How to Grow Your Open Source Project 10x and Revenues 5x

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What we want to learn today

- We now have FOSS projects 20-30 years old. Let's study the most popular ones:
  - What governance models are used?
    (Focus on ownership more than leadership.)
  - Which projects have most development velocity
    = biggest developer community?
    = investment?
  - Business:
    "I don't care about community,
    I'm in it to make money."

"Community"

- A group of people contributing to a common cause or vision. (Jono Bacon)
- Free workforce (production, marketing...)
- **Not** objects for lead generation. *(Traditional meaning at MySQL and some other firms. Not used in these slides.)*
  - Stephen Walli & Matthew Aslett http://www.osbr.ca/ojs/index.php/osbr/article/view/1195/1145

Take sample of popular, leading FOSS projects/communities

Debian	Ubuntu	Sourceforge	Henrik
perl	gcc	JBoss	KDE
gnu system tools	gnu system tools	phpMyAdmin	Eclipse
openssh	python	phpBB	Drupal
python	w3m	Webmin	Wordpress
openssl	openssh		
procmail	ogg		2011:
w3m	openssl		Chromium
mysql	xorg		OpenStack
gcc	perl		
cups	samba		
exim	launchpad-integration		
ghostscript	gpg		
ogg	gnome		
samba	openoffice		
linux	rdesktop		
apache	firefox		
xorg	smartdimmer		
openoffice	mono		
gnome	gimp		
openjdk	vino		
firefox (iceweasel)	compiz		
php	sqlite		
gimp	mysql		
html2text	thunderbird		
qt	openjdk		
mailx			
vino			
subversion			

Note:
Upstream projects only.
(No Debian,
Ubuntu, XAMPP...)

project	devs/day	commits/day	loc/day	devs/mo	devs all time	companies
linux		**130**	**18000**	**1100**		**200**
kde	**100**	**300**				
apache (ASF)	**100**	**300**				
Eclipse					**1000**	**170**
perl+CPAN					(8500)	
Drupal		**133**		**300**	**2719**	
gnome		**100**			**3500**	**106**
Mozilla+addons					(5000)	
qt		67		110	393	
gcc		25		70	441	
php+pear		34		65	700	
openoffice				60	512	
perl		17		40	1000	
mono		25		30	390	
samba		33		30	205	
openjdk		7		30	99	
mysql		7		25	1027	
python		13		25	142	
jboss		7		20	111	
subversion		13		20	161	
phpmyadmin		13		10	137	
ghostscript		1		10	39	
gimp		10		10	394	
phpbb		10		10	65	
Wordpress		33		8	30	

Notes

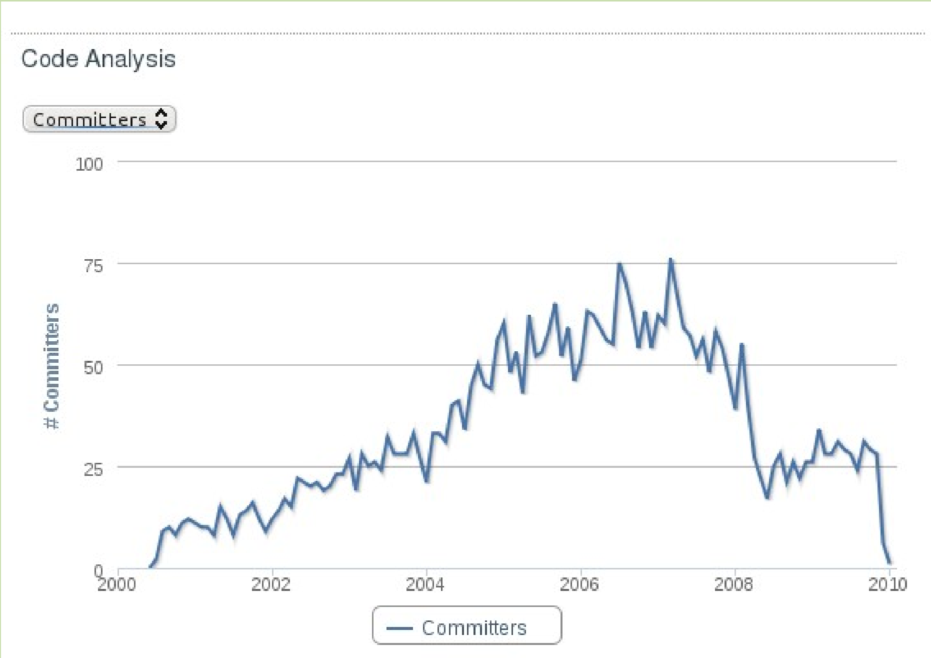
- Top projects (bold) publish their own studies or "marketing numbers". Smaller projects were measured with OHLOH.net.
  - Ordering still difficult because studies don't measure the same things. (Please follow Linux Foundation everyone, thanks.)
- Drupal 7 (core) = 954 code contributors / 3 years + 8291 addon modules!
- Perl+CPAN and Mozilla+Addons only estimated by number of modules.
- OpenJDK apparently developed within closed doors, mercurial/OHLOH statistics not realistic.

