

For discussion on
8 April 2014

Legislative Council Panel on Security

Replacement and Enhancement of the Close-circuit Television Systems for Stanley Prison

PURPOSE

This paper consults the Panel on the proposal to replace and enhance the close-circuit television (CCTV) systems at Stanley Prison.

BACKGROUND

2. The Correctional Services Department (CSD) is committed to providing a secure, safe, humane, decent and healthy environment for persons in custody. Most of the facilities of the correctional institutions in Hong Kong have been in use for years, and many of them were converted from buildings originally used for other purposes. As such, the design of these facilities may not be able to meet the security requirements of today. To ensure the safety of correctional staff and persons in custody and maintain institutional security, a reliable and secure CCTV system is necessary in each correctional institution to monitor the behaviour of individual persons in custody, support the operation of institutions and enhance their security.

3. The existing CCTV system at Stanley Prison comprises six individual sub-systems to monitor different areas in the institution with the maintenance work being carried out by five different contractors. The six sub-systems were installed at different times, and most of them have been installed for over ten years.

4. According to the Electrical and Mechanical Services Department (EMSD), some components of the existing CCTV system at Stanley Prison have been in use beyond their serviceable life and their performance deteriorates notably. To maintain normal operation, it is necessary to carry out maintenance work regularly to replace cameras and video recording facilities etc. of the CCTV system. Since the CCTV system was largely set up on technological standards of ten-odd years ago, the videos taken are of unsatisfactory quality and they only provide black and white images in some circumstances. Moreover, the retention period of these videos is confined to

14 days only due to storage capacity of the system. It does not meet the security requirements of correctional institutions nowadays.

PROPOSAL FOR REPLACING AND ENHANCING THE CCTV SYSTEMS FOR STANLEY PRISON

5. The Administration recommends that the existing CCTV system at Stanley Prison should be replaced and enhanced with a new digital system. The proposal includes installation of approximately 2 470 high resolution cameras to cover the institutional areas (except offices and specific areas such as shower rooms, toilets and sick bays in Stanley Prison). The cameras to be installed in security sensitive locations such as restricted areas will be equipped with video analytical function. The system will also be installed with server, video storage system network equipment and uninterrupted power supply.

JUSTIFICATIONS FOR THE PROPOSAL

6. The justifications for the proposal to fully replace and enhance the CCTV system at Stanley Prison are as follows:

- (i) Enhancing the system configuration and improving the quality and storage of video recordings

The six sub-systems of the existing system were separately installed at different times. They have different installations and mechanisms of operation, recording and storage, comprising both digital systems and analogue systems. As most of the systems and cameras have been in operation for a long time, they cannot meet the standards of the modern technology level. For example, the resolution of the cameras is low and the video recordings are not clear enough; the picture quality of stored images fade with time; the picture refreshes at a slower rate resulting in the video being unable to be played smoothly; there is inefficiency in the retrieval of data as the systems are not standardised due to various operating modes and there are considerable limits in the storage capacity of most sub-systems that the recordings can only be retained for 14 days, etc. At the end of 2012¹, the Coroner's Court recommended that without intruding into personal privacy, CSD should enhance the coverage of CCTV system within the areas of correctional

¹ In an inquest into the death of a person in custody, the Coroner's Court commented that the video recordings made by the CCTV at the correctional institution were not clear enough due to their low resolution and the coverage was not sufficiently extensive.

institutions, improve the image resolution and introduce the use of coloured images. During the investigation of another case², the Office of the Ombudsman also recommended that CSD should retain the video recordings for not less than 30 days.

The proposed new system can provide better images with higher resolution and the video recordings are clearer which will enable facial identification of the captured persons. Moreover, the recordings can be retained up to 31 days³ and the design of open digital CCTV system will be adopted. A platform that matches the international standards of the relevant technology will be created, so that it can accommodate the changing operational needs for further enhancement and development. As the operation, recording and storage mechanisms will be standardised, the operational efficiency can be enhanced.

(ii) Rectifying the maintenance problems arising from the ageing system

According to the recommendation of EMSD, the normal service life of existing analogue CCTV system is 8 to 10 years for CCTV camera while the service life of video recording equipment is 6 years. Most of the CCTV systems at Stanley Prison have been in operation for over 10 years. Therefore, the cameras, video recording equipment and other components have to be replaced from time to time in order to ensure their normal operation. Frequent repair will affect the operational security of the institution.

