

Spinning out  
Bitergia

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Gonzalez-Barahona

Some context

Summary

# Challenges and Learnings from spinning out Bitergia from the university

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Madrid (Spain), September 16th 2019

*Chance is important  
but then you have to work...*

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# The team is important



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# The team is important

Having great people around is very important

Playing in a team is much more fun

Together you can reach further

We had the chance of trying it

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# We had some principles

The importance of sharing

The importance of ethics

The importance of tools

We were lucky this worked

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# The starting point (2000-2001)

## Counting Potatoes: the Size of Debian 2.2

*Jesús M. González-Barahona, Miguel A. Ortuño Pérez, Pedro de las Heras Quirós, José Centeno González and Vicente Matellán Olivera*

*Debian is the largest Free Software distribution, with well over 2,800 source packages in the latest stable release (Debian 2.2) and more than 4,000 source packages in the release currently in preparation. But, how large is “the largest”? In this paper, we use David Wheeler’s sloccount system to determine the number of physical source lines of code (SLOC) of Debian 2.2 (aka Potato). We show that Debian 2.2 includes over 56,000,000 physical SLOC (almost twice than Red Hat 7.1, released about 8 months later), showing that the Debian development model (based on the work of a large group of voluntary developers spread around the world) is at least as capable as other development methods (like the more centralized one, based on the work of employees, used by Red Hat or Microsoft) to manage distributions of this size.*

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# Counting potatoes

Any detail may change a life

In some moments you're ready for a change  
and you feel you have been preparing for it

Switching fields may be rebooting from scratch

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# Becoming “academic” (2001-2003)

**Studying the evolution of libre software projects  
using publicly available data**

Gregorio Robles-Martínez, Jesús M. González-Barahona,  
José Centeno-González, Vicente Matellán-Olivera, and Luis Rodero-Merino  
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# Entering mainstream

The are niches of opportunity  
that you can exploit better than others  
but quickly you need to learn new stuff

Starting in a new research field  
is not always easy

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# Building tools (2002-2015)

## Remote analysis and measurement of libre software systems by means of the **CVSAnalY tool**

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# Tools & research

Tools are important and cool

Tools help you learn the details

Tools can be done in collaboration

Good tools don't guarantee publication

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# Benefiting from expertise (2005-2008)

Empir Software Eng (2009) 14:262–285  
DOI 10.1007/s10664-008-9100-x

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**Macro-level software evolution: a case study  
of a large software compilation**

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# The need of patience

A solid work may take a little while...  
...with a little help from friends  
and your past experience

But you need to find the right approach

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# The quest for funding (2006-2009)

Project funded by the European Comission under contract number FP6-033982

FM is part of the FLOSSQuality initiative



**Free/Libre and Open Source Software Metrics**

#### Definition

What's it?

Details

#### Project News

First version of the data web interface

Deliverable D3.2  
"Database" released



RDF

#### The FLOSSMetrics project

FLOSSMetrics stands for Free/Libre Open Source Software Metrics.

The main objective of FLOSSMETRICS is to construct, publish and analyse a large scale database with information and metrics about libre software development coming from several thousands of software projects, using existing methodologies, and tools already developed. The project will also provide a public platform for validation and industrial exploitation of results.

#### FLOSSMetrics targets

- Identify and evaluate sources of data and develop a comprehensive database structure, built upon the results of

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# Funding & research

Funded projects bring resources  
They allow for implementing ambitious ideas  
They put together interesting teams

Funded projects may be (very) distracting

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# Putting data to work (2008-2013)

## **Studying the evolution of libre software projects using publicly available data**

Gregorio Robles-Martínez, Jesús M. González-Barahona,  
José Centeno-González, Vicente Matellán-Olivera, and Luis Rodero-Merino  
GSyC, Universidad Rey Juan Carlos  
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# Reproduction studies

Reproducing past research is fun  
and interesting  
and helps to advance the state of the art  
It may lead to new lines

Reproducing is not always easy

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# Becoming commercial (2010-2013)

## Understanding How Companies Interact with Free Software Communities

progress of new analytics techniques to study them. In turn, these techniques have started to produce useful results for both practitioners and other stakeholders.<sup>2</sup>

