



Training seminar

MANAGEMENT OF INTELLECTUAL PROPERTY RIGHTS

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***PART 4
COMMERCIALIZATION OF IPR AND RESEARCH RESULTS***

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EXPLOITATION OF IP ASSETS

- ***The right to prevent a third party from using and exploiting the IP right vests in the owner an asset not very different to a physical asset, such as a car or a house***

- ***Like physical assets, IP assets could be creatively and profitably exploited***

- ***Core to the competitiveness of the product or service***

- ***Other options***
 - ❖ ***Sale, license, franchise or merchandise***
 - ❖ ***Joint ventures and strategic alliances***
 - ❖ ***Defensive patenting, publication***

- ***Finance***

EXPLOITATION OF IP ASSETS

Evaluating the commercial potential

- Does the technology offer a cheaper or better way of accomplishing something?***
- Are competing technologies available and how much better is the invention?***
- Does the invention provide a technological answer to an existing problem?***
- Does it have the potential to create a new market?***
- How much investment, in terms of both time and money, will be required to bring the invention to the marketplace?***
- Will the inventors continue to work on the invention?***
- What will be the potential pay-off for a company that invests in the development of the invention?***

EXPLOITATION OF IP ASSETS

Approach Strategy

It is a combination of which companies/organisations to approach and at which stage of technological development, and with what product or service.

Factors to be considered:

- *The level of demand,*
- *The position of the organisation,*
- *The market survey*
- *In what form the technology is required*
- *How industry adopts new technology, (e.g. licensing, Joint venture)*
- *What industry will pay*
- *Whether it is demand led or technology lead, (i.e. is it market pull or technology push?)*

EXPLOITATION OF IP ASSETS

LICENSING

Licensing is when an owner of such an intangible asset, transfers the right to use that asset to another, for a price, while retaining ownership of that asset. Several types of licensing exist.

Licensing is normally appropriate when:

- The owner of the intellectual assets does not have the essential expertise or infrastructure for effective exploitation (e.g. manufacturing, distribution, reputation, market knowledge)***
- The owner of the intellectual assets wants a low risk way to exploit the innovative technology***
- There are established companies that are well-placed to exploit the innovation***
- There are some applications that the innovator does not wish to exploit through forming a spin-off or joint venture.***

LICENCE STRUCTURE

- ***Preamble/Definitions: Framework of the relationship***
- ***Grant: What we're allowing licensee to do***
- ***Compensation: What we get for allowing them to do it***
- ***Diligence: Mechanism for ensuring they work hard***
- ***IP: Who controls the process***
- ***Legal: What happens if things go awry***



BASIC PROVISIONS

- *The subject of the Agreement – basic rights and obligations should be defined in order to avoid controversies regarding the type of contract.*
- *Subject- matter (IP rights) should be clearly indicated. However with regard to know-how licenses confidentiality must be observed.*
- *In case of numerous IP rights listing them in an annex may be of help*
- *Definitions of terms assist in avoiding misunderstandings*
- *Since IP rights are territorial licenses are also territorial*



DEFINITIONS

It is important to know what are the goals of the parties to the agreement

Field of use - e.g. application of product / technology in a certain industry branch,

Exploitation - authorized exploitation activities, e.g. production, offer, sale in the territory / for the defined field of use

Main types of licenses:

Non-exclusive license :The same license can be granted to as many as licensees as the licensor wants

Exclusive license :The license excludes any other potential licensee



WHICH TO CHOOSE

Non-exclusive license :

Licensor can spread the risk of a successful commercialization by licensing to more than one Licensee in a territory and field of use

Exclusive license :

Licensor takes a high risk as to successful exploitation based on the activities of one licensee only

In practice exclusivity is very often a precondition set up by the licensee

However, we should remember that all licenses are flexible. For example exclusivity can be limited to a territory and / or field of use



TYPICAL NON-EXCLUSIVE

Grant:

- *Scope = Non-exclusive*
- *Field = Limited*
- *Territory = Varies*
- *Ability to sublicense? = No*

Compensation:

- *Upfront = Cash (less than exclusive)*
- *Milestone payments = Varies (sometimes none)*
- *Running royalty = Varies (sometimes none)*
- *% of sublicensing = n/a*

Diligence:

