與香港兒童醫院同行
Walk with the Hong Kong Children's Hospital

為協助醫院管理局把香港兒童醫院打造成一所卓越的兒科醫院，機電署早於2014年施工初期，已積極參與籌劃、設計和提供技術諮詢服務，並支援醫院應用各種創新科技，提升日常運作效率，進一步優化醫療服務。

在施工期間，機電署擔當技術顧問，為醫院不同部門的醫護人員提供貼心的工程諮詢服務。透過前期的參與，我們能及早了解客戶的需要、解決原設計對未來使用和維修保養可能帶來的問題。

我們為兒童醫院引入創新科技 —「建築信息模擬—資產管理」系統，製作三維建築模型，便利將來醫院對工程系統進行資產管理和遙距預診。就日後新醫院的建造工程而言，我們可在施工前把新醫院的三維建築模型結合設於機電署總部的「洞穴式自動虛擬環境」系統，讓醫護人員透過置身虛擬實境，預覽醫療設施的室內設計、鋪排和空間感，有助完善設計方案。維修保養人員亦可透過這系統，模擬在平常不能去的地方(例如手術室)進行訓練，熟習環境和維修程序，好讓真正工作時能更得心應手。

我們亦與兒童醫院共同研發新科技，例如嬰兒追蹤系統及醫療儀器(例如電動病牀和呼吸器)資產管理系統。此外，為提高維修效率，我們特別引進一套採用藍牙低功耗信標的室內定位系統，配合流動應用程式，提供室內維修定位導航、維修手冊及安全信息等提示予維修保養人員。

如欲了解更多有關醫院機電系統應用創新科技的情況，歡迎致電 3155 4000 與高級工程師莊國基先生聯絡。
If you are interested in knowing more about the innovative technology application in E&M systems in hospitals, please contact Mr. Chong Kwok-kee, Senior Engineer, at 3155 4000.

In order to help the Hospital Authority build the Hong Kong Children's Hospital (HKCH) into one of the best paediatric hospitals, the EMSD has been actively involved in the preparation, design and technical consultancy work as early as at the initial stage of construction in 2014, providing support in the hospital's application of various innovative technologies to enhance the daily operational efficiency and further optimise the healthcare services.

「洞穴式自動虛擬環境」技術結合「建築信息模擬—資產管理」系統，可讓客戶先睹為快，了解醫療設施的陳設和空間感。
By integrating with the BIM-AM System, the CAVE technology allows clients to take a peek at the layout and spatial arrangement of medical facilities.

During the construction stage, the EMSD served as a technical consultant, providing attentive engineering consultancy services to the medical staff from different departments of the hospital. Through advance involvement, we were able to understand the client's needs as early as possible and solve any problem with operation and maintenance that might arise from the original design in the future.

We have introduced to the HKCH the latest innovative technology – the Building Information Modelling – Asset Management (BIM-AM) System to make 3-D building models to facilitate asset management and remote diagnosis of different engineering systems in the future. For new hospitals to be built, we may integrate the 3-D models of the new hospitals with the Cave Automatic Virtual Environment (CAVE) system set up in the EMSD Headquarters before the construction stage. In this case, medical staff can assimilate into a virtual environment to preview the interior design, layout and spatial arrangement of the medical facilities in order to perfect the design solution. With this system, maintenance staff can also practice simulation maintenance in zones that are not easily accessible (such as operating theatre), get familiar with the environment and repair procedures, thus better preparing for the actual maintenance work in due course.

We have also worked with the HKCH to develop new technologies. Examples are the baby tagging system and the medical equipment (such as electric bed and respirator) asset management system. Besides, we have introduced an indoor positioning system, which uses Bluetooth Low Energy Beacon, to increase maintenance efficiency. By working with mobile apps, the system can provide positioning navigation for indoor maintenance, push notification of operation manual and safety messages to the maintenance staff.