In particular, studies of company participation in large projects have started to raise industrial interest: FLOSS foundations want to learn about company participation in their projects, and the companies want to know more about corporate activity in the projects on which they rely. Here, we present two studies in this area—by LibreSoft, a research group specializing in the quantitative analysis of

# Approaching the industry

The real world is there, and it's nice  
If you can explain a part of it  
that will be appreciated

The real world is dirty, complex,  
difficult to understand

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# Mature tooling (2002-2015)

## MetricsGrimoire

Tools for software & development  
community analytics



Update: Check the new GrimoireLab  
platform

## MetricsGrimoire

[Update]: Currently, main development related with *MetricsGrimoire* has stopped. Main contributors are working on a new platform: **GrimoireLab**

**MetricsGrimoire** (pronounced /'metrɪksgrɪm'wər/) is a toolset to obtain data from repositories related to software development: source code management (aka *version control*), issue tracking (aka *bug reporting*) systems, mailing lists, etc. Data and metadata about the software development processes is retrieved from those repositories (information about commits, ticket management, communication in mailing lists, etc.), and then organized and stored into SQL databases that can later be mined for specific patterns or summaries of activity.

**MetricsGrimoire** tools support many kinds of repositories, including those provided by GitHub (git & GitHub issue tracking).

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## Tools & research (2)

Tools keep you anchored in reality

Tools give you a competitive advantage

Tools let you learn the details

Tools may be distracting,  
difficult to “convert” in papers

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# Bitergia (2012-)



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# Bitergia (2012-)



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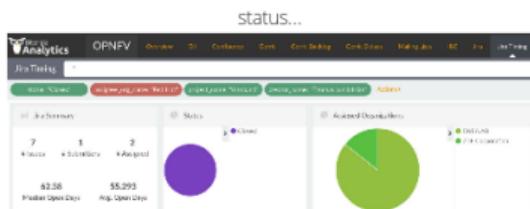
# Bitergia (2012-)

## Bitergia Dashboards

Dig deeper in project details and metrics using interactive dashboards

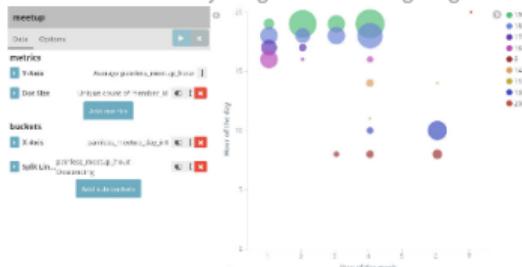
### Actionable Dashboards

Multiple filtering options like by time range, by data source repository, by organization/s, by contributor/s, by item



### Customizable Dashboards

Visual editor to create edit existing or create new panels and visualizations easily using available charting widgets.



### Shareable Dashboards

Easy panels sharing and embedding including the custom queries or filters applied.



### API Accessible Data

REST API access to stored data for data consumption and querying.



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# Bitergia (2012-)

## Supported Tools

Any area of software development covered by Bitergia's analytics suite

 Source Code Git, Baazar*, Mercurial* (*exporting to git)	 Tickets / issues Bugzilla, GitHub Issues, GitLab Issues, JIRA, Launchpad, Phabricator Maniphest, Redmine	 Code Review Gerrit, GitHub Pull Requests, GitLab Merge Requests	 Continuous Integration Jenkins
 Mailing lists / Forums Askbot, Discourse, Gmane, Groups.io, Hyperkitty, mbox files, NNTP, Pipermail, Stack Exchange	 Chat IRC (Supybot), Mattermost, Slack, Telegram	 Downloads Apache http logs	 Wiki Confluence, MediaWiki
 Meetings Meetup, Mozilla Reps events	 Others crates.io, Docker Hub, RSS, Twitter		

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# Try the stuff yourself!

## The new Cauldron (still alpha)

<https://alpha.cauldron.io>

## GrimoireLab

<https://chaoss.github.io/grimoirelab>

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# Starting up

Startups are a lot of fun  
They link you to reality,  
and see a new side of reality

Startups are a huge sink for your time

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# Starting

We observed a new market, but,

how deep it is?

what exactly does it want?

how to reach it?

how to fund the process?

