Antenna misalignment effects in 100 Gbit/s D-band wireless transmissions - DTU Orbit (29/12/2018)

Antenna misalignment effects in 100 Gbit/s D-band wireless transmissions
We report an operational photonics-enabled 100 Gbit/s D-band antenna polarization multiplexing system (2 x 2 MIMO) with a carrier frequency of 141 GHz, and experimentally explores antenna misalignment effects on the signal performance in terms of bit error rate. Misalignments from 210 to 10 degrees were evaluated for both the E-and H-plane, highlighting the strict requirements needed to maintain a signal performance below forward-error correction codes thresholds. Our findings indicate tolerable misalignments are below 1 degree, hinting beam steering as a must for future D-band communication links. (C) 2017 Wiley Periodicals, Inc.

General information
State: Published
Organisations: Department of Photonics Engineering, Metro-Access and Short Range Systems, Networks Technology and Service Platforms, Fudan University
Pages: 1431-1434
Publication date: 2017
Peer-reviewed: Yes

Publication information
Journal: Microwave and Optical Technology Letters
Volume: 59
Issue number: 6
ISSN (Print): 0895-2477
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 0.99 SJR 0.273 SNIP 0.599
Web of Science (2017): Impact factor 0.948
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 0.87 SJR 0.278 SNIP 0.561
Web of Science (2016): Impact factor 0.731
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 0.72 SJR 0.318 SNIP 0.506
Web of Science (2015): Impact factor 0.545
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 0.71 SJR 0.347 SNIP 0.578
Web of Science (2014): Impact factor 0.568
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 0.75 SJR 0.34 SNIP 0.63
Web of Science (2013): Impact factor 0.623
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 0.83 SJR 0.333 SNIP 0.585
Web of Science (2012): Impact factor 0.585
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 0.83 SJR 0.37 SNIP 0.612
Web of Science (2011): Impact factor 0.618
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes