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Protecting your Intellectual Property in China

Defining IP and its loss

- Intellectual Property: Exclusive rights to the conversion of a unique application of people, capital, technology, and information into shareholder value.
- Intellectual Property Theft: Loss of exclusivity.

Think asset, not country, in assessing IP risk

- ❑ While certain assets are at risk in China, the key is to think “asset” instead of “country.”
- ❑ Risk cannot be based on countries or “risky areas” but **wherever a sufficiently valuable asset is accessible at any tier in any country** - as the collector will move to the least defended point that contains the IP.
- ❑ We see collection efforts on the US west coast against electronics assets long before they are transferred to Asia.
- ❑ Commercial and dual-use technologies are high on the collection list.
- ❑ “Country” is only part of integrated IP protection.

Rising collection levels

- ❑ US and EU IP is being harvested at an intense rate by a hierarchy of collectors.
- ❑ Chinese firms are being pressured for increased margins while Chinese scientists and researchers are being pressured for national breakthroughs that create native Chinese advances not subject to foreign control and/or royalty payments.
- ❑ Feeling of impunity on the part of collectors in the face of feeble or ineffectual responses from targets.

Difficult to omit certain countries

- ❑ Unworkable to isolate “risky countries” with respect to IP migration.
- ❑ Revenue loss and market share erosion when presence is withheld.
- ❑ Host nations demand you be there with competent products and technology in order to do business.
- ❑ Three key vulnerability areas in any country:
 - **Pricing model compromise** (supplier outsourcing, subcontracting, etc.)
 - **Data citadel attack** (R&D hives and data warehouses).
 - **Human resources** (HR) churn.

Going offshore without a coherent, consistent, global plan

- ❑ Firms usually devolve the problem to a divisional or unit level, thus means, omissions and results vary on a case-by-case basis.
- ❑ Same problem solved in differing ways “to avoid some organizational consequence” such as:
 - Cost savings.
 - Headcount reductions (protect existing staff or get credit for a reduction).
 - Functionality (missing, failing or inconvenient).
 - Personal need (positive annual personnel rating).
- ❑ Each ‘solution’ may be measured against suboptimizing criteria.

Global IP risk to both domestic and offshore facilities

- ❑ Most firms don't know they're at risk.
- ❑ If they do become aware, they don't know where to turn for valid assistance.
- ❑ Firms employ non-solutions that lull themselves into a false sense of security.
- ❑ Firms silently surrender, fearful of negative consequences to business continuity or souring relationships with a host government.
- ❑ Firm's management may not confront a threat despite awareness and even presence of internal champions for improved protection.

Your advisers are likely vulnerable

- ❑ Chinese perceive finance and accounting as a strategic asset on par with automotive manufacturing.
- ❑ Big Four accountancies are now, and will continue to be, sustained targets for Intellectual Property (IP) harvesting by Chinese aspirants.
- ❑ Highly profitable, strategic services sector is following the manufacturing and R&D sectors.
- ❑ Clients should ask, “What happens to all my data above and beyond the business processes of a Big Four member.”

Choose advisors carefully

- Management consultancies, banks, investment houses and law firms tend to share three characteristics:
 - Actionable IP protection guidelines are absent; in their place are ineffectual guidelines conferring false sense of security among clients.
 - IP often missing among key characteristics that offshoring clients are urged to address.
 - Fear of reprisal by host government refusing them business restrains level of advice offered to clients.

