



Abstracts

W21- Tools to facilitate housing and urban processes

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Identification of the Customary Area and Land Parcelling thereon: The Case of Kasepuhan Ciptagelar Banten Kidul, Indonesia

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The origin of the Indonesian formal land tenure system is vested in the customary land system as stated in the Basic Agrarian Law, which regulates land tenure in Indonesia. However, as there exist 23 customary regions in Indonesia, each with different customary land tenure arrangements, it is not clear which customary land tenure arrangement was adopted during the formulation of the Basic Agrarian Law. The only evidence of the adoption is the similar ownership principles and the appearance of two specific types of tenure specifically designed to include the common characteristics of customary communities in Indonesia. However, the vertical separation of land and property registration contradicts the characteristic of customary land tenure arrangement in Indonesia. Furthermore, the Basic Agrarian Law has not been able to preserve the cultural value inherited for generations within the Indonesian customary land tenure system. Thus, the assimilation of the customary land tenure systems into the formal land tenure system in Indonesia should be initiated to avoid the deterioration of the cultural value of the customary land.

This paper depicts the customary rule for defining the customary area and land parcelling thereon, which is further employed to formulate an initial version of a new model for land registration, based on the customary land tenure arrangements. The study area is Kasepuhan Ciptagelar. This area differs from other customary communities on Java, since its indigenous community has lived nomadically within a forestry area of 40,000 ha. Differing also from most nomadic customary communities in Indonesia, which are quite remote and far away from the centres of urbanisation and modernisation, Kasepuhan Ciptagelar is surrounded by urbanised and modernised areas. This initial version of the model of assimilation of customary land tenure into the Indonesian formal land tenure deals with one of important customary land tenure arrangement types in Indonesia.

A multi stakeholder collaborative urban planning model

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In the last decades a shift has taken place from multi-disciplinary, expert driven urban planning to multi-organisational, stakeholder driven urban planning. This means that not only experts take part in the urban planning process but also non-experts such as users, investors, owners, and politicians.

Classical urban planning models used in multi-disciplinary expert-driven planning are not well-equipped to cope with multi-stakeholder collaboration. In these models, the planning area is modelled in such a way that based on alternative future land use strategies as model inputs, one can only analyse the possibilities and consequences of the realisation of the experts' strategies in the urban area. This excludes the direct input of groups such as investors, owners, and residents.

Using the structure of these models, a special urban planning model has been constructed by the Open Design Research Group to incorporate multi-stakeholder decision making in urban planning. This special model is an extension of the classical urban model in the sense that the stakeholders have their own decision variables represented in the model. This has the advantage that the stakeholders can express their own views on the future developments of the urban area concerned, concurrent with the experts' professional proposals. On the model level, the experts' sub-solutions and stakeholders' sub-solutions are combined in one model outcome, which enables an integrated simulation and analysis of the outcome.

This urban planning model is illustrated with the actual urban planning problem of the Laurenskwartier area of Rotterdam, an inner city area with shops, warehouses, residential blocks, office buildings, and public spaces.

An interactive urban management system for urban renewal

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The current management approach for urban renewal projects is mainly based on local governmental planning schemes. These schemes describe how to set up urban renewal projects: make an inventory of the situation, collect data concerning existing uses, draw up an urban renewal plan for the area, and make a time schedule for the realization.

After that the local inhabitants, the owners of the buildings, and future investors are asked to react on the proposals. Often the proposals are rejected: the local people do not see that their ideas and possibilities concerning the renewal of the area are reflected enough in the municipality's plans.

The Open Design Research Group has developed a new urban management system with which it should be possible to incorporate ideas and possibilities of the local people into the process at a much earlier stage. Using this system, the people involved can exchange and combine their views and ideas in an interactive manner. The plans generated with this system are a reflection of the agreed combination of everyone's wishes and sub-solutions.