Garbage in, Garbage out

How should one read OHLOH?

MySQL had 50-75 devs until 2008, when it was acquired by Sun and number of devs dropped to 25. By end of 2009 Oracle took over and development completely stopped.

- I personally know more than 25 MySQL devs.
- Despite the drama, development certainly didn't stop.
- So we use OHLOH numbers together with reality check...
- Making detailed graphs seems pointless, but we can group by order of magnitude...



GROUP BY governance, community size

	Foundation	Vendor	"Just a project"
XtraLarge 1000+ devs 100+ commits/day	Linux, KDE, Apache, Drupal, Eclipse, Perl+CPAN, Mozilla+Addons, Gnome		
Large 20-200 devs 50-100 commits	GCC, Python, Samba	MySQL, Qt, OpenOffice, Mono, JBoss, OpenJDK	PHP+PEAR
Medium	GIMP	Subversion, GhostScript, Wordpress	phpMyAdmin
Missing data	Xorg, GNU system tools		

Notes:

- Categories are observed, not pre-determined, ie they follow as observations from the sample. For instance "Multiple vendor consortium" is not observed in the sample. (Eg. Eclipse 2001-2003.)
- KDE, Apache, Gnome, Eclipse... are entire foundations hosting many sub-projects, but considered here as one community with some common focus / shared code. With the donation of OpenOffice to Apache this interpretation may perhaps have reached its limit, other than the Apache license, OpenOffice seems to have nothing at all in common with any of the other Apache projects.
- "Contributor modules" archives - found in Perl, PHP, Drupal etc... - are considered part of the main project. (Otoh, MySQL and phpMyAdmin are separate.)
- GIMP predates Gnome but is now part of it.
- GCC is part of GNU, but listed separately as data was available. The author estimates that "the GNU project" would also be an XtraLarge project if data had been found, as GCC alone tops the Large category already.
- Python changed to Foundation in 2000. Subversion was previously led by CollabNet, but is since 2009 an Apache (Foundation) project and Wordpress is transfering to its own foundation in 2010 from Automattic. Both are here categorized as vendor projects since this is the model that existed for most of their lifetime.
- Qt, MySQL and GhostScript are the stars of 1990 dual-licensing era.
- OpenOffice was forked in 2010: LibreOffice. In 2011 Oracle donated the OpenOffice code to Apache Foundation (IBM). This categorization is looking at historical Sun OpenOffice.
- Mozilla Foundation has ~100MUSD revenues and employs many engineers. (Ironic!)
- Wordpress only has data for core, plugins and themes is here added as guesstimate to even reach Medium.
- "The PHP Group" has never formally incorporated in any jurisdiction. Despite this fact, PHP does have a well defined process of membership and decision making similar to what more formal organizations tend to have.

Observations 1/2

- XtraLarge projects are **always foundation governed**.
  - 10x larger community
  - 9 projects: statistically strong result
  - Glass ceiling for Vendor projects?
- OpenJDK = Java is probably XtraLarge too (Oracle, Red Hat, IBM, Apple, SAP...) but commits don't happen in the open.
- XtraLarge foundations "acquire" Medium projects and commercial code: Subversion, GIMP, OpenOffice, Mozilla, Python.
- No movement in opposite direction.

