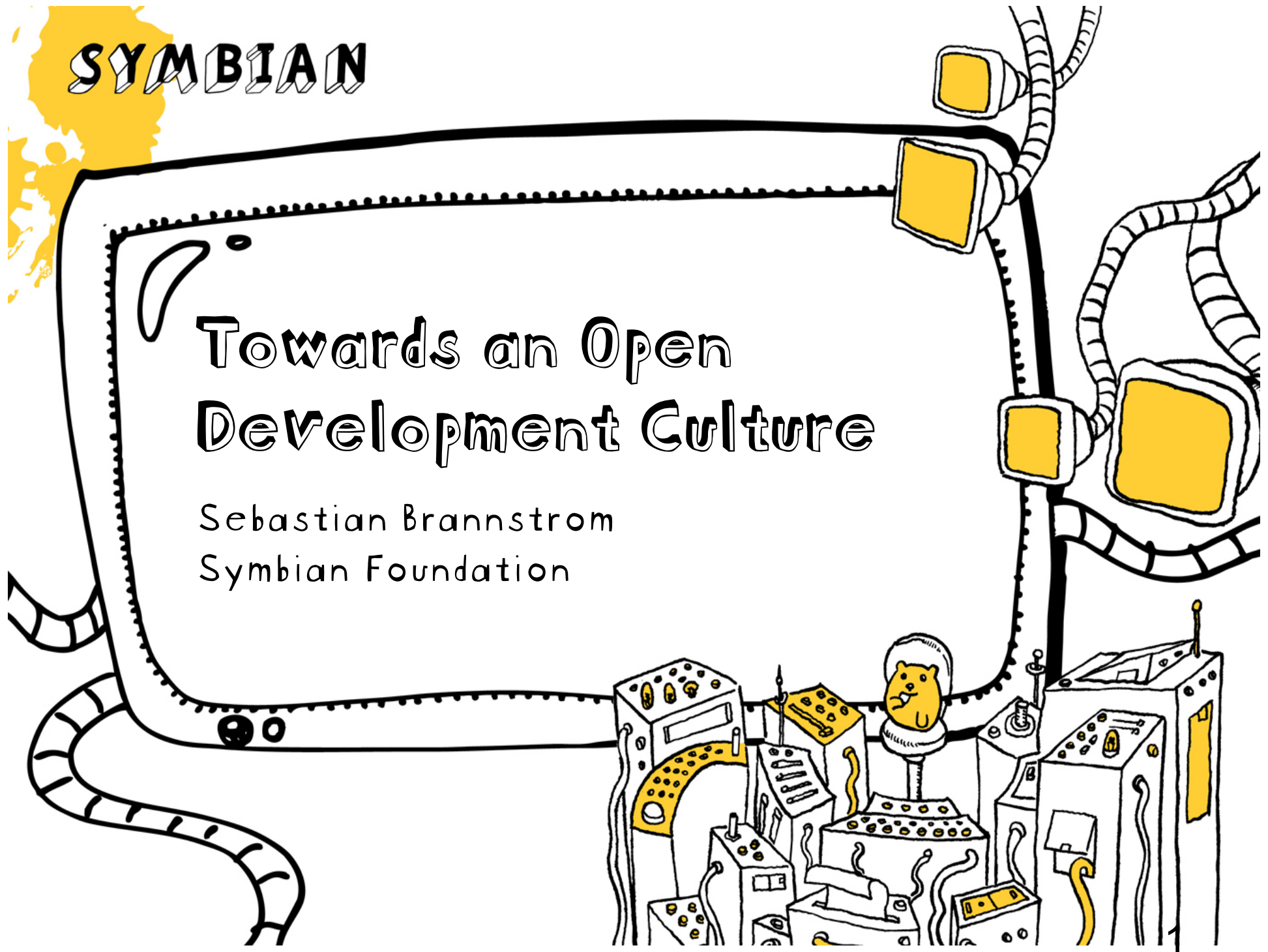


SYMBIAN

Towards an Open Development Culture

Sebastian Brannstrom
Symbian Foundation



Who am I?

