Data

- Many people refer to “dominant”, “prevalent”, or “common” practices
- But there is no data to support such claims
- Set out to conduct a survey and get data
- Goal is requirements engineering, but also some more general SE data
Survey Population

- Web survey
- By invitation only
- Students in Penn State Great Valley School of Graduate Professional Studies
- School is for industrial practitioners
- 1519 invitations
- 194 responses

![Bar Chart]

- Executive
- Architect
- Consultant
- Project manager
- System designer
- Analyst
- Technical specialist
Lifecycle Model

- Maintained popularity of waterfall model
- More among developers than managers
- More in short projects than long ones
- 60% used prototypes, mostly for UI, but half were evolutionary
Requirements Elicitation

- Use cases (related to OO tools and methods)
- Group consensus
Requirements Modeling

- ~37% use specialized SE methodologies
- Rest use OOA or nothing
Formalism

- Requirements are usually informal (e.g. natural language)
- Higher % of informal cases report that results fit user needs and were easy to use
Inspection and Review

- 59% inspect the requirements
- Diverse techniques are used
Results

- Long projects are problematic
- General optimism about meeting needs
Conclusions

- Formal methods are rarely used
- Ad-hoc methods lead to good quality
- Waterfall is still popular
- OO techniques are not dominant
- Industry perception is that most projects (especially short ones) are successful
Discussion

• Is this relevant?

• Many failures attributed to wrong requirements (system works but it's the wrong system)
  – Berry: uncover inconsistent assumptions
  – Gilb: explicitly quantify qualitative requirements

• But requirements are built-in when satisfying a personal itch

• And they are discovered with progress in agile development with user participation