- *Light. Sometimes non-existent, since rights are not being "tied up."*



TYPICAL : TANGIBLE

Grant:

- *Scope = Non-exclusive*
- *Field = Limited (frequently to internal R&D)*
- *Territory = Worldwide*
- *Ability to sublicense? = No*

Compensation:

- *Upfront = Cash*
- *Milestone payments = n/a*
- *Running royalty = Varies (frequently none)*
- *% of sublicensing = n/a*

Diligence:

- *None typically required*



SUBLICENSING

- *Often needed to enable manufacture, distribution and marketing of the final product*
- *Requires consent of the licensor*
- *Should correspond to the same terms and conditions as the license*
- *Rights and obligations as in a license agreement*
- *The licensee should indemnify the licensor against any actions by the sub-licensee and be required to collect any royalties payable*



ROYALTIES

- **Lump sum payments**
 - Usually paid at the beginning of the license period
 - Often used by exclusive licenses
 - Less risk for the licensor
 - Do not depend on profits generated by the licensed IP
- **Recurrent payments**
 - E.g. payments per unit or percentage license
 - Percentage license refers to a base formula like e.g. net sales. Defining this formula is crucial.
 - Dependent on generated profits – incentive creating
- **Minimum royalties**
 - A mixed formula providing some benefits of both 1 and 2.
- **Flexible royalty schemes**
- **TARGET: Win-win deal**
Value break-down (possibly 25% rule of thumb): inventor-developer-producer- distributor



CALCULATION OF LICENSE FEES

- ***Calculation based on projected income streams (i.e. based on the probable profit, the technology may generate***
 - ***How valuable is the technology?***
 - ***What is its useful life?***
 - ***Is there a market?***
 - ***Is it easy to defend in litigation?***
- ***Calculation based on standard royalties applied commonly in a given field (often percentage royalties).***
- ***Costs of developing technology, costs of protection (esp. relevant for patents), the need to obtain other licenses***



LICENSENCING RESOMMENDATIONS

Licensor's warranty & liability limited to a minimum

- *Ownership of patents.*
- *Right to license.*

Avoid restrictions for potential future collaborations

- *Non-exclusive or field-exclusive licenses possible?*
- *Freedom to operate granted (non-commercial collaboration w/ other third parties possible)?*
- *Distribution of material possible?*

Make sure the technology is successfully transferred

- *Know-how and software available?*
- *Allow for a limited amount of time spent after execution of agreement.*
- *Future improvements?*

License income is an important aspect ... but not the only one. Do what is good for the technology!



LICENSENCING RESOMMENDATIONS (2)

Manage expectations towards the institution, the inventors, the public, etc. It will take a long time until substantial amounts of money can be made out of technology licensing (unless you are very lucky).

Develop different strategies / channels to market, Technologies, Websites, direct marketing, news letters, technology fairs, tech brokers, collaborations, etc.

Commitment of the researchers / inventors

Without the inventor's technical help it will be very difficult to market technologies! (e.g. preparation of factsheet, willingness to demonstrate invention, timely handling of questions/documents).



TERM SHEET

A term sheet is a non-binding short outline (2 pages) of the key terms of the license, concentrating on the “business terms”. Basis for negotiation.

- ✓ *Definition of Object of License: Patent, Software, Know-how, Materials, etc.*
- ✓ *Administration / Costs*
- ✓ *Prosecution / Patent defense*
- ✓ *Geographical scope / Duration / Reasons for cancellation*
- ✓ *Field of use*
- ✓ *Exclusivity / Right to sublicense*
- ✓ *Due diligence*
- *Responsibilities for product development, introduction on the market, advertisement*
- *Milestones!*



BEFORE LICENSING: TERM SHEET

Remuneration

Up-front or milestone payment

Repayment of incurred patent costs

Milestone payments

Equity

Royalties (piece / turn-over dependent); annual minimum payments

Time of payments

Due date for royalties

Frequency of payments

Reporting to licensor

***Liability / Warranty. Only warranty acceptable for universities:
ownership of IPR and right to grant license.***

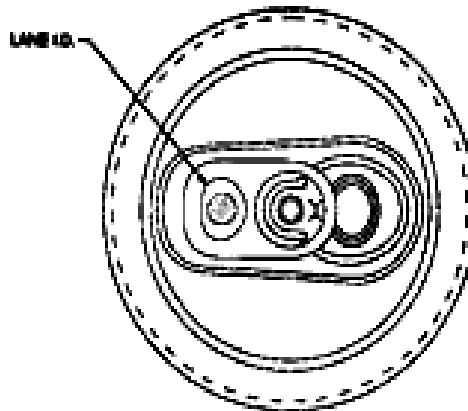
***Applicable law / Place of Jurisdiction. Foreign laws may be a
problem.***



