



Software Analytics for MDE Communities

James Williams¹, Nicholas Matragkas¹,
Dimitris Kolovos¹, Yannis Korkontzelos²,
Sofia Annaniadou², Richard Paige¹

¹University of York, ²University of Manchester



Empirical Assessment of MDE in Industry

John Hutchinson, Jon Whittle, Mark Rouncefield

Steinar Kristoffersen

School of Computing and Communications
Lancaster University
+44

j.hutchi
m.rouncefie

Industrial Adoption of Model-Driven Engineering: Are the Tools Really the Problem?

ABSTRACT

This paper presents some empirical research study of Using largely qualitative que investigate and document a r social factors that apparently MDE: specifically, its perce organizational intervention. learned. Whilst, as with al should be interpreted with providing a greater understand

Jon

¹ School of Com

Chalmer

What will it take? A view on adoption of model-based methods in practice

Bran Selic

Received: 28 December 2011 / Revised: 18 May
© Springer-Verlag 2012

Abstract Model-based engineering (ME) as a new and substantively different app development, characterized by higher lev and automation compared to traditional the availability of published verifiable ev significantly boost both developer produc quality in industrial projects, adoption of been surprisingly slow. In this article, we

Abstract.
gineering (M
adoption p
tors as wit
MDE adon

Adopting Model Driven Software Development in Industry – A Case Study at Two Companies

Mirosław Staron

Software Engineering and Management
Department of Applied IT
IT University in Göteborg, Box 8718
SE-402 75 Göteborg, Sweden
miroslaw.staron@ituniv.se

Abstract. Model Driven Software Development (MDD) is a vision of software development where models play a core role as primary development artifacts

MDE OSS Project Analysis

- Several open-source MDE tools
 - Many of them under Eclipse.org
- Publicly-available information sources
 - Source code
 - Forums
 - Bug trackers



- Activity monitoring platform for OSS projects
- Currently developed in the context of an EC co-funded project
 - www.ossmeter.org
- Scope
 - Source code
 - Communication channels (**forums**/newsgroups/ mailing lists)
 - Bug tracking systems

Overview

- Analysed 22 modelling-related Eclipse forums
- Tools and frameworks
 - EMF, GMF, Xtext, Epsilon, M2T, OCL, Graphiti, EMFT, ATL, IncQuery, GMT, UML2, UML2 Tools, Papyrus, MOFScript, Modisco, VIATRA2, UMLX, QVTd, QVTo, MMT and Sirius
- Calculated average number of posts/month from 2005 – 2014 (projected)

**FORUM TRAFFIC \approx ACTIVE
USER COMMUNITY SIZE**

Special cases: EMFT

- EMF Technology
- Forum for several projects including
 - EMF Compare
 - Henshin (GT engine)
 - CDO
 - EMF Client
 - Teneo
 - EMF Forms
 - EMFStore
- Further analysis required to allocate posts to individual projects

Special cases: MMT

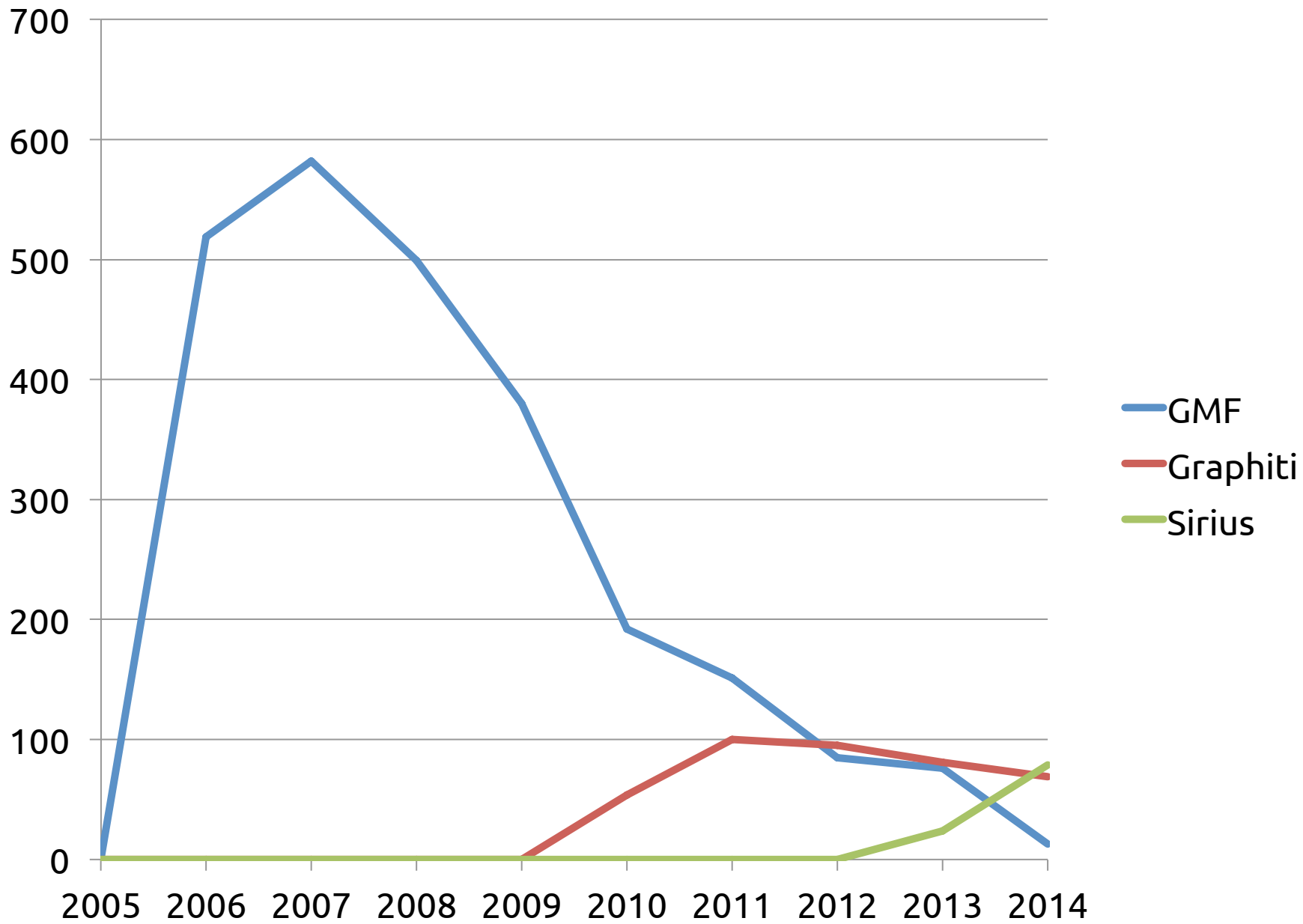
- Forum related to model-to-model transformation languages
- Mostly ATL and QVTo
- Very few messages (139 since 2012)

