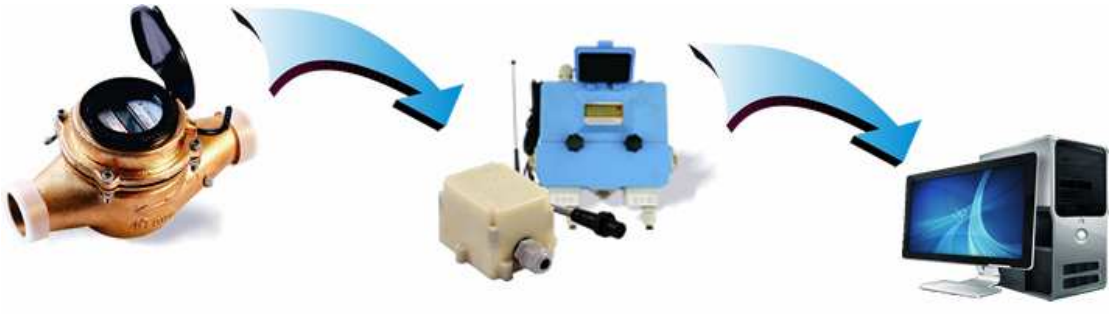
The case study of Electronic Class C Domestic Water Meter applications

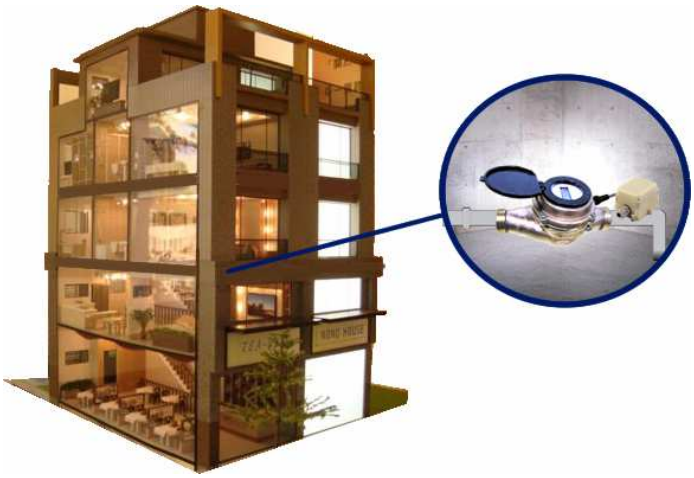


a. Farglory Smart Residential Building

In 2012, EMS (ENERGY MANAGEMENT SYSTEM CO., LTD) cooperated with Chunghwa Telecom, to install the system of energy saving management at Farglory smart residential building , so that households can easily monitor and control home energy consumption.

The intelligent electronic water meter is equipped with the functions of leakage detection, flow / reverse flow data recording. In addition, it can connect with wireless data transmission interface（GSM/ GPRS）to collect and analyze water consumption / behaviors in real-time monitoring system.

The construction of Farglory smart residential building contains “Intelligent electronic water meters" and "Modbus Transfer Interface" which have been installed in the ceiling at the entrance of each household. With smart residential building, every household will receive data 24⁄7 and can analyze instant water consumption patterns / behavior so as to detect and repair leakage pipes.

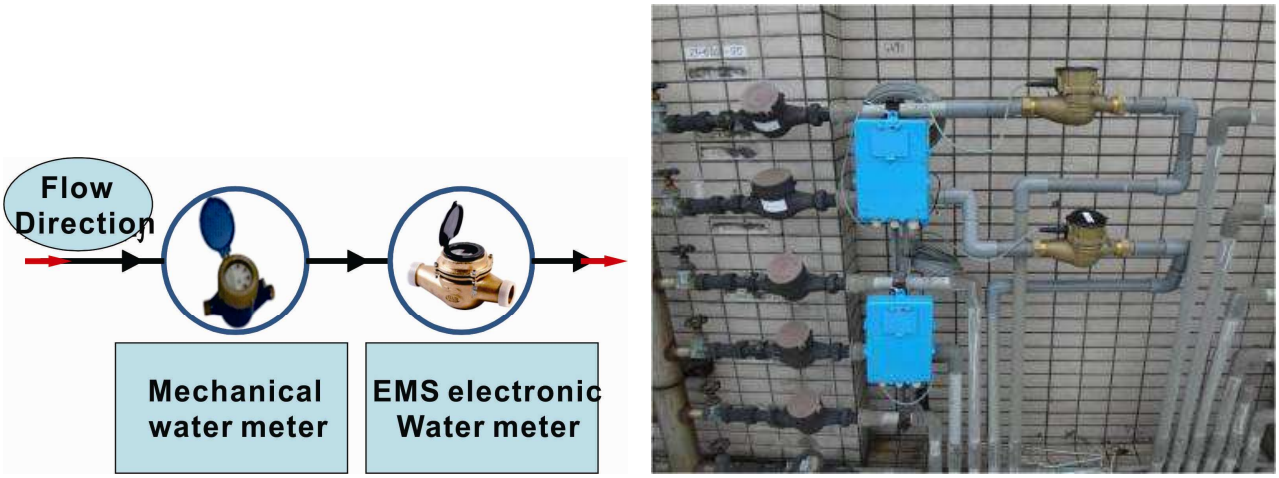


Graph 1. Intelligent electronic water meter with RMT to be installed in the ceiling of each household

Graph 2. E-Management System (Real-time water consumption graph)

