

A Framework for Describing and Understanding Mining Tools in Software Development

D.M. German, D. Čubranić, and M.-A. Storey
University of Victoria



University
of Victoria

British Columbia
Canada

Introduction

- Software engineering is a collaborative activity → activity *awareness* is important
- Can be provided by mining software repositories
- A variety of mining tools → how to compare?
- Do we mine what is easy to mine and think about the uses for it later?

Proposal

- Develop a framework for describing tools for mining software repositories
- Purpose:
 - Help designers understand and compare tools
 - Assist users assess tools
 - Identify new research areas
- Keep the specific user needs and tasks in the forefront!

The Framework

- Intent
 - Role, time, cognitive support
- Information
 - Change management, program code, defect tracking
 - Informal communication, local history, correlated information
- Infrastructure
 - Requirements, offline/online, storage backend

What Next?

- Applied the framework to three tools:
 - softChange
 - Hipikat
 - Xia/Creole
- We invite researchers to apply it to their tools and give us feedback on their experiences