Strategic Management of IP for Industry & Academic Institutions: The experience of FORTH

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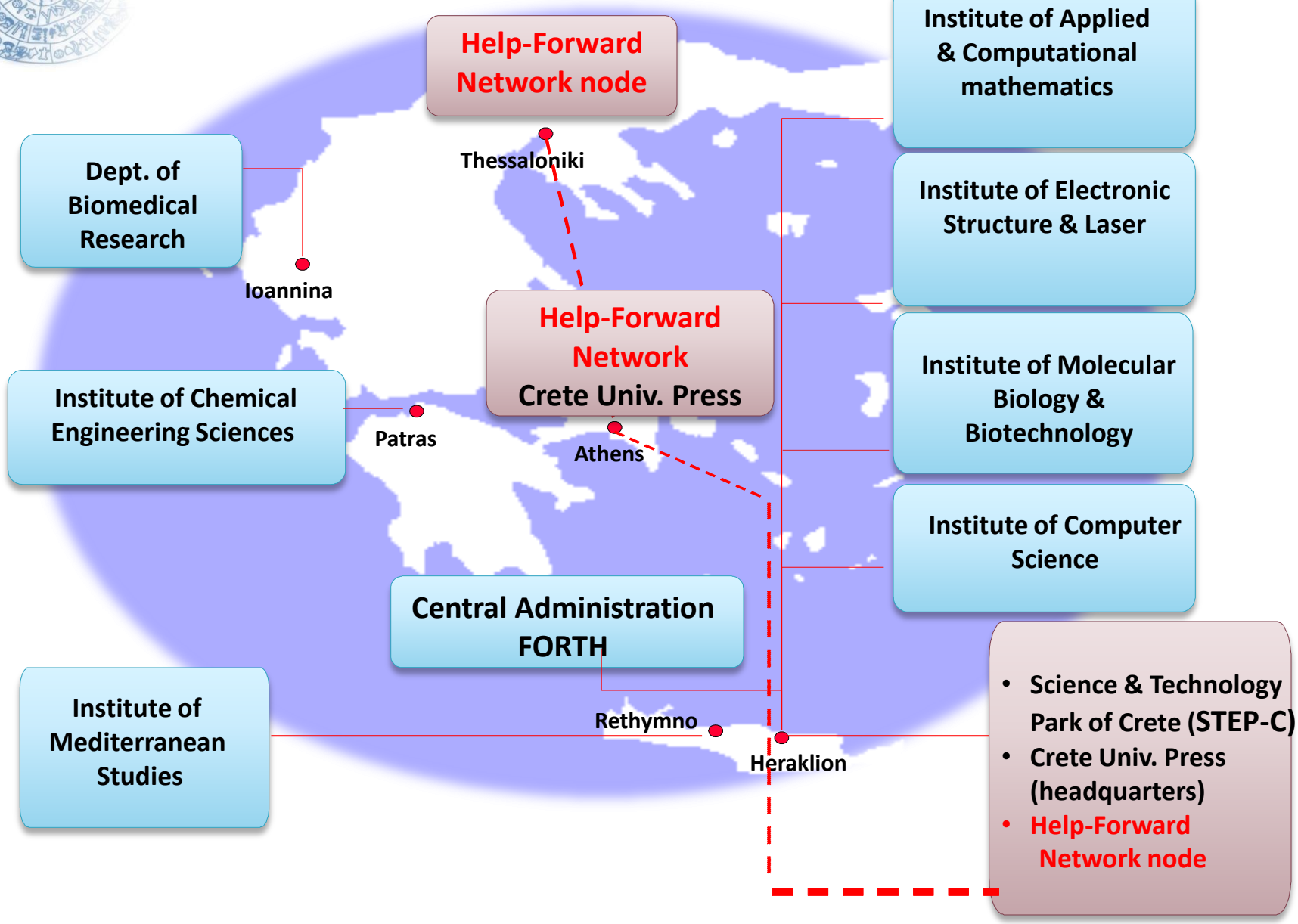
Foundation for Research & Technology – Hellas (FORTH)



FORTH: MODEL OF TECHNOLOGY TRANSFER & COMMERCIALIZATION OR RESEARCH

FORTH
Headquarters: Heraklion

Institutes in 4 Greek peripheral cities

Incubator

Technology Diffusion
Technology Transfer

Commercialization

STEP C

praxi
help-forward network

SPIN OFF Companies

Basic & Applied Research
Financed by the Government, EU, International Organizations and the private sector

Technology Transfer & Commercialization

Cooperation with the private sector in Greece and abroad
Over 100 patents filed (~20 national και ~30 international valid)

HELP - FORWARD NETWORK

***HELP-FORWARD** Network was established in 1991 by FORTH and the Federation of Greek Industries (FGI) and is also supported by the Federation of Industries of Northern Greece (FING).*

***HELP-FORWARD** offers Technology Transfer brokerage services to Greek companies and Research Institutions and provides information, mediation and advisory services to all stages of Technology Transfer and Exploitation of Research Results:*

- ✓ Funding opportunities identification
- ✓ Detection of technological needs
- ✓ Technology watch and evaluation
- ✓ Partner search
- ✓ Technology transfer negotiations support
- ✓ Support for spin-off creation