Background

- Master's Degree in Physics
- Worked in IT
- Programmer and
- Worked for Ericsson
- Switched to Symbian

Symbian

- Symbian became Open Source
- Recruited by Symbian Foundation in 2009
- Work with delivery management
- And whatever else needs to be done

Open source

- Enthusiast Linux user since 1994
- Started "Bergamot Project" in 2007, to bring OSS to Symbian



What is Symbian?

- ❑ A complete mobile device platform
- ❑ Consists of Symbian OS 9.5 merged with Nokia S60 5.0 user experience and other parts
- ❑ In the process of going open source (EPL license)
- ❑ Approximately 40 million lines of code!
- ❑ Made up of 134 software packages (kernel, Bluetooth, cellular communications, calendar...)
- ❑ Released every 6 months



What is Symbian Foundation?

- ☐ My employer
- ☐ An independent nonprofit organization to facilitate the development of the Symbian Platform
- ☐ Launched April 1st 2009
- ☐ Similar to Eclipse, Mozilla and Apache Foundations
- ☐ ~90 employees (largely new recruits), 6 offices
- ☐ ~180 members, 12 founding
- ☐ Still finding our role in the eco-system



[illegible]

World-Leading Multimedia Software Provider

3530

CR
EA
LAB

COMARCH

REVE Systems



Open Kernel Labs
Be open. Be safe.

