

Broadband Wireless Access for Rural Areas: The Tegola Project Experience

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There exists a rural-urban divide in terms of broadband internet access across the world with people living in rural areas having fewer choices and paying higher prices for slower speeds. While wireless access technologies are better placed to bridge this divide compared to their wired counterparts, there are significant differences between them in terms of deployment cost and performance. This presentation will outline the specific approach adopted in the Tegola project that is aimed at enabling low-cost broadband access in rural and remote areas. Drawing on the experience from deploying a testbed in rural Scotland as part of this project., Dr Marina will present research issues that surface such as the need for intelligent power management, link adaption, simplified network planning and management and judicious spectrum management, along with on-going work addressing some of these issues.

Dr Mahesh K. Marina is a faculty member in the School of Informatics at the University of Edinburgh, where he has been since November 2006. Previously, he was a research staff member in the UCLA Computer Science Department. He received his PhD in Computer Science from the State University of New York at Stony Brook in August 2004. Broadly, his research interests are in the areas of wireless and mobile networking, performance evaluation, distributed systems and algorithms. His current research focus is on technologies for low-cost broadband wireless access for rural areas; dynamic spectrum management and cross-layer adaptation in next-generation wireless networks; RFID sensor networks and vehicular Internet access.