

IP Intermediaries

Agents, Interpreters and other Experts

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„Agents“

- Unnoticed and unknown agents, experts, curators... act between the user (consumer) and reality
- **Software agents** on the internet provide (free) information for everyone
- **esp@cenet** ®
- **USPTO.gov**

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The Patent as an Economic Tool

- A piece of paper, turning technical know-how into a negotiable commodity
- Intellectual property certified by the Patent Office upon examination of an intellectual property application (option)
- An asset, a security, an investment.....
- „*Patents turn technical know-how into tradable assets*“ (Paul Braendli)

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Inventions for Free?

- **RDISCLOSURE** (Research Disclosure) Databank
- Scientific-technical information on new developments (about 30.000 publications)
- To be used by everyone for development purposes
- Used in PCT Minimum Documentation

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Beware of Wrong Intermediaries

- An inventor sent in a check of 485.- Pounds to a service company promising to evaluate her idea, whereupon she received a report on general stuff and an offer to develop her „excellent idea“ for a fee of 5,500.- Pounds.
- The UK Patent Office and the Chartered Patent Institute advised against the scheme. One such firm „International Product Design Incorporated“ was closed down by the Department of Trade and Industry in 1999.

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Intermediary „Professionals“

- Patent, Trademark and Design Attorneys
- Information experts
- Searchers
- R&D Managers
- Patent Managers
- Marketing managers
- Strategic Planners
- Translators....

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European Patent and Trademark Attorneys (Private Practice and Corporate)

- Technical-scientific background plus acquired legal knowledge
- Training and qualifying examination
- Quality of profession determines quality of service
- Disciplinary and code of conduct rules
- However: Lack of economic training

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Patent and Trademark Attorneys

- Advisers / Representatives at:
- Interface: client – granting / enforcing authority
- Transforming tacit knowledge in company into codified form
- Interface: client – economy and management
- Interpretation of data in conformity with needs of clients
- Devising and assessing protection and enforcement strategies, geographic coverage....
- License Agreements, risk and due diligence appraisals, private and court expertises...

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IP Field Phenomena

- New fields of inventive activity
- Increasing filing numbers exceed expectations
- Processing backlogs
- Filing/Search/Publication/Virtual Protection
- Unexamined cases
- Uncertain information, grey zones, extent of searches

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Attorneys Rely Upon

- The Knowledge Based Society and the Internet: The „*Mozilla-Google-Effect*“ (already exploited by clients)
- Commercial Information Industry
- IP Databases
- Search and Retrieval systems
- Cooperation with data service providers
(we need not do what others can do better)

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Attorneys

- Readily available information requires interpretation by specialist, e.g. in trademark clearance searches, the machine does not perform an interpretation of search results
- *„The bigger the library, the more you need a librarian“*
- *„There are no facts, only interpretations“*
(Friedrich Nietzsche)

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Examiners / Patent Attorneys / Quality

- Collaborative efforts between examiners and attorneys
- From formal quality of filing to substantive quality of patent
- Scope of protection / Legal certainty?
- Interpretation (under Art. 69 EPC)
- Litigation
- Arbitration
- Mediation

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Quality

- The patent claim as a business foundation?
- Patent claim not only focussed on technical content, but also on market?
- Who judges the quality of an IP or IP portfolio?
- Who assesses the scope of protection?
- When does quality become important?
- Does IP quality really matter in due-diligence procedures, for example?

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The Searchers (Private and Official)

Search: Most important tool in patent and trademark field

- Increasing sophistication of searches
- Increasing amount of data
- Increasing amount of non-patent literature
- US domination in retrieval technology?

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IP Economics and Management

„Like quality, innovation does not just happen. It needs to be actively managed“ (Simon London, FT)

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Management

- What is **management**?
- A network of relationships, comprising planning, organising, coordinating, controlling and information processing
- Examples: Strategic planning of portfolios to occupy an entire field of innovation,
- Controlling portfolios (e.g. maintenance)
- Coordinating licensing....

