

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Tools and Technology in Support of Integrated Applications (2)

Author: Mr. Olivier Becu
European Space Agency (ESA), The Netherlands

Mr. Giovanni Garofalo
European Space Agency (ESA), The Netherlands

ESA SPACE FOR DEVELOPMENT APPLICATION ACTIVITIES

Abstract

Programs sponsored by the main development agencies (UN, WB, EU, ...) have since a few years acknowledged Information Technologies (IT) as a major pillar for developing countries. The cost of IT equipments and infrastructure has dropped dramatically and the globalization of exchanges has made clear that IT services (computers, telephony, Internet, TV, ...) are part of our daily life and are a key element for sustainable businesses growth.

In developing country the adoption by the society of these new "tools" took less time than it did in more conservative developed countries. Capital cities of developing countries do deploy the latest broadband wireless solutions while in Europe the regulators are postponing their authorizations. Open Source software's (e.g. Linux, Ubuntu) allows an African University to procure its whole software park for a very low budget, and the University IT technicians find free tutorials and administration guide on the Internet to help them maintain it.

But the lack of broadband links to the global Internet and the geographical isolation of many populated areas (especially in Africa) is the real cause of the digital divide. Satellite links are the only technical options, reaching remote locations with robust and cost-effective ground infrastructures.

Of course the problematic of development can not be reduced to strengthening IT tools utilization. Water management and security for example is one important topic being currently addressed by the Tiger initiative of ESA. African institutions have recently recognised the added-value of space based Earth Observation data to monitor and predict the quantity and quality of water resources in Africa. It is also understood that the dynamic location of resources is essential and complementary to earth observation information in order to tackle these matters.

The convergence of needs that can be addressed through space based applications is therefore a reality in developing countries, but remains the cost obstacle, even if those solutions could not be provided without space based assets. Therefore the promotion of Integrated Applications in Africa and in Developing Countries in general focuses of the federation of users and the implementation of solutions capable of delivering multiple services with the same infrastructure. It is an approach believed to gather a critical mass of users, enabling the development of local service providers creating sustainable business.

The motivation of promoting space based integrated services in developing countries is therefore guided by financial objectives, facilitating the emergence of tailored solutions and supported by strong business cases for local economy.