Evaluating the Total Human Electromagnetic Exposure in a UAV-aided Network

Thomas Detemmerman

Supervisor(s): Wout Joseph, Luc Martens, Luc Martens, German Dario Castellanos Tache

Abstract— Society relies more than ever on the availability of the wireless networks but is at the same time also concerned about the potential health effects of the electromagnetic radiation caused by these networks. The government has enforced strict legislations to which mobile devices and base stations have to satisfy.

This research investigates the specific absorption rate caused by these electromagnetic waves by taking all mobile devices and base stations into account. To accomplish this goal, the deployment tool developed by the WAVES research group at Ghent University will be used. This tool simulates an entire network where transmission towers are represented by femtocell base stations attached to drones. This research also investigates how these drones can be guided in order to reach certain goals like minimizing power consumption or electromagnetic exposure.

It looks from the results that ... (todo)

Keywords— LTE, Electromagnetic Radiation, power consumption, drones, femtocell, microstrip patch antenna, radiation pattern, specific absorption rate (SAR)

I. Introductie

THE Introduction in Dutch

II. Section

A. Gerelateerd werk

TODO

B. Scenario's

todo

C. Electromagnetische blootstelling

todo

III. Resultaten

todo

IV. Conclusie

todo

A. Referencies

todo

References

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