



# 2009

Until recently, if you wanted information in the field on the local nature, culture and landscape, you had to depend on guidebooks and maps.



# 2010

With the arrival of smartphones with GPS, compasses and direction sensors, you only need the right software to access information from the internet on the spot.

## Smartphone as guidebook

**Where nature lovers used to have to lug around flora guides, maps and tourist guidebooks, soon all you will need is the latest mobile phone. Alterra has developed an application which provides all kinds of information on the spot, and lets visitors have their say on nature policy right there and then.**

TEXT EVELINE THOENES PICTURES WAGENINGEN UR WITH GUY ACKERMANS

Imagine the scene: walking through the woods you stumble upon an old watermill. On the screen of your Smartphone you see a moving icon that tells you there is a film available. If you click on it, a man appears on the screen and tells you all about the history and technical features of the mill. Another couple of taps on your touch screen and a vegetation inventory for the area appears. You can click on each plant species for more information and photos. A map shows you the borders of the nature area you are in, the sign-posted walks and the locations of the different types of habitat. You look up the online survey and type in straightaway that you do think it would be a good idea

to place a bench at this spot.

Sound like a distant dream? 'It just has to be published online, but essentially the application is ready', says Anne Schmidt of the Centre for Geo-information (CGI) at Alterra, part of Wageningen UR. She is project leader of the team that has been contracted by the Dutch Ministry of Agriculture, Nature and Food Quality to develop this augmented reality application for the Natura 2000 protected nature areas. Schmidt: 'The ministry asks us to research the possibilities for citizen participation offered by the new technologies. With more and more people owning a Smartphone, we opted for these virtual layers of information which enable you to zoom



in on place-related background information.’ One of the aims of Natura 2000 – a European network of protected nature areas – is to give people the chance to experience nature for themselves, Schmidt explains. ‘Stakeholders such as farmers and local residents are also allowed to have their say on policy matters. Usually that is done by holding consultation evenings. The mobile phone offers scope for letting stakeholders say their bit in new ways. This sort of ‘e-participation’ has two sides to it: it is a question of obtaining information – where are the areas, what is the policy, what is allowed? And also of inventorying knowledge and ideas contributed by citizens, in order to improve policy.’

### VIRTUAL CAMPUS

Schmidt’s colleague Jappe Franke, a biologist and software developer, was involved in the technical implementation. ‘In the past year telephones have come onto the market that have a GPS, a compass and a direction sensor which can get information about the area from the internet and alert users to it using icons that pop up when you point the phone camera at the object concerned’, he explains. ‘A telephone like that ‘knows’ to within about five metres exactly where it is and in which direction it is being pointed.’

Franke describes how last year, as soon as the necessary software was available, the CGI created a ‘virtual cam-

pus’ to test the potential of this kind of ‘augmented reality’. He holds up his telephone at the window. On its screen, the empty space on the Wageningen campus between the Forum and the Atlas building is suddenly filled with Orion, the planned building of which the first brick has yet to be laid. ‘If you walk around the site, you can literally see the building from all sides because the image you get on your phone moves with you. In this layer there is also background information about other buildings, flora and fauna, and soil types.’ The team also developed a walk this year, which they called ‘Peace, liberation and freedom’. The walk goes west from Wageningen to the Grebbeberg, passing thirty locations associated with events in the Second World War.

‘Our application is of interest, not just to policymakers and visitors to nature reserves, but also potentially for scientific research, for example for the Nature Calendar in which the effects of climate changes on recurrent annual phenomena are monitored’, says Schmidt. ‘You could add an option that would enable users to report their first crocus of the spring, or a plague of caterpillars.’

But Schmidt does see one disadvantage to this promising application of augmented reality. ‘If you have this application on your Smartphone it is tempting just to keep gazing at your screen, whereas to experience nature you should mainly be looking around you.’ ■