

SOTA: STATE OF THE ART ANALYSIS

“If you steal from one author it’s plagiarism;
if you steal from many it’s research.”

Wilson Mizner, Warner Brothers screenplay writer

A diaper story ...

The logo for BrightRoll features the word "BrightRoll" in a bold, black, sans-serif font. Below the "oll" part of "Roll", there are five small, colored circles in a row: blue, green, yellow, red, and blue.

BRIGHTROLL

Online Video Advertising
www.brightroll.com

The logo for viajanet features the word "viajanet" in a lowercase, sans-serif font. The "via" is in blue, "janet" is in orange, and there is a blue arrow pointing to the right above the "net" part.

VIAJANET

Expedia for Brazil
www.viajanet.com

The logo for ADORE ME features the words "ADORE ME" in a black, serif font. A thin, black, curved line underlines the "E" in "ME".

ADOREME

JustFab for Lingerie
www.adoreme.com

The logo for windeln.de features a cartoon illustration of a white duck holding a blue cloth in its beak. Below the illustration, the text "windeln.de" is written in a red, lowercase, sans-serif font.

WINDELN

Diapers.com for Germany
www.windeln.de

The logo for wikimart features a colorful globe icon on the left. To the right of the globe, the word "wikimart" is written in a bold, black, lowercase, sans-serif font. Below "wikimart", the Russian text "онлайн торговый центр" is written in a smaller, black, lowercase font.

WIKIMART

Russian Ecommerce
www.wikimart.ru

The logo for ticketBis features the word "ticket" in a black, lowercase, sans-serif font, followed by "Bis" in a blue, lowercase, sans-serif font.

TICKETBIS

Stubhub for Latin America
www.ticketbis.com

Big diaper business!

WINDELN.DE
STEVE O'HEAR
February 26th, 2013

Windeln.de, The German Diapers.com Clone, Raises Further \$19.6M For Its Baby Products Online Store



More VC activity in European e-commerce: [Windeln.de](#), an online shop for baby products in Germany (or Diapers.com clone), has raised a €15 million (~\$19.6m) new round of funding from existing investors DN Capital and Acton Capital Partners, while new investors MCI and 360 Capital Partners also participated. We understand that DN capital and MCI co-led the round. The new capital will be used to... → [Read More](#)

AKISMET-2D1EBBBB94E8A85634586D7896E9FD62
September 15th, 2010

Ex-Holtzbrinck VC launches Diapers.com clone, secures 7 figure funding

Although not yet live, German [Diapers.com](#) clone [Windeln.de](#) is reportedly about to launch with several million euros in the bank. Semi-publicly operated Hightech Gründerfonds and VC firm DN Capital (Shazam, Mister Spex) have invested a 7 figure sum in the startup. What's more, Windeln.de has former Holtzbrinck Ventures Managing Director Konstantin Urban as part of its founding team.

SOTA – Why?

You have a great idea for a new software product or service!



... BUT:

Before starting to invest **time, money** and **resources** into the development of a new product or service you need to know what the rest of the world is doing in this area.

SOTA definition

State-of-the-art is the level of development achieved in a certain market, application domain, science or technology.

SOTA – Why?

- You need to know and understand the important **technology trends** in your sector.
- You do not want to **re-invent the wheel**.
- You want to have access to best-in-class technology.
- You want to find partners and allies.
- You want to differentiate versus the competition.
- You do not want to infringe somebody's IPR (Intellectual Property Rights).

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SOTA domains

Take your **product vision board** and match it with related information from the following domains:

Scientific research

Industry trends

- Corporate research labs
- Startup companies
- Investor activity

Standard bodies & professional organizations

IPR – Intellectual Property Rights

- Patents
- Open source

Market reports

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CAVEAT: Analysis – Paralysis

1. Start with a “breadth first” search
2. Check and rate the relevance of every SOTA artifact:
 - Highly relevant: put it on the must read stack
 - Irrelevant: discard
 - Don’t know: save for later
3. Do an in depth analysis of the most relevant SOTA artifacts
 - Summarize
 - Identify what it means for your product vision

SOTA impact

The SOTA deliverable should describe the **impact of the SOTA artifacts** on your product vision.

Example:

- We have found an open source library for the encryption of our data.
- IMPACT: This could save us up to 2 months of testing and development but it is only available in Java.

Scientific research sources

Scientific publications:

- Journals
- Conference proceedings
- Google scholar

Public research organization annual reports:

- IMEC, Fraunhofer,
- iMinds, VITO, Telecom labs, ...