Observations 2/2

- Large Vendor governed projects tend to be controversial:
  - **MySQL**: Financial star, but now forked many times over. A lot of work to just keep it alive now.
  - **OpenOffice**: Typical Sun: Stagnated and mismanaged since 2000.
    Successfully forked: all Linuxes immediately backed it, 77 new contributors within 2 months.
  - **Mono**: FOSS fundamentalists boycott it anyway because of .NET origin, the rest don't care that it is vendor managed.
  - **Qt**: Technically superior, but lost total dominance to being 50-50 with GTK (part of Gnome) due to Trolltech over-controlling it. (Financially ok: Nokia acquired in 2008.)
  - **JBoss** is uncontroversial to the community, but was attacked by IBM backed Apache Geronimo (but survived).
  - **OpenJDK** is likely to break into the XtraLarge Vendor spot, after Oracle bullied IBM into contributing to it. (This strategy is unfortunately not available to the average open source startup :-(
- We know Large Vendor projects to have poor community contributions. (JBoss?)

2 contenders to watch

- Chromium
  - LWN.net: All time devs = 759
  - Last 12 months = 600, per month = 300.
  - Falls between Large & XtraLarge (Not far behind Gnome)
  - Vendor led (Google)
- OpenStack
  - OpenStack.org: 1171 "contributors" at 82 companies
  - OHLOH & my friends confirm code committers per month = 100+
  - Still remarkable: Project is only 12 months old!
  - Foundation-like community of equals, but OpenStack LLC owned by Rackspace (technicality? See next slide...)

OpenStack governance

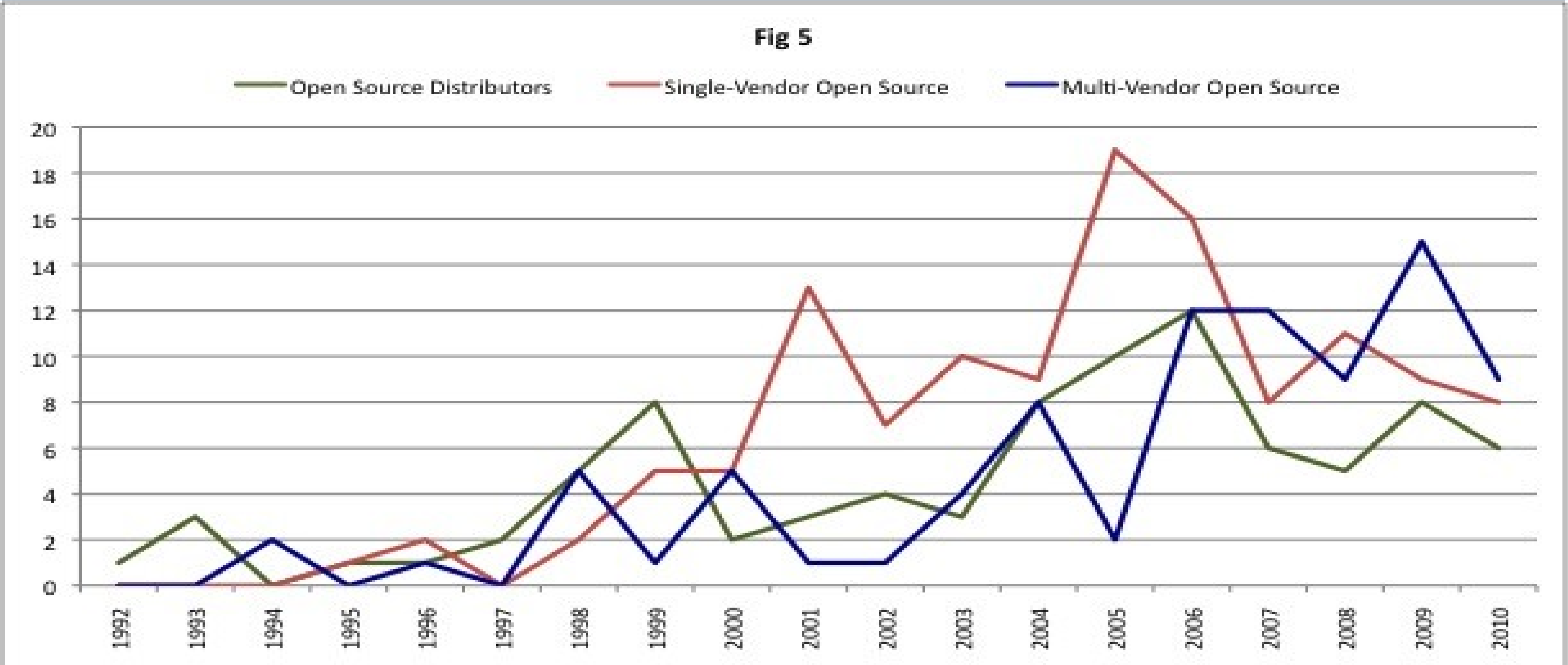
- OpenStack vs Eucalyptus
  - Same field, different model: OpenStack momentum is evidence of direct missed opportunity by Eucalyptus:
    - Developers (10 MEUR / year)
    - Channel partners (Ubuntu)
- Foundation-like:
  - No copyright assignments
  - Policy Board, Advisory board, bi-annual elections
  - Trademark & website = neutral ground
- Owned by Rackspace
  - What happens if Racskpace executives decide to veto / disregard community process?
  - Personally seen it happen in another project...

