

Industrial Partnerships and Technology Transfer

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DE RECHERCHE
EN INFORMATIQUE
ET EN AUTOMATIQUE



INRIA in numbers

- A public research institute which has celebrated 40 years in 2007
- A focus on ICT
- 3800 people of which 2800 scientists (1300 researchers, 1000 Phd, 500 post-doctorates and engineers)
- A budget of 240 millions USD of which 20% self-financed
- A national institute with a **strong regional anchorage**: 8 research centres
- **An original organisational model:**
 - 204 research teams with scientific and budgetary autonomy
- A strategic plan 2008-2012
 - 4 themes: modelisation, programmation, communication, interaction
 - 3 application challenges: numerical engineering, numerical sciences, numerical medicine





**INRIA Lille
Nord Europe**



**INRIA Paris
Rocquencourt**

**INRIA Nancy
Grand Est**

**INRIA Rennes
Bretagne Atlantique**

**INRIA
Saclay
Île-de-France**



**INRIA Grenoble
Rhône-Alpes**

**INRIA Bordeaux
Sud-Ouest**



**INRIA Sophia-Antipolis
Méditerranée**



Factual elements on transfer at INRIA

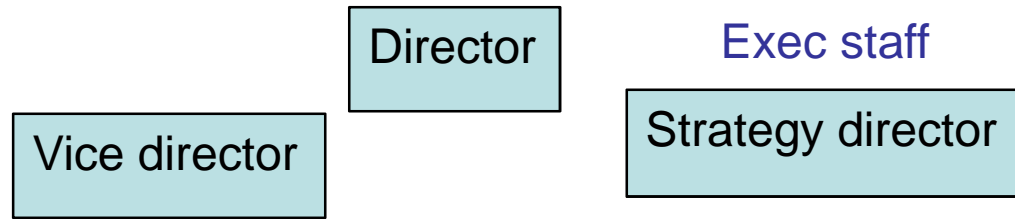
- Technology transfer: one of INRIA's *mission* (ministry: research & industry)

To have an *impact* on the real world

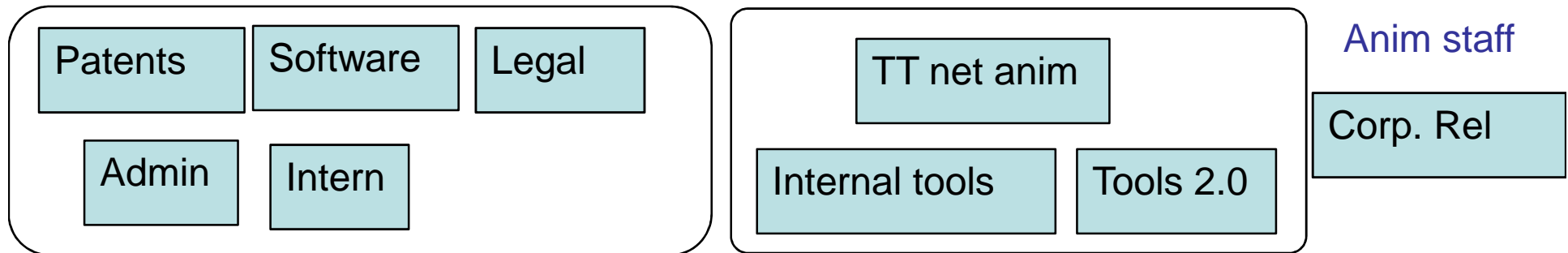
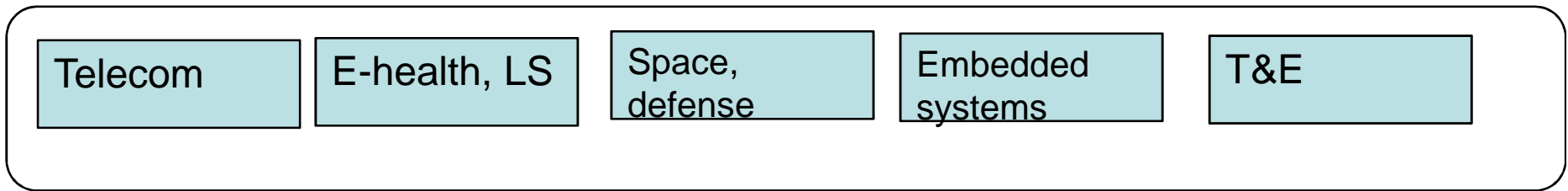
- Three channels: « ideas », technology and « human resources » transfer
 - **Research with partners: bilateral or collaborative**
 - Technology transfer (software and patents)
 - Competencies (consulting, mobility)
- Organisation
 - Transfer and innovation department (TID)
 - Headquarter and national networks
 - TT officers (2) in the research centers + 1 legal
 - A subsidiary: INRIA-Transfert (*spin-off* creation support) – 4 people



People at TID



Innovation hunters (BD)



IP Staff

FTE: 17 + 24 in regions

Admin

Budget: 710 000 \$ (oper)
468 000 \$ (IP)

R&D partnership with industry: strategy

- R&D projects with R&D departments of big companies (usually)
 - Point-to-point: bilateral, collaborative (French national research agency, EU)
 - Institute-to-company: « framework agreement ».
- Priority: a few « strategical » partnerships
 - Strategical for the quality of our *research* topics (to have access to « big » issues)
 - Mobilization of a set of INRIA research teams
 - France: « hosting territory » for R&D departments
- In practice:
 - *Joint Laboratories* (staff from both partners):
 - Alcatel Lucent Bell Labs France (ad hoc mobile networks, december 2007)
 - *Strategic Actions* (joint action of different research teams, as an answer to an industrial issue):
 - ST Microelectronics (embedded systems, november 2008)