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# Our approach

Small team  
Our own money  
Organic growth  
(growing on customers)  
word of mouth

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# Scaling up

Bring expertise in  
Learning user needs  
Business development is fundamental  
New marketing approaches  
Dealing with quickly changing tech

# From academia to industry

In the end, a single metric:  
time until all cash is burned

Talks are different  
Tools are different  
Customers are fundamental

# From academia to industry (and back)

You gain a lot of unique expertise

You learn what matters in the industry

You learn to appreciate the importance of details

You learn what is “providing value”

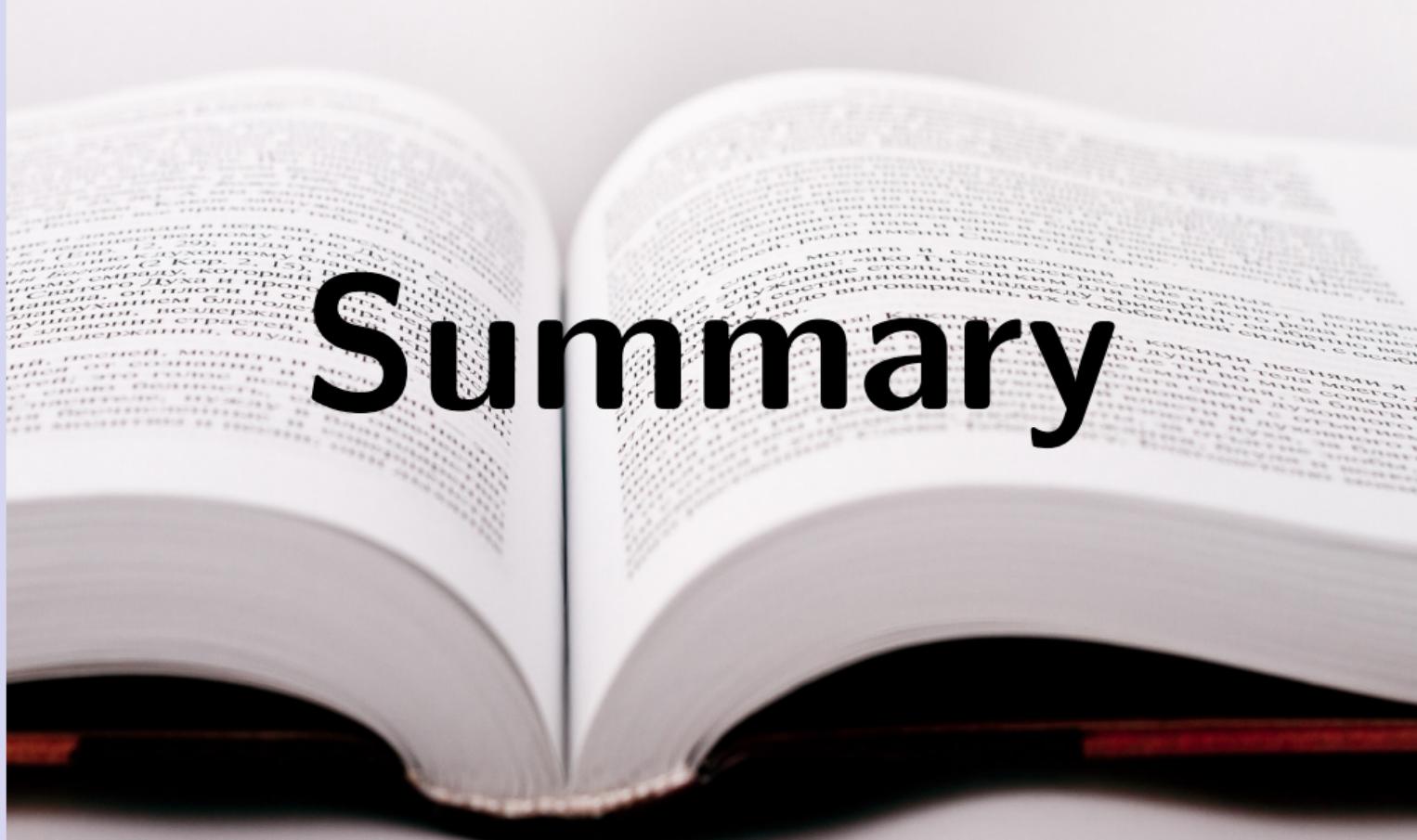
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*There is fine line  
between being academic  
and being commercial  
(for you)*

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Summary

*There is a whole world  
of difference  
between being academic  
and being commercial  
(for the rest of the people)*

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