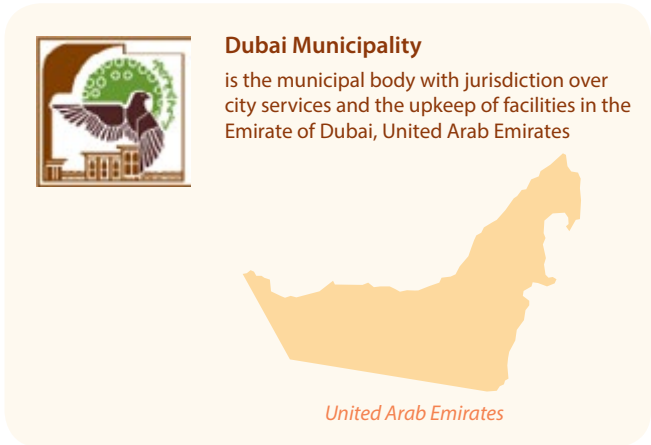


# IMS Road Weather Information System, Dubai

## MicroStep-MIS Success Story

<b>Tender:</b>	IMS Road Weather Information System
<b>Client:</b>	Dubai Municipality
<b>Contractor:</b>	Unique System FZE



After a serious car accident in March 2008, Dubai Municipality decided to purchase and install a road fog early warning and forecasting system. As for each business opportunity, choice of the right partner is the essential step to be done. MicroStep-MIS with its partner Unique have been chosen by Dubai Municipality to realize the project.

Because of the proven high professionalism and positive experience from the past, we were glad to cooperate with Unique Maritime Group, a global provider of integrated support services for the offshore industries. As a result of creating a strong team together, we have managed to build a unique and complex road warning system for the Municipality of Dubai. The system has been installed in 2009 and is operating properly till today.

In this project, Biral SWS100 road sensor has been introduced by MicroStep-MIS.

*“MicroStep-MIS decided to use Biral’s SWS100. In spite of the fact that at the time of the tender it was a fairly new product, we had an excellent long-term experience with the HSS series of sensors; therefore we expected the SWS100 would be of a similar quality. After more than one year of operation we can confirm that our expectations were fulfilled. We haven’t had any problems with the installed visibility sensors,”* says Jozef Omelka, Managing Director, MicroStep-MIS.

### Product description

IMS Road Weather Information System is a unique, complex and highly comprehensive system containing several meteorological stations strategically located alongside the highways that offer detailed professional information about the weather and the road conditions. Specialized cutting-edge hardware equipment and computer software analyze the weather and the visibility, providing inputs for the forecasting models.

System establishes 8 Automatic Road Weather Stations, and further integrates 5 existing weather stations as well as a buoy used for measurement of water temperature and water level. Powering of the devices is ensured by using high performance solar panels.

The data-center delivered by MicroStep-MIS is connected with the Dubai Municipality central database, providing up-to-date and fully comprehensive data for the system 24 hours a day.

Ensuring complex approach to the fog prediction and enriching the visibility measurements, the system is also available online on the Municipality website to provide further monitoring & analysis features.



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*“The information is used by government departments, initially by Dubai Police and Coastal Guards. It will help them to take appropriate action in case of low visibility and fog. They are able to warn drivers about fog conditions in order to prevent road accidents,”* said Mohammad Mashroom, Director of Survey Department of Dubai Municipality for Gulf News.

### Real-time weather and forecast information

The actual values of temperature, relative humidity, rainfall, water level, as well as wind speed & direction in different parts of the Municipality are provided every two minutes, ensuring continuous and up-to-date data for the traffic safety.

Road stations improve timeliness of maintenance actions, increase winter maintenance efficiency, and minimize the traveling public’s exposure to hazardous weather-related roadway conditions.

### Modeling and Forecasting

The fog forecasting models provide the local visibility forecast and prediction of fog evolution on traffic locations. Although the fog model cannot prevent the undesirable weather conditions, it provides early warning on possible formation of water fog (ice frost). The models are to be taken as early warning to sharpen attention of the operators

The system provides excellent results. *„For the last fog season in Dubai (10/2011 – 3/2012) we have achieved success in fog forecasting at 95% (the POD score) with only 18% of false alarms;“* Juraj Bartok, forecaster from MicroStep-MIS confirms the quality of the system.

### Media inform about our system:

- Khaleej Times – Dubai gets own fog monitoring stations <http://bit.ly/1BGapa4>
- Gulfnews – New system to prevent fog-related accidents <http://bit.ly/1HkhRs7>



### Challenge

- Improve safety by comprehensive fog predictions
- Rapid development, integration & delivery

### Our solution

- Unique and highly complex system
- Emerging technology installation
- Monitoring & forecasting solution preventing road accidents

### Achievements

- Wide utilization of the system
- High success in predictions
- Fast delivery