

## On the capacity of radio-over-fiber links at the W-band - DTU Orbit (09/11/2017)

### On the capacity of radio-over-fiber links at the W-band

In this work we discuss on the channel capacity of mm-wave Radio-over-Fiber (RoF) experimental transmissions at the W-band (75–110 GHz) over distances up to 300 m and bandwidth up to 20 GHz. In addition to an updated state-of-the-art on RoF demonstrations at such a promising frequency range, we provide a set of trade-off maps in terms of crucial resources on the design of W-band RoF links. The proposed framework offers a unified view for answering how fundamental spectrum resources can be optimally utilized, and how far we are from overcoming the challenge of offering seamless convergence between optical-fibers and wireless links.

### General information

State: Published

Organisations: Department of Photonics Engineering, Metro-Access and Short Range Systems

Authors: Cavalcante, L. C. P. (Intern), Rommel, S. (Intern), Rodríguez Páez, J. S. (Intern), Vegas Olmos, J. J. (Intern), Tafur Monroy, I. (Intern)

Number of pages: 10

Publication date: 2016

Main Research Area: Technical/natural sciences

### Publication information

Journal: Optical and Quantum Electronics

Volume: 48

Issue number: 5

ISSN (Print): 0306-8919

Ratings:

BFI (2018): BFI-level 1

BFI (2017): BFI-level 1

Web of Science (2017): Indexed yes

BFI (2016): BFI-level 1

Scopus rating (2016): CiteScore 1.02 SJR 0.321 SNIP 0.629

Web of Science (2016): Indexed yes

BFI (2015): BFI-level 1

Scopus rating (2015): SJR 0.392 SNIP 0.668 CiteScore 1.05

BFI (2014): BFI-level 1

Scopus rating (2014): SJR 0.373 SNIP 0.591 CiteScore 0.98

BFI (2013): BFI-level 1

Scopus rating (2013): SJR 0.547 SNIP 0.861 CiteScore 1.29

ISI indexed (2013): ISI indexed yes

Web of Science (2013): Indexed yes

BFI (2012): BFI-level 1

Scopus rating (2012): SJR 0.473 SNIP 0.787 CiteScore 0.95

ISI indexed (2012): ISI indexed yes

BFI (2011): BFI-level 1

Scopus rating (2011): SJR 0.463 SNIP 0.617 CiteScore 0.77

ISI indexed (2011): ISI indexed yes

Web of Science (2011): Indexed yes

BFI (2010): BFI-level 1

Scopus rating (2010): SJR 0.439 SNIP 0.517

Web of Science (2010): Indexed yes

BFI (2009): BFI-level 1

Scopus rating (2009): SJR 0.688 SNIP 0.645

BFI (2008): BFI-level 1

Scopus rating (2008): SJR 0.562 SNIP 0.646

Web of Science (2008): Indexed yes

Scopus rating (2007): SJR 0.66 SNIP 0.654

Web of Science (2007): Indexed yes

Scopus rating (2006): SJR 0.558 SNIP 0.549

Web of Science (2006): Indexed yes

Scopus rating (2005): SJR 0.754 SNIP 0.695

Web of Science (2005): Indexed yes

Scopus rating (2004): SJR 0.87 SNIP 0.87

Scopus rating (2003): SJR 0.871 SNIP 0.717

Scopus rating (2002): SJR 0.679 SNIP 0.705

Scopus rating (2001): SJR 0.691 SNIP 0.608

Web of Science (2001): Indexed yes

Scopus rating (2000): SJR 0.682 SNIP 0.579

Scopus rating (1999): SJR 1.175 SNIP 0.759

Original language: English

Radio-over-Fiber, W-band, Channel capacity

DOIs:

10.1007/s11082-016-0554-6

Source: PublicationPreSubmission

Source-ID: 123409652

Publication: Research - peer-review › Journal article – Annual report year: 2016