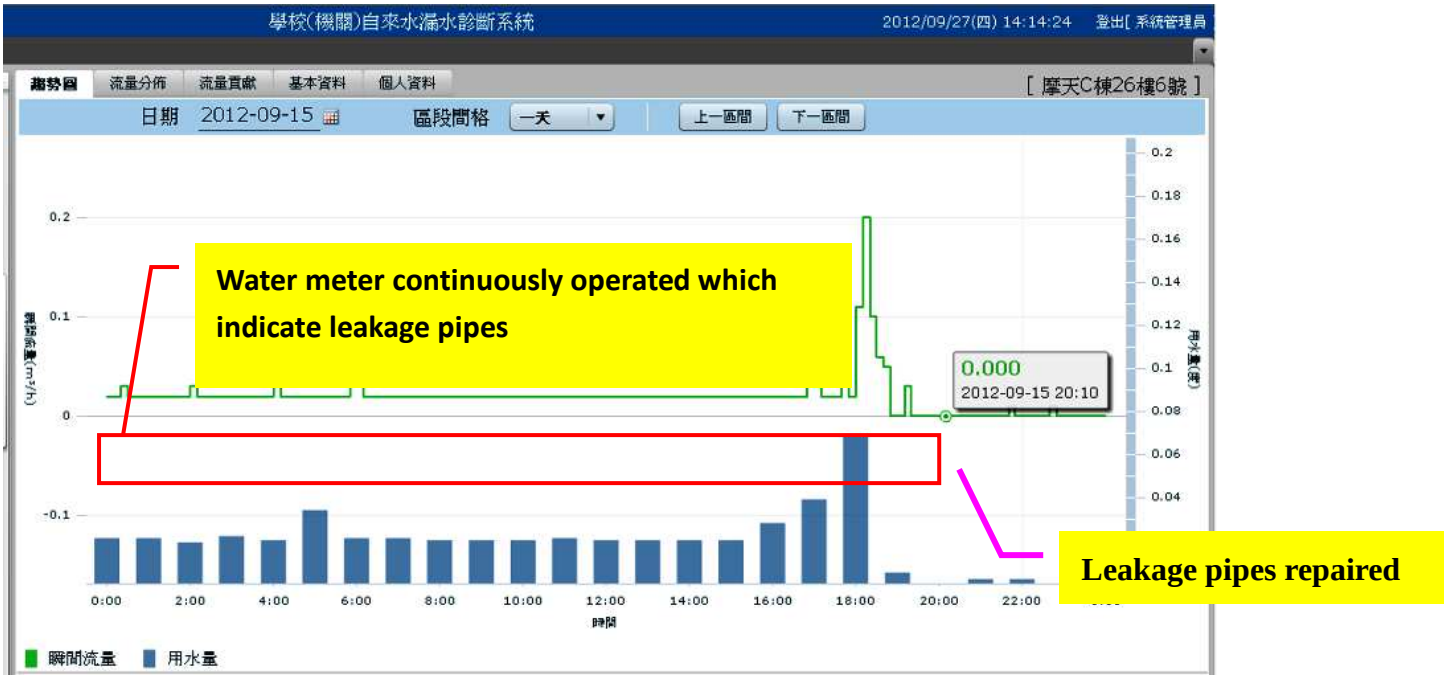
b. Pilot project conducted by Water Resource Agency, MOEA

Initiated by Tamkang University since June 2012, the pilot project will install intelligent electronic water meters and the wireless data logger after the original mechanical water meter in “MO-TIAN” and “LAI-LAI SIANG SIE” communities, total with 80 households. The total period of the pilot project is 4 months. The purpose of the pilot project is to find out the different performance between traditional mechanical water meter and electronic domestic water meter.



Graph 3. On-site electronic water meter installation condition

Customers can log on the Internet of EMS AMR System with personal username and password to check personal water consumption immediately. In the 4 months of testing period, EMS Electronic Class C domestic water meter which equipped with the function of leakage detection, alarm and record can help user find out leaks pipes and repair instantly. So, EMS electronic water meter not only prevent water loss but also save lots of energy in the resource-scarce generation.



Graph 4. AMR software –

Provide consumer real-time flow data, find out leakage pipes and conduct repair instantly

c. First national university to install intelligent electronic water meter in Taiwan

National Taiwan Normal University, Dormitory 7, is the first school dormitory to install the electronic water meter which has acquired National “Type Approval” and “Calibration-Qualified Certificate” issued by Bureau of Standard, Metrology and Inspection, M.O.E.A, R.O.C.. After National Taiwan Normal University has installed electronic water meter in Dormitory 7, user-paid principle can be applied and fairness of water consumption fees can be guaranteed. In addition, total water consumption can be reduced greatly.

After National Taiwan Normal University has comprehensively installed electronic water meter with AMR software, the administrator can easily manage water consumption of every dormitory by means of web page. If pipes leakage problems or abnormal water consumption behavior have been found out, the administrator can instantly locate the pipes and conduct repairs so as to prevent loss of water.

-	房號	功能按鈕
1	71201	查詢本月用水記錄
2	71202	查詢本月用水記錄
3	71203	查詢本月用水記錄
4	71204	查詢本月用水記錄
5	71205	查詢本月用水記錄
6	71206	查詢本月用水記錄
7	71207	查詢本月用水記錄
8	71208	查詢本月用水記錄
9	71209	查詢本月用水記錄
10	71210	查詢本月用水記錄
11	71211	查詢本月用水記錄
12	71212	查詢本月用水記錄

Graph. 5 The home page of AMR system-
the profile of electronic water meter and monthly water consumption data of every dormitory will be displayed instantly when administrator has clicked the location