Use advisors wisely but make IP protection your own

- ❑ Big Four have commenced unofficial, uncontrolled joint ventures (JVs) with the Chinese state:
 - Providing consulting and training at various levels.
 - Seconding staff to bodies such as the finance ministry and the China Securities Regulatory Commission.
 - ❑ De facto strategic advisory JVs expose virtually anything in the Big Four's inventory without accountability.
 - ❑ Consider everything they transfer to China, or make accessible in China, as open to compromise.
 - ❑ IP nightmare will only be perceived after damage is done.
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Unique Chinese characteristics

- ❑ China accelerating postwar Japanese collection model.
- ❑ Japan now promoting IP protection laws in the face of Korean and Chinese successes in former Japanese core industries.
- ❑ China unique among developing nations:
 - “First world” mentality even as it had a “third world” industrial capacity.
 - Closed off industrial penetration and investment that it did not like.
 - Turned benign eye on means by which domestic industries nurtured growth, revenue and industrialization.
- ❑ Edicts on IP infractions, or anything else, rarely leave Beijing.
- ❑ Actions by provincial, city and enterprise zone managers tolerated if they bring growth and revenue without headlines.

Unique automotive characteristics

- ❑ US and EU automotive OEMs have largely surrendered desirable IP via their joint ventures with Chinese partners.
- ❑ Recognition by collectors that much of the state-of-the-art IP is in the Tier One and Two base.
- ❑ Toyota/Denso remain a dedicated target by virtue of their retaining hierarchical design and manufacturing knowledge base.

Four tiered model of IP violation

- “Piracy” is an imprecise term in describing the risks and impacts to Intellectual Property (IP):
 - **Simple piracy**
 - Copy with no effort to hide piracy - the audio/video model.
 - **Substitute product**
 - Pirated/stolen IP used to create a “no name” or “other name” product competing with legitimate offerings, usually on price.
 - **“Badged” substitute**
 - Pirated/stolen IP used to create products masquerading as legitimate offerings by legitimate supplier.
 - **Supplier substitution**
 - Original legitimate supplier is forced from the market, replaced by copier.
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Fiduciary implications

- ❑ Firms that do not understand this landscape and industrial progression are ripe for IP harvesting.
- ❑ Legal remedies are largely ineffectual and the rewards moot as the IP is already lost and all expected downstream revenue is attenuated.

Implementable, teachable, effective processes exist

- ❑ Prudent, non-adversarial business practices to identify current exposure and to combat collection efforts.
- ❑ Achieve success with strategies drawn from proven Counterterrorism (CT) practices applied to Intellectual Property risk evaluation and remediation.
- ❑ Processes can be taught and easily embedded as company best practices performed by its employees, not outside consultants.
- ❑ Properly done, IP protection becomes a crucial business attribute, like quality, lean manufacturing or robustness.

What does work: Design Basis Threat

- Design Basis Threat (DBT) works regardless of whether the threat is counterterrorism (CT) or Intellectual Property (IP) theft:
 - Asset Value Assessment.
 - Threat/Hazard Assessment.
 - Vulnerability Assessment.
 - Risk Assessment.
 - Risk Management.
 - Defines a coherent view of risk tolerance, and a response strategy that interdicts the adversary's preparation, surveillance and collection.
 - Beware use of scenario analysis for DBT; Scenarios are dangerously omissive, having no bounding scope-like business risk statement.
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Defend, defer and deflect

- All technology migrates over time but firms assume risk by default in:
 - Not identifying what is already compromised.
 - Identifying what assets need to be protected.
 - Defining dollars and effort needed to realistically protect those assets - wherever they occur in the supply chain.
 - If a collector obtains a critical IP asset, the owner's entire ROI justification collapses along with the expected revenue stream.
 - When the IP asset is the core of a system or subsystem that often contains more mature, less competitive technology, the entire system revenue stream truncates.
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“Absence of evidence is not evidence of absence”

- We see skilled firms adopting IP protection postures involving amateurish methods and unimplementable good intentions, often buttressed by the erroneous belief that US legal remedies are applicable on a global basis.
- When no legitimate Vulnerability Assessment has been carried out, it is tenuous at best to claim that no penetrations have been made, or that no threats of collection exist.

What doesn't work

- ❑ PRTM surveyed global US automotive suppliers for 2006 SAE World, distilling supplier attempts at IP protection.
- ❑ None offer protection against even modest collection efforts. Even less effective against an Asian style method of collection.
- ❑ Commercial supply bases lack effective protection and whatever attempts are being made at a 'solution' to IP risk are only lulling the targets into a false sense of security.

