

## **ITEM FOR FINANCE COMMITTEE**

### **HEAD 78 - INTELLECTUAL PROPERTY DEPARTMENT**

#### **Subhead 700 General other non-recurrent**

#### **New item “Outsourcing of non-core services of Intellectual Property Department”**

Members are invited to approve a commitment of \$122,630,000 to meet the total expenditure required for a five-year pilot scheme to outsource non-core services of the Intellectual Property Department.

### **PROBLEM**

The Intellectual Property Department (IPD) needs to continuously improve its services to the public to meet growing expectations under a rapidly-changing business environment. To this end, the Department needs to secure the expertise of the private sector to manage and develop computer systems, to accommodate rapid technological innovation and to provide more efficient, electronic-based operations and an electronic publication service.

### **PROPOSAL**

2. The Director of Intellectual Property (DIP), with the support of the Secretary for Trade and Industry, proposes to outsource the following three non-core activities of the IPD to the private sector –

- (a) *Information management and processing of existing computer systems*

This comprises the management and maintenance of the existing systems including -

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- Trade Marks System (TMS) and the Patents Registration Information Technology System which were designed to support a computerised register for trade marks and patents with search facilities;
- Registry Local Area Network Management System and Computerised File Management System which were developed to enhance operational efficiency; and
- Interactive Voice Processing System which was designed to handle telephone enquiries.

(b) *Development and administration of new information technology systems*

This comprises the development, implementation and operation of a new registry computer system for trade marks registration, a new Designs Registry Automation System with capabilities for electronic submission of applications and Internet access, and publication on the Internet of details of applications and grants.

(c) *Office operations*

This comprises both physical and electronic means of service delivery for such functions as receipt of applications, supply of forms and printed guides, public search, and clerical support for the trade marks, patents and designs registries.

## JUSTIFICATION

### Problems with existing computer systems

3. *Lack of capacity of the trade marks registration system for further expansion* – The TMS was designed and developed in the early 1990s. It was last upgraded in 1994 and the planned capacity of the upgraded system was 1 610 applications per month. With the expansion of our economy and its gradual shift of focus from manufacturing to service industry in the past decades, the number of new trade marks applications has increased significantly. For instance, the monthly average of new trade marks applications has increased by about 30% from 1 469 applications in 1998 to 1 915 applications for the period from July 1999 to January 2000. The number of new applications has far outgrown the planned capacity of the TMS. The system has already reached its full capacity, both in terms of processing capability and storage capacity, and will not be able to meet the growing

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demands in future. As an interim measure, old data in the storage disk have to be “purged” much earlier in order to release disk space for new applications. This is highly undesirable and there is an urgent need to replace the existing system to meet the service needs.

4. *Breakdown of TMS affecting the quality of service to public* – The capacity problem of TMS has further been aggravated recently and the system is prone to degradation of performance. With large volume of data to be processed each day, we have experienced major shutdowns of the system during some peak periods of the day which result in partial suspension of our services to the public including the public search service. In the four months from November 1999 to February 2000, the system has shut down for a total of four hours. This quality of service is not acceptable to the public. Furthermore, the management and maintenance of TMS and other computer systems have also taken up a significant portion of staff’s time. According to the Information Technology Services Department, the system can no longer be maintained cost effectively and the situation will further deteriorate with the passage of time.

5. *Inability of TMS to support the new Trade Marks Bill* – The existing TMS will not be able to support the requirement of the new Trade Marks Bill which gives rise to new operational requirements on splitting and merging of applications, merging of registrations, multi-class applications and registration, and remote searching and filing of applications. In addition, the new Trade Marks Bill proposes to allow colour to be registered as elements of a trade mark but the existing systems can only accommodate registration in black and white.

6. *Deficiency of the existing design registration computer system* – Previously, registered designs were protected in Hong Kong once they had been registered in the United Kingdom Designs Registry. No further formalities were required in Hong Kong. With effect from June 1997, design owners wanting protection have to apply to register their designs with the Government. At present, the computer system for designs registration is based on stand-alone desk top computers without networking features. The capacity of the database is small and its operation requires considerable manual efforts to overcome its limitations. For example, without integration features, the preparation of standard documents such as register entries, certificates, letters and reminders to trade agents and compilation of statistics would have to be performed separately which is time consuming. As the desk top computers are not connected to support a comprehensive designs database, public search has to be conducted on paper records. The process is slow and inefficient and there is growing expectation from the trade and the public to automate the entire process.

