Your club's met on the net

Alex Latty describes the web weather station that helps with your early-morning worries about what conditions are like at your gliding club

HAVE YOU ever wished you could view the weather at your club *before* you decide to jump in your car and drive there, only to find that everyone is confined to the clubhouse drinking coffee and reminiscing about their last epic flight?

For members of Borders GC, this is a thing of the past. Since their webmaster devised a system to upload weather information to the internet, members can now view information or use their mobile phone to access text messages containing weather info.

There is also the added benefit of being able to view the latest weather at work throughout the week, thinking of what could be for the following weekend.

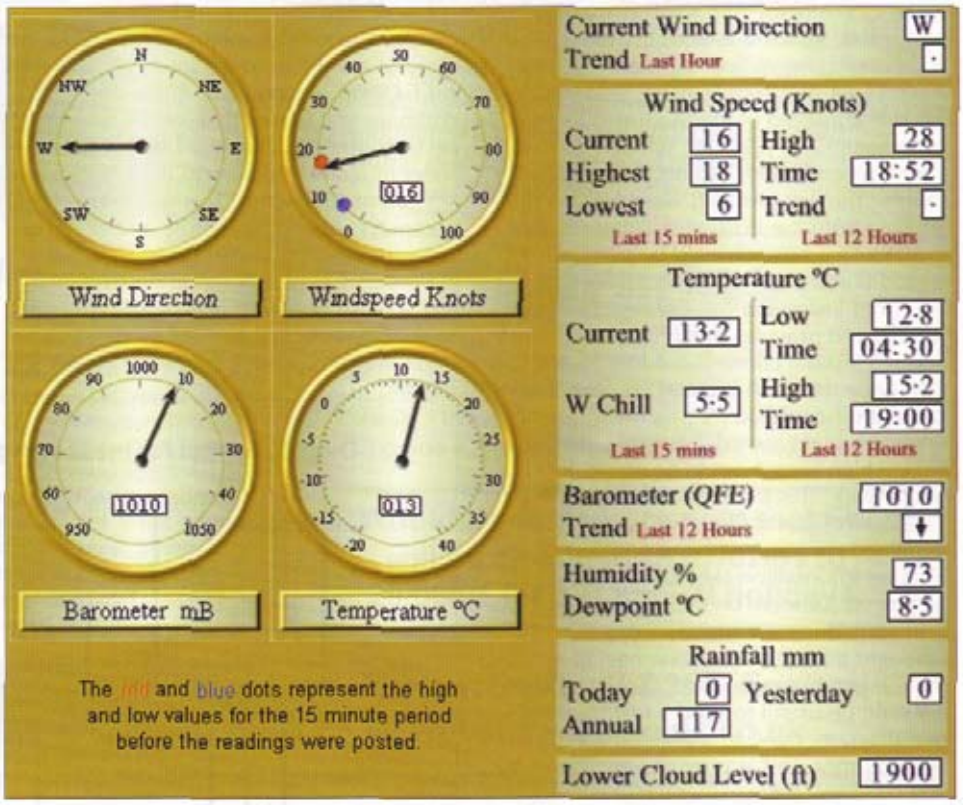
It all started when Borders GC moved to its new site in 1997: not only did Transco provide us with a new airfield because of the logistics of building a venting station but also gave us a new clubhouse and hangar free of charge. What a pack of lucky so-and-sos, I hear you say. I think this is a classic case of having an airfield in the wrong place at the right time syndrome.

Spurred on by these new surroundings, the members thought it was about time. Borders GC had a web presence. A site was duly created *(www.bordersgliding.co.uk)* with interesting but static content.

If you look at the majority of gliding club websites, I'm sure you will agree that the content doesn't change very much from week to week, and the local webmaster gets hassled to do something about it. Finding myself in this situation I decided that I would silence the masses and add a webcam to provide some dynamic content and increase the hits (a web term which means someone has accessed your site). This webcam was positioned to view College Valley (see photo, right). This is an area south of the clubhouse, which extends for some six miles or so; most of it is a ridge at 1,800ft, ending at Cheviot (3,000ft ASL).

Having looked at some of the webcam software on the market, I found that there was nothing that I could use to provide exactly what I wanted. Being a software engineer I decided to write my own. As things progressed this proved to be a good decision as new functionality was later required which I could have not provided if we had bought a dedicated webcam software package.

I'll mention at this stage that the club already had a Pentium 200 computer,



Hundreds of hours of work went into the devising of a web weather station for Borders GC. Webmaster Alex Latty drew on 20 years' experience of computers and electronics as well as his background in gliding

running Windows 98, which we used for EW barographs. So all we needed in addition to this was a modem, a webcam and some software. The chairman kindly donated a modem and the committee sanctioned the spend of a massive £60 for a Philips Vesta webcam. This uses a USB connection (which, incidentally, Windows 95 does not support).

As previously mentioned, the small matter of the software was left to me.

Anyone who has done any software development will know how long it takes

The weather station webcam at Borders GC, Milfield, showing a wave day when its pilots got to 17,500ft

- and finding the time with a wife and two young girls, not to mention work, gliding and being hassled by Helen to write this article -was difficult, but my thanks to the girls for being so understanding.