Misadventures in IP protection

“Choose components wisely”

- Mature items, little “design know-how,” build own plant...

“Break up assemblies”

- Limit suppliers, disperse assembly, withhold details...

“Select partners carefully”

- Check integrity history, choose partners “with vested interest in protecting your IP” ...

“Exploit all legal options”

- Strong legal contracts and NDAs, use Chinese lawyers to detail needs, aggressively prosecute offenders...
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Misadventure Analysis

Choose components wisely

- ❑ Asset market value trends downward from high value to commodity. Value loss can often be mitigated if mature IP is integrated into systems led by high value assets. Difficult to isolate newer assets from the older in the production of integrated systems.
- ❑ Damage from IP loss moves progressively up the value chain, to newer and more vital IP as collectors are re-tasked to target and acquire more valuable IP.
- ❑ Compromise of high value asset compromises lead asset, maturing and mature components in the system. When there is an IP loss, it is most likely that the discovery will show that the damage to the business is not isolated and broader than anticipated.

Misadventure Analysis, 2

Choose components wisely

- ❑ No “build your own plant” option. Brownfield or Greenfield, owned or leased, someone else erects the building, installs HVAC, electricals, electronics and contracts security function and hires guards.
- ❑ Local option delivering protective control is feasible only with a complete IP asset protection program (including asset vulnerability assessments), and significant preparation in selecting and developing local supply chain relationships.

Misadventure Analysis

Break up assemblies

- ❑ Location-specific IP protection is a partial approach that rarely, if ever, adds much protective value for a global asset.
- ❑ Location-specific approaches often creates false sense of comfort on the protective side. Accessibility of the asset to hostile IP collectors at any tier, at any location, is key question.
- ❑ Asset-specific protection is global, requiring comprehensive view of asset accessibility in the supply chain.
- ❑ Becomes optimally effective on the basis of a complete asset (value chain) exposure assessment to be effective.

Misadventure Analysis

Select partners carefully

- ❑ Partnering merely shares risk of IP loss but does not control it.
- ❑ Partnering is not controlled and generates additional risk. (Note levels of IP transfer that already occur in any joint venture.)
- ❑ Education and a clear delineation of joint interests is usually required, but frequently hard to affect and enforce.
- ❑ Customers may not pre-disposed to cooperate with supplier IP protection efforts.

Misadventure Analysis

Exploit all legal options

- ❑ Unfortunately, any legal remedies come after the economic damage is done or is underway, i.e., the ROI and revenue loss are unrecoverable.
- ❑ Legal remedies are ineffective outside the US, parts of the EU and Australia, and may in fact be damaging to the litigating party.
- ❑ Legal strategy may be useful for asset sales or portfolio management (disposition), and will likely be necessary part of US-based due-diligence for Sarbanes Oxley compliance.
- ❑ It will have limited deterrent value at best for clandestine IP asset collectors.

Trends in Chinese IP collection

- ❑ Explosion of “Copy-cat cars” and subsystems; quest to leapfrog limits of local design/concept IP.
- ❑ Asian ‘snippet’ collection method continues for both detail and concept.
- ❑ Quest for mathdata (CAD data) and high-order product definition:
 - Massive white light scanning (White Light Interferometry).
 - Specific targeting of vendors and technologies that do not respond to white light scanning.
 - Dual loyalties of Chinese design-engineering firms.
- ❑ Virtual reproduction of scanned family of parts, subsystems and vehicles.

Required actions for an SEC-regulated IP-dependent client

- What is a corporate SEC-regulated IP-dependent client to do in the age of Sarbanes Oxley?
- Independently build up credible IP protection program:
 - IP-focused exposure or assessment program, especially for IP upon which future revenue depends.
 - Establish IP-driven carve-outs for business critical valuations.
 - Start with knowing what has been compromised; although painful it can staunch an IP hemorrhage and evolve into a tool for allocation of suitably-valued IP protective measures.

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