



Dear Mr Smombie

### **Freedom of Information Request (our reference FOI18-541)**

We refer to your Freedom of Information request dated 22 November 2018. We apologise for the delay in responding to your request. We are currently short-staffed and have a backlog of requests that we are working through as quickly as we can.

### **University's Response**

You requested information regarding testing of 5G technology by the University of Bristol. Further to Section 1 of the Freedom of Information Act 2000 (the "Act") we confirm that the information requested is held by the University of Bristol (the "University").

The University's Smart Internet Lab has provided the following response:

Current defined frequencies from OFOM and 5G specifications are 3.5GHz, 26GHz/28GHz bands.

*1. When did you start testing 5G on campus?*

From 2015 research addressing candidate technologies has been ongoing, but not product testing.

*2. What types of antennas, masts and arrays are you using in experiments and on Campus (include specifications)?*

For sub 6GHz Massive MIMO 0.5λ linear array of sleeve dipoles and 32 x 4 patch antenna array. For millimetre wave Flann horn antenna.

*3. Do students have the choice of being exposed to the 5G tests?*

Yes, postgraduate students can choose to actively participate in 5G research. See also answer to Q6.

*4. How often are the 5G and wavelength tests?*

Several measurements per month.

*5. What wavelength RF spectrums do your experiments operate at and historically when have they been broadcast?*

3.51GHz and 24.25 to 27.5GHz. See answer to Q4 regarding when the tests are conducted.

*6. Have you done any health impact assessments or observations?*

University operates under health and safety at work procedures with associated risk assessment. All research activities are carried out by appropriately trained staff, within their respective laboratories or in the University's anechoic chamber.

A full risk assessment is undertaken by those engaged in the measurements, addressing risks to themselves and others who may be nearby. These risk assessments are approved in accordance with University health and safety processes.

*7. Have you any health and safety guidelines you're following?*

See answer to Q6.

*8. What standards and guidelines are you operating within for the 5G hardware, antennas, arrays and masts?*

We operate CE marked test and measurement equipment for our experiments. All the equipment is tested and certified for relevant UK and EU standards.

*9. Have you asked students for releases forms or their full informed consent to be tested on with 5G and other wavelengths?*

See answers to Q3 and Q6.

*10. I'd like to see a Birdseye plan of the University and where the antennas, arrays and masts are situated, please include a key for all the departments shown on the map/plan.*

The antennas used for transmission are within the test labs. There are no permanent installations of 5G research hardware and no hardware is currently on test.

#### **Internal Review Procedure**

If you are dissatisfied with the handling of your request, then you have a right under Section 50 of the Act to request an internal review. All such requests must be sent to us within 40 days, and must clearly state our reference number (at the top of this email) and your reason for requesting an internal review. We will respond to your request for an internal review within 20 working days of receipt.

Your request for an internal review should be sent to:

Director of Legal Services  
Secretary's Office  
University of Bristol  
Senate House  
Tyndall Avenue  
Bristol  
BS8 1TH

Or you can email your request to [freedom-information@bristol.ac.uk](mailto:freedom-information@bristol.ac.uk), quoting your FOI reference number at the head of this letter.

#### **Information Commissioners Office**

Should you remain dissatisfied with the final outcome of the internal review then you may apply directly to the Information Commissioner (the "ICO") for an independent review. The ICO is the Government's Independent Body responsible for overseeing the Freedom of Information Act 2000, the Data Protection Act 1998 and The Environmental Information Regulations 2004.

Please note the ICO will only review cases that have exhausted the University's internal review procedure. All correspondence to the ICO must quote the University's reference number and your reasons for your appeal. The ICO's contact details are as follows:

The Information Commissioners Office  
Wycliffe House  
Water Lane  
Wilmslow  
Cheshire  
SK9 5AF

More information can be found at the ICO's website at <http://www.ico.org.uk>

Kind Regards

Freedom of Information Team  
University of Bristol

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**To:** SecOInformation Governance ([freedom-information@bristol.ac.uk](mailto:freedom-information@bristol.ac.uk))  
**From:** Smombie Gate ([help@smombiegate.org](mailto:help@smombiegate.org))  
**Title:** FOI request  
**Sent:** 22/11/2018 14:23

Hi there

Can I please have the information on the following:

1. When did you start testing 5G on campus?
2. What types of antennas, masts and arrays are you using in experiments and on Campus (include specifications)?
3. Do students have the choice of being exposed to the 5G tests?
4. How often are the 5G and wavelength tests?
5. What wavelength RF spectrums do your experiments operate at and historically when have they been broadcast?
6. Have you done any health impact assessments or observations?