Editorial

Emerging Directions in Urban Planning Research

'Emerging Directions in Urban Planning Research' is the theme of this special edition of the International Journal of Applied Earth Observation and Geoinformation. It contains all seven papers presented during the Autumn 2000 Urban Research Seminar Series, which was held at ITC in its 50th Anniversary year and organised by the Division of Urban Planning and Management (UPM) with funding from the ITC internal research programme.

The first paper in this issue, from the keynote seminar given by Carole Rakodi, argues that the traditional approaches to land use planning in developing countries have proved to be of limited value. The strategic and structure plans that are produced routinely are not implemented and cities are not able to cope with the problems of access to affordable land, housing and services, let alone bring about sustainable development. She makes a plea for increasing the legitimacy of local government with all urban actors by concentrating on governance arrangements, the politics and processes of decision-making rather than on traditional plan making.

The main challenge reflected throughout the seminar series is how to improve urban policy development and decision-making. To be able to address this challenge, new and innovative Geographic Information Systems (GIS) based concepts and approaches are being developed by a variety of leading researchers, based on the recognition that the problems and complexity of the developing city require new tools and approaches to support sustainable development.

A number of these approaches can be found in the area of modelling, the central theme of the first three papers in this issue. In the first of these, Michael Wegener presents an overview of how GIS technology is able to contribute in the modelling and understanding of our cities, this leading to a whole new set of spatial planning models which open up previously unimaginable possibilities for planning policy development.

Tony Yeh, in the second paper, discusses recent advances in the use of Meta-models in planning support. He argues that, although planning support systems (PSS) and GIS have been used already for some time, there is a need to develop meta models above the PSS and GIS, to provide for easy re-use of the model components to facilitate and improve decision-making. Acknowledging the complexities of the decision-making process, Yeh demonstrates the use of a case-based reasoning system, supported by a computerised knowledge-based system, which could be used by city planners for development control purposes.

Another important innovative development currently taking place is in the area of 3-dimensional modelling of cities. In the third of these papers, Mike Batty explains how these techniques can potentially benefit key actors in routine, presentational and strategic contexts. Based on work done in the city of London, UK, he reviews visualisation methods and proposes a typology of virtual cities, demonstrating how 3D digital models can be used in planning the physical development of the city.

Probably the most compelling challenge in the new century will be to address the issue of informal settlements. The world is urbanising rapidly and the larger part of the urbanisation is attributable to the urban poor who are settling in extensive informal areas on the fringes of developing cities. In recent years, one paradigm that has developed requires that, rather than looking at informal settlements as a problem, they should be regarded as part of the solution. Therefore informality is considered as a development that provides the opportunity to deal with pressing issues of urban poverty and the need for sustainable development.

In his paper, John Abbott develops a method to integrate the formal and informal part of the city. Based on research carried out in a number of settlements in Cape Town, South Africa, he further demonstrates that this integration, through a spatial database and the further use of GIS tools, can offer important benefits, leading to a new settlement upgrading methodology, with more sustainable results.

The issue of sustainable use of land is also central to the contribution of Ian Williamson. He argues that our current land administration systems are based on 19th century paradigms not developed to support or contribute to sustainable development. In his paper he reviews both current international discussions and research and comes up with an encompassing vision of land administration in support of sustainable development. Part and parcel of this vision, in his view, is the national land administration spatial data infrastructures and spatial management strategies.

The final paper in this issue, by Zorica Budic, recognises the importance of national spatial data infrastructures (NSDI) and discusses the issue of data-sharing based on research in the United States. She provides an overview of the mechanisms and factors that either facilitate or obstruct GIS-sharing among organisations and also discusses the effectiveness of these mechanisms.

It is the final task of the guest editors to thank all the contributing authors, not only for their papers which go to make up this special issue of JAG, but also for giving their time and sharing their knowledge and experience with the Urban Planning and Land Administration (UPLA) students and the staff of the UPM Division, all of whom have benefited greatly. We enjoyed the time you spent with us here at ITC and look forward to further fruitful collaboration in urban planning research.

Guest Editors
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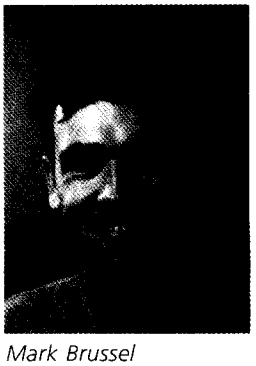

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