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The Patent System

- Freedom to practice and exploit
- Freedom to occupy entire field of technology
- Freedom to optimise returns as long as law permits
- Freedom to use patent / application in any way the law permits
- Freedom to share patent

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The European Union / U.S.A.

- IPR Helpdesk
- www.cordis.lu/ipr-helpdesk
- *For example: Advice and interpretation to SMEs of IPR related stipulations in contracts*
- *US Department of Energy, Invention & Innovation Program 1999: „From Invention to Innovation“*
- www.eere.energy.gov/inventions/

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R&D in Europe

- Non-patent applicants invest less in R&D than patent applicants
- Only about 30% of European SMEs apply for patents
- 53% of European companies do not invest in R&D
- Without R&D no inventions and no patents

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R&D Investment in Europe

- 50% of budget is invested in improving existing technology
- 15% of budget is invested in entirely new products
- return less than 20%
- return about 30%
- Peter Drucker:
- Efficiency vs Effectiveness
- Doing things right vs doing the right things

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Real Innovation?

„The more an innovation challenges the status quo, the greater the chances that it will encounter obstacles“

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The European SME

- Is European **definition** of SMEs in comparison to the U.S.A. right?
- Diverse European cultures
- Lack of capital and financial support, e.g. by tax regimes
- Lack of market knowledge
- Problems of ownership (employees' inventions, research collaboration)

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Private Inventors and SMEs

- Not (yet) fit for the turbo-economy
- Lack of knowledge of IP field
- Lack of R&D
- Lack of capital
- Lack of (international) contacts
- Lack of awareness of help-desks
- Overexpectations
- However, use of the Internet

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Innovation and SMEs

- As a rule no high risk, high return, radical inventions
- Rather, conservative incremental innovation
- Possible taxation solutions:
- Early tax deductions (specific percentage over time period)
- Relief of losses through tax system
- No tax deductions from royalties if reinvested in research.....

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Corporate IP Management

- Field of operation: Patents, Trademarks, Designs, Utility Models, Copyright
- Team of specialists and corporate attorneys, economists,
- Technical and economical training
- Licensing activities
- Evaluation of assets
- Litigation
- Searches

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IP Management

- **Ipal**, a Berlin based company is active in:
- Training in Consulting and IP qualification
- Setting up of high-tech firms
- Assets management
- Problem: Lack of university training facilities
- New: Masters courses in Dresden, Düsseldorf, Munich and Hagen

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Profile of IP Private Management Firms

- Staff training in university courses
- Experience in specific fields, e.g. biotech
- Collecting patents
- Follow up on grant procedures
- Monitor competitors
- Search for collaborators and partners
- Pre-production management

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Management Activities

- License Trading Concepts
- Set up marketing networks consisting of universities, industry associations, industry partners research institutes,
- Set up administration and management of licensees' groups and networks
- Establishing unitary advertising groups
- Establishing R&D Partnerships
- Establishing contacts to potential business partners
- Support and representation in trade fairs and product marketing

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Questions to SMEs (CIPA Journal Oct. 2004)

- Needs of market?
- Product uniqueness?
- Product competition?
- Customer requirements?
- Market barriers?
- Distribution channels?
- Pricing criteria?

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More Questions

- Venture assessment?
- Economic feasibility?
- Strategic business plan?
- Business start-up?
- Business growth?
- Business maturity?

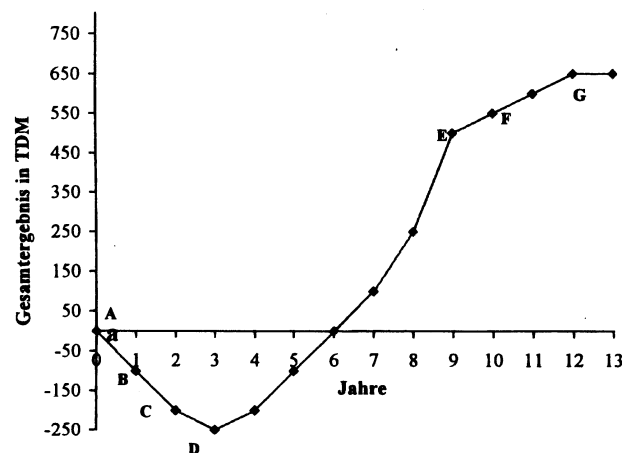
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Questions for Intermediaries

- Which strategic position on the marketplace in 5 years time?
- Which geographic coverage?
- Which IPs?
- Relationship between IP and product?
- IPs of competitors?
- Which costs at what point of time?
- Legal market obstacles?

