

Virtual Controls

They're here....



What is a virtual control?



At present a control is a white and orange kite stuck in the ground on a cane with something that allows an orienteer to record his or her visit.

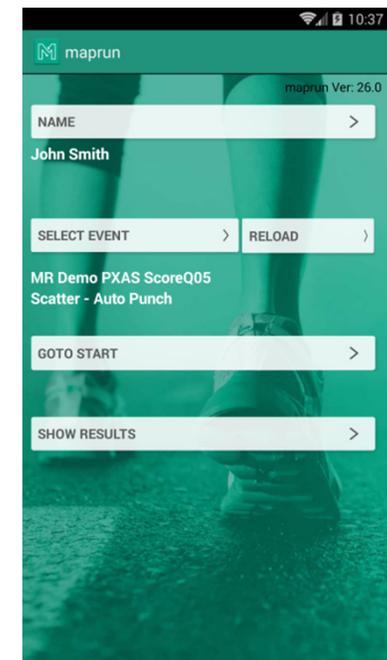
Many years ago that 'something' used to be a clipper with pins to pierce a pattern onto a control card. A technological breakthrough came with the introduction of waterproof Tyvek control cards. No more soggy cardboard.

A further, huge breakthrough came with electronic punching: the 'something' became an electronic box of tricks that recognised a dibber - and vice versa. A whole new world opened up: no fixed start times, no manned controls. Splits!

The kite, box and dibber are all physical, but a virtual control is not. It is no more than the position of a control contained as data in a smartphone App downloaded from the internet. The App constantly compares its actual location - taken from the smartphone's GPS facility - with that of the control, or in the case of a score event, many controls. Once a relevant pair coincide the App does the same job of recording the relevant details of the visit as a box and dibber. As it 'punches' there is a 'beep' and on the screen, the purple control circle turns green.

So there is no need for any of the physical stuff at the control site. Indeed, there is no need for any physical computing at registration or indeed anywhere else. After the run the App is used to upload the details, via the internet, to the Event Results.

Another whole new world beckons. No more putting out controls and no more collecting them. Downloads are direct to the internet. Dare I say it, we will also have the freedom to run some events whatever day it pleases.



How do I find and run in a virtual event ?

You need the App. It is called MapRun and there are Android and Apple versions. It's free.

Once the App has been installed it is easy to search for and download an event. Look for the UK folder, and then Manchester. You will find six events based very much on two recent NSL events (Fallowfield and Sale West) plus four GMOA permanent courses (Heaton Park, Chorlton Water Park, Wythenshawe and Lyme).

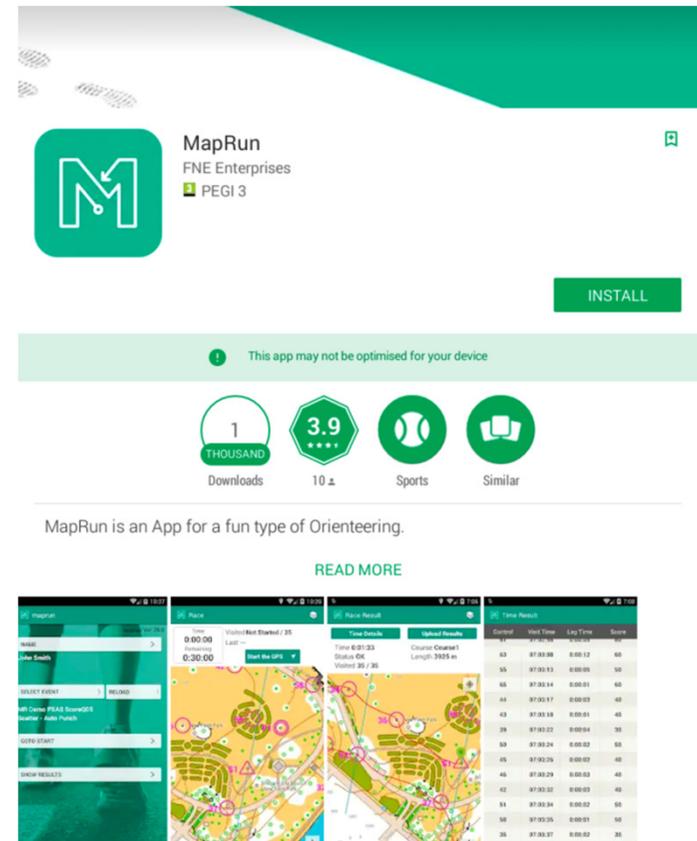
All the events have been set up as 75 minute scores.

You will need a pin number to run the course - see the data sheet at the end of this presentation. You will also need a paper map and control descriptions. Email peter.ross1@btinternet to obtain the pdfs.