EU funded research projects

- Source: Cordis database

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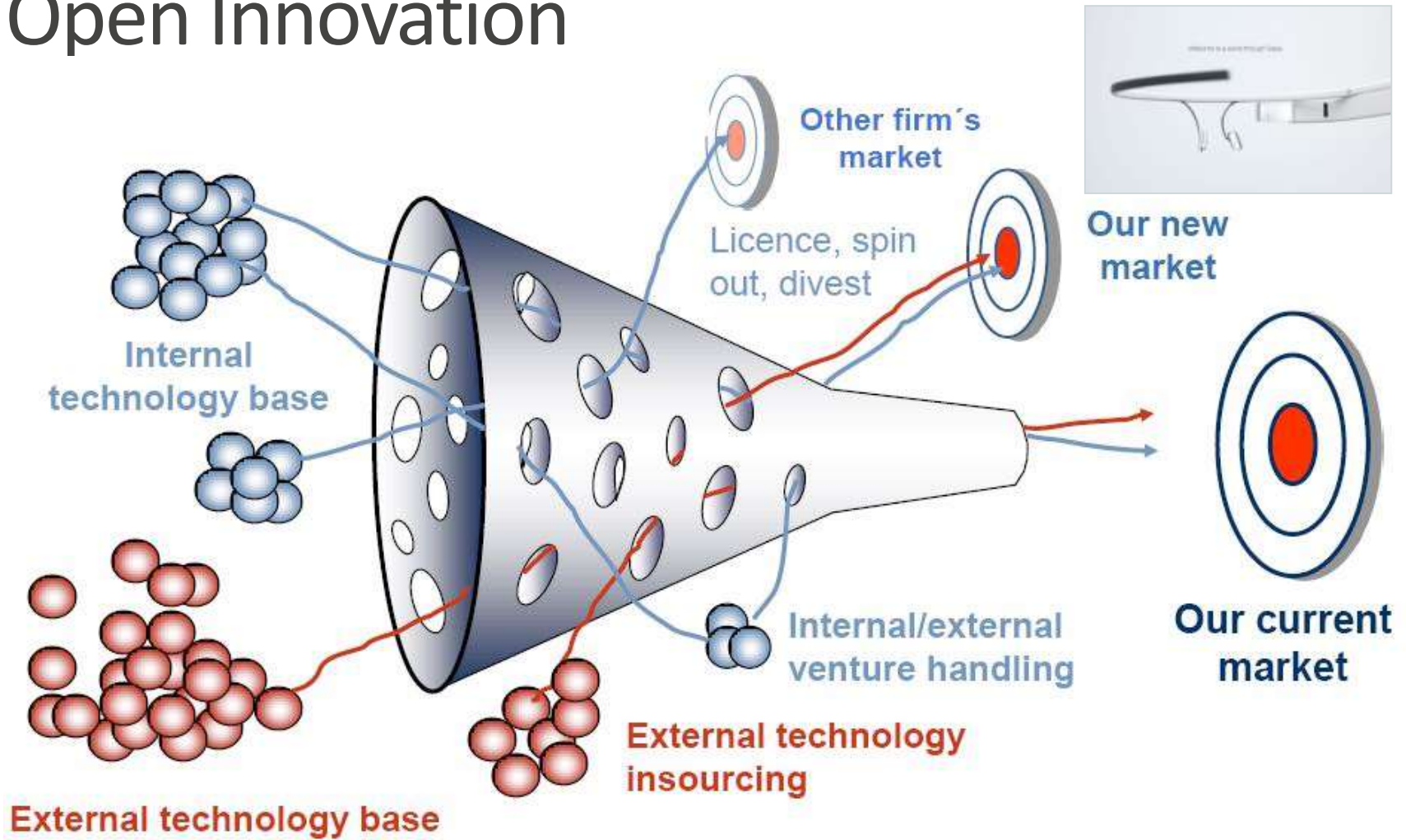
- Source: Cordis database

Industry trends: Corporate labs

Examples of corporate research labs:

- Nokia labs:
 - <http://research.nokia.com/>
- Google labs:
 - <http://research.google.com/>
- Qualcomm research:
 - <http://www.qualcomm.com/innovation/research/index.html>
- Adobe Technology Lab
 - <http://labs.adobe.com/technologies/>

Open Innovation



Industry trends: startups & VC's

Startup activity has increased significantly during the last 10 years.

Examples:

- Techcrunch: <http://techcrunch.com/>
- Y-Combinator list: <http://yclist.com>

Investment activity shows the technology trends. Examples:

- Grundertechfund (Germany):
 - <http://www.high-tech-gruenderfonds.de/>
- Accel partners (USA)
 - <http://www.accel.com>
- Incubator: 500 startups:
 - <http://500.co/>

Dealing with standards

Standards promote interoperability but come in many flavours:

- Official standards
 - Take long to develop
- Industry and de facto standards

A standard does not imply an automatic obligation to adhere to it:

- Is the market ready for it?
- What are the associated costs?