**Room for enhancing the effectiveness of the maintenance of other existing computer systems**

7. The existing Patents Registration Information Technology System (a newly-developed computer registration system for patents implemented in mid-1997), the Registry Local Area Network Management System, the Computerised File Management System and the Interactive Voice Processing System are managed by IPD staff. Although these systems are being operated smoothly, we see the advantage of drawing on outside expertise to enhance the effectiveness and efficiency of the management and maintenance of these systems. We anticipate that the advantage will become more significant as economies of scale can be achieved when the management and maintenance services of the systems are procured from one service provider.

**Deficiency in publication of trade marks and designs applications**

8. The law requires applicants for registration of patents, designs and trade marks to publish the details of an application before it can be registered. This allows those who may be affected by the registration to object or take action to protect their rights. To comply with this legal requirement, trade marks and designs applications require considerable use of graphics display in colour. It is in the interest of trade marks and designs owners and in line with the intent of the existing legislation that every detail of each trade mark or design application be published. At present, such publication is done by placing an advertisement in the Government Gazette. However, to minimise the cost to applicants, only black and white printing is made available and only one-side view of design objects is printed. Such publication arrangement is grossly inadequate by modern international standards. With the advent of technology and the popularity and accessibility of Internet website, effective colour publication of applications at reasonable cost to the applicants can be achieved through electronic publishing at Internet system.

**Need to improve delivery of services**

9. At present, over-the-counter is the only mode of operation available for many of IPD's non-core services offered to the public. These include submission of applications, supply of forms and printed guides, collection of payment and public search. With the rapid development of electronic commerce, many intellectual property authorities worldwide such as those in Japan, Korea and the United States have been delivering similar services through electronic means as an option. The electronic delivery of intellectual property services has greatly facilitated the conduct of business and become a norm amongst various developed economies. To keep pace with the global environment and to meet the expectation of the trade and the public, there is a pressing need for enhancement in this area.

/Benefits .....

**Benefits of outsourcing**

10. Outsourcing of the non-core services of IPD is expected to result in substantial benefits in terms of cost savings, improved business efficiency and increased delivery of quality services. With outsourcing of non-core services, IPD may focus on core services management in the development of law and policy, and the examination of applications for registration for trade marks, patents and designs.

11. More specifically, outsourcing will give rise to the following benefits in relation to the activities described in paragraph 2(a) to (c) above –

(a) *Information management and processing of the existing computer systems*

This area of work is more within the core competencies of private sector businesses. Unlike staff in IPD, the service provider should be able to draw on his experience in the management and maintenance of computer systems to deliver more cost-effective and efficient computer services. By applying his expertise knowledge in information technology, we also anticipate that the service provider would be able to overcome certain limitations inherent in our existing computer systems as set out in paragraphs 3 to 6 above and provide remedial measures to address some of the problems in the interim before new systems are developed. Moreover, as the service provider will provide centralised management and maintenance services to the existing computer systems, we expect that there should be significant synergies to be developed.

(b) *development and administration of new information technology systems*

The present outsourcing proposal aims at capturing the latest development in information technology through engagement of a service provider in the private sector to provide a package of enhanced services to the public in the most cost-effective manner. Instead of investing substantially in fixed assets, staff training and time to develop the systems in-house, we can spare these resources by taking advantage of the readily available knowhow from the private sector. With one service provider responsible for providing the various types of services, the services will be better co-ordinated with a higher level of quality. New services and additional benefits expected to be provided upon implementation of various new information technology systems developed by the service provider are as follows -

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- on-line real time Internet search of applications and registrations;
- worldwide Internet access to Hong Kong's computer database of trade marks, patents and designs registration;
- electronic applications for registration;
- payment of fees through electronic means;
- phasing out of the costly paper-based publication of applications in Government Gazette (in 1999, traders paid \$66.9 million to the Government for advertising in the Gazette);
- lower cost electronic publication with free public access;
- reduction in the cost of colour advertising; and
- quality image of technical drawings and illustrations.

(c) *Office operations*

We expect that with the transfer of some of the office functions to the service provider, IPD will be able to improve the effectiveness and efficiency of its office operations even before the new computer systems are in place. The functions considered appropriate for transfer include handling of applications for registration, collection of payments, answering public enquiries, distribution of information booklets and provision of public search facilities. With the ability to deploy resources flexibly and by adopting a business-originated approach to handle the outsourced operation, the service provider will be in a better position to enhance our services to the public at a lower cost. For instance, the service provider can provide additional information counters at different convenient locations so that the public do not have to visit the IPD office for the service. Furthermore, the service provider can also develop additional value-added services which could not have been developed by IPD due to its role as registrar of trade marks, patents and designs, for example, provision of computer trade mark or patent search services to the public.