EXPLOITATION OF IP ASSETS

LICENSING

EXAMPLE: *The inventor of the can opener system, licensed it to Coca-Cola at 1/10 of a penny per can. During the period of validity of the patent the inventor obtained 148,000 UKP a day on royalties*



EXPLOITATION OF IP ASSETS

MERCHANDISING

The licensing of trademarks, designs, artworks as well as fictional characters (protected by these rights) and real personalities are broadly referred to as merchandising



EXPLOITATION OF IP ASSETS

FRANCHISING

A specialized license where the franchisee is allowed by the franchisor in return for a fee to use a particular business model and is licensed a bundle of IP rights (TM, service marks, patents, trade secrets, copyrighted works...) and supported by training, technical support and mentoring.



EXPLOITATION OF IP ASSETS

Establishing joint ventures and co-operative agreements

Universities and research organisations can also commercialise their IP through the establishment of business collaborations such as joint ventures, strategic alliances etc. In fact, recognising their lack of knowledge in the commercialisation process, they may form business partnerships with the business community in order to exploit their inventions more successfully.

In general, creating a joint venture or a strategic alliance between a spin-off and an established company can be a very sensible option in a variety of situations, such as when:

- A significant amount of further development is needed and both partners can make effective contributions to the development effort.***
- The university spin-out wants to be actively involved in exploitation, sharing some of the risk in exchange for more of the reward (compared to licensing)***

EXPLOITATION OF IP ASSETS

Creating Spin-offs

One of the ways in which inventions are successfully commercialised by a University is through the formation of what is called a spin-off or spin-out company.

The establishment of a spin-off appears to be a difficult process, as it usually requires a lot of resources both in terms of financial and human capital. Thus, this specific form of IP exploitation is one that requires effective communication and mutual support of several of the stakeholders if the process is to be successful.

However, there are many important reasons why researchers are usually choosing to establish a spin-off company in order to exploit their IP.

EXPLOITATION OF IP ASSETS

Important reasons to establish a spin-off company:

- ***To exploit a new technology or an innovative development when established companies are not well-placed to do so***
- ***To prove a new technology or innovation, and extract more value from the exploiters***
- ***To commercialise a new idea when others do not recognise its real value***
- ***To establish a firmer basis for a commercial joint venture***
- ***To see a product development through from concept to commercial reality***
- ***To make money and enjoy working on a challenging new business venture***

EXPLOITATION OF IP ASSETS

Aspect	Spin-off <i>Favoured by</i>	Licensing <i>Favoured by</i>
<ul style="list-style-type: none"> ▪ Technology - Stage of Development - Uniqueness - Stand alone product or part of a system 	Unique, sustainable, stand alone product with satisfies an unmet need	Unique, sustainable, stand alone product with satisfies an unmet need
<ul style="list-style-type: none"> ▪ Intellectual Property - Patented - Know-how - Copyright protection - Design protection 	Well protected product or a process relying on know-how or IP protection	IP in place
<ul style="list-style-type: none"> ▪ Manufacturing - Capital expenditure - Use of existing equipment - Volume required to achieve financial projections 	<p>Lower upfront capital requirement.</p> <p>Low volume high value product</p>	<p>High upfront capital requirement</p> <p>High volume requirement</p> <p>Low cost manufacturing base requirement</p>
<ul style="list-style-type: none"> ▪ Market - Fragmented or concentrated - Few or many key companies - Global or few countries - Few or many customers - Established or new market - Route(s) to market 	Relatively easy to access customers and accessible route to market	<p>Fragmented market serviced by existing sales forces.</p> <p>Supply deals in place</p> <p>Difficult to access route to market</p>
<ul style="list-style-type: none"> ▪ Competition - None or well established - Differentiated or “me to” product 	Well differentiated product which satisfies an unmet need	Highly competitive cost conscious area. Differentiation slight. Well established competition.
<ul style="list-style-type: none"> ▪ Team - Experience - Inclination 	<p>Experienced and committed team</p> <p>All skills present in team</p>	Inventor does not wish to leave university
<ul style="list-style-type: none"> ▪ Environment - Buoyant or depressed - Availability of funding 	Funds from VC’s etc.	<p>Funds available from company</p> <p>Funds from VC’s restricted</p>

