



## 5GRIT Project Update

The 5G Rural Integrated Testbed (5GRIT) is testing out new applications and services at different locations in the North of England, Scotland and Wales using 5G technologies.

### Tourism

World Around Me app (WAM) (<http://wtinfotech.co.uk>) is an augmented reality tourism app which allows the user to discover nearby services through the camera of their smart phone. For the 5GRIT project, WAM has been enhanced to include a 'Discover North Pennines' section, with which visitors to the region can stream video and audio content about heritage sites. A geo-fence has been defined such that once visitors enter the area they can experience this enhanced content. The app has now been fully tested and has entered the promotion phase for the tourism season in the North Pennines. Some promotion is being undertaken by local businesses, who have also had assistance with updating their Google Profiles making them discoverable through WAM.

North Pennines Area of Outstanding Natural Beauty partnership is in the testing phase of two Augmented Reality apps, *Ghostlines* and *The Alston Explorer app*, and one Virtual Reality app which gives the user virtual access to Alston High Mill available at [www.highmillvr.com](http://www.highmillvr.com). *Ghostlines* tells the little-known stories of Alston through ghostly historical characters that appear at different doorways around the town. *The Alston Explorer app* was developed by the local primary school children and offers the user two different trails of heritage spots in and around Alston. Additional free WiFi connections to help people access the apps are being installed at Alston Town Hall (subject to permission) and Market Cross Shop (end of July). The range of the WiFi at the pavilion will be extended during July to cover more of the playing fields.

### Agriculture

#### **Arable uses**

Blue Bear Systems Research and Precision Decisions are conducting regular drone flights over arable land to develop various use cases including crop counting, crop and weed distinction and a year in the life of the crop, using algorithms developed by Kingston University. This service can provide farmers with the information needed to treat crops variably in the application of fertiliser and pesticides. The detailed surveys are being undertaken using a multi-spectral camera and these are complemented by conventional cameras which produce RGB images. Not only has it been possible to determine areas of the field which require localised treatment with pesticide or fertiliser, but all geographic issues on a field, for example with drainage, which the farmer would be unable to see by looking at the crop.

#### **Livestock detection uses and beyond visual line of sight flying (BVLOS)**

Kingston University is focusing on algorithm development for object detection to be able to identify livestock more accurately. This service will allow the farmer to save time and therefore money on the daily count of their flock. In order to conduct these flights with beyond visual line of sight, Blue Bear are working with the Civil Aviation Authority to obtain permissions.



## Rural Broadband

Quickline has successfully connected sites in the North Pennines, Lincolnshire, and Yorkshire, using TV Whitespace. Quickline is now applying the lessons learned in the first phase of the project. Monitoring devices have been sent to businesses involved in the tourism testbed by Lancaster University in order to monitor and improve the network performance.

## Research and Evaluation

During the summer, Lancaster University will be carrying out survey work on the impact of 5G on tourism on Alston Moor. Following the presentation to the Parish Council meeting in February, it was suggested that a survey on **community views** be carried out. Lancaster University have produced this survey and would be grateful if residents could take a few minutes to complete it <https://redcap.lancaster.ac.uk/surveys/?s=T7KR8R4D7N>

More information about the project can be found at [www.5grit.co.uk](http://www.5grit.co.uk), e-mail [info@cybermoor.org.uk](mailto:info@cybermoor.org.uk) or call 01434 382808.

## Electric Vehicle Charge Point Update

The chargepoints have delivered 106.5kWh of electricity since January and been used by 6 drivers across 41 charge sessions. The Cybermoor wireless broadband connection has significantly improved the reliability of the service since it was installed. Prior to that the chargepoint was going offline and could not be used.