## **The Approach**

### **Guiding Principles**

12. In May 1999, IPD issued a public invitation to private sector service providers for expression of interest in the provision of services to be outsourced by IPD. Having assessed the responses from potential bidders, IPD considers that the scheme for outsourcing should be guided by the following considerations –

- (a) the contract with the private service provider should be of reasonable length to ensure continuity of service and allow sufficient lead time before the end of the contract to decide the way forward on expiry of the contract;
- (b) as revealed in the responses to the invitation to express interest, private service providers normally expect to achieve cost recovery within five years;
- (c) the remuneration to the private service provider should be by payment at regular intervals to ensure quality service delivery; and
- (d) arrangements for transition in and out of the outsourcing contract should be prescribed in the contract. There should also be flexibility for premature termination of contract.

13. On the basis of the above, IPD considers that it should offer an initial contract of five years with a phased payment feature to ensure the attractiveness of the pilot project to potential service providers. With the experience after implementation, DIP may propose in the future (from 2005-06 onwards) to finance the outsourced services on an on-going basis. On completion or termination of the contract, should further outsourcing options not be available, all the systems developed under the service contract, including software, data and related assets would be reverted to IPD at no cost. A transition plan would also be drawn up as part of the contract to ensure a smooth transition at the end of the contract.

### **Phasing-in Programme**

14. To deliver the quality services required, the private service provider should have a thorough understanding and ample knowledge about the operation and business of IPD. However, such knowledge can only be developed over time and acquired through a gradual learning process. We therefore propose to implement the project by three phases to allow the service provider sufficient time to develop the core knowledge base necessary for the delivery of the full

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package of non-core activities. The taking over of the management and maintenance of the existing computer systems by the private service provider in phase I is scheduled to take place as soon as the tender is awarded in August 2000 and to complete in January 2001. After an initial two months' learning stage, starting in October 2000, the service provider is required to plan for the implementation of phase II development of the TMS and take over the office operations in March 2001. The implementation of the new Designs Registry under phase III will take ten months and is expected to be completed in January 2002.

### **Control Mechanism**

15. As this is a pilot scheme, the performance of the service provider has to be closely monitored and the benefits of the project constantly reviewed to assess the cost-effectiveness of the approach. It is proposed that representatives from IPD and the service provider should form a Management Committee to –

- (a) assess the performance of the service provider against agreed service standards;
- (b) ensure flexibility in response to changing needs while maintaining a consistent quality of service;
- (c) ensure the service provider adapt to procedures or services in the light of changes to legislation or international obligations; and
- (d) manage demand for the outsourced services and communicate with end-users, obtaining feedback and ensuring that their needs are addressed within the contract limitations.

16. The service provider will be required under the contract to produce performance reports to show compliance with service standards, trend analysis and charts, and service statistics on a regular basis. It will be bound by contract terms to provide satisfactory services to the Government. Penalty and termination clauses will be included. The top management of IPD and the service provider will tackle any unresolved issues at the Management Committee as appropriate, thus minimising the possibility of disruption of services. Like civil servants, staff of the service provider will be subject to the same set of regulations on disclosure of information, declaration of interest and other control measures, including prevention of corruption guidelines.

### **Cost and Benefit Analysis**

17. To retain the robustness of our intellectual property rights protection regime, IPD must continuously improve its services in keeping with prevailing international standards to encourage both overseas and local traders to register their intellectual property rights in Hong Kong. The outsourcing of IPD's non-core services to the private sector will bring about significant economic and efficiency benefits, and service quality improvements which are essential in achieving this pivotal objective.

18. Significant savings can be achieved through the outsourcing project. For example, it is estimated that if we were to develop the trade marks and designs registration computer systems in-house, this would cost about \$110 million over the five-year period. In addition, under this pilot, there will be realisable savings of \$10.4 million in annual staff cost from the deletion of 32 posts and \$0.7 million in annual maintenance cost.

19. The number of staff who will become surplus to requirements as a result of outsourcing is small. They will be re-deployed within the civil service and there will be no staff redundancy.

20. Cumulatively, the total benefits expected to be achieved through the outsourcing project over the five-year period will be \$32.8 million. A detailed cost and benefits analysis is at Enclosure 1.

Encl. 1

### **FINANCIAL IMPLICATIONS**

#### **Non-recurrent cost**

21. We estimate that a non-recurrent expenditure of about \$122.6 million over a period of five years will be required to meet the cost of the project. In arriving at this estimate, we have taken into account the outcome of the consultancy study for this outsourcing project, the result of the invitation for expression of interest from the private sector and the guiding principles in paragraphs 12 and 13 above. Remuneration to the service provider is assumed to be evenly distributed over the five-year period at \$24.5 million each year. Enclosure 2 sets out the cost assumptions and the details of the estimate calculation.

