



# International Amateur Radio Union Region 1 2017 General Conference – Landshut, Germany



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## Information Paper

### 1. Introduction

An IARU Region 1 Amateur Radio Observation Service (AROS) and Coordinator were established because of a RSGB proposal at the 2014 Region 1 General Conference for investigating and tackling DQRM. This paper provides an overview of activities and progress to date.

### 2. Background

The problem of DQRM (Deliberate QRM) is on the increase and it was felt that a proactive approach that investigated methods associated with locating and identifying DQRMers would be worthwhile.

A formal process has been discussed and established with Ofcom in the UK to initiate DFing activities on HF which can be triggered at the request of Region 1 AROS; this includes support and integrated activities from the European wide monitoring network.

A DQ cluster (similar to DX cluster but for DQRM reporting) application has been developed and trialled as a proof-of-concept. The application has proved very worthwhile and resulted in a large amount of data being gathered on DQRM during a recent major DXpedition. Further Business Intelligence tools are needed to aid data analytics and the DQ cluster application would need further development before being made available to a wider audience as a robust application.

Some initial discussions have been undertaken with a major SDR manufacturer. The concept being that SDRs located across the globe could be integrated using cloud based technology such that a network of receivers be created and used as a global monitoring system. This technology has huge potential and further work is needed in this area if it is to be made a reality.

### 3. Key Points

Using the methods described above one persistent DQRMer has been located and unwanted activities have ceased; another appears to have stopped unwanted transmissions following some targeted publicity.

The DQ cluster application is a powerful tool that needs development from the proof-of-concept we have today into a fully-fledged application; additionally, a Business Intelligence tool is also needed on the database for detailed analytics.

Further research should be conducted with the major SDR manufacturers to investigate cloud based technology.

An upcoming major DXpedition could be selected as a further example for data collection and potentially more persistent DQRMers could be identified using the existing methods and discouraged from further problematic operations.