Special cases: M2T

- Forum related to model-to-text transformation languages
- Mostly Acceleo, Xpand and JET
- Preliminary classification (7831 posts)
 - JET: 998
 - Xpand: 1671
 - Acceleo: 2700
 - Unclassified: 2462 ($\approx 30\%$)
- Further analysis required

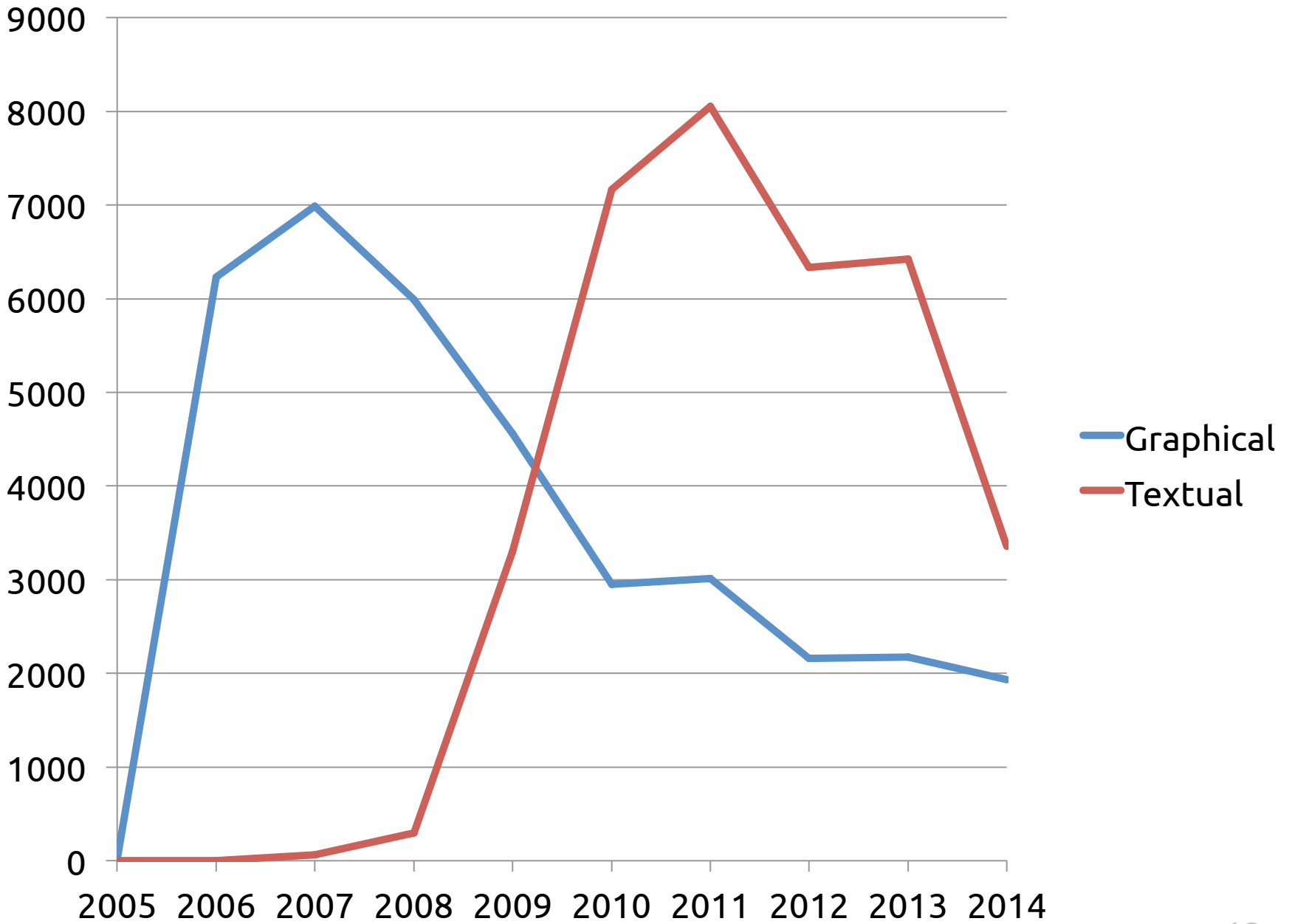
Graphical Modelling Frameworks

- GMF
- Graphiti
