

WEB WEATHER

Professional services that can provide real-time weather data and its long-time trends

By visiting special websites for field data, you can bypass the middle man and check the facts yourself



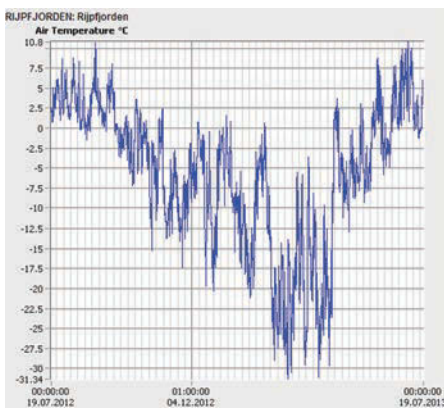
Think about all the instrumental grade weather sensors that have been sold worldwide over the past few years. Where are they? And all the dataloggers, backbones of every weather measurement system? Most likely there are tens of thousands of dataloggers out there and millions of sensors. Is there open access to data from any of these systems?

Indeed there is – and the following information is open to all via the corresponding websites.

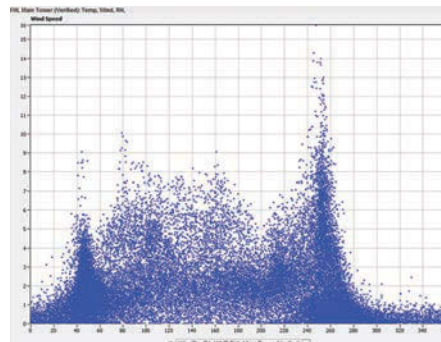
Svalbard is a group of islands in the North Atlantic, far north of Iceland, east of the northern part of Greenland, ranging from 74° to 81° north, 10° to 35° east. What is the weather like up there?

Anyone who wants to know can make use of the numerous automatic weather stations in the area, operated by the University Centre in Svalbard. There are seven stations close to the village of Longyearbyen and two further east and north. The real-time weather and trend lines are accessible at www.unis.no, from the link 'Weather'. At the time of writing, the air temperature at noon at Rijpfjorden was around freezing.

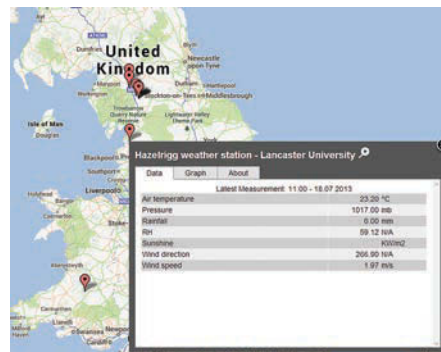
The University of Washington runs Friday Harbor Laboratories (FHL), a world-renowned centre for marine biology and oceanography, on the island of San Juan in the Strait of Juan de Fuca, north of Seattle, Washington. Since 2006 an automatic weather station has logged all the most important weather elements and stored the information in a database. This weather data is accessible at the university's website (www.washington.edu). A search for 'weather station' will find FHL Weather Station, which in turn provides direct access to the data. Looking at the wind direction



One year of air temperature measurements in degrees Celsius at Rijpfjorden weather station at 80° north. It is interesting to see the great temperature variations throughout the year



Graph showing one year of wind direction and windspeed measurements at Friday Harbor Laboratories. Clearly, the most common wind directions are 45° and 250°



All measurements from the Hazelrigg weather station are available on a Google Map interface

data, it is interesting to notice that wind has a strong two-directional character, either into or out of the strait.

Lancaster University in the UK is 10km from the Irish Sea, just south of the city of Lancaster and close to the Lake District. Its website (www.lancaster.ac.uk) opens the door to weather measurements run by the Lancaster Environment Centre at Lancaster University. A search for 'weather station' will point to Hazelrigg Weather Station and at the bottom of that page is the link to Hazelrigg Automated Meteorology Measurements. Via a Google Map interface there is access to the Hazelrigg weather data as well as data from a few other weather stations around the UK.

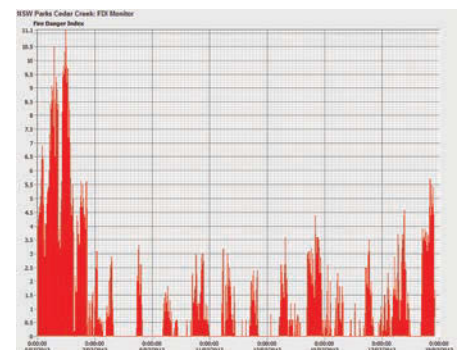
Australia has its share of bush fires, with several major incidents every year and countless smaller ones. They are dangerous and costly, so automatic weather stations have been installed to help predict the likelihood of new fires. These weather stations calculate the Fire Danger Index based on temperature, humidity, precipitation and other factors. The Windellama Rural Fire Brigade in NSW has an interesting website

(www.windellama.bushfirebrigade.com.au/windellama_rfs_about_us.php) showing not only the current weather but also, more interestingly, gives a link at the top of the page to the real-time website (www.teledata.com.au) with FDI information. Once you sign in using the username/password indicated you have access to real-time data from 30 automatic weather stations, all delivering FDI data as well as general weather readings.

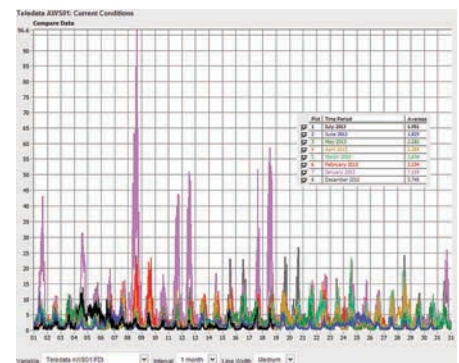
One of the interesting things about weather data management systems is the ability to be able to report data in such a way that important trends in the data become clear. One such report is the overlay data report, where each month's data is plotted on top of previous data.

With all this information so readily available, it's easy to access weather data with your fingertips and understand better all the variations in weather and how weather parameters interact. ■

Andres Thorarinnson is CEO of Vista Data Vision based in Iceland



Fire Danger Index (FDI) as calculated in real time at Cedar Creek. July is winter in Australia; in the summer the FDI may be much higher at between 50 and 100



FDI for eight months plotted as an overlay data report. It is clear that the highest FDI was in January 2013, with a few highs of 50 and a maximum of 97