**Whutza Modeling Environment?**

- CASE tools that
  - Abstract away from code (not IDE’s)
  - Edit structure
  - Edit functions and behavior
  - Focus on analysis and design
  - Not derived from formal methods or analysis

- A better definition is needed

**Overview**

- Research Strategy
- Maturity Timeline
- Interesting questions

**Research Strategy**

- Online searches
- Ask braintrust
- Lather, rinse, repeat

- It’s hard to correct unarticulated assumptions
**Research Strategy Hurdles**
- Research done in industry too
- Minimal literature survey in papers
- Few survey papers
- Gazillions of projects
- Bajillions of commercial tools
  - Note: Bajillion >> Gazillion

**Maturity Timeline**
- 70's
  - Mixed in with code tools
- Late 70's
  - First CASE
- 80's
  - Development of basic ideas
  - Multiple views of model
  - Interoperability / Frameworks

**Evolution**
- Code Tools
  - Early CASE
  - Meta-CASE
  - Architecture
  - Interoperability, Infrastructure
- The "CASE"
  - Arcadia
  - CAIS, PCTE
  - Alcoa/Alloy
  - Acme*

**Look, it works**
- Method/Means : System : Implementation
  - Or Method/Means : Techniques : Implementation
  - Discuss system architecture
- Follow the process-du-jour
- Never evaluate user effectiveness
  - Why?
  - Whose job is this? Process/Method designer?
Maturation

- Interoperability: Unsolved
- Refinement: Not addressed
- Configuration Management: Not present

<table>
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<tr>
<th>Basic Research</th>
<th>Concept Formation</th>
<th>Development &amp; Extension</th>
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But …

- Rational is a big company
  - Demand leads to sales
  - Widespread dissatisfaction with tools
  - State of the art: "OO-Frame" + whiteboard

- Maturity phases have bell curves?
- Maturity model doesn’t fit this situation?

Why No More Research?

- Funding dried up
  - Government got bored
  - Heavy early funding was premature
- High barrier to entry
- C, C++
- Evaluation difficult in academic setting

Off Topic: Integration

- Text + pipes
- Relational repository
- Object repository
- CORBA web
**All your base**

Are belong to us