“New Paradigm in Deepening GD-HK CEPA Cooperation”

HKICC 2013 Plenary Session: “Deepening of the ICT Industry Collaboration in the PRD Region”

Prepared by: Al Kwok
Founder, GD-HK International Science Park Alliance Ltd.
Founder, China International Intellectual Property Services Ltd.
Governor & Co-founder, Savant Asia Policy Institute
Former VP & CPO, NetLogic Microsystems ("NETL")

Author’s IT/IP Business Background

- **New paradigm:** IP are crown jewels for knowledge-based companies
- **Joined Quality Sem, Inc. in 1989 as a member of its founding team:** licensing & transferring CMOS technology & products to Japanese fabs (foundry partners)
- **Executed IP license business model:** transferring engineering know-how to license partners & bringing-up foundry capacity & capacities within a year
- **Joined PMIC Flash in 1996 as VP & CPO to start the IP license business**
  - Took advantage of PMIC flash for embedded NVM in SOC design
  - Managed patent portfolio for comprehensive IP protection
- **Licensed license & ODM agreements with top-tier Japanese firms (SUMOSI)**
- **Joined NMM ("NETL") in 1998 as VP & CPO** to initiate IP portfolio development program
  - Set up a system to ensure continuous innovation & IP generation
  - Set up top management patent committee, and patent generation & reward programs
  - Promoted and implemented patent programs to all engineering staff
  - Built an impressive patent portfolio since 1998
    - In-house patent attorney to manage IP creation & development
    - Enables continuous cutting-edge product developments including knowledge-based processes and "NETL” (layer 7 switching)
    - Creating significant entry barriers against competitors
    - Ensuring NMM’s long-term leadership and profitability in NSE market

Outline

“Delivering Sustainable Value in a Knowledge Economy – The Challenge for Hong Kong”

*Product/Service Focus => Value Engineering Equations*
  - End-to-end Product Lifecycle Analyses
  - Complete Value-Chain Analyses (focusing on Mission-and-time Critical Links in the Chain)
  - SCM + Application-Service Chain Management
  - New Application/Service Platforms + China Market Sustainability & Scalability (Pilot Site?)
  - GD-HK CEPA Special-policy Zone @ Nansha/GZ

The Value Hierarchy (Business Models)

Presented at Intellectual Property Symposium 2012 in Guangzhou on December 30, 2012

The Value Chain (=> Demand⇌Supply in Alignment)

Great end-to-end push-pull effect for market scaling thru lifecycles

For Consumer Electronics Market (Ecosystem)

Consumer Markets (End Users)

Service Providers

Various Applications/Services

System Manuf.

Differentiated Application Designs

System Integrators

System Application Platform(s)

Generic Reference Design (w/ other chips)

IC Design houses

IC S/W Platform (API, drivers, etc.)

Price = Values to Customers

Brand Recognition

Embedded IP Licensing

Pre & Post-Sale Services

Manufacturing Cost

Raising Values of a Product (IP is the Core)

Price = Values to Customers

- "Understanding the Power of IP"
- "Realizing the Value of IP"
- "Pre-sale services mean design-win solutions to address customers’ problems"
- This is the best source of innovation and ideas for the next-generation products (Product & Tech Roadmaps)
- Post-sale services mean reducing customers’ costs of ownership, extending lifetime revenue of the product, generating recurring sales & product improvement values
- Embedded IP licensing means the customers can use the product IP for their own product offering & differentiations, e.g., “total inside”
- Brand recognition means the customers recognize the product and its maker for superior quality, performance, reliability & services
Guangdong-Hong Kong (Guangzhou Nansha) Science Park Investment Services Ltd.

IT Business Food-chain

- Hierarchy of IT Business (from "service to consumers" as the top of the food-chain with highest Gross Margin then down):

- Service to consumers
  - Domestic market (localization)
  - Application (for service)
  - Network platform

- System Integration
  - System integration (for applications)
  - SW & HW platform

- SW platform

Existing CIIPS Business models form the IT Business Food Chain with position feedback from service to drive next product dev evolution.

