WEATHER IMPACTS ON TELECOMMUNICATIONS

RESEARCH IMPACT
Working with BT, this project aims to quantify and minimize the largely unpredictable risks that weather and climate pose to the UK telecommunications network.

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BACKGROUND

The telecommunications industry underpins modern business and social activities, increasing our reliance on a resilient communication infrastructure. Weather is known to cause infrastructure faults and service disruptions with negative economic consequences. It is an uncontrollable hazard, however, this work aims to quantify the risk weather poses so that better planning and a more resilient network can be realised.

OUR RESEARCH

Investigation of historical data identified the link between telecommunication faults and weather variables, and an impact model has been constructed. It will be used with ensemble weather prediction models at different time scales to assess future fault rates caused by weather. The data will illustrate probabilistically the range of possible futures, and show their likelihood.

OUR IMPACT

The impact model produced in this project will better inform planning to mitigate the effect that weather has on the telecommunications network. This has the potential to reduce operating costs and BT’s carbon footprint as well as improve customer service provision by reducing the uncertainty around weather.

'By combining our own knowledge on BT infrastructure with the extensive meteorological expertise and experience in modelling weather impact at the University of Reading, this project looks set to achieve something we could never have done on our own.'

Dr Kjeld Jensen
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