

**For information  
on 21 November 2006**

**Legislative Council Panel on Commerce and Industry**

**Strategic Framework for Innovation and Technology Development**

**Research and Development Centres**

**Purpose**

This paper informs Members of the latest position on the establishment of the five Research and Development (R&D) Centres and implementation of the new strategic framework for innovation and technology development.

**Background**

2. At this Panel's meeting held on 18 January 2005, Members were informed of the Administration's plan to implement a new strategic framework and a new three-tier funding model of the Innovation and Technology Fund (ITF). Under Tier 1 of the new model, R&D Centres would be set up to undertake applied research activities; under Tier 2, R&D projects with focus themes would be undertaken; and under Tier 3, innovative projects would be supported.

3. On 17 May 2005, Members were further informed of the plan to set up five R&D Centres; and on 21 February 2006, Members were updated of the progress in establishing the R&D Centre on Information and Communications Technology by the Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI).

### **Tier 1: R&D Centres**

4. The five R&D Centres started operation on 20 April 2006. For the past six months, the Centres have been actively engaged in institutional and corporate issues; publicity and marketing programmes; exploration of co-operation opportunities with the industry and research institutes; as well as public solicitation of R&D proposals. Specifically, this include -

- the setting up of proper governance structures. Under the Board of Directors, a Finance and Administration Committee was established to oversee administration and finance matters, and a Technology Committee was set up to formulate R&D policies and to vet and monitor R&D projects. Company secretaries and auditors were also appointed to ensure proper governance;
- the recruitment of key staff to start up the Centres. In cases where the required expertise was not available locally, overseas recruitment exercises were conducted;

- the establishment of a robust, transparent and credible project vetting mechanism which draws on the input of experts in the industry, research institutes and academics. The mechanism seeks to ensure sufficient scientific propriety in the projects undertaken by the Centres, market relevance to Hong Kong and the Pearl River Delta, and a reasonable chance of success in developing the technology and subsequent commercialization;
- aggressive networking with international, regional and local industry and research institutes through attending conferences, talks, seminars organized by the academic as well as trade and industry organizations, and building up of databases and friendly groups;
- expanding collaboration network with Mainland and overseas research institutes such as the Tsinghua University. Umbrella Memorandum of Understanding (MOU) were also signed between Innovation and Technology Commission (ITC) and these overseas institutes to facilitate their co-operation with the Centres;
- the continuous refinement of the business models of each Centre in the light of feedbacks obtained from various sources, including each Centre's policies on soliciting and terms of co-operation with business and academic partners; and

- the public solicitation of research proposals have either been completed or in progress. After the Centres have gone through the vetting process, the projects would be submitted to ITC for approval.

5. The progress of each Centre is set out in the following paragraphs.

### *Nanotechnology and Advanced Materials*

6. The R&D Centre for Nanotechnology and Advanced Materials is hosted by the Hong Kong University of Science and Technology (HKUST). Having consulted the relevant industries, the Centre focuses on five core technology areas, namely nanomaterials (functionalization and applications); nanotechnology enabled nano-optoelectronics; nano-structured/textured materials applications; advanced materials for interconnection, packaging and thermal management; and forming of advanced materials. \$61.4 million and \$209 million have respectively been earmarked for the operating cost of this Centre, and for supporting about 75 R&D projects, in the initial five years. A report by the Centre on its activities for the past six months is at **Annex I**.

### *Textile and Clothing*

7. The R&D Centre for Textile and Clothing is hosted by the Hong Kong Polytechnic University (PolyU). Having consulted the textile and clothing industry, the Centre focuses on four core technology areas, namely new

materials and textile and apparel products; advanced production technologies; innovative design and evaluation technologies; and enhanced industrial systems and infrastructure. A total of \$60.3 million and \$215 million have respectively been earmarked for the operating costs of this Centre, and supporting about 100 R&D projects, in the initial five years. A report by the Centre on its activities in the past six months is at **Annex II**.

### ***Logistics and Supply Chain Management (LSCM) Enabling Technologies***

8. The R&D Centre for LSCM Enabling Technologies is jointly hosted by the University of Hong Kong (HKU), the Chinese University of Hong Kong (CUHK) and HKUST. Having consulted the relevant industries, the Centre focuses on three core technology areas, namely radio frequency identification (RFID) tag and reader technologies; networking and infrastructure technologies; and applications and decision support technologies. \$52.2 million and \$255 million have respectively been earmarked for the operating costs of this Centre and for supporting about 80 R&D projects, in the initial five years. A report by the Centre on its activities in the past six months is at **Annex III**.

### ***Automotive Parts and Accessory Systems***

9. The R&D Centre for Automotive Parts and Accessory Systems is hosted by the Hong Kong Productivity Council (HKPC). Having consulted the relevant industries and academic sector, the Centre focuses on four core technology areas, namely electronics and software; safety; hybrid electric drive

and environment; and new materials and processes. \$100 million and \$250 million have respectively been earmarked for operating costs of this Centre and upgrading of Hong Kong's testing facilities in the local institutions to carry out testing of automotive parts/components and systems, as well as supporting about 78 R&D projects. A report by the Centre of its activities in the past six months is at **Annex IV**.

### *Information and Communications Technologies (ICT)*

10. The R&D Centre for ICT is hosted by ASTRI. Based on the latest market analysis and consultation with stakeholders, the Centre focuses on four technology areas, namely communications technologies; consumer electronics; integrated circuit design and opto-electronics.

11. To support its new role of the R&D Centre for ICT, ASTRI has strengthened its existing organization structure mainly through the creation of a new market research team, expanding the technology transfer team and the R&D project management team. The Administration and ASTRI have critically studied the financial implications entailed by the organizational changes required to support the new role, and after streamlining of ASTRI's operations and more effective use of existing resources, ASTRI's operating expenses have been increased from \$93.3 million in 2005-06 to \$119.9 million in 2006-07<sup>1</sup>. In addition, the ITF has earmarked \$1,400 million to support about 150 R&D projects (including seed projects) to be undertaken by the Centre. A report by

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<sup>1</sup> Approved by Legislative Council in 2006 as part of the 2006-07 Estimates.

the Centre on its activities in the past six months is at **Annex V**.

## **Tier 2 – Focus Themes**

12. In 2004, the "Guangdong/Hong Kong Technology Cooperation Funding Scheme" was launched to encourage collaborative R&D by research institutions and industries in the Greater Pearl River Delta region. In 2004 and 2005, the governments of Guangdong and Hong Kong supported respectively a total of 66 and 126 projects (of which 23 and 32 respectively were funded by Hong Kong). The projects cover RFID; automotive parts and accessory systems; electronic and information technology; new materials and fine chemical processing; critical precision manufacturing technology/equipment; new energy and energy-saving technologies; information and communications technology; medical biotechnology and medical device; food safety and agricultural product processing; and environmental technology and green manufacturing. The total funding involved is around \$650 million (\$250 million from Hong Kong side).

13. For 2006/07, a total of 62 applications have been solicited in Hong Kong, with total funding applied amounting to \$275 million. These proposals relate to information and communications technology, biomedicine and health, precision manufacturing technologies and products, new materials and nanotechnology, new energy and resources conservation, and modern agriculture. The Innovation and Technology Commission is processing the applications.

14. Apart from the Hong Kong/Guangdong Technology Co-operation

Funding Scheme, two projects with specific focus themes are being undertaken.

15. The mechanical watch movement project seeks to develop associated design methodologies and precision manufacturing technologies in the fabrication of the mechanical watch movement. The project is conducted by CUHK in collaboration with a number of other local R&D support institutions. Apart from \$54 million funding from ITF, the local watch industry will contribute \$6 million cash sponsorship, and CUHK another \$4 million (in-kind contribution). The project commenced in January 2006, is progressing well, and is scheduled for completion in 2008.

16. The Digital Entertainment Incubation-cum-Training Centre, managed under the Hong Kong Cyberport Management Co. Ltd, aims to incubate up to a total of 45 companies in digital entertainment and digital multimedia industries, with initial focus on game development, and to provide technical and business-related training for digital entertainment professionals in the industry. The project commenced in October 2005 and is scheduled for completion by January 2009. Total funding required is \$30.77 million. So far, 30 incubatee companies have been recruited. The majority of them have already settled in and started work on the establishment of the teams and the development of their products and services.

### **Tier 3 – Innovative Projects**

17. Tier 3 projects are those that are more innovative in nature while also



exhibiting application potentials. We encourage projects which not only give considerations to developing new technology, but also those which follow up from or leverage on the results of completed basic research projects. Public solicitation of proposals under Tier 3 projects was launched in December 2005 to March 2006. A total of 127 applications were received. After vetting, 45 applications involving total funding support of \$40 million were approved. A list of the titles of these projects is at **Annex VI**. They are currently at various stages of implementation.

Innovation and Technology Commission

November 2006

**Report of the R&D Centre on  
Nanotechnology and Advanced Materials  
for the period April to October 2006**

**Activities over the past six months**

Centre Operation and General Administration

Over the past few months, the Centre has been actively engaged in formulating a detailed plan of the Centre's operation and R&D programme for 2006/2007. Major activities included setting the company's institutional arrangements, recruitment of staff, drawing up office procedures and corporate governance, as well as promotional activities with a view to building up connections and networking.

2. Key staff including the Chief Executive Officer (CEO), two Chief Technology Officers (CTO) for nanotechnology and advanced materials and three Managers for project coordination, technical support and business development have already been appointed and are on board.

Promotion and Networking

3. The Centre has also participated in and co-organised various promotional activities in Hong Kong and overseas including international conferences, roadshows, setting up the corporate website ([www.nami.org.hk](http://www.nami.org.hk)) to introduce its work, research outputs and deliverables, establish networks and seek possible collaborations. For instance, the Centre co-organised a large scale conference, the 2006 International Conference on Nanotechnology and Advanced Materials, concurrently held with the Nanotechnology Commercialisation Forum 2006 and the third Asia Nano Summit, in the Hong Kong Convention and Exhibition Centre from 1 to 3 November 2006. The Nanotechnology Commercialisation Forum 2006 aimed to create business connections between the industry and the financiers. Industrialists and experts from various disciplines were invited to share their experience in commercialising R&D into successful products and businesses. These activities have generated positive responses from the industry and research

institutes. The Centre has received enquiries on possible collaboration and membership applications.

#### R&D Programme

4. The Centre has drawn up the technology and execution plan for its first year of R&D programme. Project solicitation plan, vetting criteria and procedure, monitoring and working schedule were prepared. In 2006/2007, the Centre plans to undertake about 21 ITF-funded R&D projects under the five main technology areas. The Centre will conduct two rounds of solicitations, one in September 2006 and another in early 2007.

5. With a view to arousing public interest, a Symposium for R&D Project Solicitation was held on 16 August 2006 to introduce the Centre's vision, research focus areas, IP policy and arrangement, application and vetting procedures of R&D proposals. The symposium was well attended by representatives from the industry, universities and research institutes.

6. In addition, the Centre has made many visits and presentations at trade associations and individual companies to introduce nanotechnology and advanced materials that might be of interest to various industrial sectors of Hong Kong. The response has been very positive, as was evidenced by the large number of visits by industrialists and investors to NAMI for detailed discussions. A number of such discussions have led to product concepts and prototypes that were of commercial potential.

7. The first round of invitation for project proposals started on 18 September 2006 and ended on 16 October 2006. The response from the industry was encouraging as the Centre received 13 industry-led project proposals involving total project costs of about \$40 million. It is expected that the Centre will complete the vetting procedure and make recommendations to the Technology Committee in mid to late December 2006. With the endorsement of the Technology Committee, the proposals will be submitted to the Innovation and Technology Commission (ITC) for approval.

8. The Centre also participated in monitoring the progress of four nanotechnology-related projects ITC funded before the establishment of the

Centre. With funding support of some \$73 million, three projects are on the development of organic light-emitting diodes (OLED) materials and devices for display and backlight applications, while the other is operating under the ambit of the then Institute of Nanomaterials and Nanotechnology in the Hong Kong University of Science and Technology to conduct three research programmes on energy storage, nano-electronics and nano-materials manufacturing.

### **Future activities**

9. The Centre will continue to undertake promotional and R&D activities. This will include the actual implementation of approved R&D projects as well as conducting the second round of solicitation for proposals. The Centre will also seek active industry collaboration on establishing a demonstration production line for high performance display.

10. A list of corporate activities undertaken/planned by the Centre in 2006/2007 is at Appendix.

**R&D Centre on Nanotechnology and Advanced Materials**  
**List of corporate activities undertaken/planned by the Centre in 2006/2007**

<b>Date</b>	<b>Events/Activities</b>
20 Apr 2006	Launching Ceremony of Hong Kong R&D Centers organized by ITC
18 May	Lunch talk for Federation of Hong Kong Industries to introduce Nano and Advanced Materials Institute Limited
29-30 May & 8-9 Jun	Participation in the PRD Roadshow organized by ITC regarding Guangdong-Hong Kong Technology Innovation Research and Development Centers
5-9 Jun	Providing brochures in the 3rd PAN - PRD Regional Economic & Trade Cooperation Fair, Yunan Province, China
17-19 Jun	Participation in the Fujian Fair, China
19-21 Jun	Participation in the International Symposium on Nanotechnology in Environmental Protection and Pollution (ISNEPP 2006) as speaker and exhibitor
23 Jun	HKGCC Talk to Innovation and Technology Committee
26-30 Jun	Joined the Venture Forum 2006 cum San Jose Mission 2006 led by ITC together with other R&D Centres
16 Aug	Organised the Symposium for R&D Project Solicitation
12-17 Oct	Participation in the China Hi-Tech Fair 2006, Shenzhen, China as exhibitor
24 Oct	Meeting with Chief Executive of HKSAR together with other R&D Centres
1-3 Nov	Co-organiser of the 2006 International Conference on Nanotechnology and Advanced Materials, concurrently held with the Nanotechnology Commercialisation Forum 2006 and the third Asia Nano Summit
29 Nov - 1 Dec 2006	Participation in the Innovation & Design Expo 2006 as exhibitor
2006/2007	To publish and maintain NAMI industrial consortium website,

	newsletters, etc.
2006/2007	To expand the NAMI website to include a database of technical updates, business opportunities, education and promotional materials like presentation slides, e-version of brochures and posters etc.

