La propriété intellectuelle dans les transferts de technologie internationaux
Cas pratiques et modes opératoires

Vème séminaire franco-chinois
d’intelligence compétitive et d’innovation

Paris – 5 juin 2013

Patrice VIDON
European and French Patent & Trademark Attorney
Former President of CNCPI
Past President of CNIPA
INTANGIBLE ASSETS
10 categories that give value to companies and organizations

1. Clients
2. Human / Stakeholders
3. Suppliers & Partners
4. Shareholders
5. Social responsibility and relationships
6. Brands
7. Technologies and Know-How
8. Natural Assets
9. Information systems
10. Internal organisation

Source: Observatory of intangible Assets, France
I. Growing importance of IP in the globalization

- FACTS -
R&D Expenditures in the World

Source: Battelle, R&D Magazine, International Monetary Fund, World Bank, CIA World Factbook, OECD
40 years of patents (Applications)

- Japon
- OEB
- USA
- France
- URSS
- OEAB
- Russie
- Chine

Source : WIPO
China

- Chinese patent Publications: +250% from 2006 to 2011
- Ratio Chinese/Total Publications: from 58% in 2006 to 79% in 2011
  - Sharp improvement of Chinese R&D
  - Chinese firms massively invest in IPR management to override foreign concurrent but also Chinese competitors!

**Source:** SIPO database (2012)
Foreign Patent Applications in China 2011

Source: SIPO database (2012)
IP Statistics in China

Top ten patent applicants in China in 2010 (in terms of published application)

<table>
<thead>
<tr>
<th>Name</th>
<th>Number</th>
<th>Field</th>
<th>Country of origin</th>
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<tbody>
<tr>
<td>ZTE CORP</td>
<td>7218</td>
<td>Electrical engineering</td>
<td>China</td>
</tr>
<tr>
<td>HUAWEI TECH CO LTD</td>
<td>4440</td>
<td>Electrical engineering</td>
<td>China</td>
</tr>
<tr>
<td>PANASONIC CORPORATION</td>
<td>4100</td>
<td>Electrical engineering</td>
<td>Japan</td>
</tr>
<tr>
<td>HONGFUJIN PREC IND SHENZHEN</td>
<td>3405</td>
<td>Electrical engineering</td>
<td>China</td>
</tr>
<tr>
<td>SONY Corporation</td>
<td>3343</td>
<td>Electrical engineering</td>
<td>Japan</td>
</tr>
<tr>
<td>SAMSUNG ELECTRONICS CO LTD</td>
<td>3343</td>
<td>Electrical engineering</td>
<td>Korea</td>
</tr>
<tr>
<td>CHINA PETROLEUM &amp; CHEMICAL CORPORATION</td>
<td>3253</td>
<td>Chemical Engineering</td>
<td>China</td>
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<tr>
<td>LG ELECTRONICS</td>
<td>2725</td>
<td>Electrical engineering</td>
<td>Korea</td>
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<tr>
<td>GM GLOBAL TECH OPERATIONS INC</td>
<td>2291</td>
<td>Mechanical engineering</td>
<td>US</td>
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<tr>
<td>QUALCOMM INC</td>
<td>2252</td>
<td>Electrical engineering</td>
<td>US</td>
</tr>
</tbody>
</table>

Source: SIPO database (2012) and FamPAT
International patent applications

PCT applications

Source: WIPO
II. About bricks …

… and mortar
From competition ….

… to cooperation
IP as a pro-competition instrument

**IP & Strategy Games**
- Life points
- Strategy
- Partners/Competitors
- Toolbox (IPRs)

- Patents of invention
- Databases
- Integrated Circuits
- Plant patents
- Marks
- Domain Names
- Design Patents
- Copyright
- Contracts
- Know-how
- Trade secrets
- Unfair competition

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Efficiency and strategy management

MANAGEMENT OF INTANGIBLE ASSETS

- IDENTIFY
- VALUATE
- GENERATE REVENUES
- ENRICH
- SAFEGUARD
- BENCHMARK + WATCH

Source: J. Morin, 'Excellence technologique, 1989
Stages in the evolution of corporate IP policies

1. IP ignored

2. Rewards for patents
   IP issues left to legal dpt

3. Selective patenting based on pros + cons of disclosure.
   Licensing in if needed and licensing out if requested
   Trade secrets defended in Courts
   Review of patent positions

4. IP opportunities part of business strategy, project selection & project management criteria
   In-licensing to maintain focus, speed external point of comparison an learning opportunities
   Technical staff rotates through IP dpt
   Out-licensing based on business and technical assessments
   Comprehensive trade secret policies

cited by Ove Grandstand (EMIP, 98), based on Adler et al., 1992 (permission restricted)
Patent mappings
New regulations for the IP Game
New roles for Patent Attorneys

IP Prosecution
IP Negotiation
IP Litigation
IP Strategy
IP as a co-operation instrument

- Patents

- Know how
Patents of invention

2 dimensions:
- claims
- specification

3 functions:
- direct stimulation of innovation
  (temporary exclusive rights)
- indirect stimulation
  (systematic publication
  allows for improvements and cross-fertilization)
- secure and facilitate cooperations and
  transactions (identifies, delimitates, objectifies,
  « backgrounds » and « foregrounds » and allows
  for clear allocation, distribution of roles, manage-
  ment of efficiency)
identifying / protecting / transferring know-how