- Sirius



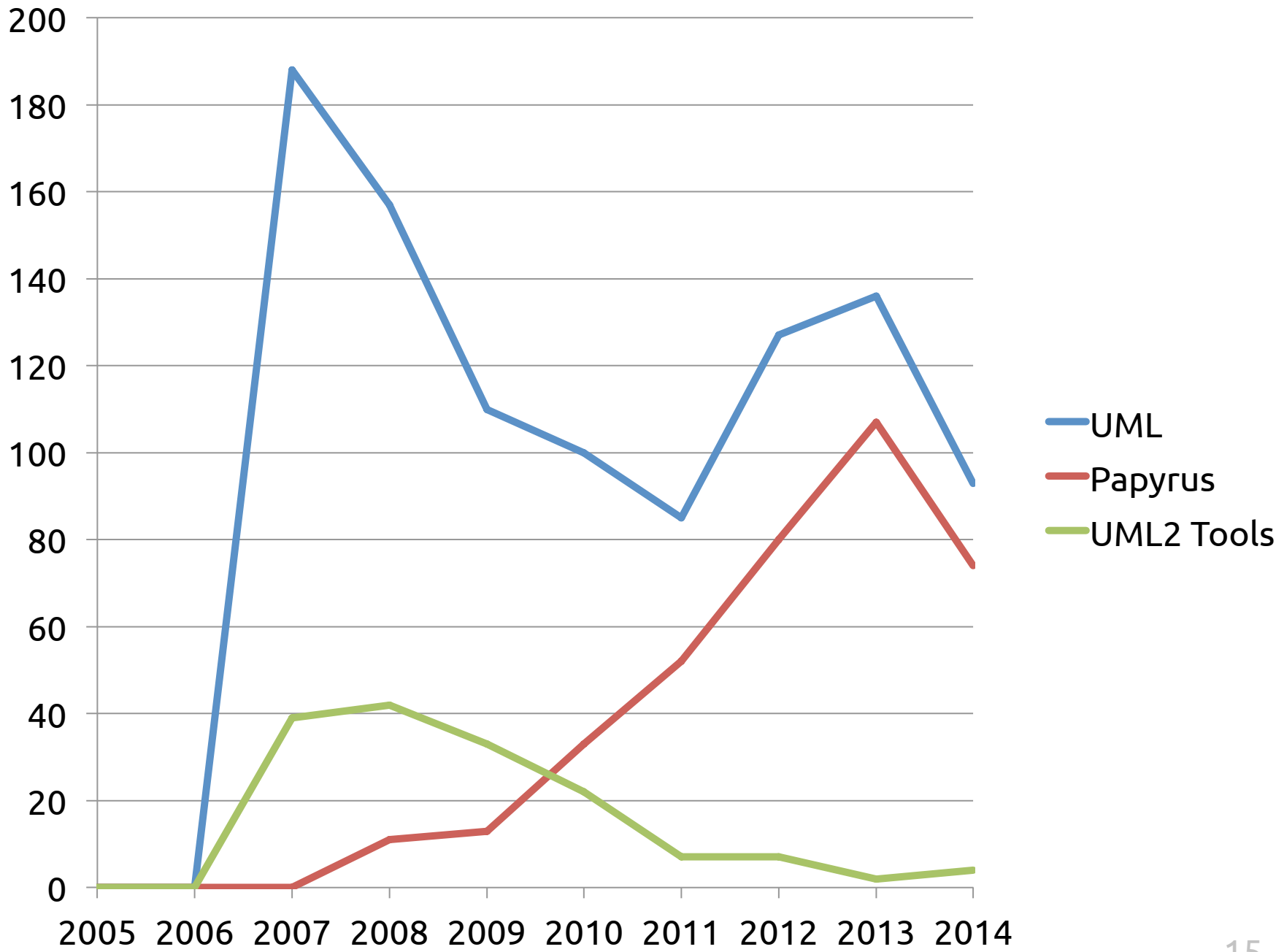
Graphical vs. Textual Modelling

- Graphical: GMF + Graphiti + Sirius
- Textual: Xtext



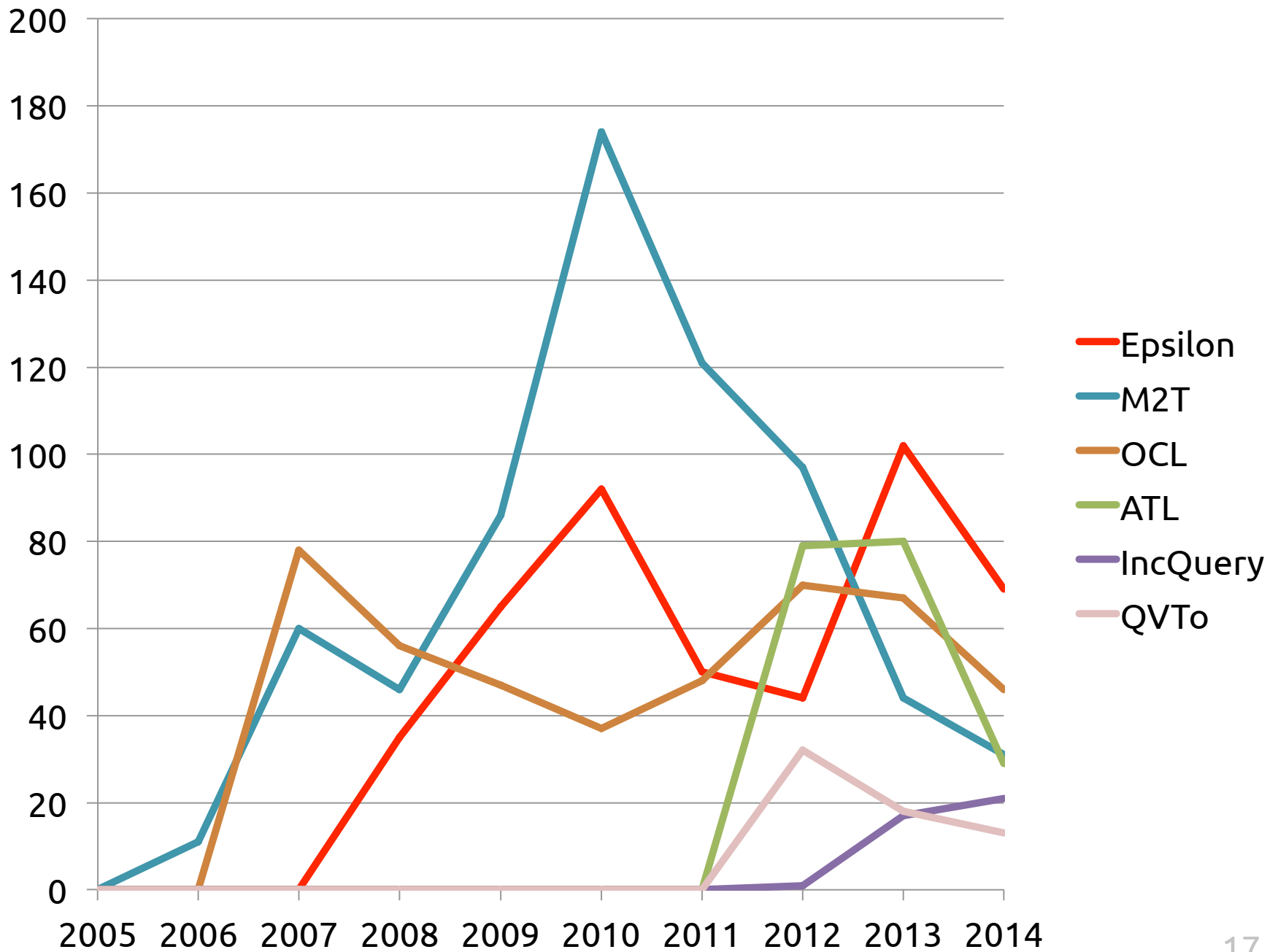