**Report of the R&D Centre on  
Textiles and Clothing  
for the period April to October 2006**

**Activities over the past six months**

Centre Operation and General Administration

Over the past six months, the Centre has, inter alia, been busy in setting up the office and establishing its corporate policies and guidelines as well as developing its R&D project vetting mechanism and procedures.

2. As at November 2006, the Centre has a staff establishment of 11 personnel comprising a Chief Executive Officer (CEO), a Research and Development (R&D) Director, an Administration Manager, a Marketing Manager and other supporting staff.

Promotion and networking

3. The Centre launched its website ([www.hkrita.com](http://www.hkrita.com)) on 1 August 2006 and issued its first E-newsletter on 30 September 2006.

4. The Centre has been establishing effective connections with industry, universities, research institutes and industry support organizations. A membership scheme has been launched with three types of membership: corporate, institution and affiliate member. The scheme aims to offer a base for companies and research institutions to network and for the Centre to provide an information and research hub for those companies.

5. A series of publicity and marketing programmes in Hong Kong, the Mainland and overseas have been launched. A summary of these activities is at Appendix.

R&D Programme

6. In 2006/07, the Centre plans to undertake about 15 R&D projects funded by the Innovation and Technology Fund (ITF) under the four main

technology areas.

7. The first tranche call for R&D projects was issued on 1 August 2006. The response from the industry was encouraging. A total of 19 applications have been received.

### **Future activities**

8. The Centre will consider the 19 applications for funding received during the first round of invitation. After completing the vetting procedures, the Centre will submit the applications to the Innovation and Technology Commission (ITC) for approval. Project agreements with successful applicants will then be signed.

9. The Centre will conduct the second round of project solicitation in Q1 of 2007.

10. The Centre will continue to act as a focal point to enhance technological innovation for the development of highly competitive industrial clusters in Hong Kong and the Pearl River Delta region. These will cover:

- core industries: textile, clothing, leather and footwear;
- supporting industries: chemical engineering, machinery, electronics, marketing, trading, financing, legal, and logistics; and
- potential new industrial sectors: wearable (textile) electronics, biomedical (textile) products and devices.

11. Relevant seminars, workshops and marketing programmes will be organized to promote the Centre's services and R&D capabilities as well as to facilitate its membership drive. Such planned publicity events and other programmes from November 2006 to March 2007 are highlighted at Appendix.

12. The Centre will develop a Chinese version of the website with a target launching date in end December 2006.



**R&D Centre on Textiles and Clothing  
Publicity Events and Other Programmes from April 2006 - March 2007**

<b>Date</b>	<b>Events</b>
7 April	The 8th China Venture Capital Forum in Shenzhen
20 April	Launching Ceremony of the R&D Centres
3 May	World of Trims Exhibition organized by Apparelkey
29 - 30 May 8 - 9 June	Road-shows organized by the ITC in Guangzhou and Foshan; Shenzhen and Dongguan
6-10 June	2006 Pan PRD Trade Fair – HK Pavilion organized by HKTDC in Yunnan
22 June	FHKI Member Casual Lunch Gathering
19-23 June	IFFTI Annual Conference in North Carolina State University, Raleigh, US
23 June	HKGCC Industry and Technology Committee Meeting
23 June	HKTDC's Garment Advisory Committee Meeting
28-29 June	The Venture Forum in Hilton San Jose & Convention Centre, Silicon Valley
11-14 July	Fashion Week Spring/Summer 2007
18 July	Forum of applications of advanced technology on textiles and apparel in Shenzhen Virtual University Park
4 August	Luncheon meeting with Textile Council
4 - 6 October	Interstoff Asia Autumn
12 - 17 October	China Hi-Tech Fair in Shenzhen
16 - 18 October	The Sixth International Thermal Manikin & Modelling Meeting
10 - 13 November	Innovation Festival 06: Exhibition at Hong Kong Science Museum
29 November - 1 December	Innovation and Design Expo
15-18 January 2007	Hong Kong Fashion Week for Fall/Winter

Feb/ March 2007	Technology Week for Textiles and Clothing industry (HKRITA)
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**Report of the R&D Centre on  
Logistics and Supply Chain Management Enabling Technologies  
for the period April to October 2006**

**Activities over the past six months**

Centre Operation and General Administration

Over the past few months, the Centre has been actively engaged in formulating a plan of the Centre's operation and R&D programme for the first year in 2006/07. This included institutional set up such as company establishment, recruitment of centre staff, drawing up of office procedures and corporate governance, as well as promotional activities with a view to building up connections and networking.

2. Key centre staff including the Chief Executive Officer, two Advisors, an R&D Director and three Managers have already been appointed and are on board. Two R&D Directors will report duty in late 2006 and early 2007 respectively.

Promotion and Networking

3. The Centre participated in different events with related associations and affiliates in order to build up the network with industry players, technology providers and institutions.

4. Apart from introducing its establishment, such activities were also essential for the Centre to understand the industry requirements and needs. Staff of the Centre participated as a working member in various industry and government committees, such as the e-Business Development (Logistics) for the Digital 21 Strategy Review by OGCIO, the Expert Group on Cooperation in Informatisation and Radio Frequency Identification (RFID) Hong Kong Working Group (RFID-HKWG); and the Advisory Committee on the Promotion of Innovation and Technology through the Hong Kong Platform.

5. With a view to enhancing international communication and co-operation and promoting RFID innovation, the Centre, as part of the Hong Kong delegation, attended the China International RFID Technology Development Conference and Exposition held on 26 to 28 October 2006.

6. Highlights of other publicity and networking activities undertaken by the Centre are listed in the Appendix.

7. The enhanced version of the Centre website (www.lscm.hk) was launched in May 2006.

#### R&D Programme

8. The Centre has drawn up a technology plan for its first year of R&D programme in 2006/07. Project solicitation plan, vetting criteria and procedure, monitoring and working schedule have also been prepared. In 2006/07, the Centre plans to undertake 14 ITF-funded R&D projects under the three core technology areas.

9. The Centre has launched the first round of project solicitation on 29 September 2006 with a submission deadline on 15 November 2006. Several briefings and Q&A sessions for the academia and general public were hosted in early October 2006.

10. The Centre has set up expert groups to gauge the view of the industry closely. Experts from the industry and research institutions give advice to the Centre on the scope and implementation approaches of R&D project proposals, and provide comments on R&D project proposals for the Centre's consideration.