When you are ready to run, stand at least 30m away from the Start. You do not need the internet at this point, just use the App to call up the previously downloaded event and start the GPS. Walk toward the Start. When you hear the App beep and see the clock start you're good to go.

The first control visited enables the Finish control to function, and the Finish only works once. So having visited one control don't go near the Finish unless you want to finish.

You will need the internet to download and view your time and splits.



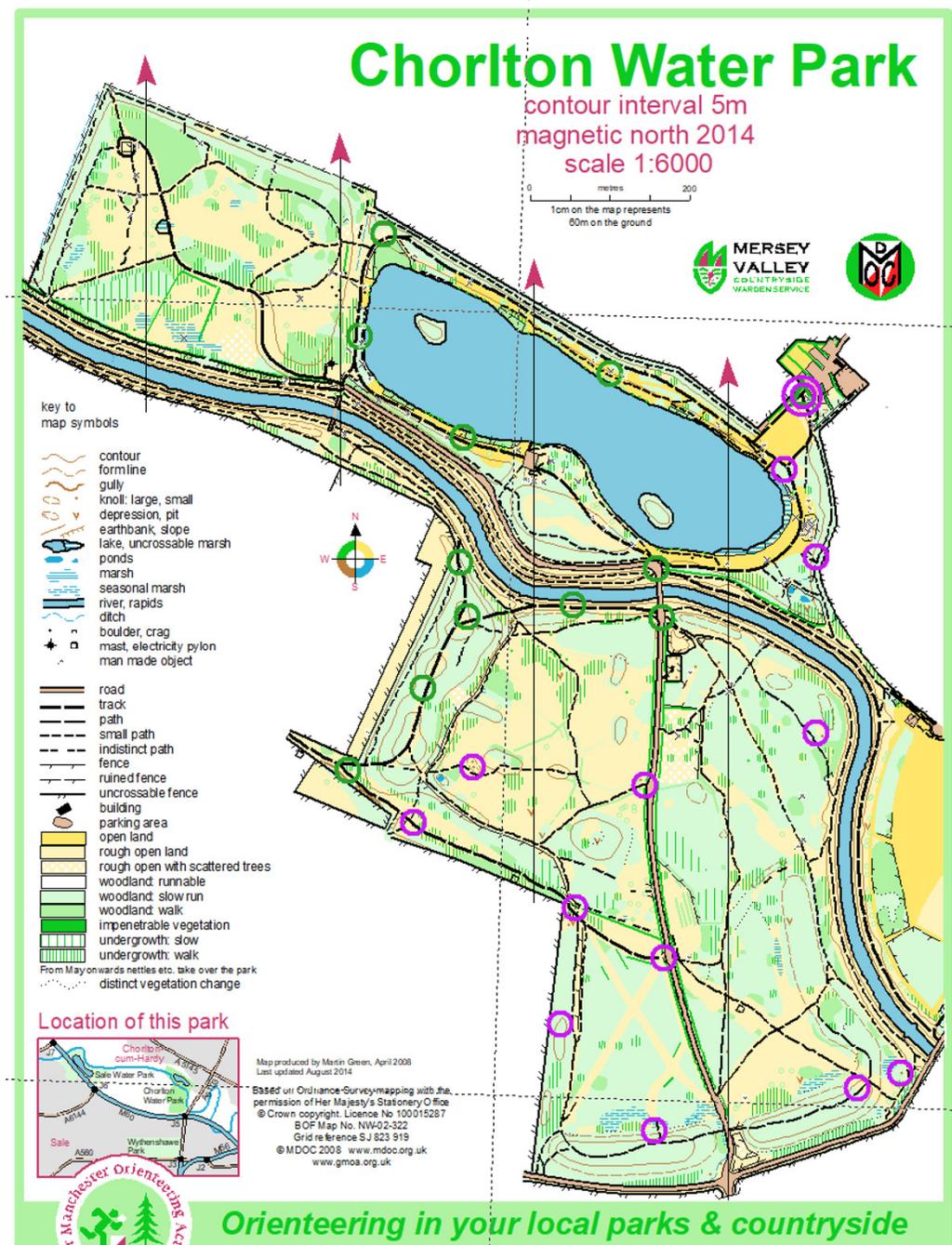
What about the maps and control descriptions?

Smartphones are not actually big enough nor foldable enough to act as orienteering maps. The App displays the standard orienteering map complete with controls, but this is largely for cosmetic purposes.

The App does not show the current location, and the map display does not automatically set itself to North.

The map display initially shows a control circle as purple in colour but as it is visited there is a beep and the circle turns green. In a way the App is rather like those Tyvek cards which also kept a visible track of the controls that had been punched.

