

Xtend

The Xtend project is a proposed open source project under the [Tools Container Project](#).

Background

The first version of Xtend was developed in 2004. At that time it acted as a small functional language used to add functionality to existing class hierarchies through extension methods. It was merely used in the context of code generation and model transformation and shipped as part of the Xpand project at Eclipse. Although Xtend was quite popular in the model-driven community, the language fall short on some important aspects, such as performance and tooling. Also conceptually there were a couple of shortcuts taken which made the language not as widely applicable as wished.

Xtend 2.0 was released in June 2011 as part of the Xtext project. It is based on Xtext and is a complete rewrite of the former Xtend 1. Xtend 2 is incompatible with Xtend 1, but solves the same kind of problems. Conceptually Version 2 is much more generic, which makes it a good fit for many different kinds of programming.

Scope

The scope of Xtend is to offer a modern and concise alternative to Java implementations. The project contains anything from the definition and implementation of the language to all kinds of libraries and tools supporting development with Xtend, including powerful Eclipse-based IDE-support.

Description

The language Xtend has a strong focus on leveraging all the good parts of Java, including seamless integration with the huge amount of Java frameworks and libraries out there. Experienced Java developers can get started with Xtend in almost no time, since everything is so familiar. The editor integrates tightly with Eclipse JDT to ensure a seamless integration in the IDE as well.

Xtend inherits the good parts of Java and improves on that. For instance, you can discard a lot of boilerplate. Reasonable defaults, type inference, and some other powerful features make the code more readable. Closures and operator overloading are supported as well. With Xtend you can use such beyond-Java features without learning a whole new language.

Xtend is not meant to be a replacement for Java but serves more as an add-on. When working with Xtend you still write the interfaces, enums, and annotations in Java. There currently is little value in changing the syntax of these concepts, as they are already very compact, well-known, and tooling-wise nicely supported. However, this might change in the future.

Move Plan

CQs

The following CQs are needed for Xtend and Xtext. That is shouldn't be moved but new CQs need to be filed.

CQ	Third-Party Code	License	Use
2993	log4j Version: 1.2.15 (Subset see CQ2555) (PB CQ2555)	Apache License, 2.0	unmodified source & binary
3778	ANTLR Version: 3.0 Runtime (PB CQ1359)	New BSD license	unmodified source & binary
5804	Guava Version: 10.0.1	Apache License, 2.0	unmodified source & binary
5816	Google Guice / Inject Core API Version: 3.0.0 (PB CQ5058)	Apache License, 2.0	unmodified source & binary
5841	atinject (Package javax.inject) Version: 1.0 (PB Orbit CQ3578)	Apache License, 2.0	unmodified source & binary

Committers

The following individuals are proposed as initial committers to the project. All of them are already committers at Eclipse.org

- Dennis Huebner, itemis
- Holger Schill, itemis
- Jan Koehnlein, itemis
- Knut Wannheden, paranor
- Michael Clay, codeworkz
- Moritz Eysholdt, itemis
- Sebastian Zarnekow, itemis
- Sven Efftinge, itemis (proposed project lead)

Infrastructure Changes

Git

A git repository has to be created.

(TBD : It would be good to keep the history from the Xtend project. One way to do this would be to clone the Xtext repository and remove the Xtext artifacts.)

Bugzilla

A bugzilla product "Xtend", classified under "Tools", has to be created.

Website

A module 'www/Xtend' under 'cvs/org.eclipse' has to be created.

Mailinglist

A mailing list 'xtend-dev' should be created.

Community

To support the growth of the community the committers intend to:

- help users and adopters in the mailing list
- encourage people to provide bug reports, feature requests and patches
- encourage adopters to create libraries and frameworks based on Xtend
- write blog posts, articles and give presentations

Initial Contribution

The initial contribution will be a fully working language implementation including very advanced IDE-support. The currently released version is 2.2.

Legal Issues

There are no legal issues. In fact everything is already approved, by the legal team as the code comes from Xtext.

Project Scheduling

The first release after the restructuring is planned for June 2012. It will be version 2.3 and is planned to be released as part of the Juno release train.

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Changes to this Document

Date	Change
15- December-2011	Document created