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Evaluation sample



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Typical Forms of Exploitation

- A) Direct production and sale
- B) Patent „used“ as investment
- C) Patent „used“ a blocking means
- D) Transfer of patent
- E) Licensing
- F) Collaborative ventures (standards)
- G) Patent „used“ as security

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Some Exploitation Obstacles

Lack of exploitation know-how

Competitive market underestimated

Patent and prototype are a few percent of entire marketing effort

No success without market and customer acceptance

Ignorance of social and legal requirements

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Patent Exploitation Firms

- E.g. **Patev**: Patentverwertungs- und –bewertungsgesellschaft
- Initiates Intellectual-Property-Certificate courses
- Performs active management and evaluation of patent portfolios
- Due diligence appraisals for banks

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Time Cycles in the Mechanical / Electrical /Chemical Industry

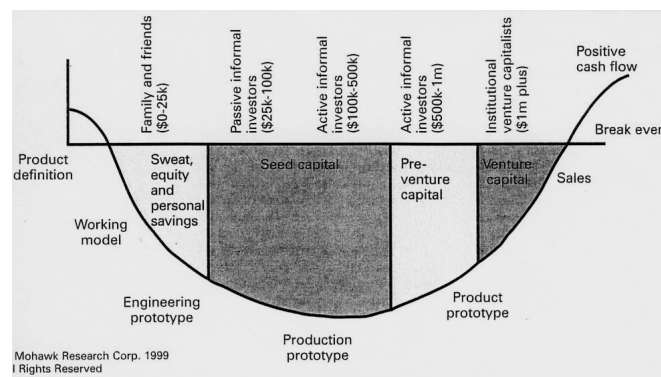
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|--------------------------|-----------|
| • Patent grant procedure | 3-4 years |
| • Marketing of product | 4 years |
| • Economic result | 4 years |

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Profit?

- For most technical sectors actual profit may be 8 year away
- Processing / cancelling of a patent application for which a market can be found / not found is independent of the technological quality of the invention
- In case of technical expertise / utility the commercial success is not guaranteed if market does not adopt the invention

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Licensing as a Marketing Tool

- Licensing more important for bigger companies
- License fees:
From low tech to high tech: 0,5 – 5%
- License combined with special know-how:
up to 12%
- A wide variety of options / custom made
- Licenses exist as long as subject matter is valid, at least virtually

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Financing

- Own resources?
- Venture capital?
- Loans, securities, pledges?
- Joint venture?
- Partner companies?
- Government subsidies?

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The Patent as a Security

- Venture capital
- Start-up companies, e.g. university spin-offs

- Problems according to *European Commission*:
- High risk of early stage investment
- Long lead times
- High costs of appraisals and monitoring
- Quality of management and marketing
- Control desired by venture capitalist

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Start-ups

- Big companies have many inventions that are not used
- They do not serve their core interest
- Patents are licensed by start-ups in order to tap know how of big company, private equity firms step in
- Strategy considerations: Free access to patent portfolios of IBM, P&G, DuPont...for non-profit groups in return for taxation benefits and public image of benefactor

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An Abundance of Free Services

- Examples:
- www.innovationsprofil.ch
- Technical University Dresden: **PIZ Patent Information Center** offers patent and trademark searches and advice by patent attorney
- www.tu-dresden.de/piz/
- **Professional associations....**

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Advice and Action

- Examples: **Frauenhofer-Patentstelle für die Deutsche Forschung, München**
- Advises inventors, entrepreneurs, research institutes, universities, private persons.....
- **PINA NRW GmbH, Dortmund**
- Advises on patentability and economic exploitation, recommends further public subsidies

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Public Support for SMEs

- Example: **German Patent Initiative of the Federal Research Ministry**
- 20% Start-ups
- 90% would not have filed application without this support although 30% carry out development activities
- Supports prior art searches, patentability, cost-benefit-analysis, exploitation chances, patent attorneys involvement...