Source: Heriot-Watt University, UK

EXPLOITATION OF IP ASSETS

SELLING IP RIGHTS

- *It is established that most researchers do not have the appropriate professional experience to act as entrepreneurs and most universities and research institutions can not effectively engage in commercial activities. In such connections, the inventor institutions should probably sell their IP Rights to other companies or organisations.*
- *The advantage of this option is that it does not entail major expense, although the returns are small compared to other options.*

EXPLOITATION OF IP ASSETS

PUBLICATION OF RESULTS

- ***By publishing, the invention is no longer new and not patentable.***
- ***Decide not to patent and prevent others from patenting***

DECISION FOR THE EXPLOITATION OF IP ASSETS

Decision Factors	Implication
Unlikely to raise sufficient funds to develop or exploit the idea from in-house resources	Favours licensing to company with sufficient resources and willingness to progress development
Involves specialised assets (equipment, market access) for effective exploitation	Suggests licensing or a spin-off linked to a strategic partnership
Difficult to protect the intellectual assets	Favours spin out if it can be justified economically but business will need to move quickly
Sceptical business community is unconvinced about product feasibility or business prospects	Favours spin-off to prove concept and commercial potential
Further development needed	Consider all options but only if certain that added value outweighs cost of further development
Unlikely to raise sufficient funds to develop or exploit the idea	Either license or seek partnership with a company that has funds and essential exploitation assets
Involves specialised skills for development and/or exploitation	Depends whether skills are already in place and where they are located
Some, or all, of the essential skills or exploitation assets are already in place elsewhere	Consider licensing or spin-off with a strategic partner
Requires complementary skills or assets for effective exploitation	Favours partnership with owner(s) of complementary skills or assets
Development or exploitation involves a considerable risk	Favours strategic partnership to reduce risk exposure
Progress unlikely without drive of project champion	Favours spin-off, ideally involving someone with business experience
Long term perspective needed for effective exploitation	Characteristic of many spin-off or joint venture developments, though licensing should not be ruled out
Straightforward to implement	Tends to favour either spin off development or licensing depending upon expected reward
Mutual benefits would arise from exploitation involving another company	A feature of strategic partnerships and sometimes characteristic of licensing opportunities

EXPLOITATION OF IP ASSETS

CASE STUDY: Forth Photonics SA

Forth Photonics Ltd (Forth Photonics) is a medical device company that designs, develops, manufactures and markets, imaging systems which focus on detection of cancerous and pre-cancerous lesions and is based on their patented Dynamic Spectral Imaging (DySIS) technology. The technology is used as part of a system to screen and detect cervical cancer.

The company was established in 2002 as a spin-off company of FORTH, Greece, based on the exploitation of a group of international patents.

The Forth Photonics group comprises three companies, with Forth Photonics Ltd being registered in London although they have recently established a new global headquarters in Edinburgh. The other companies within the Forth umbrella are Forth Photonics Hellas SA which is based in Athens and this facility houses R&D and production facilities for the group, and the recently established Forth Photonics Inc in the USA.

In January 2009, SE, via the Scottish Venture Fund (SVF) participated in a £6.1million equity funding package for Forth Photonics, with the deal being completed alongside SVF partners NBGI Ventures and Albion Ventures. NBGI Ventures invested £2million, Albion Ventures £2.5million, and SVF invested £1.6million in the deal. Proceeds from the funding round will be used to finance the Company and finance their sales drive, focused on Europe and the US.

The DySIS product has clear cost and efficiency benefits based on higher sensitivity and earlier detection which can pay back much faster than traditional methods. The addressable market for DySIS is circa €500million in cervical diagnosis and an additional €620million in screening. The US is the primary market, due to the large number of gynaecology practices, their purchasing power and their focus on preventative healthcare. Other key global countries will be accessed mainly via network of distributors, which reduces the capital requirement. The device is CE marked and is generating growing revenue in Europe.

Info: www.dysismedical.com