

### SARLOC location software

by Russ Hore Ogwen Valley MRO

We've probably all been there. You get a phone call from somebody out on the hill: 'I am lost.' With the ever-increasing use of smartphones I felt there must be a way for the user's phone to tell us where they are. The following gives an overview of the system currently under test.

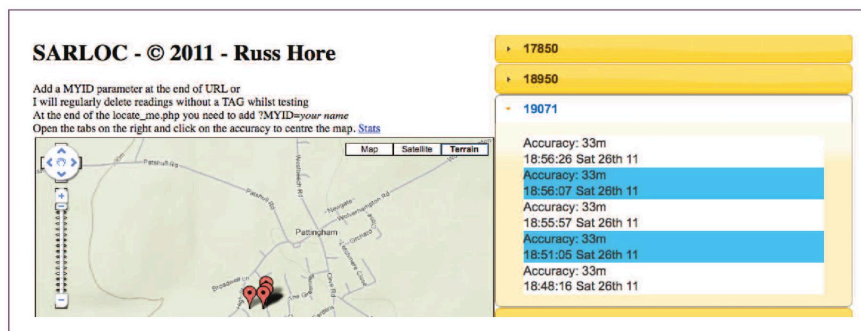
I assume we are all aware of Steve Fletcher's work on feeding the location data from MR personnel phones in to MRMap. This undeniably works perfectly where we have access to the phone to install Steve's application. I was looking for a way we would not need to install anything on the phone.

Most modern web browsers are now able to query the device they are running on, be it a phone or a computer, and obtain its location as Latitude/Longitude. Normally the user of the device will have to give their permission for any applications to read its location. For example, on an iPhone a small dialogue pops up allowing the user to deny or permit access to its location.

With help from Rob Brookes and Dave Binks, I have been testing a system that seems to be providing good results, with certain caveats, which I will mention later.

#### So how does it work?

What I needed to do was get the user to use their phone to browse to a web page which would query the phone for its location. The code then needs to share this location



with the MR team and display the phone's location on a map.

The URL the 'user' needs to browse to is:  
<http://sarloc.russ-hore.co.uk/sarloc.php?MYID=identifier>  
 where identifier is a unique identifier.

The next release of MRMap will display the reported location but to achieve this, the **identifier** needs to be one of the team's spare radio IDs taken from mrmapi.ini. Check with Dave Binks if you are unsure which IDs to use but, at the moment, we advise using the last numbers in your block. So, for example, within Ogwen we would use 19070 or 19071.

Therefore, the URL would be:  
<http://sarloc.russ-hore.co.uk/sarloc.php?MYID=19071>

I suggest teams store these URLs on a phone and if they receive a call from a lost person they can send an SMS straight back with the pre-prepared URL. The caller can then just click on the URL and this should browse to the web page.

If the user's phone is internet

capable they should see a screen like the following whilst the web page attempts to obtain the phone's location:

*Getting location. If location not shown in 30 seconds please try again.*

*Tested on:*  
 iPhone 3GS  
 iPhone 3G  
 iPhone 4.0  
 Blackberry Storm  
 HTC Desire HD (Android 2.2)  
 Samsung Galaxy S  
 If it works on another phone please let me know

*As of 15 February 2011, it didn't work on:*  
 Nokia N95  
 Nokia N97  
 Nokia 3720  
 Nokia 2037  
 Some Blackberrys  
 Sony Ericsson C903  
 Samsung D900i (Pay as you go, very limited internet)  
 An unidentified Samsung



### SARLOC location software

If the web page can obtain a location from the device, the page should change to something like:

SARLOC@ Russ Hore  
 Timestamp: 1299015959259  
 OS Grid Ref: TQ005591  
 Latitude: 51o 19' 0.316"  
 Longitude: 0o 33' 0.369"  
 Accuracy (m): 33  
 Altitude (m): 0  
 Altitude Accuracy (m): 0  
 Heading (degrees): 0

Speed (m/s): 0  
 TAG: 19071  
 Tested on  
 iPhone 3GS  
 iPhone 3G  
 If the user sees this screen, then their location has been uploaded to a database on the web, which is used to display the location on a map. This would be protected by a password known only to authorised people but can currently be viewed at:

[http://sarloc.russ-hore.co.uk/sarloc\\_reports.php](http://sarloc.russ-hore.co.uk/sarloc_reports.php)

This page shows a map on the left and all the reports received so far on the right. The system is still under development and needs you to test it in your area, with different types of phones, and to provide feedback to me at: [russ@russ-hore.co.uk](mailto:russ@russ-hore.co.uk).

#### Further developments to February 2012

- SARLOC is now in use by the Police who have a separate site for their use.
- I am seeing more and more hits around the world on the [http://www.sarloc-usa.russ-hore.co.uk/sarloc\\_reports.php](http://www.sarloc-usa.russ-hore.co.uk/sarloc_reports.php) page
- Development: I am looking at mailing the location of a SARLOC

- activation to a team's address. I am trying to get some code working that will figure out what team covers the area the hit is reported at.
- RNLI/Coastguard are playing' with it.
  - Looking at different software frameworks to make the reporting pages work on all mobile phones
  - I now have some code working on Blackberry devices but at the time of writing (early 2012) it does

- not report into MRMap, just displays the location on the screen of the mobile.
- MRMap/SARLOC/MRMap.ini file integration
  - I am also working on an online MRMap configuration file editor so each team can change their details via the web. Once this is working, teams will be able to specify which of their IDs are to be used with SARLOC.

Russ Hore has been a member of Ogwen Valley Mountain Rescue Organisation for almost twenty years, and served as chairman for two years. He is the IT Coordinator for NWMRA and, with much help from Dave Binks and Rob Brookes, he introduced MRMap and GPS enabled radios to NWMRA in 2006. Russ's other projects include MRMap for the web – see [http://www.russ-hore.co.uk/mrmap\\_for\\_web](http://www.russ-hore.co.uk/mrmap_for_web)

Published 28 February 2012