More to come in 2010: TOTAL, EDF, VEOLIA, ORANGE, etc



The patent policy

Our patent filing criteria:

- The team has a **short-term startup project**
- The team has a **contact with an interested licensee**
- The team is building a **patents portfolio**
- The team is involved in **standardisation**

International extensions: PCT then US, EU, JP and more and more China

Researchers incentives:

- 50% of the royalties revenues (after patent costs reimbursed)
- A patent bonus of 3900 \$ (20% at filing date, 80% at a deal with a licensee)

INRIA has been blocked a long time by the « impossibility » to patent software in Europe – Licensing packages: patent + software



INRIA: a software producer

Different kinds

- Basic tools of a research team: libraries of basic functions
- Toolbox: elements diversity, number and variety of combinations
- Concretisation of a new concept: a program to illustrate, to ease comprehension, to show relevancy and efficiency in comparison to state of the art
- An object (and an objective) of some research work: conception and implementation of a new programming language

Characteristics:

- Size (much less than commercial software)
- **Research origin**
 - By researchers for researchers (limited diffusion)
 - Rapid diffusion of new concepts
 - Various years to adopt a diffusion strategy



The Open Source tradition at INRIA

From an academic point of view: a natural inclination to OSS

- Motivations: diffusion and sharing scientific results in academia

As well as: « I code, I publish, I put the software on the web, I exist »

according to « To publish or perish »

- A scientific object: to elaborate and experiment new ideas, to prove theorems, used as scientific tools, possibly opening new research directions
- the impact: who is using my software ? « myself and myself alone, my colleague (with me), my colleague (without me), a group (with me), a group (without me), people that I don't know and who do not know me, etc »



IPR tracking at INRIA

Use tools to track automatically:

- Authorship and IP ownership rights: who has contribute, at what percentage,
- Code reuse: third party components, generic INRIA components,
- FTO: compatibility of licences, release history, legal issues from sponsored contracts

Goals:

- To have a clear view of autorship to avoid arguments
- Secure transfer/licensing operations: avoid legal issues
- To create a label: « certified for transfer@INRIA »



ANTELINK



Technology transfer: strategy

➤ To have an *aggregated view*

- Transfer rack: spin-off companies, direct licensing of IP, standardization, *Open source* software, consortium/joint ventures

The CSATT: a **follow-up committee** that think of a transfer strategy for every idea (external, not a financial counter) launched in January 2009.

➤ Priority: technology transfer to SME

- First caveat: contact surface (« demand »)
 - Deployment in the French competitiveness clusters 2.0 (regional anchorage for a national network of SME partners): structuring role of CCs
- Second caveat: packaging of the INRIA « offer »
 - Not a technology-broker approach: rather a maturation-provider approach
 - Strategic marketing seminars
- Third caveat: appropriate frameworks
 - Research tax-credit, INRIA incent for motivated research teams
 - Framework agreement with OSEO



Strategic competitiveness clusters



Talking to innovative SMEs

- Demand identification: networks of innovating SMEs
 - Relying on national competitiveness clusters
 - Innovation hunters are never in the office
 - 145 prospects in 12 months (qualified, active, promising)
 - To be matched to INRIA research team offer (or might offer)

- Adaptation of INRIA offer
 - ⇒ **Building I-Labs with SMEs (failure is not an option):**
 - A common technical roadmap for 3 years
 - Commercial development plan in regard to the technical roadmap
 - Development of a common long-term vision: market/team, techno/SME
 - A contract and a **charter**
 - TDI allocated human and financial resources



Encouraging INRIA researchers

➤ Strategic marketing seminars

- Obtain a vision of the economical, industrial and technological challenges of different industrial sectors
- Define priorities to maximize the impact of transfer in the sector
- Propose and implement a concrete actions program
- every five weeks, videoconference, open to academic partners

Done: publishing & press, embedded system for automotive, mobile phones apps, bioinformatics for biopharmaceutical.

To come: Smartgrids, sustainable numerical cities, finance, e-health, transport, etc

➤ An innovation award (still to come)

- ⇒ To give the envy to build success stories
- ⇒ Adequate press coverage





Partnering with OSEO

- OSEO: the enterprise for entrepreneurs
 - Innovation support and funding : for technology transfer and innovative technology-based projects with real marketing prospects.
 - Guaranteeing funding granted by banks and equity capital investors.
 - Funding investments and operating cycle alongside the banks

- The agreement with INRIA
 - OSEO has a seat in the CSATT
 - Joint launching of the **CONNECT** newsletter for SMEs
 - Launching three national transfer initiatives to structure innovation ecosystems: Mobiles Services, HPC, Sustainable Cities

Political, strategic and practical importance



France and american approach

- A rather new discipline in France
 - The 1999 innovation law where researchers
 - Do some consulting
 - Create a startup
 - Take equity in a startup
 - Be member of the board
 - The competitiveness clusters (70 CC): since 2005
 - Financed by public funds (1 billion euros invested)
 - Encourage cooperation between private companies, academia on a local territory
- Weaknesses:
 - A scattered landscape
 - Constrained by public regulations
 - No entrepreneurship culture (might be changing)

A lot of different experiences on which we can share



INRIA TID moto

Alone we go faster, together we go farther !

Q&A session