After the replacement of the system, the number of incidents of system malfunctioning due to the ageing problem can be reduced. Moreover, the operation of the new system will be standardised and maintained by a sole contractor, which will be more cost-effective.

² In the investigation into a complaint, the Office of the Ombudsman commented that 14 days retention period for audio or video recording was not adequate and recommended that CSD should review its procedural guideline on retention and disposal of files and records.

³ Regarding the retention of the CCTV data, CSD has made reference to the practice adopted by the Hong Kong Police Force in retaining CCTV data obtained at police stations and also the standards stipulated in the guidelines provided by the police of the United Kingdom for users of CCTV systems. In deciding on the retention period of 31 days, CSD has given due consideration of the recommendation made by the Office of the Ombudsman with regard to retaining the recordings for not less than 30 days.

(iii) Extending the system coverage and efficiency in surveillance

Since the premises of Stanley Prison are extensive, the coverage of the existing CCTV system is considered insufficient.

In the light of the current circumstances and the recommendation of the Coroner's Court mentioned at paragraph 6(i) above, the proposed procurement of the new CCTV system will cover all accessible areas by persons in custody (except toilets, shower rooms and sick bays etc. in the institution) in order to provide a more comprehensive coverage so as to enhance the surveillance effectiveness. Moreover, in security sensitive areas (such as areas in the proximity of the protective walls of the institution), the video recorders installed will be equipped with video analytical function. The central system will receive messages directly if any foreign objects enter into the restricted areas, which will trigger the alarm to alert the staff in the institution to take contingency measures so as to further enhance the level of security in restricted areas.

FINANCIAL IMPLICATIONS

Non-recurrent cost

7. We estimate that the total non-recurrent cost for replacing and enhancing the CCTV system will be about \$163 million. A detailed breakdown is as follows:

	\$ million
(a) Construction of a New Server Room	29.00
(b) CCTV Cameras ⁴	41.40
(c) Control and Surveillance System ⁵	12.54
(d) Storage System	24.35
(e) Network and Cabling System ⁶	15.93
(f) Infrastructure and Associated Building services ⁷	10.40

⁴ Including the procurement of some 2 470 sets of CCTV cameras and some of them being equipped with video analytical function.

⁵ Including the procurement of workstation computer, display panel, equipment rack and uninterrupted power supply for the system.

⁶ Including the procurement of network equipment, such as core switches, edge switches, network supporting unit, and the carrying out of the associated cabling and builders' works.

⁷ Including the procurement of uninterrupted power supply system, to support infrastructure facilities/building services works.

(g) Electrical and Mechanical Services Trading Fund (EMSTF) project management services ⁸	15.70
(h) Contingencies (approximately 10% of items (a) to (f) above)	13.36
Total	162.68 (in money-of-the-day prices)

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

Year	\$ million
2014 - 15	5.925
2015 - 16	18.600
2016 - 17	34.600
2016 - 18	30.900
2018 - 19	28.000
2019 - 20	44.655
Total	162.680

9. It is estimated that after the new CCTV system is put into use, the annual recurrent cost of the proposed system is about \$ 9.5 million, including expenses on preventive and corrective maintenance, equipment spare parts and electricity tariffs etc.

IMPLEMENTATION PLAN

10. Subject to Members' comments on the proposal, we plan to seek funding approval from the Finance Committee (FC) in mid-2014. Subject to approval by FC, the implementation plan will be carried out in accordance with the following schedule:

Activity	Target Date of Completion
(a) Project planning, system design/tender preparation	January 2015
(b) Tendering and award of contract	September 2015

⁸ The services provided by the EMSTF include the preparation of tender documents, tender evaluation, approval of contractor's design submissions, monitoring of contractor's installation, acceptance tests, and co-ordination with various government departments and the contractor during the project.

Activity	Target Date of Completion
(c) Approval of system design	January 2016
(d) Manufacturing of equipment, delivery and site work preparation	September 2016
(e) Installation and building service works	January 2019
(f) Acceptance test and training	April 2019
(g) System commissioning	May 2019

11. We draw up the above schedule with reference to previous experience and the proposals of the EMSTF. As the said project is going to be carried out at Stanley Prison which was built over 70 years ago and the works will cover the whole institution, the installation and replacement works will be carried out by areas in various phases so as to accommodate the normal operation of the institution. Moreover, the integration and transition of the old and new systems will be included in each phase. Therefore, the installation works will take a longer time to complete.

ADVICE SOUGHT

12. Members are invited to comment on the above proposal.

Security Bureau
Correctional Services Department
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