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Panel on Security

**Background brief prepared by the Legislative Council Secretariat
for the meeting on 3 February 2009**

**Replacement of Radio Communications System
of the Customs and Excise Department**

Purpose

This paper summarizes past discussions by the Panel on Security (the Panel) on the replacement of the radio communications system of the Customs and Excise Department (C&ED).

Background

2. According to information provided by the Administration in May 2008, the radio communications system of C&ED has been operating since 1978 on an analogue platform. It supports C&ED's enforcement operations, including those related to anti-smuggling, anti-narcotics, protection of intellectual property rights and protection of revenue on dutiable goods, by providing a reliable and secure means of communication among officers on site and those at a coordinating centre. The existing system will reach the end of its serviceable life by 2010.

3. A study conducted by the Electrical and Mechanical Services Department (EMSD) in 2005 on the radio communications system of C&ED revealed the following problems -

- (a) the system, which was designed in the late 1970s, did not provide full radio coverage for all inhabited areas in Hong Kong. Radio blind spots had been on the rise in recent years with the emergence of more high-rise buildings and new towns such as Tin Shui Wai, Ma On Shan and Tseung Kwan O;

- (b) the limited capacity of the existing system was unable to cope with the increase in the number of users in C&ED and the volume of C&ED's enforcement operations;
- (c) the system relied on a coordinating centre to relay messages for communication among officers located in different regions covered by different radio cell sites. Such indirect communication considerably undermined the effectiveness and efficiency of C&ED's enforcement operations;
- (d) as the system operated in analogue mode, it was susceptible to interference by other radio communications systems operating in adjacent frequency bands and interception by ill-intentioned persons; and
- (e) as the analogue technology was becoming obsolete, the system could not be upgraded to cater for the operational needs of C&ED. It was also increasingly difficult to find spare parts for servicing the system.

4. In the light of the study findings, EMSD recommended that C&ED should replace its radio communications system by 2010 by making use of the Unified Digital Communications Platform (UDCP) built on the Third Generation Command and Control Communications System (CCIII) of the Police.

Discussions by the Panel

5. At its meeting on 6 May 2008, the Panel was consulted on the Administration's plan to seek the approval of the Finance Committee (FC) for replacing C&ED's analogue radio communications system.

6. Members in general supported the proposal. Some members, however, expressed concern about the security of UDCP and sought information on the safeguards to be put in place to ensure the confidentiality of C&ED's enforcement operations. They also enquired about the possibility for C&ED to develop a separate radio communications system which provided interface, if required, with the Police's communications system.

7. The Administration responded that the use of UDCP built on CCIII operated by the Police would bring about the following benefits -

- (a) it would be more cost-effective, in terms of investment in infrastructure and maintenance costs, for C&ED to make use of UDCP than developing a separate radio system on its own. The capital and recurrent expenditure of the latter option was estimated to be more than double that of the former option;

- (b) CCIII was a communications infrastructure that was fully rolled out in 2006 by the Police to cater primarily for communication among frontline Police officers. UDCP provided reliable and territory-wide radio network coverage. As CCIII adopted the TETRA encryption standard, UDCP was built with strict security standards;
- (c) supported by digital technology, UDCP allowed C&ED to operate its radio communications system independently with better protection from interference and improved voice quality. The enhanced security capability of UDCP, e.g. end-to-end encryption for the entire radio system as well as additional encryption keys available within the system, could better safeguard the confidentiality of C&ED's enforcement operations by preventing eavesdropping or unauthorized access;
- (d) the infrastructure of UDCP was based on open technological standards, which allowed the system to be further enhanced and developed in future in the light of the changing needs of the user departments; and
- (e) UDCP offered a common communication platform for all participating law enforcement departments, which would facilitate multi-departmental communication during joint operations. After C&ED's participation in UDCP, C&ED would operate its news system with designated frequency talkgroups under normal circumstances. C&ED would operate on the common talkgroups only when joint enforcement operations with the Police or other law enforcement agencies were conducted. C&ED's participation in UDCP would greatly enhance the effectiveness of joint enforcement operations in future.

8. Regarding the difficulties encountered in carrying out maintenance on the devices of the existing system, the Administration advised that the problem of system maintenance, as mentioned in paragraph 3(e) above, had emerged some years ago and compounded over the years to the extent that most of the spare parts needed for the system were of obsolete models, some of which were unavailable in the market. Hence, there was a pressing need for C&ED to replace its analogue radio communications system.

9. On 6 June 2008, FC approved a commitment of \$86,640,000 for C&ED to replace its radio communications system.

Latest development

10. The Administration intends to seek Members' support for the allocation of \$52,000,000 to replace another radio communications system which is used solely by the Customs Drug Investigation Bureau of C&ED. The Administration will brief the

Panel on the details of the proposal at the Panel meeting on 3 February 2009.

Relevant papers

11. Members may wish to refer to the following minutes and papers for further details -

Minutes

- (a) minutes of meeting of the Panel on Security on 6 May 2008 (LC Paper No. CB(2)2744/07-08);
- (b) minutes of meeting of the Finance Committee on 6 June 2008 (LC Paper No. FC14/08-09);

Papers

- (c) Administration's paper entitled "Replacement of Radio Communications System of the Customs & Excise Department" for the meeting of the Panel on Security on 6 May 2008 (LC Paper No. CB(2)1748/07-08(03)); and
- (d) paper provided by the Administration for the meeting of the Finance Committee on 6 June 2008 (Paper No. FCR(2008-09)22).

12. The above minutes and papers are also available on the website of the Legislative Council (<http://www.legco.gov.hk>).

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