

Spinning out
Bitergia

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Gonzalez-Barahona

Research context

Starting a
company

Problems, lessons

Summary

Challenges and Learnings from spinning out Bitergia from the university

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@jgbarah <http://github.com/jgbarah/presentations>

FAU-URJC Joint Seminar

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

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Research context

Starting a
company

Problems, lessons

Summary

Research context



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Research context

Starting a
company

Problems, lessons

Summary

The team is important



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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

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.

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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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

Building tools (2002-2015)

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

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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

Benefiting from expertise (2005-2008)

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

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

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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

The quest for funding (2006-2009)

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

 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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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

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
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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

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.²

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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Research context

Starting a
company

Problems, lessons

Summary

MetricsGrimoire

Tools for software & development
community analytics



Update: Check the new GrimoireLab
platform

Mature tooling (2002-2015)

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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Research context

Starting a
company

Problems, lessons

Summary

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

Jesus M.
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Research context

Starting a
company

Problems, lessons

Summary

Starting a company

Spinning out
Bitergia

Jesus M.
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Research context

Starting a
company

Problems, lessons

Summary

Bitergia (2012-)



Spinning out
Bitergia

Jesus M.
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Research context

Starting a
company

Problems, lessons

Summary

Bitergia (2012-)



Spinning out
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Jesus M.
Gonzalez-Barahona

Research context

Starting a
company

Problems, lessons

Summary

Bitergia (2012-)



Spinning out
Bitergia

Jesus M.
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Research context

Starting a
company

Problems, lessons

Summary

Bitergia (2012-)

Bitergia Dashboards

Dig deeper in project details and metrics using interactive dashboards

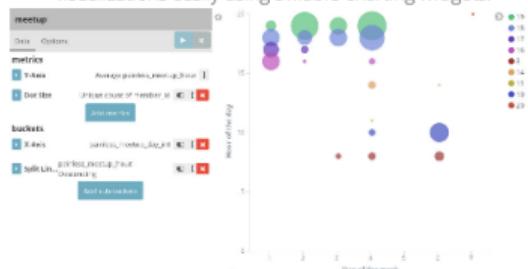
Actionable Dashboards

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.



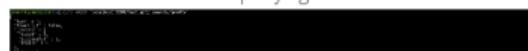
Shareable Dashboards

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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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

Try the stuff yourself!

The new Cauldron (still alpha)

<https://alpha.cauldron.io>

GrimoireLab

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

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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

Our approach

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

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Research context

Starting a
company

Problems, lessons

Summary

Scaling up

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

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Research context

Starting a
company

Problems, lessons

Summary

Problems, lessons

Spinning out
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Research context

Starting a
company

Problems, lessons

Summary

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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Research context

Starting a
company

Problems, lessons

Summary

Having two hats

It is difficult to combine
academia and industry
with just 24-hours days

If you want to stay in academia
it's difficult to leave it
even for a short while

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Research context

Starting a
company

Problems, lessons

Summary

Funding

If you can, you need to decide

- Building on your own money, or
- Convincing somebody else

If you don't have money,
you're done

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Research context

Starting a
company

Problems, lessons

Summary

Focusing on customers

What you think everybody needs
maybe nobody wants

Following customers keeps you grounded

But...
maybe they don't know what they want
...yet

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Research context

Starting a
company

Problems, lessons

Summary

Timing is everything

Who is ready for your offer?

Who will be ready next?

How to prepare for the next niche?