- ✓ Member of Enterprise Europe Network
- ✓ NCP for FP7 & H2020
- ✓ Co-organizer of International Venture Capital Forum

Best IRC 2002 Award

www.help-forward.gr

Science and Technology Park of Crete (STEP-C)

- FORTH' s conception of the Park: Late 80s
- Construction of the buildings : 90s
- Managing Company : Established Dec. 1993

Mission:

- Make available FORTH's and other academic communities significant research deliverables for the development of the region and become the 3rd development pole next to agriculture and tourism
- Encourage companies to join the Park and become major vehicles of the Technology Transfer process
- Become a Center of Learning
- Contribute to regional development

Main competences:

ICT & applications

Biotechnology/Biomedicine

Materials & Laser applications

Tourism and services

INCUBATOR: 20 tenant companies

METHODOLOGY FOR TECHNOLOGY EXPLOITATION

1. Collaboration with the private sector for the establishment of New Technology Based Firms

2. Collaboration with VC firms for spin-off financing

3. "Institutional" Enterprises (FORTH Labs sell products and offer services to the private and public sectors, e.g. DNA enzymes, biotech products, laser applications)

4. Establishment of New Technology Firms at STEP-C (private companies)

5. Licensing agreements

6. Support students and researchers to start up new firms
Since 2003 a number of programs has supported students to develop new companies (some success, but most important change of culture)

Due to demand side limitations: Development and exploitation where competitive advantage exist (niche approach)

EXAMPLES OF FORTH spin-offs

- **FORTHNET** (Greece), telecommunications & internet services, created 1995, FORTH's share ~6 %, (www.forthnet.gr)
- **ART INNOVATION BV** (Netherlands), sales of diagnostic equipment for art works inspection, created 1997, FORTH share 13,82%
- **MINOS BIOSYSTEMS Ltd** (UK), commercialization of gene transfer techniques (using the transposable element MINOS) through the development of a patent portfolio, created 2000, FORTH share 30,67%
- **IMPERMEABLE AS** (Norway), commercialization of ground stabilization techniques with applications in the oil drilling industry, created 2000, FORTH share 10%
- **FORTH PHOTONICS** Ltd (UK), development of imaging technologies for non invasive diagnosis and screening of cancer, created 2002, FORTH share 18%
- **COMPITENT SA** (Greece), development of laser equipment for materials processing, created 2002, FORTH share 15%
- **NANOTHINX SA** (Greece), high-yield and low-cost production of carbon nanotubes, created 2005, FORTH share 15%
- **ADVENT SA** (Greece), new materials and systems for renewable energy sources such as fuel cells and photovoltaic systems, created 2005, FORTH share 10%
- **NANOCHRONOUS LOGIC** (Greece & USA), new company est. 2006 in the USA with its R&D department in Heraklion. Production of software for integrated circuits (ICs)

CASE 1

FORTH PHOTONICS

- *Exploitation of FORTH patents*
- *First round of financing, 1.8 mio € (NBG VC)*
- *Development of imaging technologies for non invasive diagnosis and screening of cancer, created 2002, FORTH share 25%, Research group: 26 %*

2011: Acquired by Scottish Enterprise, now Dysis Medical (headquarters in Edinburgh, offices in Athens and USA)

FORTH: Less than 2% (dilution)

CASE 2

MINOS BIOSYSTEMS Ltd

- *Exploitation of FORTH patent family*

- *Commercialization of gene transfer techniques (using the transposable element MINOS) through the development of a patent portfolio, created 2000, FORTH share 30,67%*

2012: Decision to close the company

CASE 3

Patent rights : Proposal for reassignment to inventors (obsolete technology)

FORTH policy Vis-à-vis IP protection

- *Protection and Exploitation of Research results is a strategic priority of FORTH (provision in the FORTHs' Statutes & Internal Regulations)*
- *IP protection is considered as a way to strengthen its strategic position and increase revenues*
- *Each Institute of FORTH is responsible for the decision of patenting, IPR management and exploitation*
- *Final decision by the Board of Directors for selling, licensing, joint venture, creation of spin-off company*
- *Since its establishment (1983) over 100 patents filed (national and international)*

Major difficulties in obtaining IP protection

- ***Lack of awareness and knowledge of the procedures***
- ***Financial difficulties and high costs associated with international patenting and patent watch***
- ***Lack of specialized attorneys and intermediary organizations***
- ***Culture***

Recommendations

- *Eligibility of the costs associated with IPR in all national programmes*
- *Incentives and rewards (motivation of employees)*
- *Creation of a culture among the research community*
- *Creation and management of an IPR portfolio within each academic and research institution*
- *Training of researchers and staff in managing of IPR, legal offices*
- *Organization of professional training seminars (positive role of the Greek Patent Office)*

FORTH: Position regarding vs. open licensing

- ***Ad hoc* approach**
- ***Depends on the programme framework, partners, objectives of the project etc***
- ***FORTH is not a charity***

Role of International IPR Framework

- ***Relatively complicated, requires experts and continuous technology watch***
- ***Court litigation and arbitration are associated with high costs (small organizations are not able to afford)***
- ***Intellectual Property Rights are as strong as the means to enforce them***
- ***Favours large enterprises and organizations who have the necessary resources and capabilities***

THANK YOU

FOR YOUR ATTENTION

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