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Mapping Air pollutants Anytime, Anywhere

A mobile, real-time air pollution monitoring platform will be developed for the first time in Hong Kong by researchers at the Hong Kong University of Science and Technology (HKUST).

Entitled "Mobile Real-time Air Monitoring Platform", or MAP, the pioneering project is supported by a grant of HK\$12.3 million from The Hong Kong Jockey Club Charities Trust.

"As Hong Kong's largest private charity organization, we're working proactively to meet community needs," said Mr Lawrence T Wong, Chief Executive of The Hong Kong Jockey Club. "Improving air quality is one of our major concerns. Back in 1989, we funded the set up of the Air Pollution Index which informs the public each day about air pollution levels. Today, the sponsorship for MAP is our latest contribution to improve the environment," he said.

MAP will be housed in a 24-seat low emission van, and equipped with advanced equipment, including a particle distribution counter, a volatile organic compound analyzer, an elemental carbon analyzer, a global positioning system (GPS), criteria gas monitors and an automatic weather station.

MAP will provide a powerful and versatile tool to map air pollutant concentrations in different parts of Hong Kong, and to obtain time-series data at strategic sites. It is mobile and real-time, which means that measurement can be conducted anytime, even when the van is in motion; and anywhere, even in certain inaccessible locations such as tunnels, hill tops and street canyons.

"As the government takes steps to improve the environment, such as the switch from diesel to LPG, the data collected by MAP will allow researchers to track the progress of these initiatives, study the dynamics involved and the corresponding health impact," said Dr Ming Fang, Project Manager and Director of Institute for Environment & Sustainable Development. He will be working with Dr Chak K Chan, Principal Investigator and Associate Professor in the Department of Chemical Engineering.

"MAP is a versatile platform which serves not only environmental purposes, but also research, education and other initiatives. One possible application is to deploy MAP for emergency air quality monitoring in cases of chemical spills or gas leakage," said Dr Ming Fang.

Dr Fang plans to conduct exhibitions and demonstrations for secondary schools and the general public to heighten public awareness for environmental issues. He will also launch a summer internship program, inviting secondary school teachers and students to join the MAP project so that they will gain hands-on experience on air monitoring.

It would be another 18 months before MAP comes into being as its versatility requires substantial modification and installation work.

Dr Fang will introduce MAP at the Hong Kong-France Conference on the Environment on 11 December. Details are as follows:

Event: Hong Kong-France Conference on the Environment

Date: Monday, 11 December 2000

Time: 2-2:20 pm

Venue: Chow Tak Sin Lecture Theater

Language: English