Sell for today
but plan for tomorrow

The market evolves quickly

The environment

You are not alone:

- Know your competitors
- Know your potential partners
- Know your customers
- Know your potential customers

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Research context

Starting a
company

Problems, lessons

Summary

Benefiting from research

Try to make
“state of the art”
a part of your key
differential advantages

Being linked to academia
makes it easier to join R&D projects

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Research context

Starting a
company

Problems, lessons

Summary

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

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Research context

Starting a
company

Problems, lessons

Summary

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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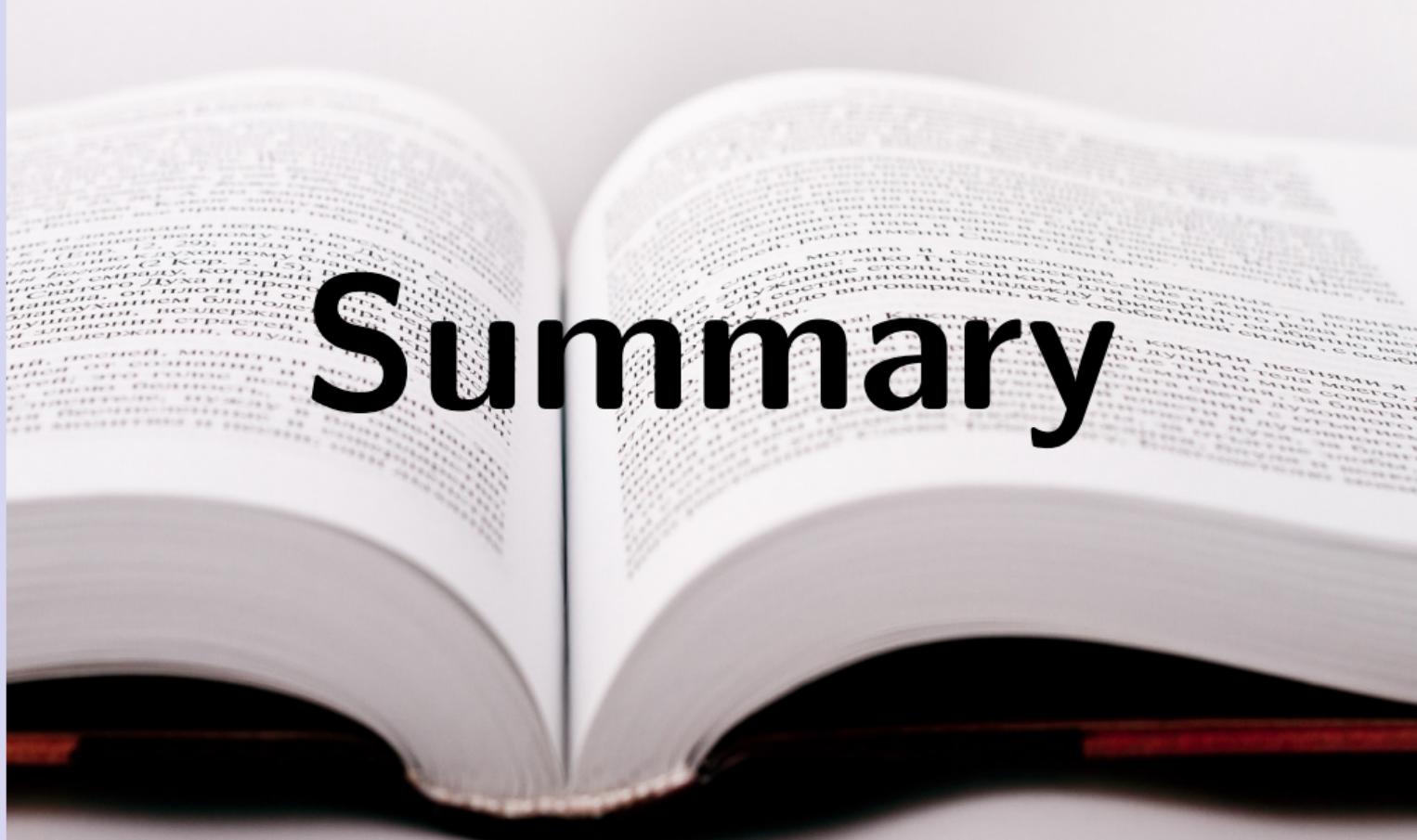
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Research context

