

# Graphical Modeling Framework (GMF)

Creation Review

Richard C. Gronback  
Borland Software Corp.  
April 13, 2005



# What is GMF?

- The Graphical Modeling Framework (GMF) Project provides the underlying components and framework for the generation of design surfaces within Eclipse from domain and diagram models.
  - Intended to bridge GEF & EMF, hence GMF
  - Goal: to deliver exemplary diagramming for Eclipse UML2 Project, while providing general diagram support for any domain model

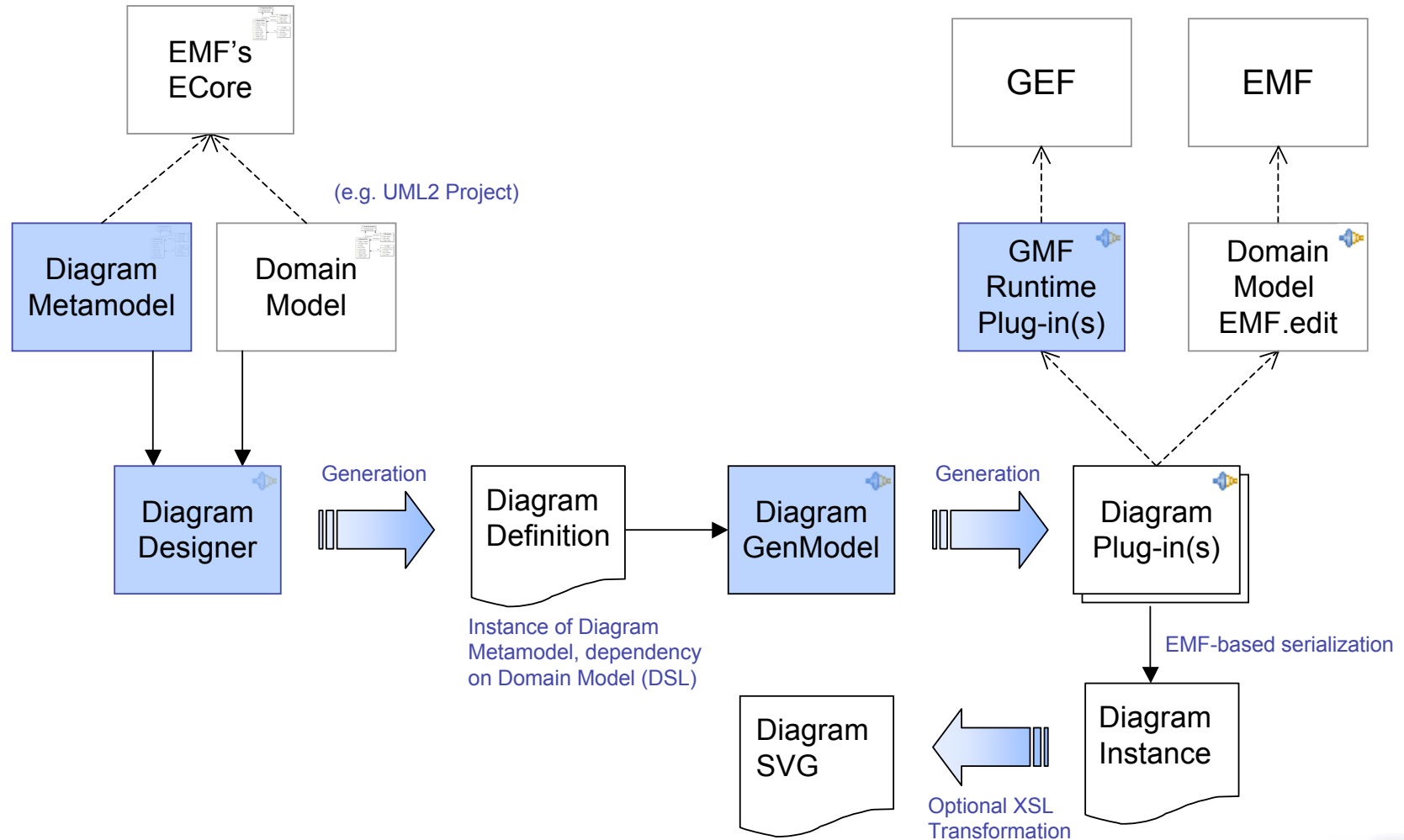
# Why a GMF Project?