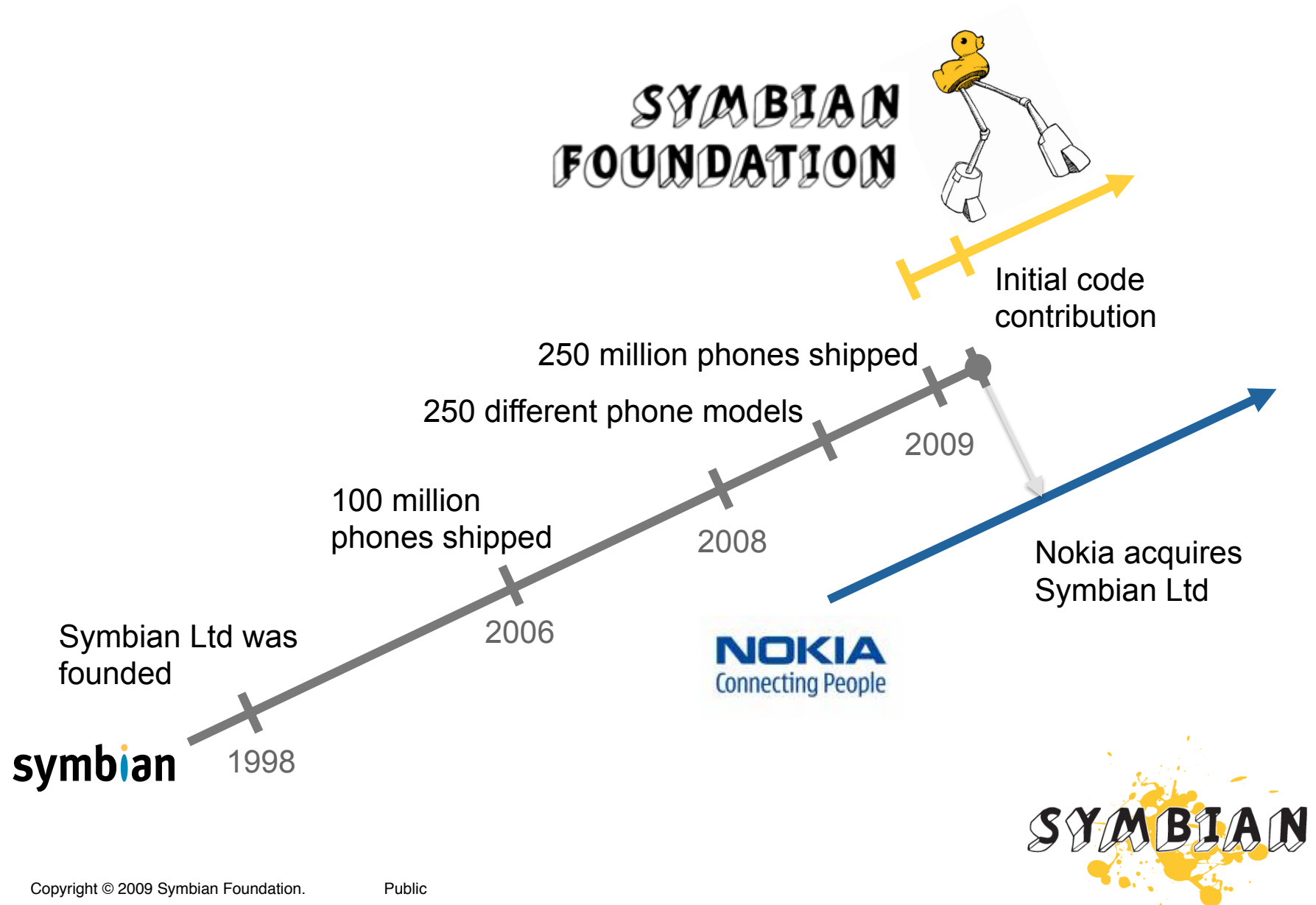
PSILOC



KONOE

11

A short history



Planning the Foundation



Expert teams

Staffed by Nokia and Symbian Ltd to look at specific problems

How is the platform governed?

Feature & Roadmap, Architecture, UI and Release

How will the code base be structured?

System model and technology domains

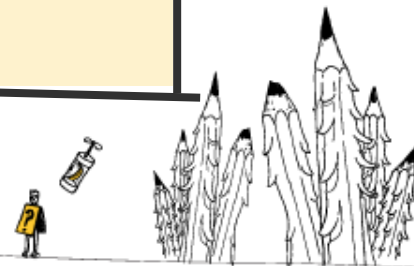
What Infrastructure is needed?

Bug tracker, Mailing Lists, SCM system, etc.

What are the different open source roles?

Package Owners

How do different parts ~ of the community work together?



Initial structure of Symbian

- Planning led to a large number of documents, suggesting an initial structure of the Foundation
- Platform divided into **134** packages in **13** domains
 - Each package the size of many OSS projects!
 - A small community around each package
 - So package owners are **community leaders!**
 - And Symbian is a community of communities
- Open Governance
 - Platform direction is governed by **4** councils
 - Seats filled by community representatives
 - Chaired by non-voting Symbian staff

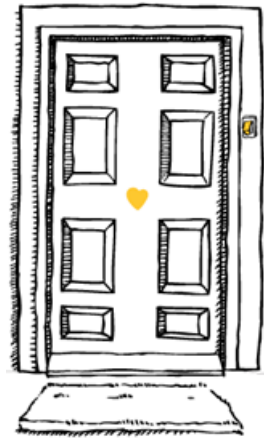


Going Open Source... slowly

- 10 years worth of source code developed by many parties
- 40 million lines of code to check for IP violations
 - Many false positives
 - Many benign cases (e.g. code copied from a book)
- It took 6 months to identify all serious IP issues
 - 16% of components had an instance of an IP issue
 - 96 cases altogether, 74 closed as of December 1st
- Affected code was removed initially
 - Ultimately replaced by open source friendly code
 - Or feature scrapped
- Code made available under interim SFL licence



SFL an interim license



SFL Package

Members Companies
Using and contributing



EPL Package

Everybody
Using and contributing

A beta period towards going open source :
learn, fix & de-risk

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Restarting the community

Symbian already had an eco-system around it
Going open source is a shock for existing members
Moving from secret business agreements to community

Raising questions such as ...

