

Merging OGJ and IGJ

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Abstract

In this presentation I will describe the work which I am undertaking this summer for Alex Potanin, namely the merging of his implementations of Ownership Generic Java and Immutability Generic Java as extensions to Sun's javac compiler.

Introduction: Ownership and immutability

- Ownership enforces encapsulation
- Immutability expresses guarantees about who may change an object, and whether an object may change at all
 - Reference immutability
 - Object immutability
- OGJ and IGJ implement these extensions to the type system, using Java generics to do some of the work for us.

Objectives

- 1 Merge IGJ implementation (against JDK6) into OGJ implementation (against JDK7).
- 2 Test combined implementation, fixing bugs introduced in merging process.
- 3 Fix and extend implementation to cover cases not previously supported.
- 4 Implement Java collections with immutability and ownership (building on earlier work by others).