Standards & professional organizations

ISO: International Standards Organization

- <http://www.iso.org>
- Example: PDF ISO 3200 , PDF/A ISO 19005

UPnP: home automation industry

- <http://www.upnp.org>

W3C consortium:

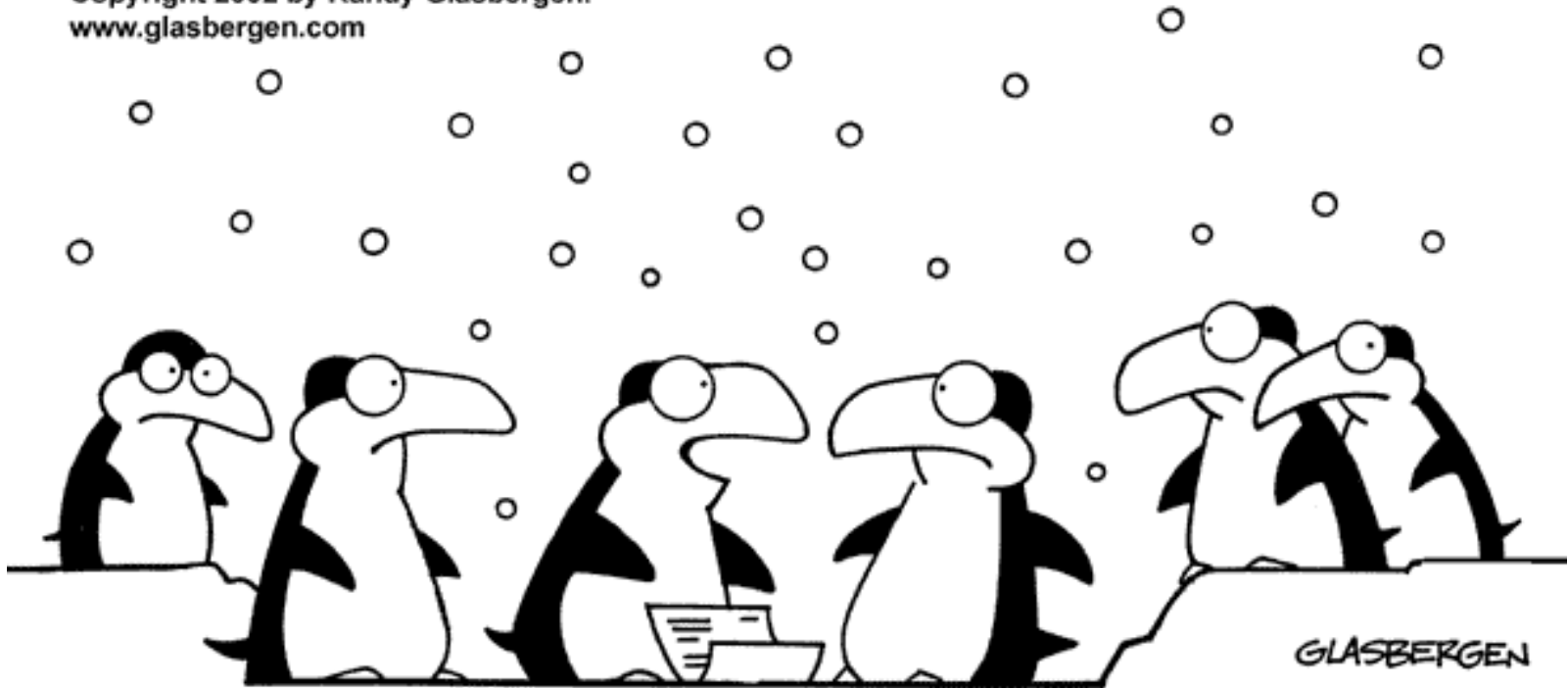
- <http://www.w3.org>
- Example: Mobile web at W3C

IEEE:

- <http://www.ieee.org>
- Example: IEEE Learning Technology Standards Committee

IPR: Intellectual Property

Copyright 2002 by Randy Glasbergen.
www.glasbergen.com



“The funny walk and tuxedo feathers are my intellectual property and trademark. If you want to look or act like me, you have to pay me a million dollars.”

Are we free to operate?