- What is the opportunity?
- What is the risk?
- How does the game change?
- How do I adapt?
- Do I need to change my business model?

This takes time

Many eco-system companies
are concluding this process

- Some find it hard
- Early birds are thriving
- Foundation must help out



Lessons learned

- Growing community leaders
- Starting the contributor community
- Provide the common goods
- Open source versus open community
- Leave challenges to the community
- Let everybody influence
- Encourage, don't force openness

Lots to learn still...

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Growing community leaders

How do I find 134 open source leaders who know their technology?

I Can't! Experts need to grow into community leaders over time!



Most are inexperienced with OSS, wondering

- Why would anybody want to contribute?
- What do I need to do to be successful?
- What support can I count on?

Solutions: education, supporting, mentor and rewarding desired behavior!

Also: Foundation staff leading and acting as role models



Starting the contributor community

All contributions satisfy a
SELFISH NEED!

We had to learn what
motivates contributions

Transfer that
knowledge to the
community

And transfer the knowledge to our open
source leaders, so that they can build a
community around their package



Provide the Common Goods

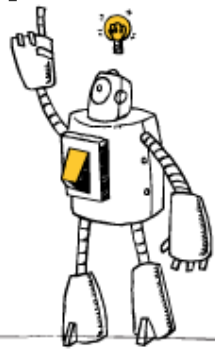
Many open source projects struggle with common goods

Running infrastructure...

Testing for

Building and releasing the platform and development

A variant of the **Tragedy of the Commons**



Symbian Foundation delivers critical common goods!



Open Source versus Open Community

Slowly going open source has benefits:

- Time to staff the foundation
- Time for community leaders to learn
- Time to
- Time to

Not as bad as it sounds!

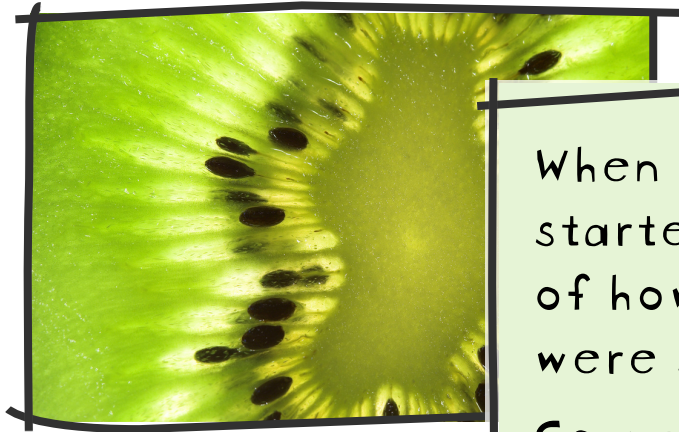
Open source is at least as much a way of collaborating as a choice of license!

But

- Negative sentiment from parts of the OSS community
- No way for most people to contribute code!

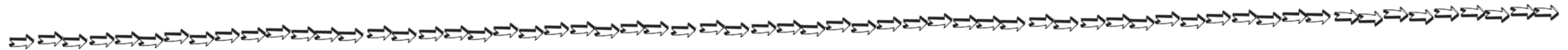


Leave Challenges to the Community



When the foundation started, significant parts of how it was to operate were still to define
Council members had some challenges to resolve

Actually this was a blessing!