Starting a
company

Problems, lessons

Summary



Summary

Spinning out
Bitergia

Jesus M.
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Research context

Starting a
company

Problems, lessons

Summary



Summary

Spinning out
Bitergia

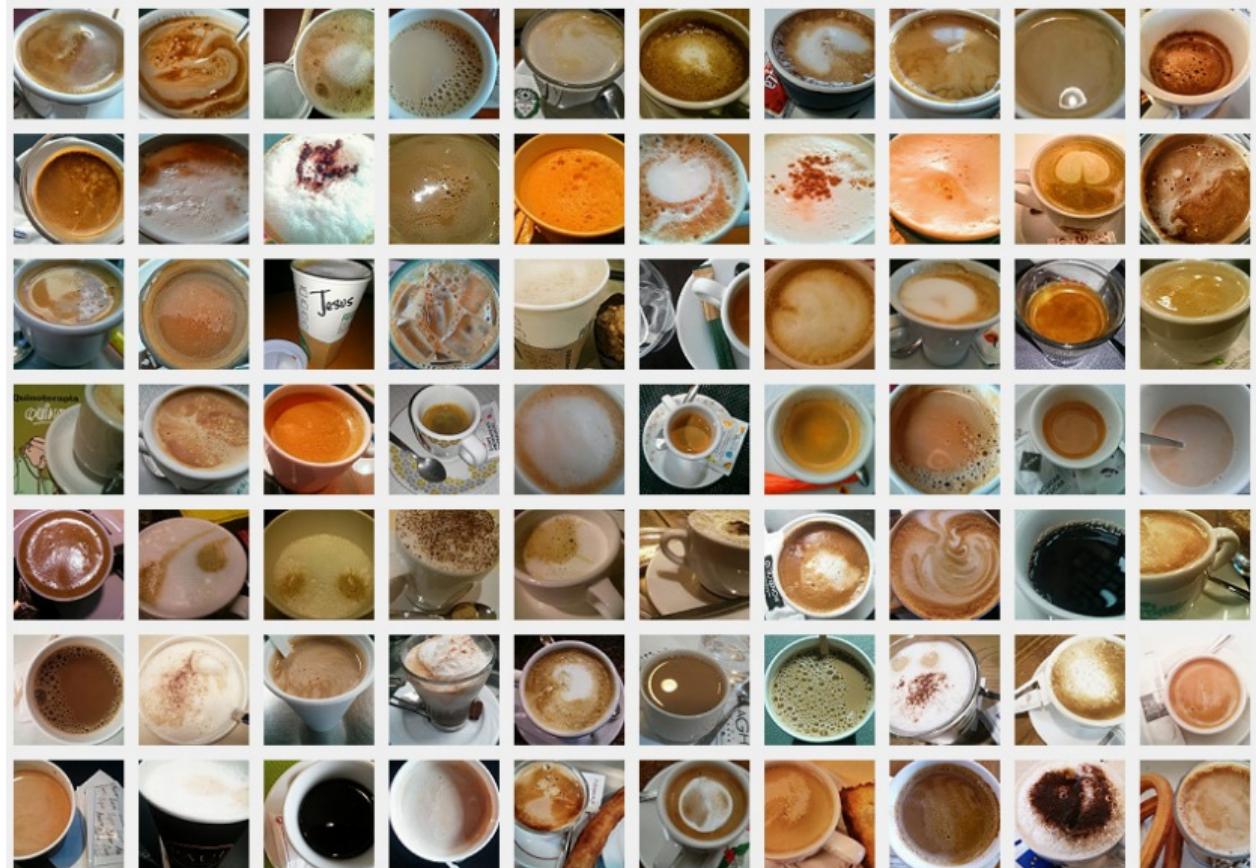
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Research context

Starting a
company

Problems, lessons

Summary



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Research context

Starting a
company

Problems, lessons

Summary

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

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Research context

Starting a
company

Problems, lessons

Summary

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

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Research context

Starting a
company

Problems, lessons

Summary



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