

International Conference and Business Expo on

# Wireless Communication & Network

September 21-23, 2015 Baltimore, USA

## Sustainability models for private or community wireless networks in remote rural areas of developing countries

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In many rural areas of developing countries, there are no telecommunications services or are very limited. This is particularly severe in remote areas of very low density or high population dispersion. This condition has more serious implications in areas such as health or education and obviously, without access to telecommunications infrastructure, it is impossible to use the ICT tools currently available or perform other administrative activities or professional development. These rural areas, where the digital divide is wider, are not attractive to carriers or service providers, so it is expected that a significant number of them do not enjoy data transmission services in the medium term. In this perspective, the possibility of deploying community networks or private networks is at least interesting and perhaps achievable, especially for rural public institutions. Nevertheless, the sustainability of these networks and services represent the main problem to be faced, with many seemingly successful experiences which then, have shown that were not sustainable. This presentation, based on the experience gained by the Rural Telecommunications Group of PUCP in the implementation of various ICT projects in some of the most difficult and remote rural regions of Peru, will describe the different solutions implemented to ensure the sustainability of wireless telecommunications networks have been installed in the framework of these projects, then, will make a critical analysis of them, in light of its current status and results and finally will propose a generic scheme under which focus sustainability assurance, in the context of ICT development initiatives.

### Biography

Juan A Paco Fernandez is Executive Director in the Rural Telecommunications Group of Pontifical Catholic University of Peru (GTR PUCP). He has worked in some of the most important telecommunications companies in Peru and has directed several ICT4D projects financed by international cooperation and research projects about WSN implementations and wireless networks in rural areas. Electronic Engineer by PUCP with postgraduate courses in telecommunications, he has over 17 years of experience and additionally is a Cisco CCNA Instructor in the Local Academy of PUCP.

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