



Graphiti Creation Review

Planned Review Date April 28, 2010
Communication Channel: Modeling Forum
Project Lead: Michael Wenz



Overview

The goal of Graphiti is to support the fast and easy creation of unified graphical tools, which can graphically display and edit underlying domain models using a tool-defined notation.



Scope

Graphiti provides

- An easy to use and well structured plain Java API for building graphical tools in RCP scenarios

- Documentation and tutorials for doing so

- Optional components beyond the RCP use case to ease e.g. IDE integration

- The ability to use any existing layout algorithms for auto laying out diagrams (GEF laying out integrated as default)



Concepts (1)

Graphiti allows definition of

- Diagram types

- Editors responsible for a diagram type

Functionality is defined by providing Features

- A Feature implements an operation for a domain object and defines in which case the operation is available

- Specialized Features for common user interactions available (add, create, delete ...)



Concepts (2)

An editor is provided by writing a Diagram Type Agent

Defines a diagram type and one or more editors for it

Defines a set of features

Diagram Type Agent

Is triggered by the framework for any user interaction (e.g. moving a shape, using a tool in the palette, etc.)

Modifies domain objects and their graphical representation

The framework reacts to those changes and updates the screen



Concepts (3)

Graphiti offers a flat learning curve

GEF /Dram 2D APIs are hidden

Extensive functionality already implemented within the framework and default implementations

Very little coding necessary for initial editor

Iterative way to build an state-of-the-art graphical editing tool

Common look&feel

Standard look&feel was designed in cooperation with usability specialists

Standard can be changed easily

Option to support different platforms

Rendering engine may be exchanged



Relationship to other Eclipse Projects

EMF

Used to manage the diagram metamodel

Preferred storage for domain model

GMP

Graphiti will be a subproject of the new GMP umbrella project besides GMF

Restructuring is currently happening, see [Bugzilla 304589](#)

GEF/Draw 2D

Used for rendering diagrams

JPA Editor

Uses Graphiti as its underlying graphical framework



Initial Committers (1)

Michael Wenz, SAP AG, Project Lead

Michael holds a diploma in computer science at TU Kaiserslautern (Germany) and works since 1998 for SAP AG within various development infrastructure projects. He started with developing Eclipse-based tools in 2002 and concentrated over the last five years in the area of Eclipse tooling infrastructure and model-driven development. He joined the Graphiti team last year.

Christian Brand, SAP AG

Christian holds a diploma in electrical engineering at TU Kaiserslautern (Germany). Since 1998 he works for SAP AG within various development infrastructure projects. He started with developing Eclipse-based tools in 2001 and concentrated over the last five years in the area of Eclipse tooling infrastructure and model-driven development. He is one of the creators of Graphiti.



Initial Committers (2)

Matthias Gorning, SAP AG

Matthias holds a diploma in computer science at University of Applied Sciences in Wiesbaden (Germany). Since 2001 he works as a Senior Developer for SAP AG within various development infrastructure projects. He started with developing Eclipse-based tools in 2001 and concentrated over the last five years in the area of Eclipse tooling infrastructure and model-driven development. He is one of the creators of Graphiti. Prior to joining SAP AG Matthias worked at Audi AG and Deutsche Bank AG.

Tim Kaiser, SAP AG

Tim works as Eclipse developer at SAP AG since 2004. His focus has been on development infrastructure tooling. Lately, he turned to graphical modeling. He holds a doctorate in mathematics from TU Dresden (Germany).

Jürgen Pasch, SAP AG

Jürgen works as Eclipse developer at SAP AG since 1992. His focus is on developing tools with the MDSD area. Since 2005 works in SAP's modeling infrastructure development team and was involved in several projects in this area. He joined the Graphiti team last year. Jürgen holds a doctorate in computer science from TU Berlin (Germany).



Mentors

Cédric Brun – [Obeo](#)

Bernd Kolb – [SAP AG](#)



Code Contribution and Licensing

Initial code contribution

Will come from SAP AG

Code has been developed over the last 5 years within Graphiti team at SAP AG

Several SAP tools already use the framework today

Licensing

All source code will be released using EPL license



IP Policy

Graphiti will use the parallel IP process

No IP issues expected since all coding is currently owned by
SAP AG



Plan

EclipseCon 2010

Project Presentation

June 2010

First incubator version available

Graphiti aims to participate in the annual Eclipse release train starting 2011



Graphiti Proposal -

<http://www.eclipse.org/proposals/graphiti/>

Modeling Forum -

<http://www.eclipse.org/forums/modeling>

Introductory talk at EclipseCon 2010 –

<http://www.slideshare.net/michaelwenz/short-talk-on-graphiti-at-eclipsecon-2010>

Restructuring of the EMF project (bundling graphical modeling projects) -

https://bugs.eclipse.org/bugs/show_bug.cgi?id=304589