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Nansha

“New Paradigm in Deepening GD-HK CEPA Cooperation”

HKICC 2011 Plenary Session: “Deepening of
the ICT Industry Collaboration in the PRD Region”

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1

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Author’s IT/IP Business Background

- New paradigm: IP are crown jewels for knowledge-based companies
- Joined **Quality Semi. Inc.** in 1989 as a member of its founding team **licensing & transferring CMOS technology & products** to Japanese fab (Foundry) partners
 - Executed **IP license business model**, transferring engineering know-how to licensee partners and **bringing up foundry capability & capacity within a year**
- Joined **PMC-Flash** in 1996 (as VP & CIPO) to **start the IP license business**
 - Took advantages of PMOS flash for embedded NVM in SOC design
 - **Managed patent portfolio generation for comprehensive IP protection**
 - Secured **license (& ODM) agreements** with top-tier Japanese firms (>US\$10M)
- Joined **NMI (“NETL”)** in 1998 (as VP & CIPO) to **initiate IP portfolio dev. program**
 - **Set up a system to ensure continuous innovation & IP generation**
 - Set up top-management patent committee, and patent generation and reward programs
 - Promoted and implemented patent programs to all engineering staff
 - **Building an impressive patent portfolio since 1998**
 - In-house patent attorney to manage IP creation/development
 - Enabling continuous cutting-edge product developments **including knowledge-based processors** and “NETL” (Layer 7 switching)
 - Creating significant entry barriers against competitions
 - Ensuring NMI’s long-term leadership and profitability in NSE market

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2

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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**

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3

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The Value Hierarchy (Business Models)

Presented at Intellectual Property Symposium 2002 in Guangzhou on December 10, 2002

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4

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

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

For Consumer Electronics Market (Ecosystem)

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5

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Raising Values of a Product (IP is the Core)

Price = Values to Customers
(价格 = 给客户的价值)

- **价格 = 给客户的价值 => 价格 = 成本+服务+IP授权+品牌**
- **Pre-sale services** mean **design-win efforts** providing solutions to address customers’ problems
 - This is the **best sources of innovation and ideas** for the next-generation products (**Product & Tech Roadmaps**)
- **Post-sale services** mean reducing customers’ **costs of ownership**, extending the useful lifetime of the product, generating **recurring sales & product improvement ideas**
- **Embedded IP licensing** means the customers can use the product IP for their own product uplifting & differentiations - e.g., “**Intel Inside**”
- **Brand recognition** means the customers recognize the product and its maker for superb quality, performance, reliability & services

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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) (China market is huge enough)

Application (for service) <=> Domestic market (localization) (China centric standards & IPs)

Network platform <=> Domestic stds. for local services/appl. International stds. (for global interface)

System Integration (for applications) <=> Domestic market (localization) vs. Int'l. mkt. (China centric standards & IPs vs. Int'l. ones)

S/W & F/W platform <=> Int'l and domestic stds. (global & local)

H/W platform <=> International stds. (global IC supplies)

Existing OEM/ODM business model breaks the IT Business Food Chain without positive feedback from Service to drive next product dev. cycle

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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

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Market Positioning - Product Focus

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Types & Ranking of Innovation

In the order of lasting value impact to society (from most to least):

- New business model (global productivity jump) - great lasting value impact
 - E.g.: e-Commerce (internet), pure-play foundry business model, carbon trading...
- New business process (global productivity jump) - great lasting value impact
 - E.g.: Window/Office (new work environment), outsourcing, TQM, ERP...
- New application/market (for exist. prod. or tech.) - great value impact
 - E.g.: GPS, RFID, radar guiding... - from military to commercial applications
- New technology (for existing product) - great value impact sometimes
 - E.g.: High-speed CMOS (over NMOS) for power reduction and device scaling
- New product/service (for existing market) - medium value impact
 - E.g.: On-line shopping/trading, SMS (China), digital broadcast...
- New combination of package of technologies, products and services
 - E.g.: Apple's iPhone and iPod, Blackberry, solar, clean tech...
- New design (implementation or appearance) - limited value impact
 - New system architectures: e.g., the Sandisk "338" patent for flash-memory card
 - New subsystem/circuitry

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Business Development Platform in GD-HKISP (Nansha)

3 Industrial value-chain developments can drive professional service businesses

Data Special Zone

- Logistic & Supply-chain Management
- 3D Animation Production & Exhibition
- Intelligent City & Smart System Designs
- Professional ICT Services

Eco-Tech

- Environment Improvements
- Low-carbon Footprint Management
- New Materials & Resource Efficiency
- New Business Models: Carbon-Trade, EMC

Renewable Energies

- Solar Photovoltaic
- Distributive Power Generation & Storage
- Smart Grid & Power SCM
- Green Building, Electric Vehicle...