Encl. 2

22. The detailed cost breakdown for each cost component and the actual distribution of the five-year cash flow can only be accurately determined after the selection of the private service provider by tender as they will be subject to how the tender specifications are met. Nevertheless, having regard to our service requirements and the present mode of operations, a rough estimate for each of the outsourcing activities is as follows –

	<b>\$ million</b>
(a) Information management and processing of the existing computer systems	5.0
(b) Development and administration of new information technology systems	105.2
(c) Office operations	12.4
Total	<hr/> 122.6 <hr/>

23. DIP will keep Members and the Panel on Trade and Industry of the Legislative Council informed of any development and significant variations in cost from time to time.

### **Recurrent cost**

24. There is no recurrent cost for the project.

### **Savings**

25. The project will result in savings of \$11.1 million in a full year, of which \$0.7 million is the annual maintenance cost of the hardware of the existing system and \$10.4 million is recurrent staff savings of 32 posts. Detailed breakdown has been included in Enclosure 1.

### **Fees and Charges**

26. If successfully implemented, this proposal will lower the operating costs of non-core services through enhanced efficiency. We will take this into account when considering future revisions of fees and charges.

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## OTHER PROPOSALS CONSIDERED

27. DIP considers that outsourcing is the best approach to improve the range of services for customers and to provide value for money for the services in question by maximising private sector participation.

28. The alternative to outsourcing is to provide the services in-house. However, this is not considered cost economical as illustrated at Enclosure 1. Moreover, the development of new systems and the acquisition of novel technology require constant availability of skilled and experienced resources. By outsourcing those services, IPD will be able to gain the maximum benefit of being able to access the latest technologies and knowhow through the private service provider.

29. More importantly, through outsourcing IPD will be able to upgrade its quality of services and continuously improve these services to meet the changing needs of the business community and international developments, such as the requirement of the information technology systems proposed by the World Intellectual Property Organisation.

### Implementation Plan

30. Subject to Members' approval, the implementation programme will be as follows –

(a)	Invitation for tender	April 2000
(b)	Tender submissions	April to May 2000
(c)	Assessment of tender submissions	June to July 2000
(d)	Award of tender	August 2000
(e)	Phase I completion	January 2001
(f)	Phase II completion	March 2001
(g)	Phase III completion	January 2002

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**BACKGROUND INFORMATION**

31. In March 1998, IPD conducted a consultancy study of activities in the Department which might be candidates for outsourcing to the private sector. The study explored the benefits that could be derived from involving the private sector in some of the activities of IPD. The consultancy report was completed in July 1998.

32. The consultancy identified a number of non-core IPD activities which could be conducted in the private sector. These activities include -

- (a) office operations;
- (b) information management and processing;
- (c) information technology systems development and administration; and
- (d) publication.

The consultancy identified the following activities as not appropriate for private sector involvement -

- (e) departmental management and co-ordination;
- (f) legal, judicial and development of law and policy; and
- (g) examination of applications for trade marks, patents and designs.

Activities (e) to (g) are policy, statutory and quasi-judicial functions which must be reserved to the Government.

33. In May 1999, the Department invited private sector service providers to express their interest in the provision of outsourced services to IPD. There was an encouraging response from potential bidders.

34. On 11 January 2000, we consulted the Trade and Industry Panel of the Legislative Council on the above proposal. The Panel supported the proposal.

**Outsourcing of Services in Intellectual Property Department  
Cost and Benefit Analysis**

(HK\$ million)					
	2000-01 (August 2000 to March 2001)	2001-02	2002-03	2003-04	2004-05
<b>I. Costs of Outsourcing</b>	24.5	24.5	24.5	24.5	24.5
<b>II. Benefits</b>					
<b>(A) Notional Savings</b>					
<b>(a) New Trade Marks Computer System</b>					
Avoidance cost of additional staff	2.1	3.3	3.3	3.3	3.3
Savings from public search area	0.5	0.8	0.8	0.8	0.8
Systems maintenance costs	-	1.1	1.1	1.1	1.1
Estimated project cost	41.5	-	-	-	-
Sub-total (a)	44.1	5.2	5.2	5.2	5.2
<b>(b) Design Registration Automation System</b>					
Avoidance cost of additional staff	1.0	1.9	1.9	1.9	1.9
Improvement in efficiency	0.2	0.4	0.4	0.4	0.4
Accommodation costs	0.1	0.2	0.2	0.2	0.2
Estimated project cost	33.8	-	-	-	-
Sub-total (b)	35.1	2.5	2.5	2.5	2.5
<b>(A) Total Notional Savings (a) + (b)</b>	79.2	7.7	7.7	7.7	7.7
<b>(B) Additional Revenue Arising from Outsourcing</b>	0.2	0.3	0.3	0.3	0.3