On those gloomy days when everyone sat in the clubhouse (on new furniture might as well rub it in) and told their tales of Diamond heights (we did have some last year) and other exploits, I decided to get on with the job of developing the software, only surfacing for a dose of caffeine.

After many hours and a phone bill to match, the process of taking a picture and uploading it to the Internet had finally been tested and was robust enough to deploy. The software was installed and configured to take pictures at predefined times.

The software allows the user to select any time (15-minute slots) on any day to take a picture and upload it to the net. Time menus for each day are dynamically created. That is, the time does not appear unless a picture exists to view. The main emphasis in the design is for someone who has very little computer knowledge to be able to install and operate the system successfully, which I think I have achieved.

Having completed this piece of work, I basked in the glory. Then the rumblings started again and requests for weather information to accompany the pictures

became a topic of conversation. This was to prove more of a technical problem than the webcam but with 20 years' experience of electronics and computers I pushed ahead.

The club already had weather monitoring equipment, which was bought from a British company called Instromet Ltd (we couldn't get this from Transco, unfortunately). This consisted of the usual wind speed, temperature and pressure, which was read from a nice wooden cabinet housing the gauges. The first problem was to transfer the data from the existing weather sensors to a PC. This was achieved by purchasing an additional piece of kit called MetLog, also from Instromet. This connects to the sensors and provides the information through a serial connection. This meant that, once installed, it could be connected to our existing PC.

First problem solved, I moved onto the next, which turned out to be about 400 hours work. This involved developing the existing software further. The presentation remained the same with the addition of weather information tagged below the picture (see screen, on the previous page).

In addition to the internet content, I thought that, with everyone having a mobile phone (essential for those landouts), it would be useful to send a text message (see diagram, right) to registered users at certain times. This is proving very useful as you can view the weather while playing with your mobile in bed at 7am. (Takes all sorts, I suppose!)

This article is not meant to give detailed technical information (that can be found on my website, www.latsoftware.co.uk) but some of the features are as follows:

- Runs on Windows 98 and above.
- Weather information is sampled and stored in a database every 15 minutes.
- The software caters for Webcam and/or Met operation.
- Data can be automatically uploaded to the net, with very little experience.
- A "realtime" screen is available on the PC with MET4NET installed.
- Graphical trends for the last week.
- Table trends for the last week.

Future developments include: *MET Phone*, allowing members to dial up a number and listen to the latest weather; *MET Query*, a module to query the database and output to a format which can be imported and examined with a spreadsheet program and a Local Area Network version of *METActive. This* will allow computers connected across a network to view information in real-time.

Borders GC is in Northumberland near the Scottish border. It is in close proximity to the Cheviots and so we experience a wide range of conditions, ranging from wave even in summer (the conditions shown on p28 gave a 17,500ft climb!) to thermals and ridge soaring. The weather is volatile and can be completely different to that only 20 miles away. For this reason, the equipment is excellent.

I now look at the message on my phone at 7am on Saturday and if it's raining, yes, you guessed it, I still go to the club to talk about the latest exploits and listen to the rumblings!

I hope this article has given you an insight into what is involved. Enjoy your gliding and keep a good lookout (pun intended) for more details on my website. Anyone want an autopilot for their glider?

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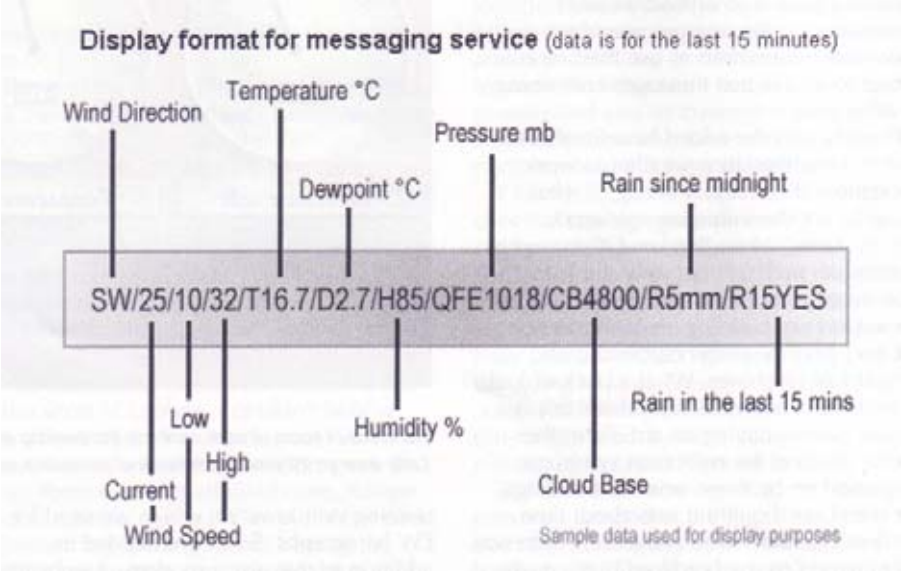

Met4net offers a text messaging service to registered users, decoded above. "You can view the weather at 7am while playing with your mobile in bed," says software designer Alex Latty. "Takes all sorts, 1 suppose." For more technical details of the system he's devised, see his website at www.latsoftware.co.uk