The Paradox of IT Development in a Developing Country: a Case of a Land-related IT Programme in Malaysia

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Abstract: Malaysia has undergone radical social, economic and political development over the last four decades. The information systems put in place to provide information support for managing development projects have also changed from manual systems in the 1950s and 1970s, to computerised systems based on batch and on-line processing and networking in the 1980s and multimedia in the 1990s. The year 2001 saw Malaysia leaping even further into the IT world with a determination to be the centre of IT excellence. Notwithstanding the stated achievements remain questionable how many of the implemented programmes have been able to meet its overall objectives to take-off successfully. The study presented in this article is on land-related IT programme, named for the purpose of this article as CALIS (Country Land Information System). The planning for CALIS began in 1987 and in 1994 it was officially endorsed as a national programme. The main objective of CALIS was to provide the government with an information and technology infrastructure to support interrelated aspects of strategic planning and land-use management, resource management, environmental management, and physical infrastructure planning management. As of 2000 CALIS has not been able to meet its initial objectives – to share, to exchange and to lessen information collection duplication among major land related agencies. Two theoretical frameworks the Web models and structuration theory guided collection of information and the subsequent analysis of that information. The study concludes by demonstrating how organisational behaviour and socio-political culture influenced by economic interests and personal ambition, can complicate information systems development.

Keywords: Information Technology (IT), Geographic Information System, Development, Structuration, Web Models

Introduction
The selection of specific case studies for this study was influenced by the present government’s motivation to use IT as a means of reaching advanced development status. Government made two levels of emphasis: first, public agencies are entrusted to initiate maximise use of IT, that was, to be used not only by officers but also supporting staff, to avoid duplication of information collection efforts by various government agencies and encourage extensive sharing and exchange of information both within and among agencies. Second, information systems were to be the means to overcome the friction of distance between geographical areas. Better communications were being sought to minimise the present disparity between East and West Malaysia, and between the east coast (dominantly poor States and Malay ethnic groups) and west coast (dominated by rich urban States and non-Malay ethnic groups) of West Malaysia.

Countrywide land information system (CALIS) was one of the major initiatives that were proposed to meet these goals. CALIS was to provide the government with an information and technology infrastructure to support interrelated aspects of strategic planning, land and landuse management, resource management, environmental management, and physical infrastructure planning and development. Further CALIS was also expected to provide the necessary organisational and management infrastructure to support the development, maintenance and dissemination of land-related data and information. In March 1994 CALIS was formalised and the Ministry of Land and Co-operative Development was assigned the task of setting up the programme. The Ministry initial action was setting up a task force, which consisted of members from major land-related agencies at both state and national levels. Subsequent to that a public corporation (Consultant) was appointed to carry out a nation-wide feasibility study for CALIS. The Consultant team whom principally were IT professionals from an advanced country took about a year (December 1995) to produce a nine volumes report on the state of land-related IT development in Malaysia. Among the Consultant findings, two were highlighted as most critical, for without it CALIS could not be implemented or will be delayed. The first was on the lack of digital maps for both topographic and cadastral data. Second CALIS requires an adequate communication infrastructure for inter-and intra-information exchanges. The Consultant estimated an upfront sum of about RM1 billion to meet up with the projected expenses. Nonetheless the Consultant suggested that the cost could be made less obvious if it was spread over a period of time. The suggestion was accompanied by an alternative implementation plan. Consultant suggested to phase implementation by stages, taking states with facilities first (namely Kuala Lumpur, Pulau Pinang and Johor), follow on with states with fairly adequate facilities (namely Selangor, Perak, Terengganu, Sarawak, Kedah, Melaka, Pahang and Sabah) and lastly take on the least facilitated states, Kelantan, Perlis and Labuan. The rationale in state selection was based strictly on technical reason, the already existing information gap between the east and west Peninsular Malaysia and the consequences of such decision on national development vision were conveniently ignored.

Malaysia is a peaceful complex State. It is complex because it is made up of large number of differentiated ethnic and cultural groups. In Peninsular Malaysia alone, for example there are the Malays, Chinese and several minor groups including Thai, Vietnamesse, Eurasian and European. In Sabah are the Murut, Bajau and many other less prominent groups. In Sarawak are the Melanau, Iban, Bidayuh and about dozen other less prominent groups. The differences and culture, religion and beliefs, however, have rarely come in the way of development. Alan in some cases ethnic differences relate with social and economic inferiority or superiority. For example the Malays and other