

HUMBOLDT Application Scenario

Atmosphere

Air pollution can have harmful effects on human health, animals and the environment as a whole. In recent years efforts to reduce air pollution levels have been increasing. However, high concentrations of ozone, particulate matter and nitrogen oxides continue to cause problems. EU Member States are required to take measures necessary to ensure compliance with the air quality directive by continuously monitoring the air quality.

The Atmosphere Scenario is based on air quality data integration and provision through Location Based Services (LBS). This scenario is a demonstration on how data integration difficulties in Location Based Service provision can be tackled. It demonstrates new possibilities to provide the mobile users with air quality information especially adapted to their needs in a mobile environment. The purpose of such a service is to offer comprehensive personalised information on air quality depending on users' actual location and profile. The user has access to spatial and atmospheric information using a mobile device. In this regard, the Atmosphere scenario is intended to showcase harmonisation of atmospheric data products.

The Atmosphere Scenario overall objectives in the integration of atmospheric information are to:

- ⊞ Support initiatives for informing the public on pollution or meteorological data and support experts (especially in micro-climate) in collecting or accessing this data.
- ⊞ Add value to other LBS and thus promote use of atmospheric data through providing an interface for integration of live sensor data, meteorological world and other location services through a Location Based Service for the distribution and collection of atmospheric data from dynamic locations (pollution, pollen, weather forecast...)
- ⊞ Support integration of sensor data using standards to accumulate data from mobile sensors even in urban or other obstructed environments
- ⊞ Contribute on the harmonisation of atmospheric and air quality data depending on the user context



The scenario testbeds are Germany and Italy. Currently data is being collected both for Italy and Germany. This data will be used in a scenario demonstrator application to showcase atmospheric data harmonisation for Location Based Services.

The Atmosphere Scenario is intended to provide harmonisation for different classes of end users of atmospheric data products, including general public users and professional LBS users who need atmospheric and air quality data.

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