

Guest Editorial Preface

Special Issue on ICT for Socio-Economic Development in Africa and Other Developing Regions (Part 1)

Dennis Lupiana, Institute of Finance Management, Dar es Salaam, Tanzania

Said Jafari, Institute of Finance Management, Dar es Salaam, Tanzania

Kuda Dube, Massey University, Auckland, New Zealand

Fred Japhet Mtenzi, Dublin Institute of Technology, Dublin, Ireland

This special issue of the International Journal of ICT Research and Development in Africa (IJICTRDA) contains extended versions of papers selected from conference papers presented in the 2nd International ICT Summit 2016, which took place in Dar es Salaam, Tanzania on 4th July 2016.

The Summit is an annual event of the Institute of Finance Management (IFM), Tanzania in collaboration with the Dublin Institute of Technology (DIT), Ireland. The Summit brings together national and international stakeholders from ICT sector to share best practices in developing an information society in order to nurture digital engagement in the socio-economic developments. The Summit emphasises innovative activities and steps towards development of innovative ICT solutions and their applications that lead to attaining good governance, improved business operations as well as provision and accessibility of quality services across various sectors.

The event invited original, high-quality research contributions, industrial practices, and innovative ideas that advance the state-of-the-art in the design, development, deployment, evaluation and understanding of emerging ICT technologies for socio-economic development. The effective use of ICT is always a key component in Science, Technology and Innovation (STI), which are the key drivers for modern socio-economic development. ICT is both an engine of economic growth and a valuable source of innovation. These are technologies which have spurred a virtuous cycle of skills, employment and investment in applications and tools that are fundamental leaps in innovation. These are not just better ways of doing old things, but radically new ways of doing previously impossible things.

Therefore, the papers included in this special issue address among others contemporary issues in ICT that aims to support, share and promote ICT skills for linking communities for communication, learning, and services. This will lead to improved well-being, increased work productivity, support for innovation, and thrust for inclusive growth.

The special issue presents an interesting discussion on how Service Level Agreements (SLAs) can be an important ingredient on making use of ICT solutions for socio-economic developments from a paper titled “The Role of Service Level Agreements (SLAs) in Leveraging ICT in Tanzania”. Since Telecom industry plays an important role on usage of ICT solutions, the paper also provides results of a study conducted to assess the effectiveness of SLAs in Telecom industry in Tanzania.

The paper titled “Mobile technology in training micro businesses: users’ requirements and architectural design” establishes users’ requirements and develops architectural design for mobile training platform between Micro Finance Institutions (MFIs) and Micro Businesses (MBs). The study responds to the existing challenges facing trainings Micro business vendors which are learning coverage and ubiquitousness, caused by physical contact as model of delivering.

A solution for measuring soil macronutrients and transmitting the data wirelessly and in real time is provided in a paper titled “Deployment of wireless sensor networks for soil macronutrients measurements in farms”. The solution integrates various elements into a portable in-field device that measures soil macronutrients of nitrogen (N), phosphorus (P) and potassium (K) and soil pH. The device then transmits the measured data wirelessly to a remote base station for analysis, presentation and storage in real-time.

The paper titled “Promoting voluntariness on technology usage in organisations: a mobile technology perspective” discusses the concept of voluntariness in technology adoption. It comparatively outlines various aspects of promoting voluntariness in various technologies with the main focus on mobile phone technology.

In the paper titled “A New Educational Mobile Devices Platform for Social Inclusion in Tanzania” a new educational mobile phone platform is designed, implemented and used. This platform has adopted protocols from mobile banking to offer educational services using low end mobile phone. Further, the paper discusses how educational content can be localized/adopted with a view of empowering teachers to benefit the educational needs of students. The proposed system can dynamically provide personalized feedback.