

Initial Project Presentation

**VARIATION OF DEFECTS AND
COMPLEXITY IN MULTIPLE VERSIONS
OF OPEN-SOURCE PROJECTS**

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Background

- ▣ Card and Glass (1990)
 - Design Complexity Model
 - Correlation between Design complexity and Pre Delivery Defects
 - Structural Complexity (FO), Procedural/Cyclomatic complexity and Data Complexity

- ▣ Chidamber and Kemerer (1994)
 - Continue work for Object Oriented Software
 - Coupling between objects (CBO)

About Project

- ▣ Confirming how to predict the number of post delivery defects and be able to predict the maintenance effort.
- ▣ Complexity with version: Increases or Decreases?
- ▣ Defects with version: Increases or Decreases?
- ▣ If complexity increases or decreases what is the effect on No of defects.

Project Plan

1. Install various Metrics Calculating Software
2. Verify the Metrics Software for Correctness.
3. Download different versions of various Open Source Software from Sourceforge.net
4. Collect the appropriate measures for each version in accordance with the Object Oriented equivalent of the Card & Glass work.
5. Analyse the results for correlation between design complexity and reported defects to determine how this relationship changes with version.

Threat to Validity

- ▣ Defects information collected will be Post delivery Defects.
- ▣ Defects reported need to be filtered.
- ▣ Backtracking the Defects is difficult.
- ▣ Skill/Experience of Programmer

Thank You