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I.D.E.E. (Information und Dialog für Erfinder und Existenzgründer)

- **IHK-Kiel und Technologie-Transferzentrale Schleswig-Holstein**
- Advisory service once a month for would be entrepreneurs
- Pre-requisites for setting up a company, from social security to financial support
- In cooperation with patent attorneys advising on protection possibilities
- www.balk@kiel.ikh.de

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A View across the Atlantic

- www.taeus.com
- Observation, testing, and/or reverse engineering of products in infringement
- Industry investigations
- Patent analysis and proprietary system for evaluating patents
- Patent brokering and transactions
- Litigation support

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Universities and Intermediaries

- Exploitation and Licensing Departments
- Transfer Agencies
- Licensing and spin-offs
- Example:
 - TECMA Patent Exploitation Agency
Austria
 - EuroConsult Research and Education
University of Bonn

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Solution

- The NEICO consortium:
- UPAS awareness
- SAFE financial support
- BUS business summaries
- InnoTULI ® commercialisation:
- Working Group on entrepreneurship, financial expertise, licensing expertise, IPR expertise
- Hired experts
- Industrial joint venture, licensing and selling, new companies

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On Evaluation

- Motto: „It is difficult“
- *Oscar Wilde:*
- *„A cynic is a man who knows the price of everything, but the value of nothing“*

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Example: The IT and Electronic Industry

- Fast technological progress
- Very competitive global environment
- Life expectancy of products short
- Companies must invent faster than items are commoditised
- Difficulty to turn investment into profit
- Patents become *vehicles* for complementary marketing strategies, e.g. services

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Call-Option Type Evaluation

- Market forecasts over a number of years
- Expected turnover x license fee x discount factor at selected interest

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Evaluation Tools

- 2 Examples:
- *IPscore*TM by Danish Patent Office
(www.dkpto.dk)
- Patent and License Exchange PLX
(www.pl-x.com)

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Evaluation Formula: Complex Example

- $V = P \times 1/r \times (1 - e^{-rL}) - D \times I$
- V Value of patent
- P Operating profit
- r Discount rate
- L Protection period
- D Discount operator
- I Investment
- Taken from: „The Economics and Management of Intellectual Property“, *Ove Granstrand*
(Edward Elgar Publishing 1999)

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Evaluation Formula: Simple Example

- $V = T \times LF \times R$
- T Estimated turnover over time
- LF License factor (e.g. 5%)
- R Discount rate factor (e.g. 4-8%)

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Compensation for Employed Inventor

- Example:
- $C = T \times LF \times RF$
- T Turnover
- LF License factor (%)
- RF Reduction factor = $F \times A \times L$
- F Inventor's position in company
- A Object underlying invention
- L Inventive solution factor

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Reward?

- A number of ways can be pursued to evaluate a patent
- Evaluation enables an active patent / license / use policy and long-term strategy
- Due to system redundancy many patents do not generate returns, promotional activities would be required
- „Intangible“ value of patenting rests in continuous tackling of technical problems and the „codified“ reward for the imaginative mind

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Shuji Nakamura

- 1979 Employment in **Nichia** research
- Involved in 190 patents
- 1993 Invention of blue LED (now blue laser in DVD players)
- Turnover increased tenfold since 1993
- Employees from 200 to 3000
- Initial **inventor's remuneration** EUR 160.-
- **Final settlement:** EUR 6,000.000.-

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Conclusion

- SMEs should make use of any free support and service available in order to make themselves knowledgeable
- Filing of application by professional should at once be followed by reduction to practice and search for business partner
- Inventions not activated cost money
- Any ownership issue should be dealt with in the beginning

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The End

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