

How Ofcom uses information about white space devices

Introduction

- 1.1 The Office of Communications (Ofcom) is the UK communications regulator. Our range of duties includes the efficient management of the electromagnetic radio spectrum available for wireless telegraphy and the promotion of innovative services.
- 1.2 Ofcom has authorised the use of a new type of radio equipment known as 'white space devices'. This document explains how we may use information about the use of white space devices and how this may affect you if you are a device user or owner.

What is 'white space' and how does it work?

- 1.3 'White space' is a term used to describe radio spectrum not being fully utilised in all locations all of the time. Despite the presence of other users in the same band of spectrum, these gaps in spectrum usage (the 'white spaces') can be shared to deliver additional services.
- 1.4 White space devices may only operate in the UK in accordance with operational parameters provided by a white space database (WSDB) operated by an organisation which has been qualified by Ofcom. We publish a [list of qualified database operators](#) on our website.
- 1.5 In order to use white space frequencies, a white space device has to provide certain information to a database, including its unique identifier and location. The database uses this information to provide that device with operational parameters, i.e. the available frequencies the device can transmit on and the power levels at which it can transmit.
- 1.6 Databases must keep this information for a period of at least one month. This is because Ofcom has a specific function to provide an advisory service in relation to reports of radio interference to wireless telegraphy. If interference is reported to us and we suspect that a white space device is causing interference to an incumbent service, we will need to investigate.
- 1.7 [More information about white space devices in general is available here.](#)

Why does Ofcom need information about the use of white space devices?

- 1.8 Ofcom has put in place arrangements with operators of qualified databases to obtain certain information about the use of white space devices in limited circumstances. These are:
 - In carrying out interference management activities. Following a report of interference to radio we may need to ask for information to work out if there are any devices in the area of interference which may be the cause.

- In monitoring compliance by database operators with the terms of their contract with Ofcom.
 - In undertaking other work in connection with Ofcom's statutory duties and functions, in particular our spectrum management functions – such as evaluating and determining Ofcom's policy on white space technology and dynamic spectrum access.
- 1.9 We will get more limited information about individual white space devices for the purposes of conducting compliance checks on database operators or for our wider policy purposes. For example, we would not obtain any information about individual device identifiers (i.e. information which would identify a specific device and its location, as discussed further below).
- 1.10 We therefore focus below on information about device use that we may collect and process for our interference management activities. This is because we will need more detailed information about individual devices for these purposes.

What type of information will Ofcom request about white space devices and how will it be used?

- 1.11 Reports of interference are passed to the Duty Engineering Officers at our 24/7 Spectrum Management Centre. They have access to a white space information platform (WSIP). The WSIP is a software platform which allows Ofcom to send data requests simultaneously to all databases providing services. It can also be used to issue instructions remotely to devices via the database operators.
- 1.12 Interference management relating to use of white space devices will often begin with a request for data using the WSIP. Ofcom may request from database operators information about white space devices which has been reported to the database when devices request operational parameters.
- 1.13 We will begin by asking databases for information on white space devices which were:
- Active within a fixed distance from the location of the reported interference;
 - At around the same time of the reported interference; and
 - On the frequencies/channels on which the interference occurred
- 1.14 The information requested from database operators will ask for details of the relevant active individual white space devices which meet the criteria above. The information response will include:
- The location of the device at the relevant time (expressed as the coordinates of its antenna).
 - The operational parameters of the device, in particular the channel/frequency being used by the device, as well as the power and antenna height of the device.
 - A unique identifier for the device (please see below).

- 1.15 The white space device's 'unique identifier' is not the actual unique serial number of the device. It is a reference code generated and attributed to an individual device by the database operator at the time Ofcom makes a request for information. This process is known as 'pseudonymisation'. It is generated for the purpose of interference management and can be matched by a database operator to the device's unique serial number.
- 1.16 Once in receipt of the information, in order to identify which white space device may be causing problems, Ofcom's Duty Engineering Officers may instruct databases to apply restrictions to devices - for example restricting a device's power or the channels available for use. They may also instruct a device to cease transmitting in order to determine if a device is causing interference.
- 1.17 It is important to note that diagnosing a source of interference from white space devices is an iterative process and could involve making several successive but related requests – or applying and then removing restrictions - in order to resolve a problem.

How Ofcom will manage data about white space devices

- 1.18 We recognise that in some circumstances the information obtained by Ofcom from databases about a device's location along with a device identifier could constitute personal data, as defined under the UK Data Protection Act 1998 (DPA), relating to an individual user or owner of a device. We will handle such information in accordance with Ofcom's Data Protection Policy.
- 1.19 [More information on Ofcom's Data Protection Policy](#), including data retention, data security and subject access requests, can be found on our website.
- 1.20 [The White Space Database Contract](#) between Ofcom and database operators requires database operators, where reasonably practicable, to inform white space device users about disclosure of information to Ofcom..
- 1.21 In certain circumstances Ofcom may need to disclose data to third parties (for example, in compliance with [requests made under the Freedom of Information Act 2000](#)).