Strategic Enabling Pillar Platforms (All Megatrend Game-Changers)

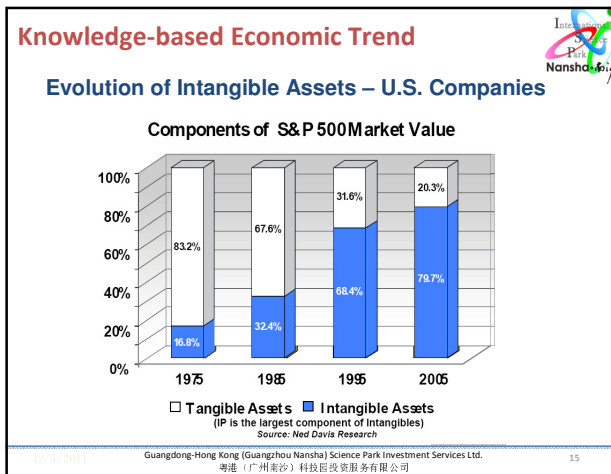
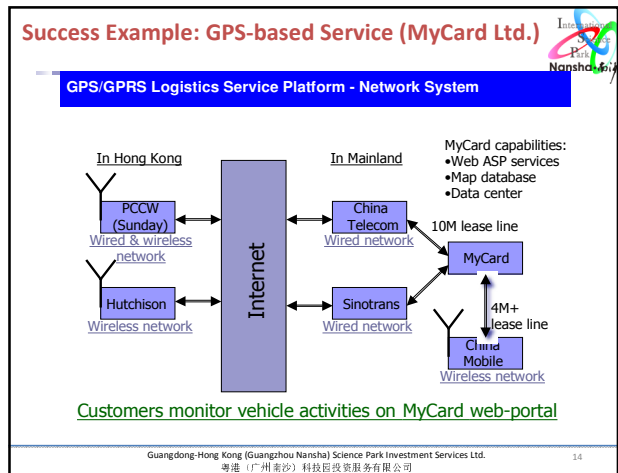
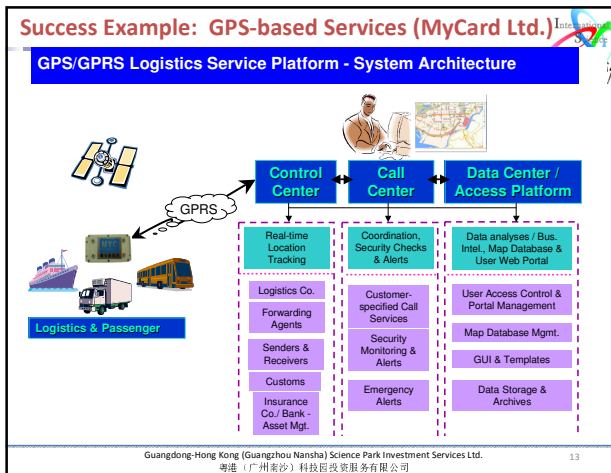
- IP Protection & Sharing
- Data Security & Privacy Protection
- Carbon Reduction & Credit Trade

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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

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Stage of Enterprise Development: China vs. US

Professional Service Opportunities to address China's corporate uplifting needs

Stage of development	Key asset / value driver	Domain knowledge	Human resource development	Primary capital sources	Scalability factor
Agriculture	Farmland	Family-recipe	Hands-on training	Family	Copy
Factory-cluster era	Low-cost labor	Task oriented	Hands-on training	Family & friends	Counterfeit & clone
Industrial era	Automated mass-prod. technology	Technological oriented	Profit-driven training	Traditional investors, govt. prog.	Industrial Standards, trade assoc.
Post-industrial era	Business services/ know-how	(Business) Process oriented	On-job professional training	VC, Institution investors	Professional Standards, IP & license
Knowledge based economy	Business intelligence	"Integrated system"	"Learning ecosystem"	"Open source platform"	"Knowledge sharing"

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

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- ### 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**
 - GD-HK International Science Park at Nansha (Guangzhou) is intended to be the CEPA Special-Policy Pilot (Landing) Site (for product/service localization)
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Thank You Very Much For Your Attention!

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