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Met Office exploitation of user-provided content

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Increasingly, the UK Met Office is looking to make use of so-called user-provided content, to take advantage of the potential offered by people external to the organisation ('citizens'), either to provide additional valuable information, or to interpret information, which can not readily be processed automatically. In all the cases discussed here the interaction is through the Web, which provides a ready 'gateway' between the organisation and the public.

A key area for the Met Office is obviously the collection of observations. In winter 2010, the Met Office gained valuable additional information on the distribution of lying snow through the submission of snow depth reports by citizens. The information was then displayed in symbol form using Google Maps and was of use both to the public themselves and to forecasters.

In 2011, the Met Office, with the support of the Royal Meteorological Society and the Department of Education, will also be launching a new website for the collection of user-generated weather observations. The website will cater both for keen amateurs, registering their weather observing equipment to automatically upload observations, and for people who just wish to occasionally manually upload weather observations or photographs. These 'citizen weather observations' will be a valuable additional resource to Met Office forecasters, especially in severe weather events.

The Met Office Hadley Centre maintains long-term records of weather and climate change, and producing such records requires the recovery of historical weather observations made decades or centuries ago and preserved in the world's archives. The Oldweather project (http://oldweather.org) has recruited thousands of volunteers ('citizen scientists') to read Royal Navy ship's logbooks dating from the period around the First World War. The volunteers digitise the weather observations recorded in these logbooks, and the digitised observations are used to extend the database of historical weather observations used for climate model development and climate change detection. Oldweather has been very successful, involving the public in the collection of climate records, has made it possible to extract and use large quantities of information that would otherwise have remained inaccessible.

The Met Office also now hosts a permanent beta website, "Invent", which is used to showcase future plans for presenting web-based weather forecasts, products and information. This currently hosts a freely accessible Weather Map Viewer, written in JavaScript, which accesses a Web Map Service (WMS), to deliver innovative web-based visualizations of weather and its potential impacts to the public. The intention is to engage the public in the development of new web-based services that more accurately meet their needs. As the service is intended for public use within the UK, it has been designed to support a user base of 5 million, the analysed level of UK web traffic reaching the Met Office's public weather information site.

A further use of citizen input for the Met Office website has been the use of so-called 'crowd testing' to debug new releases of web applications; this is now used regularly, and is seen as a very cost-effective way of increasing the quality of the web offering.

The Met Office is also going beyond the traditional website and email communications channels, to make use of social networking tools Twitter, Facebook, Flickr, YouTube, Linkedin, SlideShare and FriendFeed to reach a wider audience in more interesting ways.