11. The Centre has continued to monitor the progress of the six foundation projects on RFID technologies that have been funded before the establishment of the Centre. Amounting to a total sum of \$45.6 million, the six projects were related to the developments of active and passive tags and readers, public service infrastructure based on EPCGlobal standards, middleware and counterfeit applications.

## **Future activities**

12. After the closing of the application deadline for the first round of funding application on 15 November 2006, the Centre will assess the submissions received. It is the plan to announce the results in early 2007. The Centre also plans to launch the second solicitation exercise in Q2 of 2007.

13. An industry marketing programme will be launched in November 2006 to establish channels and mechanisms to collect industry views for developing market-driven R&D projects. The two key industry programmes are the Membership Scheme and Special Interest Group Scheme. Various membership-drive activities will be held in the coming months.

14. The Centre will also continue its promotion and publicity efforts as well as identifying potential business opportunities. For example, it will attend the Seminar on “China’s 11<sup>th</sup> Five-Year Plan and the Development of Hong Kong” organized by the Central Policy Unit and co-organized by Chinese University of Hong Kong on 2 November 2006. In addition, the Centre will work with the Guangdong RFID Technology Service Centre (GDRC), OGCIO of HKSAR and the Department of Information Industry of Guangdong Province to host a RFID Forum in late November 2006.

**Report of the R&D Centre on  
Logistics and Supply Chain Management Enabling Technologies  
List of networking activities undertaken by the Centre in 2006-07**

Date	Activities
20 Apr	Launching ceremony of LSCM.
28 Apr	LSCM took part in EPCglobal Hong Kong RFID Conference. The Conference addressed the theme “The Mission in Action and Beyond”. LSCM displayed the Centre’s information and services in the exhibition.
25 May	LSCM made a presentation for the Tripartite Committee on Logistics Industry on its work.
May & June	ITC organized a series of road shows to promote the R&D Centres to explore collaboration opportunities with research institutes and enterprises in Guangzhou, Foshan, Shenzhen and Dongguan.
13 June	LSCM attended a gathering on the theme “Logistics and Supply Chain Management” organized by the Federation of Hong Kong Industries (FHKI).
16 June	LSCM made a presentation for a delegation led by Information Industry Department of Shandong Province on the work of the Centre.
23 June	Interim CEO and Technology Program Manager met with Industry and Technology Committee of Hong Kong General Chamber of Commerce (HKGCC) in the roundtable discussion on “Hong Kong Research and Development Centres”.
27 June	LSCM attended a panel discussion on “Logistics and Mobile Industry” in Mobile Enterprise Conference organized by Hong Kong Wireless Technology Industry Association.
28 June	LSCM participated in the Foshan (International) Logistics Equipment Technology and Application Exhibition in Foshan, China.
28 & 29 June	LSCM together with ITC and other R&D Centres joined the 12 <sup>th</sup> Venture Forum held in San Jose, USA .
19 July	Meeting with Wahha Excellent Multimedia Mobile Technology Ltd.
21 July	Speech by Interim CEO to Tradelink Business Luncheon on “RFID’s Latest Development & Applications in HK Business Sector”..

3 Aug	Speech by Interim CEO to CSCMP China International Conference in Shanghai on “Hong Kong’s R&D and Business Development Activities”.
21 Aug	Attended Anniversary Ceremony for The Chamber of Hong Kong Logistics Industry.
5 Sept	Speech by Interim CEO to the FHKI for the Transport & Logistics Sub-group.
29 Sept	LSCM made a presentation for HK General Chamber of Commerce on its work.
29 Sept	Meeting with Prof. Zheng Qi of Ministry of Information Industry.
5 Oct	Organized a Briefing Session for LSCM Project Proposals.
11-12 Oct	Attended the 6 <sup>th</sup> Supply Chain Management CEO Summit.
12-17 Oct	Participated in the China Hi-Tech Fair held in Shenzhen Convention & Exhibition Centre under Hong Kong Pavilion.
14 Oct	Meeting with delegation from Tsinghua University visiting the Centre.
18 Oct	Meeting with delegation from Fujian Province Hi-Tech Innovation Centre.
24 Oct	Demonstrated RFID application to the Chief Executive of HKSAR.
2 Nov	Attended the Seminar on “China’s 11 <sup>th</sup> Five-Year Plan and the Development of Hong Kong” organized by the Central Policy Unit and co-organized by CUHK.
8 Nov	Speech by LSCM at PRD Software World Forum in the “Sharing IT Resources in Pearl River Delta Region” in Guangzhou.
29 Nov	Co-organized with Hong Kong Trade Development Council a seminar titled “Application of Wireless Technology – RFID and Logistics”.
29 Nov - 1 Dec	Participated in Innovation and Design Expo in Hong Kong Convention and Exhibition Centre.
Late Nov	LSCM is working with Guangdong RFID Technology Service Centre (GDRC), OGCIO of HKSAR and the Department of Information Industry of Guangdong Province to host a RFID Summit.

Late Nov	Planning to launch membership programs in November 2006. Networking activities (e.g. knowledge sharing session and annual gathering) will be organized to create exchange and collect industry views. The Centre will also set up Special Interest Groups (SIG) comprises people or organizations from various industries.
4 Dec	Speech by the CEO at the ITU Telecom World 2006 in Hong Kong.
Late 2006 – early 2007	LSCM will collaborate with relevant associations, industries and government authorities to organize seminars, workshops, forums, exhibitions and trainings in both Hong Kong and the Mainland to promote the Centre's services, projects and value proposition in logistics and supply chain management industry.



**Report of the R&D Centre on  
Automotive Parts and Accessory Systems  
for the period April to October 2006**

**Activities over the Past Six Months**

Centre Operation and General Administration

Following incorporation, the Centre commenced operation in April 2006. Under the Board of Directors, a Finance and Administration Committee was established to oversee administration and finance matters, and a Technology Committee to formulate R&D related policies and to solicit, vet and monitor R&D projects. The Board has, among other things, endorsed the 2006/07 Annual Plan and a Corporate Governance Manual of the Centre.

2. The Centre's establishment includes a Chief Executive Officer (CEO), two Centre Directors, one Associate Director, four technologists, two engineers and two administration staff. The CEO was appointed in August 2006. Recruitment of directors, an associate director and two technologists were underway. As an interim arrangement, the Centre was supported by part-time staff seconded from Hong Kong Productivity Council (HKPC). The host organisation HKPC was also providing finance, human resources, administration and information technology support to the Centre.

Promotion and Networking

3. To achieve market driven R&D, the Centre has made great efforts in networking with the automotive parts and related industry groups, and been initiating discussions with targeted partners including the Mainland auto makers.

4. To publicize the Centre's work and R&D opportunities, the Centre has held workshops, participated in local industry association forums, and paid visits to major auto makers. In May and June 2006, the Centre respectively participated in the ITC Road Shows in the Pearl River Delta Region and the Venture Forum held in San Jose, California. Visits were also made to local universities and other primary R&D organisations in Hong Kong. A list of

publicity and promotional activities undertaken/planned by the Centre is at Appendix.

