

# Abstracts

## 155 Mbit/s data transmission at 60 GHz using a $1/\sin^4$ patch array antenna with variable optical delay lines

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G. Grosskopf, R. Eggemann, D. Rohde and M.S. Choi. "155 Mbit/s data transmission at 60 GHz using a  $1/\sin^4$  patch array antenna with variable optical delay lines." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1821-1824 vol.3.

155 Mbit/s data transmission at 60 GHz was carried out successfully with bit error rates below  $10^{-9}$ . The experimental transmission system included a  $1/\sin^4$  patch array antenna. It was fed by optically generated RF-signals and its beam was steered by tunable optical delay lines. Bit error rates below  $10^{-3}$  could be maintained for azimuthal angles over a range of 120 degrees. The antenna is part of an experimental radio-over-fiber system for proof-of-concept of optical beamforming to be applied in broadband mobile communication systems.

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