

# Deutsche Telekom and Ericsson top 100Gbps over microwave link

- Wireless backhaul confirmed as a future-proof technology in 5G era
- Microwave link over 1.5km in live trial achieves 10 times greater throughput than current commercial solutions
- Joint innovation project used Ericsson's latest mobile transport technology

Ericsson (NASDAQ: ERIC) and Deutsche Telekom have achieved a landmark data transmission rate by consistently topping 100 Gbps in a trial microwave link over 1.5km. Conducted at the Deutsche Telekom Service Center in Athens, the joint innovation project represents a major technical breakthrough, achieving more than 10 times greater throughput speeds than current commercial solutions on similar 70/80 GHz millimeter wave spectrum.

Alex Jinsung Choi, SVP Strategy & Technology Innovation, Deutsche Telekom, says: "Advanced backhaul solutions will be needed to support high data throughput and enhanced customer experience in the 5G era. This milestone confirms the feasibility of microwave over millimeter wave spectrum as an important extension of our portfolio of high-capacity, high-performance transport options for the 5G era. In addition, it represents a game changing solution for future fronthauling capabilities."

Per Narvinger, Head of Product Area Networks, Ericsson, says: "This trial signifies the successful establishment of true fiber capacities over the air using microwave. This means that microwave will be even more relevant for communications service providers in creating redundant networks as a back-up for fiber, or as a way of closing a fiber ring when fiber is not a viable solution. By carrying such high capacities, microwave further establishes itself as a key transport technology, capable of delivering the performance requirements of 5G."

Apart from confirming the potential of microwave technology over millimeter-wave spectrum (70/80 GHz and above) as a 5G-and-beyond fronthaul and backhaul solution, the trial showed the importance of applying spectral efficient techniques, such as MIMO (multiple input, multiple output) on wireless backhaul technologies to address upcoming 5G radio access demands.

## Technical details

Key technological advances included an 8x8 line-of-sight MIMO with cross polarization interference cancellation setup using commercial MINI-LINK 6352 radios and a 2.5 GHz channel bandwidth in the E-band (70/80 GHz) able to transmit eight independent data streams over the radio path. This corresponds to a breakthrough spectrum efficiency of 55.2 bps/Hz at peak.

## PRESS RELEASE

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During the mid-April trial, transmission rates measures were consistently above 100 Gbps, with telecom grade availability (higher than 99.995 percent), with peak rates reaching 140 Gbps.

In late 2018, [Ericsson and Deutsche Telekom broke the 40Gbps barrier](#) fully using commercial equipment including Ericsson's MINI-LINK 6352 solution, which currently provides 10Gbps capacity over a 2000MHz channel. To raise throughput by more than 10 times, this trial used a 2500MHz channel and pre-commercial baseband and MIMO processing equipment in addition to MINI-LINK 6352 radios.

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