5. The Centre has launched its website (<http://www.apas.hk>) and a Members Club to promote the latest events and to facilitate Club members' access to industry information, reports, standards and engineering specifications of major global auto makers. The Centre has recruited 243 individual and corporate members, of which 164 are from industry; 54 from the academia; 14 from research institutions and 11 from government and public organisations.

#### R&D Programme

6. The 2006/07 Technology Roadmap covers four focus technology areas, in which the Centre aims to start about 15 R&D projects as solicited from industry.

7. On 8 September, the first round of project invitation was launched. On 22 September, a Collaboration Workshop was held to bring together university professors, researchers and industry representatives to encourage submission of proposals. By the closing date of 3 November, 23 project proposals had been received.

#### **Future Activities**

8. Three directors and two technologists are expected to come on board by the end of 2006. Two technologists and two engineers will be recruited in 2007 to run the testing laboratory.

9. The Centre will continue its networking with potential R&D partners, technology partners, auto manufacturers, and industry sponsors through organising workshops and meetings. Bi-weekly newsletters will be published to keep Members abreast of the Centre's activities and services.

10. The Technology Committee and an expert panel will meet to vet projects proposals received in the first round of solicitation. The Centre will negotiate project agreements with the R&D partners and industry sponsors. Five projects are expected to commence as the first batch. Subject to the

feedback from industry, another round of project solicitation may be launched in the first quarter of 2007.

**Report of the R&D Centre on  
Automotive Parts and Accessory Systems  
Publicity and Promotional Activities in 2006/07**

<b>Date</b>	<b>Events</b>
8-11 April	Hong Kong International Auto Parts Fair Seminar
20 April	Opening of R & D Centres
7-11 May	2006 長江經濟帶生產力發展(南京)論壇暨南京汽車經貿合作考察 in Nanjing
15-16 May	2006 International Conference for Asia Pacific Automotive Industry
15-17 May	2006 International Auto Parts & Accessories Fair
29-30 May	Roadshows in Guangzhou & Foshan
30 May	CEO as guest speaker in Trade Development Council Dinner in Guangzhou
7 June	武漢市科技局代表團探訪汽車零部件研發中心
8-9 June	Roadshows in Shenzhen and Dongguan
16 June	Shandong Delegation visit to APAS R & D Centre
23 June	香港汽車設計及汽車新材料高端研討會
28-29 June	Venture Forum 2006 in San Jose, U.S.A.
14 July	CEO as guest speaker of Federation of Hong Kong Industries Casual Lunch
17 July	Project Solicitation Workshop
14-17 August	CEO's visit to Norstar Automotive Holdings in Anhui, Shenyang and Beijing
3-5 September	CEO participated in Automotive Parts Study mission to Changchun
21 September	Visit by Shenzhen Deputy Mayor

<b>Date</b>	<b>Events</b>
22 September	Project Collaboration Workshop
9 October	"From Series HEV to Fuel Cell Electric Vehicles" Seminar
10 October	Visit to Institute of Vocational Education (Lee Wai Lee Campus)
12-17 October	China Hi-tech Fair 2006 in Shenzhen
16 October	CEO's visit to Guangzhou Honda and Guangzhou Electric Apparatus Institute with delegates of AutoCRC from Australia
17 October	CEO visit to PolyU and IVE(Lee Wai Lee) with delegates of AutoCRC from Australia
24 October	Presentation to Chief Executive's visit to ITC
27 October	CEO being guest speaker at the dinner hosted by the America Hong Kong Electronics Association
10-13 November	Youth Innovation Exhibition 2006
14 November	Technical Seminar on Application of High Efficiency Electric Motor in Hybrid or Pure Electric Vehicle
18-25 November	<p>CEO's Visit to 2006 Beijing International Automotive Industry Exhibition (Auto China 2006), Norstar Holdings, Great Wall Motor</p> <p>Visit to Shanghai Automotive Industry Corporation (Group), Shanghai General Motors Co. Ltd., Shanghai Delphi, Viseton Corporation</p>
29 November – 1 December	Participation in the Innovation and Design Expo
December	APAS R & D Centre Club members' gathering dinner
January 2007	APAS R & D Centre Club members' breakfast gathering
9-11 March 2007	CEO's visit to Auto Maintexpo China

**Report of the R&D Centre on  
Information and Communications Technologies (ICT)  
for the period April to October 2006**

**Activities over the past six months**

Projects

Since April 2006, ASTRI has eight projects approved by the Innovation and Technology Commission (ITC) –

- Digital Living Platform (seed project);
- Low-cost Solution for High-Performance and High Density Packaging (seed project);
- Digital Multimedia Broadcast Terrestrial Television Baseband Demodulator Development (seed project);
- Digital Multimedia Broadcast Terrestrial Television RF Tuner Development (seed project);
- Advanced Broadband Wireless Technologies Platform (full project);
- Customizable Element Management System for Wireless Networks (full project);
- LED for General Lighting – Area Light Source (Phase 1) (full project); and
- Wireless Personal Area Networking and Streaming Media Access Control (full project).

Technology Transfer and Industry Contribution

2. The number of annual technology transfers from ASTRI to the industry has grown from a total of 2 in 2003/04 to 10 in 2004/05 and 18 in 2005/06. In the first six months of 2006/07, ASTRI had already transferred 18 technologies to the industry, details of which are at Appendix A.

3. ASTRI has set the targets to generate industry contribution at 10% of the R&D expenses for the first year of ICT R&D Centre operation.

## Patent

4. Patent reflects innovation and inventiveness. They also serve as a basis for transferring technologies. The number of patents filed by ASTRI has increased more than twofold from 14 in 2004/05 to 31 in 2005/06. During the first six months of 2006/07, ASTRI filed 25 patent applications.

## Collaboration with Universities

5. ASTRI has engaged the Hong Kong University of Science and Technology (HKUST) in supporting the Internal Antenna Design and LED BLU projects in the area of algorithms development and prototype simulation.

## China Partnership

6. To promote its technologies, ASTRI has held since April 2006 12 roadshows, seminars and forum in China. It has also participated in technology standard bodies for strategic placement of its intellectual properties. These included China Communications Standards Association (CCSA) for comprehensive standards in communications technology, Intelligent Grouping and Resources Sharing (IGRS) for wireless home appliance networking and Solid State Lighting for the use of LED in general lighting.

## Promotional and Networking Activities

7. ASTRI has organized many dissemination and publicity events encompassing press conferences, international conferences and expositions, seminars and technology forums in the Mainland and Hong Kong, media interviews, publications and TV productions, VIP visits and laboratory tours. As an initiative to inspire Hong Kong's young students to develop an interest in Information and Communications Technologies (ICT) and hopefully pursue further studies and a career in this area, ASTRI introduced the "ASTRI Junior Fellowship" with a 15-day modular program launched in July 2006. A list of the activities held since April 2006 is shown in Appendix B.