451 Group study

Governance Observed development	Single vendor	Community
Closed (Cathedral)	74%	5%
Open (Bazaar)	25%	95%

The 2010 report from 451 Group (aptly) titled "Control and Community":
The software industry has entered the fourth stage of commercial open source business strategies, characterized by a shift away from projects controlled by a single vendor and back toward community and collaboration. There is an increased focus on open source as a development model for the creation of software to be monetized indirectly, rather than a licensing strategy to spread adoption for direct monetization. Established open source specialists that rely on controlling open source development projects need to evaluate how they might transition towards more collaborative development.
While the single-vendor open source approach is not going to die out, vendors that control open source projects need to transition to more collaborative development. (Monty Program, Forgerock cited as examples)

451: Decline of single vendor model



Simon Phipps: "Open Source bubble"

So what about making money?

3. ???
4. Profit!

- Actual quotes from managers of open source related firms:

  "Community is nice and all, but I'm in it for the money..."

  "I don't believe in ecosystems. You invest in developing a product, then you sell it to customers."

  "We need to become profitable first. Then we can do something nice for the community."

Valid point
So which is it?

Or?

I want to keep the whole cake even at the risk of the cake then remaining smaller

Let's use Linux market shares to <u>estimate</u> an answer...

- Red Hat
  - Most commits, 12% to Linux kernel
  - Most control by employing 36% of the lead developers that review commits. (...used to be 50%)
  - Red Hat has 62% market share of Linux operating system sales
- **<u>Leverage factor</u>** = 62/12 ~ 5x
- Novell = 29 / 7.6 ~ 4x

Rationale of that handwawing:

Factors affecting revenues of Linux vendor:

- Total addressable market (OS market = N*10 billions USD)
- Linux' market share
- One factor limiting Linux market share is how well its functionality and features serve the needs of the total addressable market. This is a result of engineering investment. ("Limits to growth" theory.)
  - Other factors like marketing, sales, "good timing" etc ignored.
- Vendor's share of Linux market

(Obviously, this part is less accurate than the first part. I'm using Physics 101 method of assuming linear causality for highly non-linear system :-)

Summary

- 2 types: foundation or vendor.
  - Exception: PHP
- 9 of them 10x larger: Foundations rule.
  - Mozilla revenues higher than for-profit open source vendors like MySQL, JBoss.
- Watch OpenJDK, Chromium and Openstack for 1st XtraLarge vendor owned.
- Linux market: Red Hat & Novell benefit from community development.
  - Leverage = 4-5 x (revenues/engineering investment)

Recommendations

- Prefer participating in existing foundation projects
- Owning a project? Share it!
- Expected benefits:
  - Project *can* grow 10 x larger
  - This *should* increase addressable market (10x?)
  - Main vendor typically can capture 50% or more of its market
  - 500% more revenues

Questions?

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