						<b>(HK\$ million)</b>				
						<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>
						<b>(August 2000 to March 2001)</b>				
<b>(C) Realisable Savings</b>										
<i>Phase I</i>										
<b>(a) Taking over management and maintenance of existing systems</b>						0.4	1.4	1.4	1.4	1.4
<i>Phase II</i>										
<b>(b) Trade Marks Registry</b>						-	5.7	5.7	5.7	5.7
<b>(c) Office Operations</b>						0.5	2.0	2.0	2.0	2.0
<i>Phase III</i>										
<b>(d) Patents and Designs Registries</b>						-	0.6	2.0	2.0	2.0
<b>(C) Total Realisable Savings (a) + (b) + (c) + (d)</b>						0.9	9.7	11.1	11.1	11.1
<b>Total Benefits (A) + (B) + (C)</b>						80.3	17.7	19.1	19.1	19.1
<b>III. Net (Costs)/Benefits = Total Benefits – Cost of Outsourcing</b>						55.8	(6.8)	(5.4)	(5.4)	(5.4)
<b>IV. Cumulative (Costs)/Benefits</b>						55.8	49.0	43.6	38.2	32.8

**Notes :**

- (a) The actual cash flow for each year will be adjusted based on the tender results in mid-2000.
- (b) Notional savings are costs that could be avoided and savings identified under the outsourcing proposal. They are not realisable. The estimated figures are based on the feasibility study reports of the new computer systems.
- (c) There will be notional savings from public search areas as the number of terminals will be reduced when remote off-site public search is established.
- (d) The avoidance cost of additional staff refers to additional staff cost which would otherwise be required to support the present computer systems. The higher efficiency of the new computer systems will dispense with the need for additional staff.
- (e) The realisable savings in Phase I for the taking over management and maintenance of existing systems are the full annual average staff cost of 1 Computer Operator I and 1 Computer Operator II for LANS management and \$0.7 million annual system maintenance cost.
- (f) The realisable savings in Phase II for Trade Marks Registry are the full annual average staff cost of 5 Clerical Officers, 7 Assistant Clerical Officers (ACO), 4 Clerical Assistants (CA) and 1 Typist.
- (g) The realisable savings in Phase II for Office Operations are the full annual average staff cost of 6 ACO.
- (h) The realisable savings in Phase III for the Patents and Designs Registries are the full annual average staff cost of 5 ACO and 2 CA.
- (i) Cumulative (Costs)/Benefits are the running year-on-year total.

### Costing Assumptions and Estimate Calculation

In arriving at the estimated cost, Intellectual Property Department has drawn reference from the responses to the invitation to express interest in May 1999, and has made the following assumptions –

- (a) take into account the advance of information technology and competition in private sector, the private sector service provider would be able to develop the trade marks registry and designs registry computer systems and provide services in the maintenance of the computer systems and office operations at 70% of the estimated costs of \$75.3 million for in-house development of the systems;
- (b) the service provider will need to recover the development and capital costs in five years (i.e. 20% per year). The five-year recovery period is based on an internal assessment having considered the response by potential bidders in the invitation to express interest;
- (c) annual operating, maintenance and staff costs including the cost for running the office operations and electronic publishing, would be 10% of the capital costs; and
- (d) a profit margin of 15% on top of the capital and recurrent costs for the service providers which is the normally expected return on investment of similar projects.

2. On the basis of the above assumptions, the annual expenditure requirement is as follows –

	<b>\$ million</b>
(a) Capital costs: \$75.3 million x 70%	52.7

(b)	Annual requirement	
(i)	cost recovery: 20% of (a)	10.5
(ii)	annual operating, maintenance and staff costs: 10% of (a)	5.3
(iii)	Profit : 15% of [(a)+(b)(ii) which is the total investment incurred by the service providers]	8.7
		24.5

**Note** .....

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**Note**

The capital costs of in-house development of the new computer systems, as based on the feasibility studies conducted by the Information Technology and Services Department, are as follows –

	<b>\$ million</b>
(a) Computer system for trade marks registrations	41.5
(b) Computer system for Designs Registry	33.8
Total	75.3