Problems (which people care about)



Big stake in solving these



builds sense of **OWNERSHIP**

Let Everybody Influence

Working groups (e.g. UI
migration working group)

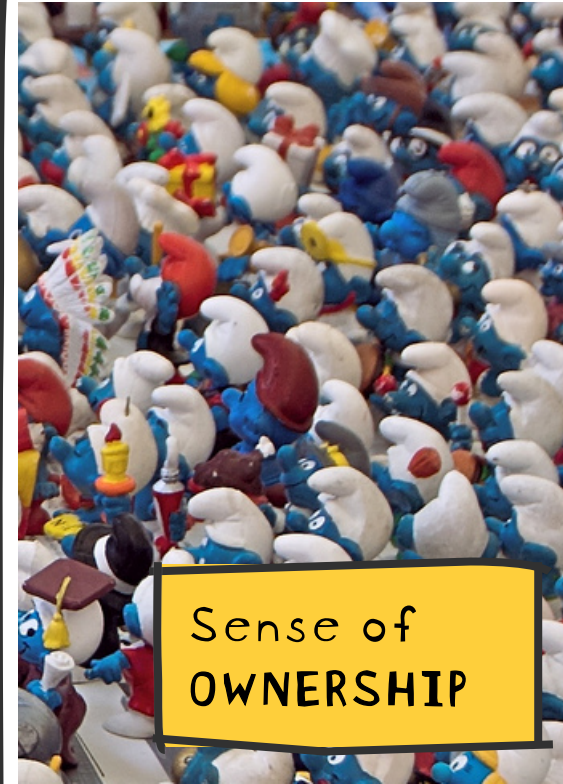
SIGs: Special Interest
Groups

"I can help drive change?"

BoFs and other interactive
parts of our annual
conference!

Symbian Idea Site
<http://ideas.symbian.org/>:
Over 500 ideas!

UI Brainstorm blog



Sense of
OWNERSHIP

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Encourage, don't force openness

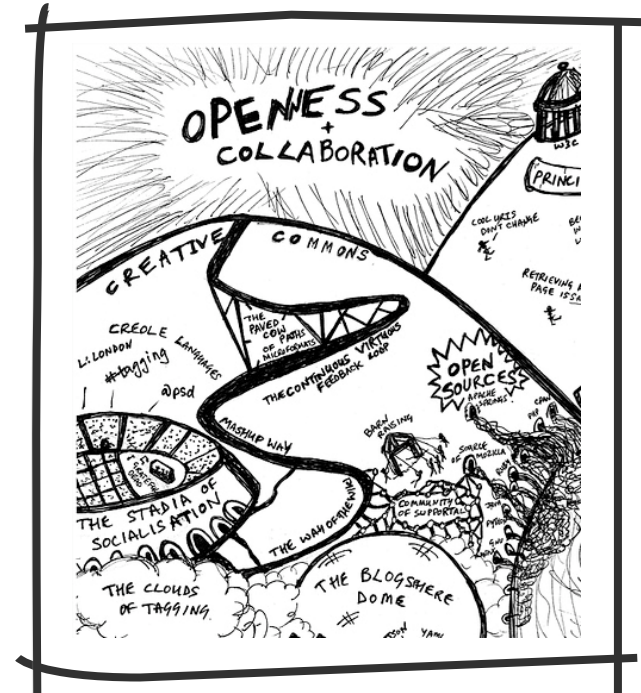
Open Management

Our community likes the fact that roadmaps, backlogs, minutes, etc. are publicly available!

But being open can lead to embarrassment (consider number of silently scrapped projects)

Worry to share information that can be used to deduce trade secrets

And separating value add from infrastructure is difficult!



Do not force the community to be open!



The journey has only begun

We have a very good chance of succeeding

- Strong support from OEMs
- Member base growing
- Contributions are coming in
- Members are finding their place
- Results prove that the community works

Uncharted waters, and still lots to do and learn!

Foundation keeps trying new ideas to see what works
Ultimately the community must lead

Being part of this journey is FUN, but also lots of HARD WORK!



Some data to close...

In 2012 - 2014 there will be 372 - 525 million smart phones sold per year.

>60% of these will be based on open source operating systems

Symbian is projected to be the most used OS in 2012 & 2014

Open Source in Mobile is here to stay!

-
- [Juniper Research](#)
 - [Gartner](#)





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Questions

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