High-end vs. Low-end Example

- China e-book as a low-end example
- "Shanzhai" business model (山寨型商业模式)
- Copy others’ design concepts
- Add more common (proven) applications
- Aim for low-cost and low-price (~US$250)
- Little post-sale on-going services
- Little connection to on-going e-commerce service
- Little customer feedback, no learning and no product innovation
- Apple’s iPad as a high-end example
- Designed as an e-commerce CRM tool (tied to iTunes e-commerce platform)
- one-stop e-commerce business ecosystem
- More recurring business from post-sale of iPad (hardware)
- Aim for high-value and affordable price (~US$600)
- Complete the "H/W platform to Service" end-to-end cycle for next-generation product innovation

Market Positioning - Product Focus

- Technology: Basic, Good, High, Top
- Future Growth: Long-term, Short-term
- Profit: Low, Medium, High, Excellent

Business Development Platform in GD-HKISP (Nansha)

3 Industrial value-chain developments can drive professional service businesses

- Industrial specializations
  - Data Special Zone
  - EcoTech
  - Renewable Energy

- Strategic Enabling Pillar Platforms (All Megatrend Game-Changers)

- IP Protection & Sharing
- Data Security & Privacy Protection
- Carbon Reduction & Credit Trade

Appl./Services Platforms for Knowledge Economy

- International IP Trading, Professional Services for IP Commercialization; IP Valuation System
- Professional Development and Certification for Intellectual (Collaborative) Innovation
- International Data Security & Privacy Protection Services
- International Food Safety End-to-end Management & Tracking Services
- International End-to-End Logistic Service Management
- International Carbon Credit-earning & Trading Services
- Smart-city Applications & Information Management
- International Medical Tourism, e-Medical Global Resource Management Services
Success Example: GPS-based Services (MyCard Ltd.)

GPS/GPRS Logistics Service Platform - System Architecture

- Real-time Location Tracking
- Fleet Management
- Security Monitoring & Alarm
- Data Analytics / Business Intelligence
- Data Storage & Retrieval

GPS/GPRS Logistics Service Platform - Network System

In Hong Kong

- Hutchison
- SinoTrans

In Maryland

- MyCard

Customers monitor vehicle activities on MyCard web portal

Knowledge-based Economic Trend

Evolution of Intangible Assets – U.S. Companies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible Assets</td>
<td>95.0%</td>
<td>96.5%</td>
<td>97.5%</td>
</tr>
<tr>
<td>Intangible Assets</td>
<td>5.0%</td>
<td>3.5%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Key asset value drivers:
- Domain knowledge
- Human resource development
- Primary capital investment

Stage of Enterprise Development: China vs. US

Professional Service Opportunities to address China’s corporate upskilling needs

- On average, US SMEs are at "Post-industrial" stage of development, whereas the majority of China SMEs are at "Factory-cluster" stage of development.

Conclusion

- Knowledge Economy must be Prof. Service/Application driven
- Core competency in professional services is the key to global competitiveness
- IBM’s transformation is a good example (from H/W to Professional Services)
- Must focus on "True Demand" – Mission/Time Critical ones
- Supply-side economics (Reaganomics) is a dead-end – unsustainable
- Real economic growth must come from "True Demand" – not unsustainable Cheap-Credit Inflated False Demand causing continual global economic crises
- OEM/ODM, SCM... are for the "Push Effect": From the Demand Side, Services and Applications based on standardized services provide the "Pull Effect" – the horse (engine providing the Pull Effect) should be in front of the cart (economy)
- "Professional Services" is the Intrinsic Source of Innovation & IP
- Valuable IP development is from Pre- and Post-Sale Professional Services
- Core competency development requires "Technical, Business and IP/Legal Domain Expertise": HK’s education & prof. development systems have to adapt
- Hong Kong & the whole world need China for market scalability
- GO-HK International Science Park at Nansha (Guangzhou) is intended to be the CEPA Special-Policy Pilot (Landing) Site (for product/service localization)

Thank You Very Much
For Your Attention!

al.kwok@ns-isp.org