

**For discussion
on 1 March 2013**

Legislative Council Panel on Security

Replacement of Digital Radar Security System for Marine Region of Hong Kong Police Force

Purpose

This paper consults the Panel on a proposal to replace the Digital Radar Security System (DRSS) for Marine Region of the Hong Kong Police Force (HKPF) to prevent and detect crime at sea and to maintain effective maritime security.

Background

2. The DRSS, which was launched in 2003 and installed at the Marine Regional Command and Control Centre as well as the Small Boat Division of the Marine Region, receives raw radar data from the Vessel Traffic Services System of the Marine Department. The DRSS processes the raw data and converts it into operational and navigational information to meet the specific requirements of the Marine Police in maintaining law and order at sea.

3. The DRSS provides invaluable information to support anti-smuggling and anti-illegal immigration operations by tracking, monitoring and locating suspicious vessels. Moreover, it provides real time information to coordinate search and rescue operations in case of maritime accidents and hazards as well as to conduct marine traffic control during fireworks displays and other maritime events. In addition, the radar signals are crucial to bolster action plans against possible maritime terrorist threat. The system also records and provides printouts of vessel positions and movements which are essential for presentation as Court evidence.

Proposal for Replacement

4. The existing DRSS has been in place for about ten years. The normal serviceable life span of similar systems is around 13 years and DRSS is approaching the end of its serviceable lifespan in the coming three years. In 2011, the Electrical and Mechanical Services Trading Fund examined the system and found that a number of its components were showing signs of aging which might cause service interruption and affect the reliability of the system. In order to maintain maritime safety and stability in local waters, we need to

start the replacement to allow sufficient lead time for tendering, system development and testing. The proposed new system is planned to be commissioned by 2016.

5. We will take advantage of the latest available technology to enhance the system with a view to improving the efficiency and effectiveness of maritime police operations.

Benefits of the Proposal

6. Timely replacement of the system will ensure continued effectiveness of the Marine Police in preventing and detecting crime, performing search and rescue operations in local waters. This will help support our maritime trade and regional transport hub for cruise liners by keeping Hong Kong free from the threat of terrorism and crime, and maintaining Hong Kong as one of the most safe and stable societies in the world.

7. Moreover, the replacement of the system will bring along enhancements to the performance of the system. They are summarised as follows: -

- (a) The processing power of the new system will be greatly enhanced to strengthen the current service provision. For instance, the current signals for fast and small vessels are intermittent under inclement weather; whereas the new radar data processors with enhanced tracking capability can provide more stable signals to reduce the risk of losing track of such fast and small vessels;
- (b) The proposed new system can support viewing of all radar sites at a single terminal which will enable holistic monitoring of the entire Hong Kong waters and improve the efficiency of the police officers significantly. Currently, individual DRSS terminals can only preview signals from four out of 13 radar sites at one time. This situation is not ideal as police officers have to switch from one terminal to another in order to trace the movement of targets covered by other radar sites; and
- (c) The proposed new system can capture real time signals and playback signal history simultaneously at a single terminal which will avoid loss of important information for further analysis and investigation. In contrast, due to the limited processing power of the existing system, playback of signal history of target

vessels and receipt of real time signals cannot be shown on the same terminal at the same time.

Financial Implications

Non-recurrent cost

8. HKPF estimates that the replacement of the DRSS will incur a total non-recurrent cost of \$39.785 million for the acquisition of computer hardware, software, network equipment and related implementation service. A detailed breakdown is as follows:-

	\$ '000
(a) System and workstation hardware	9,180
(b) System and workstation software	7,650
(c) Site preparation and transition	3,393
(d) Implementation services (including hardware installation, software customisation, interfacing, system integration, testing, data conversion and project management)	15,945
(e) Contingency (10% of items (a) to (d))	3,617
Total:	39,785

9. The estimated cash flow requirement is as follows:-

Year	\$ '000
2013 – 14	600
2014 – 15	593
2015 – 16	2,800
2016 – 17	33,342
2017 – 18	2,450
Total:	39,785

Recurrent cost

10. The estimated annual recurrent cost for maintenance of the proposed system will be \$4 million in a full year from 2018-19 onwards, representing an increase of about \$2.1 million over that of the existing system (\$1.9 million for 2011-12). No additional staff cost will be incurred.

Implementation Plan

11. Subject to the views of Members on the proposal, HKPF plans to seek funding approval from the Finance Committee and implement the replacement project according to the following timeframe –

<u>Activities</u>	<u>Timing</u>
(a) Preparation of tender documents	June – November 2013
(b) Tendering, evaluation and award of contract	December 2013 – August 2014
(c) Detailed system design	September 2014 – February 2015
(d) Equipment manufacture, delivery and installation	March 2015 – June 2016
(e) System development, testing and training	July – December 2016
(f) Commissioning of the system	December 2016

Advice Sought

12. Members are invited to offer views on the proposal.

**Security Bureau
February 2013**