Patents & IPRs are mainly associated with protection

The most important issue of technological innovation is nevertheless: **freedom to operate**

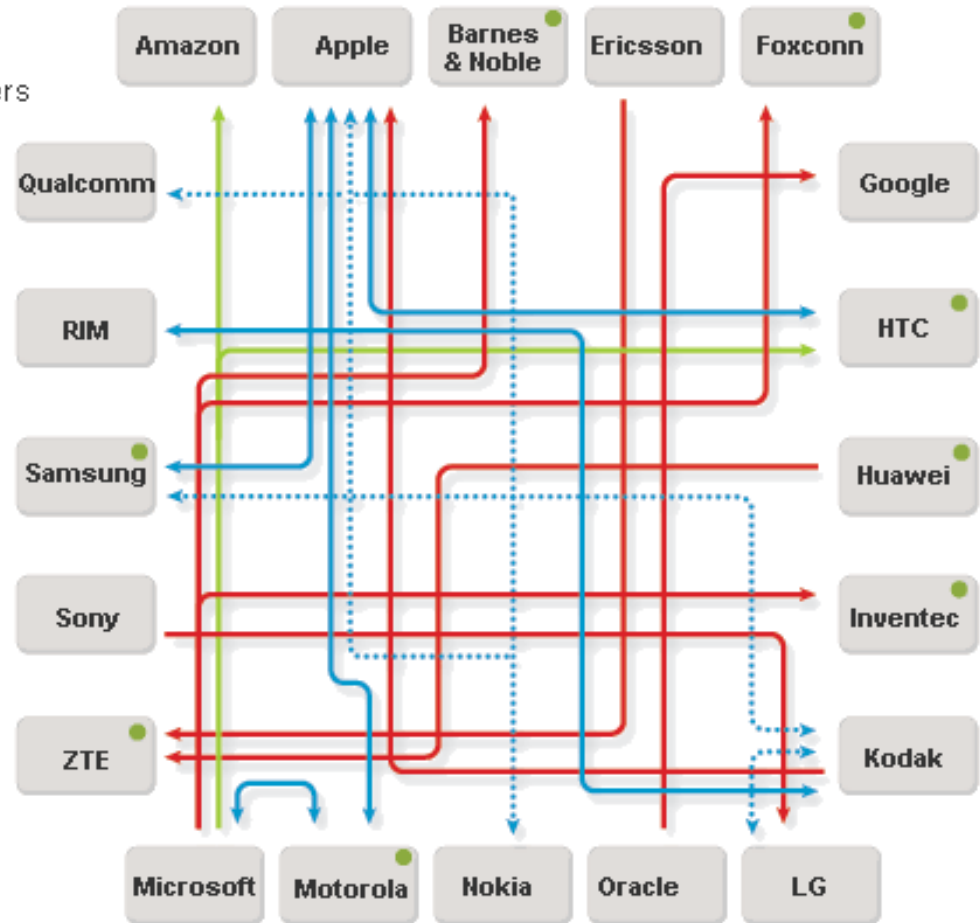
- Check existing prior IPR
- Avoid infringements on exclusive rights of third parties
- Optimal implementation of our planning and business strategy (partners, buy-build, ...)

You have the obligation to check but the option to patent.

The smartphone patent war

Mobile patent suits

Patent-related suits between mobile device/ component manufacturers



IPR databases

The main public databases are:

- U.S. PTO (<http://www.uspto.gov>): US Patent Office
- WIPO (<http://www.wipo.int>): World Intellectual Property Organization
- EPO (<http://www.espacenet.com>): European Patent Office
- JPO (<http://www.jpo.go.jp>): Japanese Patent Office
- CIPO (<http://patents1.ic.gc.ca/>): Canadian Intellectual Patent Office

Google also is getting into patents:

- <http://www.google.com/patents>

We recommend: Espacenet

- Patent search based on keywords



Open source software - OSS

Different OSS license types:

- Viral: everything it touches turns into open source.
 - Examples: GPL, AGPL
- Permissive: less restrictions for use in proprietary applications.
 - Examples: MIT, Apache

Dual licensing:

- The terms of a GPL license if you live by the principles of open source or
- Under commercial terms for third-party profit.
 - Example: iText PDF software, MySQL.

Market research

Market research reports:

- Gartner, information technology research:
 - <http://www.gartner.com/technology/home.jsp>
- OVUM, business & technology research:
 - <http://ovum.com/section/home/>
- Juniper: mobile telecom, content and applications sector
 - <http://www.juniperresearch.com>
- ...

SOTA overview

Make **clear SMART^(*) guidelines** to distribute the tasks among your team members for each SOTA area:

1. Scientific research
2. Industry trends
3. Standard bodies & professional organizations
4. IPR – Intellectual Property Rights
5. Market reports (optional)

SMART task example: John will research scientific papers and projects using Google Scholar and Cordis. A report with ½ page per topic and the impact analysis needs to be posted on the team wiki by Friday, Oct 1st at 10PM.

SOTA process



1. Do a breadth first search and prioritize the info.
2. Analyze the relevant information and summarize.
3. Determine the impact for your product vision.
4. Organize a team review and
5. Write the final conclusions & impact.
6. Decide about the next steps.