UML in Eclipse

- UML2
- UML2 Tools
- Papyrus

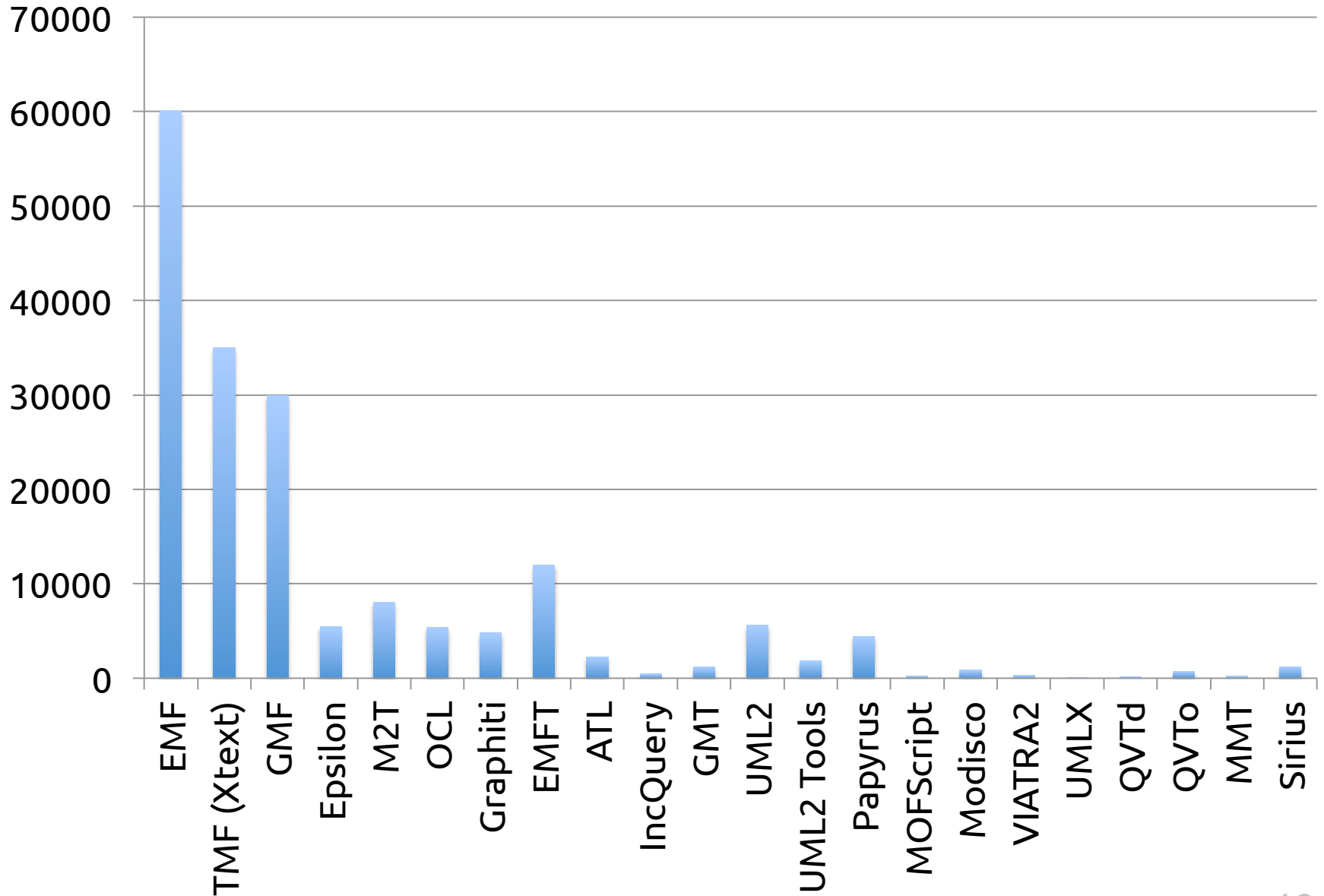


Model Management Languages

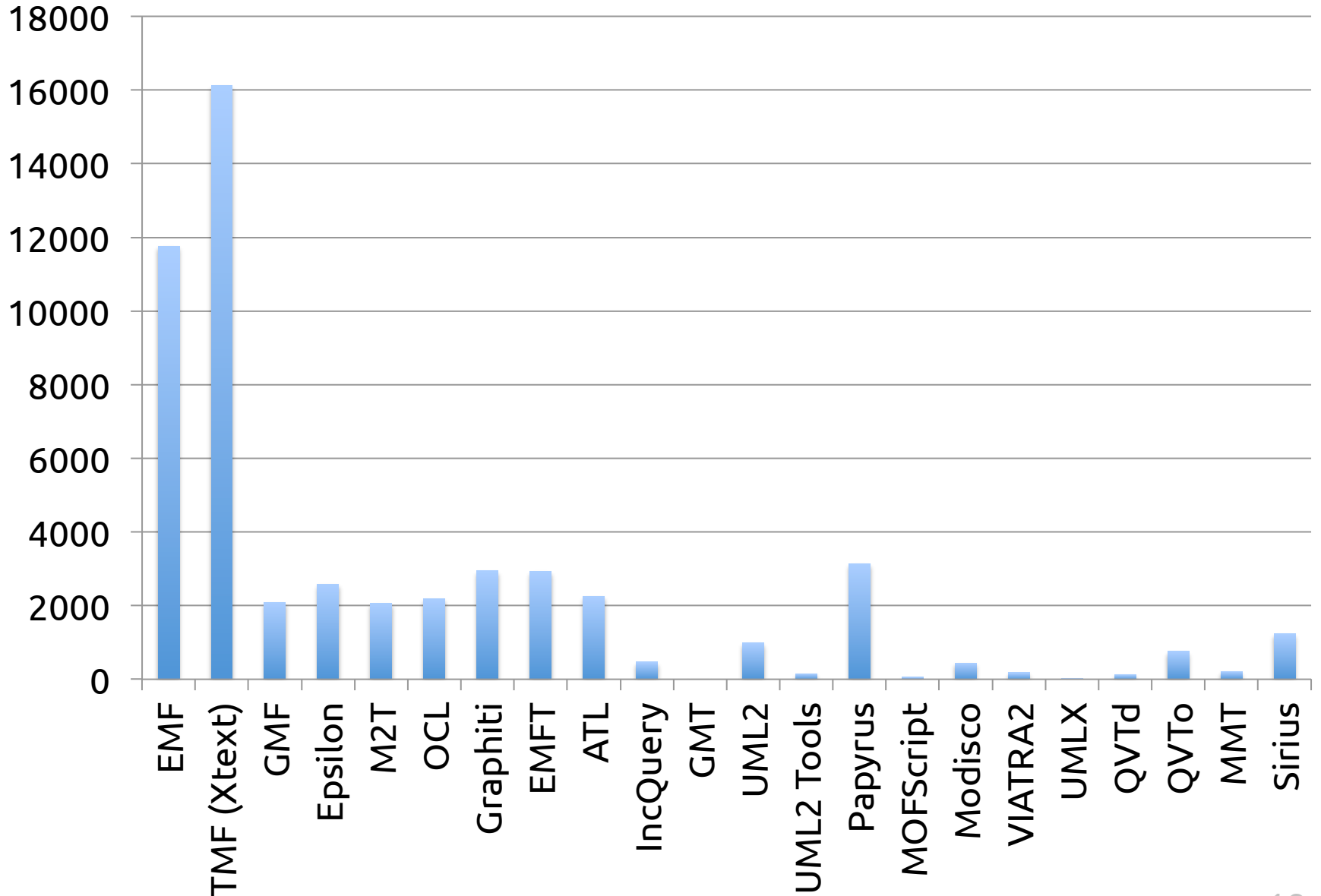
