EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

EURO-COST

CA15104 TD(17)03019
Lisbon, Portugal
February 1-3, 2017

SOURCE: ICTEAM
Université catholique de Louvain

Stochastic Geometry Based Coverage Estimation Using Realistic Urban Shadowing Models

The main contribution of this paper consists in integrating a physically correlated shadowing model of the aggregate interference in a stochastic geometry- based approach. The considered shadowing takes place in a Manhattan urban grid and combines both penetration and corner diffraction when modeling signal transmission from base stations to users. A tractable expression for the network coverage probability is obtained thanks to the framework of stochastic geometry. Our initial results suggest that the diffracted mechanisms are dominant com- pared to building penetration.

Charles Wiame, Luc Vandendorpe, Claude Oestges
Place du Levant, 3 - bte L5.03.02, B-1348 Louvain-la-Neuve, Belgium
Phone: +32 476 319 272
Fax: +32-10-478 705
Email: charles.wiame@student.uclouvain.be