

AI for Connectivity

INTELLIGENT FUTURE NETWORKS: HASC PROJECT SPOTLIGHT

PROJECT TITLE:

Spectrum Enhanced Datasets
& Models For Optimisation

CORE CHALLENGE:

Measurement & Modelling



CHALLENGE:

At present, there is limited visibility of how spectrum is used across the UK.

This lack of detailed, real-time data makes it difficult to understand where and when spectrum is underused, and to design smarter systems for managing it.



INNOVATION:

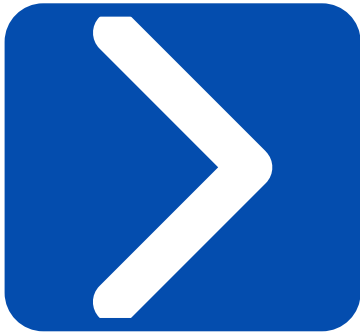
By collecting and studying this data, we are learning more about how different parts of the spectrum are used.



Using machine learning (ML), we can create systems that identify unused bits of the spectrum and find better ways to share it. This will help make wireless communication faster, fairer and more efficient.

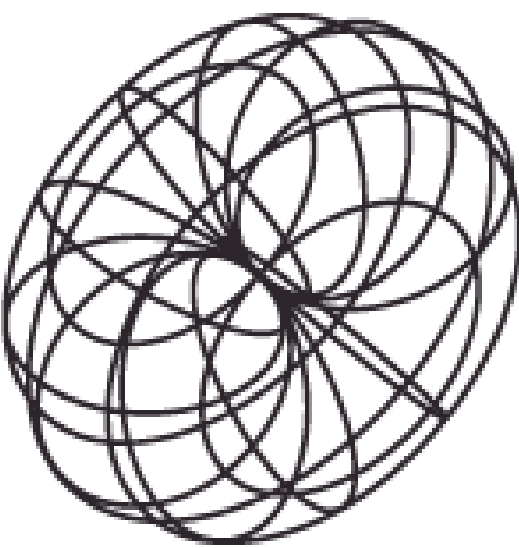
IMPACT:

The insights generated from monitoring nation-wide spectrum usage will be relevant to a range of standards groups and of interest to operators and regulators.



Regular contact with standards bodies and operators will ensure it enables future spectrum innovations.

TECHNOLOGY ENABLER

J  **JOINER**

joiner.org.uk

JOINER NATIONAL SPECTRUM FACILITY

JOINER's National Spectrum Facility provides persistent, high-fidelity radio frequency monitoring and data capture across wide bandwidths and in diverse environments, enabling real-world, large-scale spectrum research, emulation and data gathering.



JOINER NATIONAL SPECTRUM FACILITY

JOINER makes it is possible to predict future spectrum sharing scenarios, create testbeds to trial dynamic resource allocation strategies, and build AI-driven algorithms.



JOINER is committed to ensuring that spectrum access is not a limiting factor on the UK's economic and societal potential.

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With thanks to...

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