hindsight, was related to cyberinfrastructure (NSF term, not mine) and e-science (CSDM, etc.)
- Despite subsequent good work at UCSB and elsewhere, need stronger engagement with distributed collaboration, simulation and data intensive computing

The End

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