- Forums: ATL, M2T, Epsilon, IncQuery, QVTo, OCL
- Analysed but not included in the graph: UMLX, QVTd, VIATRA2, MOFScript



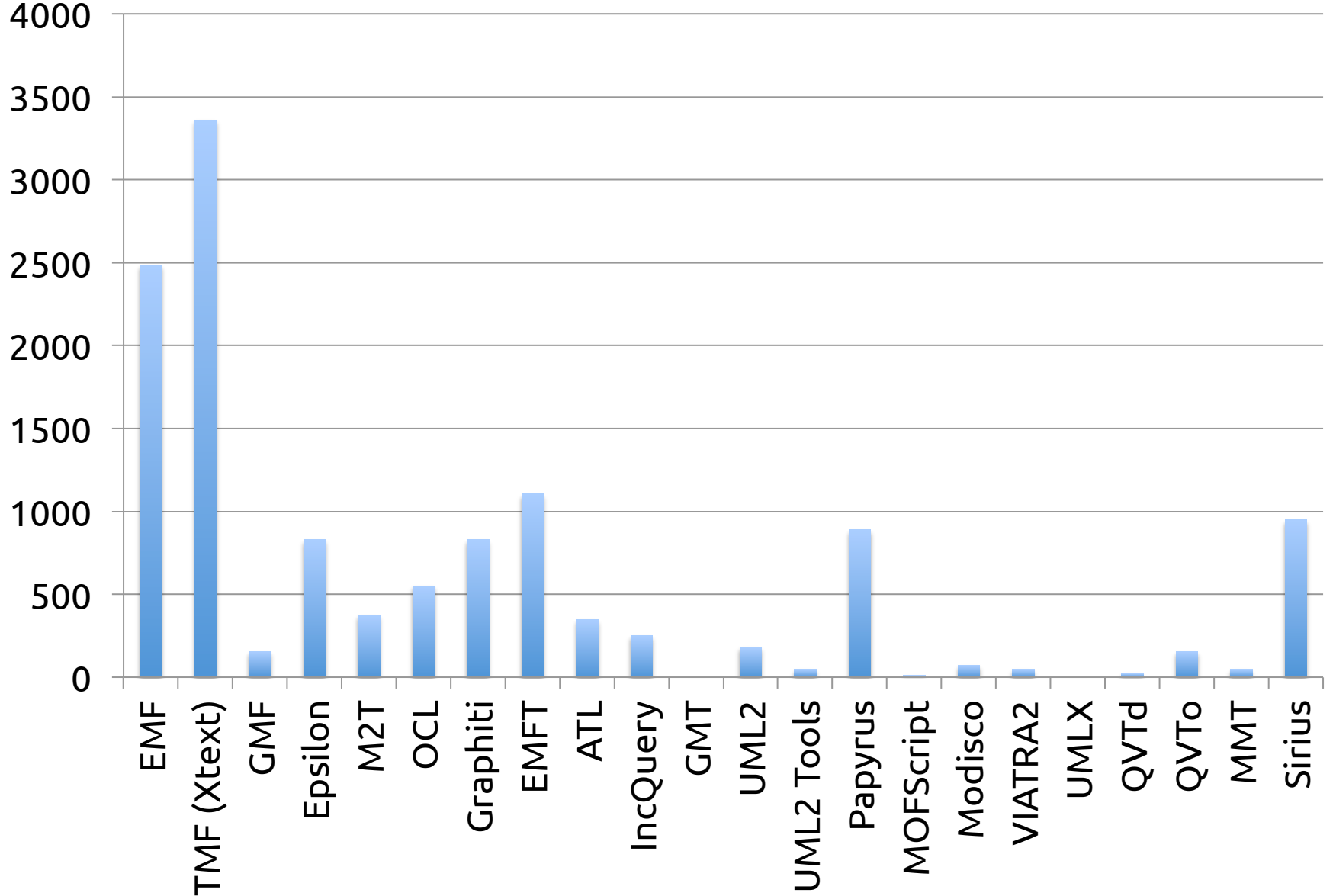
Number of posts (2005-14)



