

OPERA position on the feasibility of processing of radar data to remove RLAN interference

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The EUMETNET OPERA group stresses the fact that meteorological radars are key observation applications for National Meteorological and Hydrological Services, helping to protect lives and property as part of the public mandate to serve society, as well as providing significant benefits to several sectors of the economy.

In this context, OPERA states that processing of weather radar data is not a viable solution for mitigating RLAN interference because it will result in the loss of essential information. This would lead to a reduction of data quality and availability and have a consequential unacceptable adverse impact on the weather radar data and products.

OPERA is of the view that RLAN interference filtering, should it be possible, could only solve sporadic short-term interference events in random sectors. It cannot be considered to be a solution that could permit numerous short-term and/or long-term interference events to occur in the same sectors, even if they are narrow.

OPERA therefore believes that this issue can only be addressed by minimising RLAN interference in the weather radar 5600-5650 MHz band as far as is practically possible. OPERA recognises that the recently finalised package solution within EU TCAM will ensure a satisfactory long-term coexistence between meteorological radars and 5 GHz RLANs when operated in their nominal and typical “terrestrial” manner. However, OPERA is concerned with possible airborne use of RLAN 5 GHz and the consequential potential interference events.

Arguments:

- Even in situations where it might be possible to filter out some spurious echoes caused by interference, it would not be possible to do so without losing important information. Filtering out spurious echoes would therefore have a negative impact on both data quality and coverage, which in turn would affect the ability of the National Meteorological Services to monitor severe weather situations and to deliver warnings to the public.
- OPERA has particular concerns over the impact of interference on the signals from both Doppler and dual-polarisation systems, which are becoming more prevalent in the European weather radar networks and for which no means of filtering is currently considered to be feasible.