

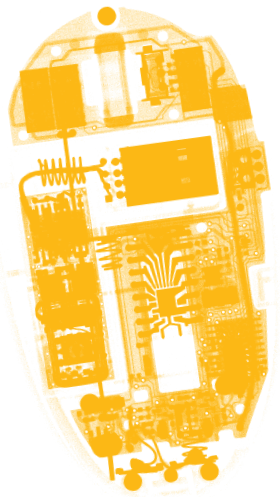
## THE INTERNET OF THINGS

### REMOTE OPERATIONS WITH REMIOT

The increasing use of weather monitoring stations raises two significant issues linked to the substantial variations between the objects and settings in question: the data sources and data collection in real time.

With regard to data sources, the solutions on the market differ in terms of both formats and protocols, given the lack of strong standards. Proprietary mechanisms for exchanging data, for example, have become a strong point, a positioning strategy used by the manufacturers of weather stations. These closed standards reduce the flexibility of devices when it comes to adapting to the operative needs of the end user.

The increasing need to gather data in real time raises the same standardisation issues. Media and protocols vary according to the setting, ranging from the traditional ethernet network to the less common ad hoc wireless channels.

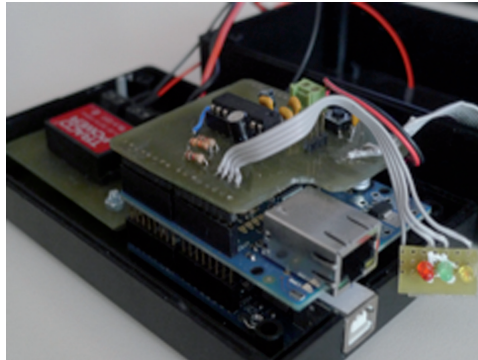


## REMIOT: THE WEATHER STREAMER APPLICATION

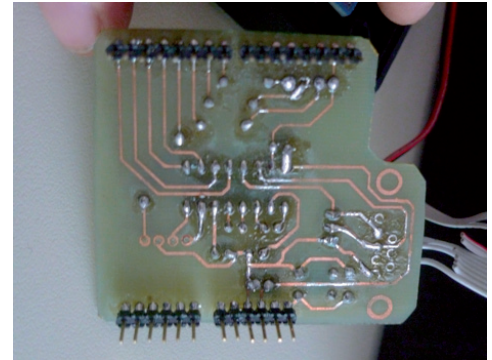
To respond to the need for greater flexibility and interoperable devices, CSP has developed a simple, versatile, embedded object that solves the problem of communication between data sources and data gathering platforms, using a paradigm that can be applied to all the most common types of weather stations.

The system is based on the Arduino open source platform and presents hardware interfaces capable of connecting data sources that communicate on serial standards, such as weather stations.

A collection of software libraries implement the mechanisms needed to interact with the individual models of weather station available on the market.



*RemIoT - the prototype system inside a compact box*



*The adaptor circuit that connects to the weather station.*

The data transmission component is designed to support the main IP communication standards, and features an interface that transmits the data on telecommunications networks for emergency management (Tetra, DMR...) using commercial radio transceivers.

Exploiting these two-way communications channels, RemIoT can also be used to interact actively with the remote station, enabling users to control simple actuation circuits.