Number of posts (2012-14)



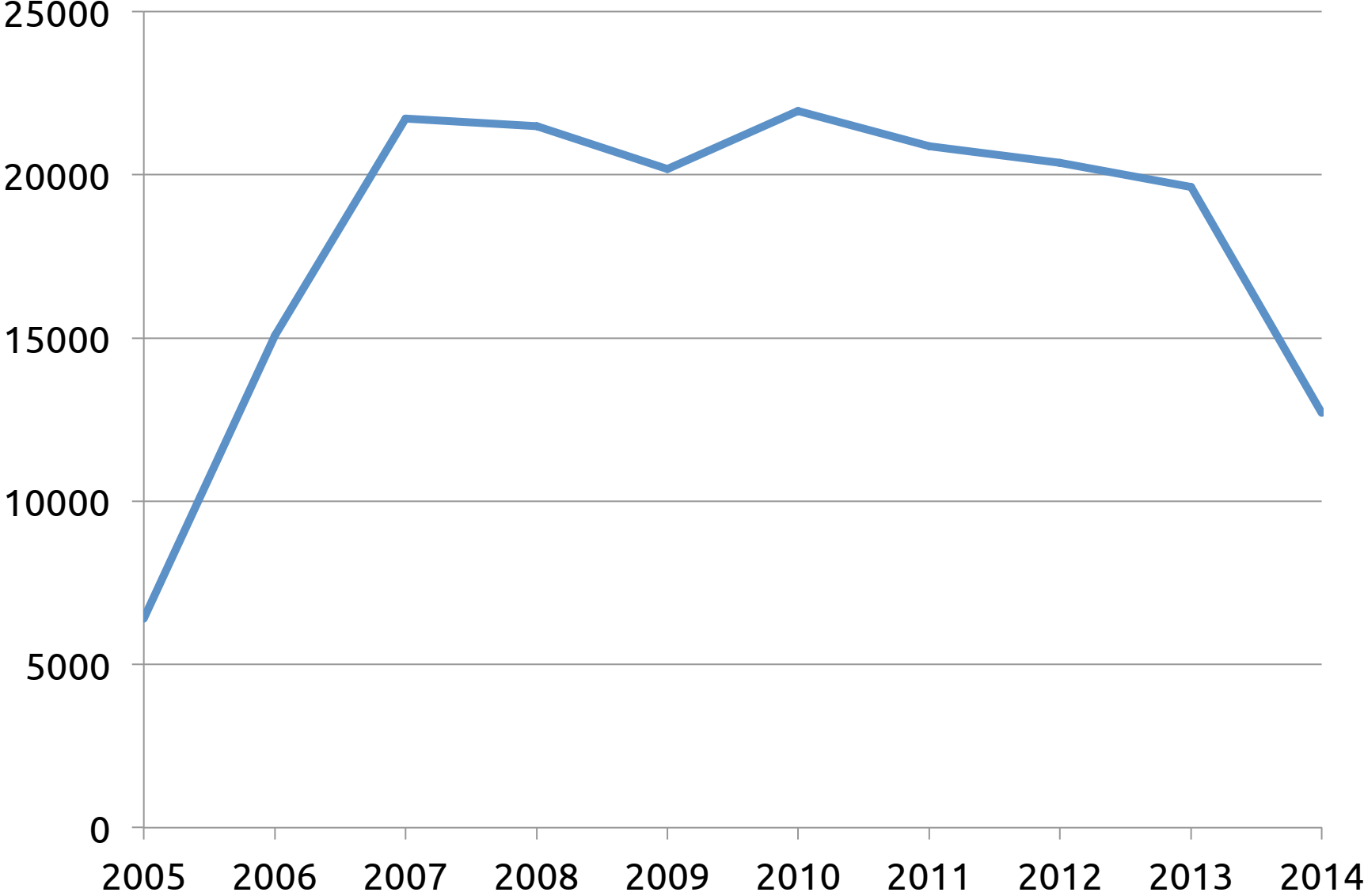
Number of posts (2014)