## **Future Activities**

### Projects

8. A total of five projects approved by the Technology Review Panel (TR Panel) of ASTRI have been submitted to ITC for funding approval. In the coming months, ASTRI has four projects in the pipeline pending in-house evaluation and another three projects are ready for consideration by the TR Panel.

### Technology Transfer and Industry Sponsorship

9. ASTRI aims to transfer 31 technologies to the industry in 2006/07, which is a 72% growth over its achievement in 2005/06.

10. ASTRI has also set the target of generating industry contribution to projects to reach 40% of the R&D expenses by the fifth year of the ICT R&D Centre's Five-Year Plan.

### Patent

11. ASTRI is drafting 46 patent applications. The target for 2006/07 is 61 applications, which is almost a 100% increase over the 31 patent applications filed in the previous year.

### Collaboration with Universities

12. According to the Advanced Indoor MIMO Platform project plan as approved by the TR Panel, ASTRI will outsource part of the project to the HKUST. ASTRI will also work in collaboration with HKUST, Chinese University of Hong Kong and Hong Kong Polytechnic University on the High Definition TV Technologies Applied Research Platform Project, which has been approved by the TR Panel.

### China Partnership

13. Five technology forums are planned to be held in various cities of the Mainland, including Beijing, Shanghai, Guangzhou and Mian Yang, in the



remaining of 2006/07. ASTRI will continue to liaise with provincial and municipal Science and Technology Agencies as well as various high-tech Science Parks and secure their assistance in its promotional activities.

#### Promotional and Networking Activities

14. In the coming months, ASTRI plans to hold a series of conferences, seminars, technology forums and media interviews in Hong Kong, Mainland and overseas, details of which are also listed at Appendix B.

**R&D Centre on Information and Communications Technologies  
List of Technology Transfers**

- LED backlight technology to a LED packaging company in HK
- SIP based VoIP phone to an OEM, ODM and contract manufacture company in HK
- WiFi Access Point and related technologies to a HK based WiFi equipment design house
- H.264 IP Set Top Box to an Australia listed consumer electronic design company
- H.264 Home Media Centre to a HK startup company
- H.264 Home Media Centre to an Australia listed consumer electronic design company
- Laminate substrate based SIP to one of the world's leading magnetics companies based in HK
- Power IC packaging design and analysis to a leading Taiwan manufacturer of LEDs, including lamps, displays and infrared products
- H.264 Home Media Centre to a HK based communications product manufacturer
- H.264 Real Time Surveillance recorder software to a leading acoustic products manufacturer in Taiwan
- Low Drop Regulator IC to HK based IC design house
- SIP based WiFi VoIP Phone to a leading HK manufacturer of consumer electronic products
- Wireless Video Adapter to a market leader for tablet DVD player products based in HK
- Image Signal Processing Integrated Circuit Design Technology to a HK based IC development house
- Step-UP DC/DC converter IC to a HK based IC design house
- H.264 Real Time Surveillance recorder software to a leading acoustic products manufacturer in Taiwan
- Smart Optical Sensor Technology to the world's largest supplier of integrated assembly and packaging solutions based in HK
- SIP based VoIP Phone to a HK based manufacturer of telecom and network products

**R&D Centre on Information and Communications Technologies  
ASTRI's Publicity Events in 2006/07**

<b>Date</b>	<b>Activities</b>
<b>I. International Conference/Exposition</b>	
29 May 06	Joint R&D Centres Roadshow in PRD, Guangzhou
30 May 06	Joint R&D Centres Roadshow in PRD, Foshan
8 June 06	Joint R&D Centres Roadshow in PRD, Shenzhen
6-8 June 06	Society for Information Display (SID) 2006 International Symposium, Seminar and Exhibition in San Francisco, US
9 June 06	Joint R&D Centres Roadshow in PRD, Dongguan
18-20 June 06	China (Fujian) Technology & Projects Fair 2006, Fujian
28-29 June 06	The Venture Forum 2006 by Larta Institute, San Jose, US
27-28 Aug 06	The “7th International Conference on Electronics Packaging Technology & International Courses on Advanced Packaging Technology”, Shanghai
12-17 Oct 06	China Hi-Tech Fair, Shenzhen
18-20 Oct 06	Flat Panel Display (FPD) International 2006, Yokohama, Japan
23-26 Nov 06	3 <sup>rd</sup> Asia Electronics Exhibition, Shanghai
29 Nov – 1 Dec 06	Innovation & Design Expo, HK
4-8 Dec 06	International Telecommunication Union (ITU) Telecom Word 2006, HK
5-6 Dec 06	ASTRI's Vice President as Speaker for “NextGens Technologies” in Seattle
8-11 Jan 07	CES 2007 (demo and/or support customer demo of HMC, demo P2P HMC)
11-15 Mar 07	Institute of Electrical and Electronics Engineers, Inc., (IEEE) Wireless Communications & Networking Conference, HK
15-11 Mar 07	CeBIT 2007 (support customer demo), Hannover, Germany

<b>II. Seminar/Technology Forum</b>	
9 Apr 06	ASTRI's Vice President as speaker for Hong Kong International Auto Parts Fair 2006, HK
20 Apr 06	Concurrent Seminar at R&D Centre Launching Ceremony, HK (Dr Allan Wong & Dr Robert Yang as speakers)
21 Apr 06	ASTRI Seminar, HK
18 May 06	ASTRI hosted a seminar entitled "Liquid Crystal Devices for Displays and Photonics". Prof. Vladimir G. Chigrinov, of Hong Kong University of Science & Technology was invited as guest speaker, HK
18 May 06	ASTRI's Chief Financial Officer as speaker for Causal Lunch Gathering – Federation of HK Industries
19 May 06	ASTRI Seminar, HK
25 May 06	ASTRI's Chief Executive Officer as speaker for Chengdu Hi-Tech Seminar
12 June 06	IC Designs Seminar – Challenges of Mixed-signal Design and Verification Methodologies, HK
13 June 06	ASTRI's Vice President as speaker for Semiconductor Intellectual Properties Workshop, HK
16 June 06	ASTRI Seminar, HK
16 June 06	ASTRI co-organized a seminar entitled "Sensing the Marine Environment Workshop" with City University of Hong Kong, HK
26 June 06	Light Emitting Diode (LED) Workshop, HK
6 July 06	Symposium on WiMedia Ultra Wideband (UWB), Suzhou
12 July 06	IC Designs Technology Forum, HK
12-14 July 06	The 3rd China Solid State Lighting Conference (SSL), Shenzhen
21 July 06	ASTRI Seminar, HK
27 July 06	Flomerics User Gathering 2006, HK
18 Aug 06	ASTRI Seminar, HK
18 Aug 06	IC Designs Technology Forum, HK
24 Aug 06	ASTRI's Chief Executive Officer as speaker for Hong Kong Electronic Industries Association's Luncheon, HK