- Fills an architectural gap
  - Specifically, the one between EMF & GEF
  - Many bridges have already been handcrafted
- Meets a need
  - Visualization aids in dealing with increased complexity of today's applications
  - Driven by increasing popularity of model-driven development, generative programming, & MDA®
- Complementary to other emerging technologies
  - Domain-Specific Language (DSL) generative design surfaces (i.e. Microsoft's [DSL Toolkit](#))

# GMF Overview

- Main Components
  - Diagramming Infrastructure
    - Eclipse framework for design surfaces (built on GEF)
      - Editor, view, properties, navigator
    - Generic frameworks for constraint, query, validation, etc.
  - Diagram Generator
    - Diagram metamodel, generator model, mapping view
    - Generation framework for diagram elements
      - Node, edge, connector, constraints, etc.
    - Constraint implementation generator
  - Exemplary Tools
    - Diagram definition designer (GMF bootstrap)
    - Diagramming for [Eclipse UML2 Project](#)
    - ECore modeling surface

# GMF Overview



# GMF Proposal Feedback

- No shortage of positive feedback and interest!
- Serendipitous EclipseCon session was well-attended
  - *EMF, GEF and UML2: Ready for a Graphical Modeling Framework (GMF) Project?*
- Newsgroup active with interested parties, proposed committers, and potential code contributions
  - *81 posts since March 16<sup>th</sup>*

# GMF Interest

- Many interested parties, in addition to Borland:
  - Adaptive [www.adaptive.com](http://www.adaptive.com)
  - Anyware Technologies [www.anyware-tech.com](http://www.anyware-tech.com)
  - AT&T Global [www.attglobal.net](http://www.attglobal.net)
  - BEA [www.bea.com](http://www.bea.com)
  - Cognos [www.cognos.com](http://www.cognos.com)
  - DSTC [www.dstc.edu.au/Research/Projects/Pegamento/hugn/](http://www.dstc.edu.au/Research/Projects/Pegamento/hugn/)
  - E-Sim [www.e-sim.co.il](http://www.e-sim.co.il)
  - Evolution [www.evolution.at](http://www.evolution.at)
  - IBM [www.ibm.com](http://www.ibm.com)
  - ILOG [www.ilog.com](http://www.ilog.com)
  - InferData [www.inferdata.com](http://www.inferdata.com)
  - M1 Global [www.m1global.com](http://www.m1global.com)
  - Norwegian University of Science and Technology <http://www.idi.ntnu.no/>
  - Patternset Software [www.patternset.com](http://www.patternset.com)
  - Protos [www.protos.de](http://www.protos.de)
  - Real-Time Innovations [www.rti.com](http://www.rti.com)
  - SnapXT [www.snapxt.com](http://www.snapxt.com)
  - Sybase [www.sybase.com](http://www.sybase.com)
  - University of Nantes [www.univ-nantes.fr/](http://www.univ-nantes.fr/)
  - University of Victoria [www.uvic.ca](http://www.uvic.ca)
  - Vanderbilt University <http://www.dre.vanderbilt.edu/>
  - Versata [www.versata.com](http://www.versata.com)
  - Web Methods [www.webmethods.com](http://www.webmethods.com)
  - Xactium [www.xactium.com](http://www.xactium.com)

# GMF Participation

- **Borland contributors:**
  - Richard Gronback (CT, USA) – proposed Project Lead
  - Artem Tikhomirov (Prague)
  - Max Feldman (Prague)
  - Karl Frank (MA, USA)
  - +4-6 TBDs (Prague & St. Petersburg)
- **IBM**
  - Daniel Leroux currently dealing with legal department
- **CS Group TOPCASED project**
  - David Sciamma (Anyware Technologies)
  - Olivier Prouvost (Anyware Technologies)
  - Agusti Canals (+ others?)
- **Others:**
  - Petter Graff (InferData)
  - Sehyo Chang (AT&T Global)
  - David Zygmunt (M1 Global)
  - Jules White (Vanderbilt University)
  - Jose de Frietas (Patternset)
  - Sean Woodhouse (Versata)
  - Chaur Wu (Independent Consultant)
  - Markus Voelter (OpenArchitectureWare)
  - Hallvard Trættemberg (Norwegian University of Science and Technology)
  - Michael Lawley (DSTC feedback on experience with JANE project)
  - Chris Aniszczyk



# GMF Plan... Next Step

- Validation Phase:
  - Develop initial requirements, architecture, and project plan
  - Several code bases to examine
    - Borland, CS Group TOPCASED, eDiagram EMF-GEF example, Merlin, openArchitectureWare, M1 Global, Eclipse VE project, etc.
    - IBM dealing with legal, but expects contribution in coming weeks
  - Diagram 'metamodel' research
    - UML2 Diagram Interchange Specification?
- GMF kickoff meeting (location TBD)

# Questions?

<http://www.eclipse.org/proposals/eclipse-gmf/index.html>  
<news://news.eclipse.org/eclipse.technology.gmf>