

Interleaved Spectrum Planning Study Part II

Final Report

10 June 2008

Prepared for Ofcom
by
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Wireless

Introduction

Based on the use of the median method to define protected coverage, the availability of spectrum at 81 stations has been assessed. Templates for all channels considered have been derived based on an antenna at half the height as used by the main multiplexes. A lower antenna height may result in reduced restrictions, whereas a higher antenna height may require more restrictions.

The study considered frequency channels -5 below and +2 above the receive aerial group for the station. Though for the 10 largest stations all channels were considered.

The ERP of main stations has been set at 10kW and relay stations at 1kW. It should be noted that in several cases these powers result in a higher ERP than allocated to the main multiplexes.

Coverage of the chosen channel has been assessed on the basis of the derived template and the use of a 64QAM 2/3 modulation scheme. Availability of mast aperture, mast loading and building space to support the required antennas and house transmitters was not investigated.

Coverage calculations are based on existing broadcast stations and reception via fixed roof top aerials.

The derived UK median templates are designed to protect populated coverage derived by the median method. The derived UK continental templates include Irish and Continental restrictions based on 23dB μ V/m at the border.

The exercise has been based on version 5.5¹ of the UK digital plan and an interpretation of the GE-06 frequency plan for Europe.

Coverage of each interleaved channel is quoted in isolation, i.e. only that channel and the v5.5 plan have been considered.

As coverage is based on the template at the planned height and at the maximum ERP, coverage using implemented antennas, heights and actual ERP will be lower.

¹ For Northern Scottish sites, version 5.7 of the UK digital plan has been taken into account.