

Green Wireless: Towards Minimum per-bit Linear Energy Consumption in Wireless Communications

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ABSTRACT

Low-energy communications is becoming an increasingly relevant research area, due to both economic and environmental reasons. Low-energy is particularly relevant in wireless because of the limited energy available to terminals and the high consumption of the base stations derived from wide geographical coverage. Green wireless aims to formulate a long term research goal in the wireless environment. In the talk, the speaker will present the motivation and formulation of this research goal, with an overview of the associated research challenges. The talk will also address in more detail one specific case of energy-efficiency consisting in the cross-factor, which consists of the energy penalty derived from a packet traversing the system protocol stack.

Categories and Subject Descriptors

C.2.1 [Computer-Communication Networks]: Network Architecture and Design—*Network communications*

Keywords

Low-energy communications, green wireless, cross-factor energy efficiency

Short Bio

Arturo Azcorra received his M.Sc. degree in Telecommunications Engineering from the Universidad Politecnica de Madrid (UPM) in 1986 and his PhD from the same university in 1989. In 1993, he obtained an MBA with honors from Instituto de Empresa.

Arturo Azcorra is an IEEE Senior Member and an ACM SIGCOMM Member. He has participated in and directed 49 research and technological development projects, including European ESPRIT, RACE, ACTS and IST programs. Azcorra has coordinated the CONTENT and E-NEXT European Networks of Excellence, and the CARMEN EU project. He has served as a Program Committee Member in many international conferences, including several editions of IEEE PROMS, IDMS, QofIS, CoNEXT and IEEE INFOCOM. He was the founder and first general chair of the CoNEXT conference series. He has published over 100 scientific papers in books, international magazines and conferences. In addition to his scientific achievements, Dr. Azcorra has a relevant track record of research management. He was deputy Vicerector of Academic Infrastructures at U. Carlos III from 2000 to 2007. He served as Director General for Technology Transfer and Corporate Development at the Spanish Ministry of Science and Innovation from 2009 to 2010, and then appointed Director General of CDTI (Spanish agency for industrial research from 2010 to 2012). He is the founder of the international research center IMDEA Networks, and currently is its Director, with a double affiliation as Full Professor at University Carlos III of Madrid (UC3M).

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