



Delineating an Integrated Data Management System (IDMS) for Systematic Underground Utility Maintenance and Management – HKSAR Practice

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Underground utilities are crucial to our daily life and operation by functioning as a channel for the transport and transmission of our necessities such as water, town gas, electricity, etc. Serious impacts in terms of time, money, and even human life would be arisen should there are any damages to the utilities. For instance, breakage of town gas ducts caused by excavation may lead to fatal explosion. With an aim to have better utilities management to eliminate any potential damages, government authorities and public utility organizations in Hong Kong have established their own database systems to store the location of the underground properties specific to their organizations. All digging works should refer to these information accordingly in order to satisfy the statutory requirements. However, should all underground utilities be assembled as at large instead of crispy utility databases to uplift the reliability? Should the service condition of utilities be also recorded in the database for better maintenance and management? Therefore, it is desirable to establish an integrated repository to gather the location and condition of all underground utilities so as to have a comprehensive and complete utility picture. Besides, the utilities should also be scrutinized and updated to the repository regularly. This paper first described the steps in developing an Integrated Data Management System (IDMS) for all buried services in Hong Kong. Possible methods to achieve proper updating to IDMS were also illustrated. Finally, the mechanism of implementing IDMS for systematic maintenance and management of underground utilities was demonstrated.