<table>
<thead>
<tr>
<th>Country</th>
<th>Requirement</th>
<th>Value</th>
<th>Status</th>
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<tbody>
<tr>
<td>Europe</td>
<td>« secret » (not easy to access)</td>
<td>substantial</td>
<td>identified</td>
</tr>
<tr>
<td>USA</td>
<td>not generally known nor readily ascertainable + efforts to maintain secrecy</td>
<td>independent economic value (actual or potential)</td>
<td>identified</td>
</tr>
<tr>
<td>China</td>
<td>Unknown to public + measures of protection (confidentiality)</td>
<td>Economical advantage and practical value</td>
<td>identified</td>
</tr>
</tbody>
</table>

*Article 10 of Chinese Unfair Competition law*
Cas pratique n°1
Collaboration universitaire et de recherche

1-Formes de valorisation

2-Niveaux de coopération

3-Méthodologies de coopération
Stratégies opératoires de coopération universitaire

1-Formes de valorisation

- colportage de portefeuilles de résultats scientifiques et de technologies
- recherches de partenaires locaux de R&D
- montage de partenariats locaux industrie-recherche
- implantations locales
- développement d’une image internationale attractive
Stratégies opératoires de coopération universitaire

2-Niveaux de coopération

Niveau 1 - ECHANGE DE JEUNES CHERCHEURS

Niveau 2 - LABORATOIRE SANS MUR (« LIA* ») (souple, virtuel, bilatéral)
   ex. : « LIAMA » de Pékin (INRIA, INRA, Ecoles Centrales, …)

Niveau 3 - RECHERCHE EN RESEAU - PROJETS EUROPÉENS
   ex. : « GDRI** » (consortium ouvert) : (QMAP : Manipulation quantique des atomes à Shanghai)

Niveau 4 - UMI (Unité Mixte Internationale)
   ex. : Rhodia héberge à Shanghai depuis Nov. 11, 1ère UMI en Chine avec CNRS, ENS Lyon et l’ ECNU (East China Normal University) - chimie verte

Niveau 5 - STRUCTURE LOCALE
   ex. : IPS-ASC (Institut Pasteur de Shanghai), premier institut international indépendant à disposer d’ un statut légal dans la cadre de l’ Académie des Sciences de Chine - créé en 2004 - 16 chefs d’ Unités de Recherche

* Laboratoire International Associé
** Groupement de Recherche International

Stratégies opératoires de coopération universitaire

3-Méthodologies de coopération

Solides capacité de pilotage :
- Stratégie à MLT dans un cadre global
- Soutien institutionnel
- Pilote solide
- Capacité à la gestion interculturelle

Compétence et crédibilité dans la gestion des connaissances
- Solide politique de propriété industrielle et intellectuelle
- Solides pratiques de réservation des savoir-faire
- Sérieuses compétences de gestion des contrats
Programme « Foeterien bro – Etudiants explorateurs »
What would BRICKS be useful for ….

… without MORTAR
Cooperation agreements and IP

Level 1: sourcing; outsourcing (without tech. transfer)

Level 2: license, franchise agreement

Level 3: know-how communication

Level 4: JV for manufacturing and/or commercialing

Level 5: R&D and valorisation

Freedom to Operate
(i) locally (ii) abroad

IP control/management of technology and brands

Contractual control/managmt of know-how

Contractual control of improvements and R&D results

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<th>Pat.</th>
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Ten keys to success in collaborative agreements and tech transfer

- A - Carefully organise initial negotiation
  1. Structure negotiations and Hold firm to principles

- B - Carefully define Domain of cooperation / Contract
  2. Audit objectives (adapt cooperation/transfer scheme to actual objectives)
  3. Scope of Cooperation Domain (whether broad or narrow -> different commitments)
  4. Products / Outcome of Cooperation (finely detail items, and allocate specific commitments to each item)

- C - Carefully organise distribution of tasks
  5. Means and logistics
  6. Project management
  7. Access to results

- D - Management partners mutual rights
  8. Background and foreground
  9. Confidentiality and competition
  10. Termination (anticipate, whether timely or early)
"background" et "foreground" : how to properly manage contribution by partners to a cooperative agreement
Background management

IDENTIFY
inventory
evaluate
express / write down

SECURE
OWNERSHIP
date
protect
confidentiality

NEGOTIATE
negative conditions: non competition non exploitation
positive undertakings: reciprocity reserving exclusivity
conditions of use: R&D phase exploitation phase
anticipate early termination
Foreground management

IDENTIFY inventory, evaluate, express
ACCESS legal access, actual access
PROTECT date, protect, confidentiality
ALLOCATE ownership provisions
date, protect, confidentiality
EXPLOIT preempting provisions
negative conditions: non competition
non exploitation
positive undertakings: reciprocity
reserving exclusivity
conditions of use: R&D phase
exploitation phase
license to third
management of continuations
improvements
infringement /enforcement
what if early termination

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In conclusion

Using IP and contracts as bricks and mortar undoubtly is the most efficient way to build (walls, cathedrals, temples, and) efficient solutions to complex technical challenges of the XXIst century.
Thank You

Patrice VIDON
European and French Patent and Trademark Attorney
pvidon@vidon.com
PARIS - SHANGHAI