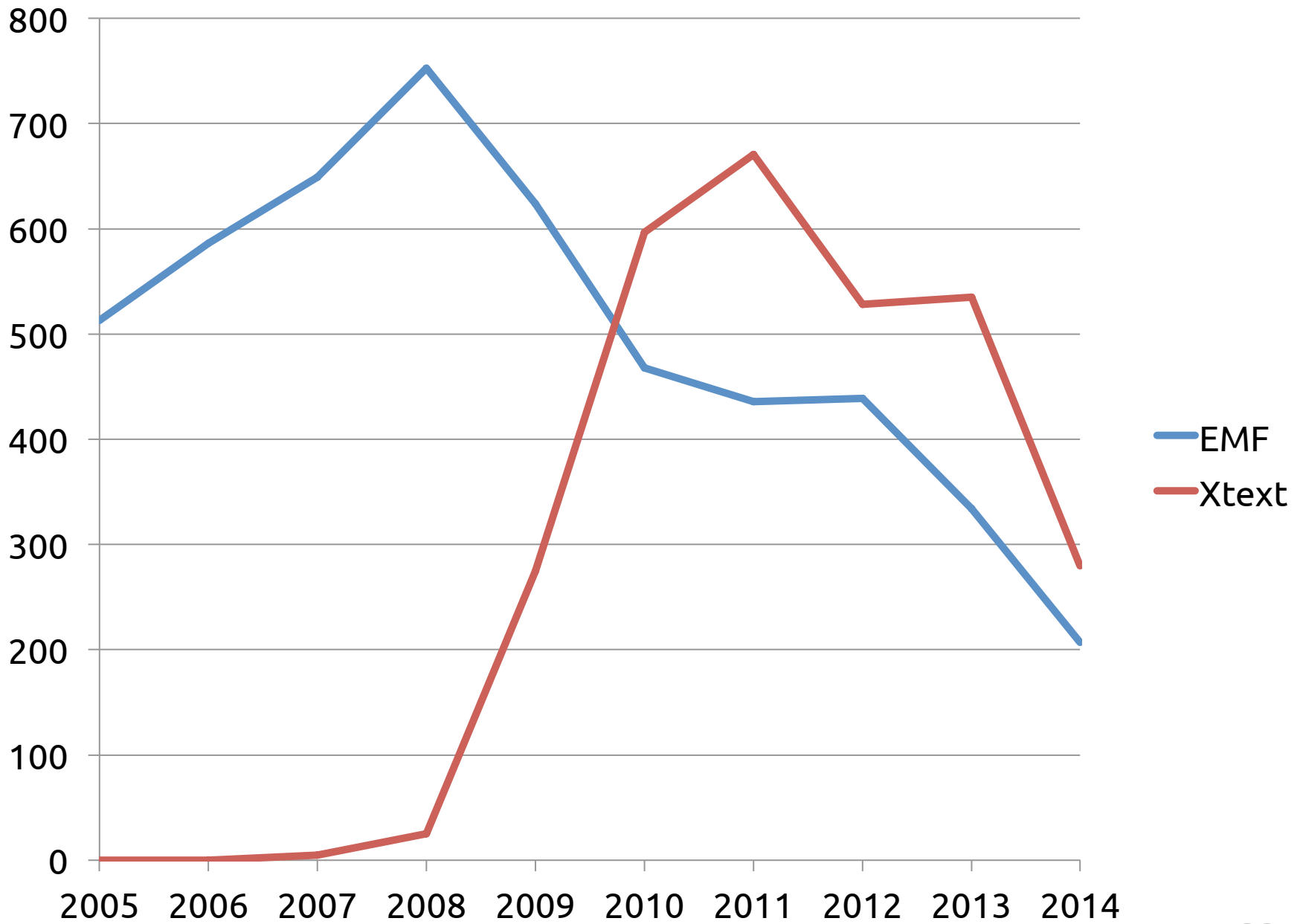


Quiz

- Which was the busiest year for Eclipse modelling-related forums?
 - 2009
 - 2010
 - 2013

Number of posts/year





Observations

- Textual modelling > graphical modelling
- Xtext and EMF still dominate the Eclipse modelling community
- GMF has lost 90% of its forum activity since 2007
- Overall forum activity seems to be declining since 2010
 - Steep drop in 2014
 - Maturity?
 - Stackoverflow?
 - Wider Eclipse issue?



Vadim Zaytsev
@grammarware



Follow

@kolovos isn't forum activity dropping overall just because forums are going out of style anyway? #models14 #oss4mde

Reply Retweet Favorite More

10:47 PM - 27 Sep 2014