24 Aug 06	Product-Oriented Microelectronics Packaging Workshop, HK
7 Sep 06	IC Designs Technology Forum, Suzhou
15 Sep 06	ASTRI Seminar, HK
15 Sep 06	Light Emitting Diode (LED) Workshop, Shenzhen
27 Sep 06	ASTRI Technology Forum – Digital Living, Marching into the Digital Intelligent Consumer Electronics Age, HK
11 Oct 06	ASTRI's Vice President as Panel Speaker for International Coalition of Optoelectronics Industry Associations (ICOIA) Seminar, HK
12-13 Oct 06	15 <sup>th</sup> Wireless and Optical Communications Conference (WOCC), Hangzhou
20 Oct 06	ASTRI Seminar, HK
26-27 Oct 06	Hong Kong Technology and Engineering Development Forum (Dr Allan Wong as co-chair and Dr Yang as panelist), HK
2-3 Nov 06	ASTRI co-hosted 2006 China Radio Application & Management Conference, Nanjing
10 Nov 06	Intellectual Properties (IP) Conference, HK
17 Nov 06	ASTRI Seminar, HK
24-25 Nov 06	Enterprise & Consumer Electronics Technology Forum, Mian Yang
Nov/Dec 06	Communications Technology Forum (Advanced Wireless Technology), Guangzhou
14 Dec 06	Enterprise & Consumer Electronics Technology Forum (Digital Home), HK
15 Dec 06	ASTRI Seminar, HK
Dec 06	IC Designs Technology Forum (MCU/CPU) – ASTRI MCU (Micro-controller Unit) Design Platform and Roadmap (8051/IT-8051 and 32-bit MCU), HK
Dec 06	ASTRI and Hong Kong IC Industry ecosystem gathering and business update (4Q06), HK
19 Jan 07	ASTRI Seminar, HK
Jan 07	IC Designs Technology Workshop – Low-power IC Designs Methodology, HK

Jan 07	IC Designs Technology Workshop – Low-power IC Designs Methodology, Shanghai
Jan 07	IC Designs Technology Workshop – Low-power IC Designs Methodology, Beijing
7 Feb 07	ASTRI Wireless PAN Symposium, HK
16 Feb 07	ASTRI Seminar, HK
Feb 07	Enterprise & Consumer Electronics Technology Forum (Portable Multimedia), HK
Feb 07	IC Designs Technology Forum – MPEG2/MPEG4/H.264 (HD) Multimedia Processing, Solution and Co-design methodology, HK
Feb 07	Communications Technologies Forum (Advanced Wireless Technologies), HK
Feb 07	IC Designs Technology Forum – China Digital TV and semiconductor research and development initiatives in ASTRI IC Designs Group, HK
5 Mar 07	Communications Technologies Conference co-organized with IGRS, Shenzhen
16 Mar 07	ASTRI Seminar, HK
Mar 07	Enterprise & Consumer Electronics Technology Forum (High Definition Technologies), HK
Mar 07	Material & Packaging Technologies Forum (Advanced Packaging Technologies), HK
Mar 07	Material & Packaging Technologies Forum (Light Emitting Diode), HK
Mar 07	ASTRI and HK IC Industry ecosystem gathering and business updates (1Q07)
<b>III. Media Interview/Publication/TV Production</b>	
June 06 Issue	Contribute an article introducing “HK R&D Centre for ICT” for “Capital Entrepreneur” Magazine
June 06 Issue	ASTRI on “LEDs Magazine” – an International publication to report ASTRI’s participation in Society for Information Display (SID) 2006 International Symposium in San Francisco, USA
July 06 Issue	Interview by “Electronics Bulletin” with ASTRI’s Vice President – Mr. Raymond Chiu on 23 May 2006

Sep 06 Issue	Interview by “Electronics Bulletin” with ASTRI’s Vice President – Dr. Tom Chung on 3 Aug 2006
Publish on 29 Sep 06	ASTRI’s Chief Executive Officer Dr. Yang was interviewed by South China Morning Post on 11 Sep, 06, and the article was published in the “Engineering & Technology Supplement”
Submit on 3 Nov 06	Contribute an article introducing “HK R&D Centre for ICT” for Hong Kong Chinese Manufacturers' Association's monthly magazine – “HK Entrepreneur”
Nov 06	Filming by Hong Kong Trade Development Council on Documentary entitled “Hong Kong – Our Technology Marketplace”
By Mar 07	Interview by “a major Chinese circulation” with ASTRI’s Vice President
To be confirmed	Filming by RTHK for “ASTRI Junior Fellowship” – “The Creativeness of HK”
To be confirmed	Media Interview by Hong Kong Polytechnic University
To be confirmed	Media Interview by Trade Development Council – “HK Traders”
To be confirmed	CCTV Documentary for the 10 <sup>th</sup> Anniversary of the HKSAR Establishment
To be confirmed	Multiple media interviews lining up
<b>IV. VIP Visit/Laboratory Tour</b>	
19 Apr 06	Shang Yong, Vice Minister of Ministry of Science & Technology
21 Apr 06	Ministry of Information Industry
26 Apr 06	Fujian Economic & Trade Commission
18 May 06	Chongqing Science and Technology Commission
23 May 06	Shenzhen CXO Club
26 May 06	Optoelectronics Industry of Xiamen
12 Jun 06	Government of Alberta, Canada
3 July 06	Gold Peak Industries (Holdings) Limited
6 July 06	University of Cambridge - Department of Manufacturing Engineering (MET II)

10 July 06	Hong Kong Science Student Project Competition 2006's winning teams
19 July 06	Shenzhen Virtual University
21 July 06	Ms. Regina Ip - Savantas Policy Institute
24 July 06	Taiwan Teco Corporation
24 July 06	Sichuan Changhong Electric Company Limited
1 Aug 06	Dongguan – Science & Technology Bureau delegation
1 Aug 06	Wenzhou delegation – entrepreneurs from high-tech manufacturing business sector of Zhejiang Wenzhou
31 Aug 06	The Economic Analysis and Business Facilitation Unit (EABFU), Financial Secretary's Office, HKSARG
1 Sep 06	Swedish Innovation delegation
21 Sep 06	Shenzhen delegation – Led by Vice Mayor, Mr Liu Yingli, Shenzhen Municipal People's Government
25 Sep 06	Beijing delegation
27 Sep 06	Kunshan – Science & Technology Bureau delegation
27 Sep 06	Suzhou delegation
29 Sep 06	Hei Long Jiang delegation
11 Oct 06	Hong Kong Trade Development Council Electronics/Electrical Appliances Industries Advisory Committee
13 Oct 06	Tsinghua University delegation
13 Oct 06	Xiamen - Science & Technology Bureau delegation
16 Oct 06	Chile Electronics Partnership Mission
19 Oct 06	Fujian – Science & Technology Bureau
23 Oct 06	Israel Technion Institute of Management's visit (TIM)
24 Oct 06	The Chief Executive of HKSAR Government, Mr. Donald Tsang
26 Oct 06	U.S. Chinese Institute of Engineers
7 Nov 06	Science Park Association Denmark's visit
9 Nov 06	Hei Long Jiang - Science & Technology Bureau delegation
10 Nov 06	Shanghai SVA delegation