So the maps remain A4 or thereabouts and are made of (waterproof) paper. There is no change to the control descriptions either. They have to be printed and carried around too.



How close do you have to get to a virtual control before the beep?

The short answer is about a dozen or so paces. Technically it depends on the positional accuracy of the control site locations and the performance of the smartphone.

The Planner identifies the control locations using Google Earth, which is accurate to 2m or so if the feature is visible. Trees are a problem for the planner because they hide potential control sites.

The smartphone has to maintain access to the GPS (global positioning system) satellites and carry out its calculations whilst keeping up with the runner. In the open a smartphone is accurate to about 5m, but once again trees are a problem, as are tall buildings, both of which make the GPS signal weak or cause it to bounce about a bit.

What is interesting - to some of us - is that the map itself is not directly involved in the virtual punching process. The key to it is the proximity of the real world positions of the orienteer and the control site. The map is merely a guide to enable the former to find the latter. Plus la change....



Where?

At present virtual control events can only work in the open, but this still leaves plenty of scope with which to engage a wide range of orienteering expertise.

Some complex terrain can be very open and the invisible nature of virtual controls puts an extra premium on precise navigation.

Urban areas - especially suburban urban - are also candidates for virtualisation, as are Parks, as are Countryside Score events.

Who?

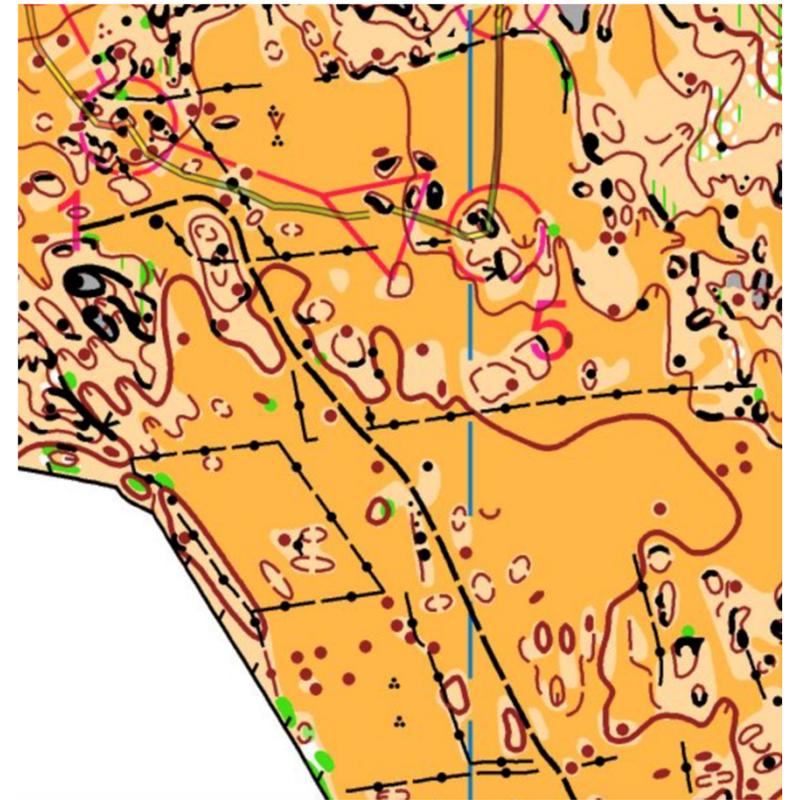
Again, a very wide range of ability.

Even the most experienced orienteer takes advantage of actually either seeing a control or witnessing another competitor punching a control. These options are not available with virtual controls. If this isn't exciting I don't know what is.

Inexperienced orienteers are often young and very much App savvy. They will be comfortable with the technology whilst learning a basic skill: find the feature and the App will beep.

Those with a physical disadvantage crave independence. Permanent Orienteering Courses are often in Parks and there is no reason why a suitable virtual course should not be made available to them to navigate alone. In fact there is no reason why a different suitable virtual course should not be made available to them to navigate alone every month.

The rest of us. We would quite like our training events to be different and effort free. I.e no putting out controls and no bringing them in. Open areas? No problem!



Data Sheet



MapRun 4+
PETER EFFENEY
Free

The App is called MapRun.

It is available for Android and Apple smartphones and tablets.

All the events are score with a time of 75 minutes. The scoring per control is the control number rounded down to the nearest multiple of 10. Penalties are 30 points per minute or part thereof.

	PIN Controls	Notes
Chorlton Water Park	1613	29 Park. Some controls are under trees
Fallowfield	0693	50 NSL urban
Heaton Park	2891	13 Park. Suitable for prams & pushchairs
Lyme	3032	33 Park. No controls under the trees
Sale West	0762	60 NSL urban
Wythenshawe	9062	38 Park. Some controls are under trees