<b>V. Others</b>	
31 Jul – 17 Aug 06 14 Oct 06	ASTRI Junior Fellowship – a 15-day internship program plus other publicity activities

**Annex VI****Tier 3 Projects Approved in 2006**

<b>No.</b>	<b>Reference</b>	<b>Project title</b>	<b>Approved Amount</b>
1.	ITS/002/06	Commercialisation of Smart Pressure Monitored Suits (SPMS) for Managing Hypertrophic Scar	HK\$883,798.00
2.	ITS/009/06	Electrically Tunable Microwave Devices Based on Ferroelectric Thin Films	HK\$862,500.00
3.	ITS/010/06	Development of Comprehensive Methodologies for Paddy Rice Yield Monitoring Using ENVISAT ASAR Data	HK\$991,300.00
4.	ITS/012/06	R&D of Epimedium-derived-flavonoids-fraction for Prevention of Steroid-induced Osteonecrosis through a Unique Mechanism by Inhibiting both Intravascular Thrombosis and Extravascular Lipid-deposit	HK\$997,000.00
5.	ITS/014/06	Development of an Accurate Blood Test for the Detection and Monitoring of Hepatocellular Carcinoma	HK\$991,300.00
6.	ITS/015/06	Development of an In-shoe Sensor System for Real-time Ankle Supination Torque	HK\$874,349.00
7.	ITS/016/06	Development of Automatic Segmentation and Tracking Tools for Real Time Video Services	HK\$990,748.00
8.	ITS/018/06	Improving the Flavor Quality of Local Cultivated Food Fish by Feed Modification	HK\$744,794.00
9.	ITS/026/06	Enabling "Face-to-Face" Entertainment Computing Technology (EFFECT)	HK\$999,925.00
10.	ITS/027/06	Development of Ultra-Low-Power Alcohol Vapor Sensors Based on Functionalized CNT Sensing Elements	HK\$871,700.00

11.	ITS/035/06	M-Health: Wearable Body Sensor Networks for the Noninvasive and Continuous Tele-monitoring of Physiological Signals	HK\$975,212.00
12.	ITS/044/06	Development of Metal Tolerant Bio-Organic Multi-Functional (MT-BOM) Fertilizer	HK\$699,000.00
13.	ITS/045/06	Feasibility Study on the Application of Micro/Nano Molding Technique for Chipless RFID Tags Fabrication	HK\$974,050.00
14.	ITS/049/06	Smart Thermal Fluid with Nano Composite PCM / Microcapsules	HK\$899,300.00
15.	ITS/050/06	Development of Experimental Operation Attachment to Implement Hydroforming Capability on Conventional Press	HK\$889,580.00
16.	ITS/051/06	Platform to Simulate Populous Scenes with Heterogeneous Behavioral Human Character Motions Driven by Libraries of High Quality Motion Captured Data	HK\$968,755.00
17.	ITS/054/06	On-Line Transformer Condition Monitoring by Use of Fiber Optic Gas Sensors	HK\$992,335.00
18.	ITS/055/06	Innovative Low-Emission and Efficient Burner Technology	HK\$869,975.00
19.	ITS/056/06	Development of Three Dimensional Slope Stability Analysis Technique	HK\$749,800.00
20.	ITS/059/06	Fabrication of Ceramic Coating by Electrophoretic Deposition (EPD)	HK\$688,705.00
21.	ITS/064/06	Novel Strontium Hydroxyapatite Nanowhisker (Sr-HA-Nano) Reinforced Bioactive Cement for Bone Fracture Treatment	HK\$895,850.00
22.	ITS/070/06	Extending Web 2.0 to Deliver E-Commerce Services	HK\$982,675.00

23.	ITS/071/06	Real-time Hydro-environmental Modeling and Visualization System for Public Engagement	HK\$1,000,000.00
24.	ITS/072/06	Advanced Semantic Video Analysis for Content-based Video Retrieval	HK\$994,250.00
25.	ITS/073/06	Innovative Development of a Gene-targeted Therapy for Rheumatoid Arthritis	HK\$982,744.00
26.	ITS/076/06	An Extensible Fault-based Predicate Testing Toolset for Wireless Sensor Network Software Applications	HK\$976,350.00
27.	ITS/077/06	Superhard Coatings and Processing Technologies for Advanced Manufacturing Devices	HK\$899,507.00
28.	ITS/078/06	Multi-Axis FPGA Based Motion Control IC Chip Design	HK\$974,822.00
29.	ITS/080/06	Research and Development of Business Intelligence Technology for Adaptive Fraud Management System	HK\$974,000.00
30.	ITS/082/06	Reliability and Integrity Studies of Superhard Nanocomposite Coatings	HK\$849,965.00
31.	ITS/087/06	A Continuous On-line Stress-strain Measurement for a Precise Prediction of Compacting Values in Finishing Treatment of Knitted Fabric	HK\$142,726.00
32.	ITS/088/06	Generation of Ozone in Water Via Novel Electrode Materials	HK\$895,700.00
33.	ITS/090/06	New Technology for Real Time and Accurate Collision Detection in Computer Games and Simulation	HK\$1,000,000.00
34.	ITS/098/06	Elliptic Curve Cryptographic Systems and Weil Pairing Based Crypto-devices for Intellectual Property Rights Protection	HK\$1,000,000.00

35.	ITS/101/06	Hemostasis and Hong Kong: The Future Hub of Nanomedicine	HK\$994,405.00
36.	ITS/102/06	Nanobiomedical Manufacturing: The Workforce of Tomorrow	HK\$994,750.00
37.	ITS/106/06	Technology Development and Application for Making Near Meter-range Telescope Mirrors	HK\$949,900.00
38.	ITS/108/06	Electronic Tongue by Quartz Piezoelectric Crystal with Molecularly Imprinted Polymer Recognition	HK\$966,442.00
39.	ITS/111/06	Cross Validation of the Zebrafish Bioassay System for Drug Screening and Toxicological Assessments	HK\$917,933.00
40.	ITS/116/06	Development of Hydrogen Burner Using Methanol/Water Mixture	HK\$828,000.00
41.	ITS/120/06	An Advanced Thermal Material for Metal-Core Printed Circuit Board (MCPCB)	HK\$900,450.00
42.	ITS/122/06	Intelligent Energy Saver for Induction Motor Using IVVC Techniques	HK\$719,900.00
43.	ITS/123/06	A Web-based Publishing Platform for Chinese Classical Books	HK\$994,750.00
44.	ITS/126/06	Development of Design and Manufacturing Capability of Micro Lenses for Zoom Cameras used in Mobile Phones	HK\$984,000.00
45.	ITS/127/06	Feasibility Study of Instant Synthesis of Gemstone-graded Colored Corundum Using a Powder Sintering Approach	HK\$692,880.00
		<b>Total:</b>	<b>HK\$40,426,125.00</b>