A direct link is made between the visions (possible, various, conflicting, etc.) and goals of the actors involved, and the urban planning variables. The resources that are available (or can be made available) for the realization of the visions are also represented. With this system, the exchange of visions and the associated negotiation process can be simulated. The latter is possible thanks to the interactive computer system which forms the basis of the new urban management system. This linking of content and process-related aspects in one system is one of the most important features of this new system, and offers the opportunity of working interactively.

This urban management system is illustrated with the actual urban renewal problem of the Hobbema urban zone in The Hague.

Managing an urban actor network

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In urban planning nowadays, the decision making process takes place in pluricentric decision making arenas with multi-actor interaction. Due to the mutual interdependency between the actors involved, and ever-changing partnerships, managing this process is a very complex task. The steering and controlling of this process by means of the classical local government based hierarchical planning is impossible.

Using the soft systems approach the Open Design Research Group developed a special management system for multi-actor urban decision making. In this system the multi-actor process is modelled as a multi-level network, which consists of actors and the decision-making relations between them. This gives the possibility for each actor to manage and enhance both his organisational and his personal networks.

Both the network of actors and the pluricentric decision-making structure function as actor-driven processes. A process of this type is based on the actors' perspective on decision making. This perspective 'which comes from methodical individualism' states that every individual has different kinds of considerations as far as his preferences and decisions are concerned: not only his own interests (economic or otherwise), but also altruism, solidarity, social norms, etc. It also states that every individual will form his preferred structure directly during interactions with others.

This also implies that in the case of individuals who have to decide something, it cannot be predetermined whether something that could be regarded as a dilemma between them on paper will actually turn out to be so in practice. Conversely, it means that an apparently problem-free issue may turn out to be such a dilemma.

The new management system for the urban actor network will be illustrated with the actual urban decision making process for the Laurenskwartier of Rotterdam, an inner-city area with shop, warehouses, blocks of residential property, and office buildings.

The role of visual information in design tools

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Sustainable housing in a broad definition is enhanced by a clear design process. In this process all actors should have a shared understanding to come to a shared responsibility towards this sustainable project. In this process, design tools play an important role. Design tools are communication tools in which visual information helps to get to sustainable solutions.

In this paper there will be examples of the use of visual information in the design process. The following research questions will be answered:

- Thus different actors understand visual material in different ways and were thus these differences consist of?
- Is there a relation between type of drawing (hand made or computer, 2D or 3D) and the understandability for different actors?
- Thus modeling helps to get to a clear understanding of a design problem without fixing the solutions?
- Is there a relation between type of visualization and usability in the different stages of a design process?

In the end there will be several recommendations towards different forms of visual information to be used in a sustainable design process.

Municipal government and communication - Development of town quarters with the help of scenarios and model calculations

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A specific number of European towns will be confronted with shrinking processes in the near future. Population numbers have been declining in several German towns since the 1990s, especially in the Eastern part of Germany. In the future similar processes are also projected - although at a reduced level - for parts of Western Germany. The municipalities and the urban planning have to respond to the upcoming social, economic, infrastructural and spatial consequences. Particular the concurrent processes of growing and shrinking in German towns show clearly this complexity. The sustainable approach and the solution of problems caused by transformation and vacancy pose a challenge for many municipal governments.

The Institute of Urban Development and Construction Management (ISB) of Leipzig University investigates several scenarios and model calculations in different types of residential areas in the research project: 'town quarters in upheaval'. The project is commissioned by the German Federal Ministry for Transport, Building and Urban Development and the German Federal Office for Building and Regional Planning. The objective of the project is to support the municipal governments to make decisions and to define the strategic development of urban areas in a problematic situation. The gained knowledge of this research should give an orientation for the integration of different developments in several areas in the system of the whole town, the assessment of possibilities for governance and the consequences of certain strategies.

With a focus on residential areas, four relevant types of areas in dependence to the building structure were defined. The range of questions reaches from the structural changes of population, the rule of social and technical infrastructure, the potential of residential environment to economic and organizational expenditure for the local politics. The results of the research project will be finished till June 2007 and can be presented at ENHR International Conference.

Inside people's homes

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Housing is the domain of architects. In the domain of industrial design, we argue that usage of products in various ways (usability, experience, safety) may inspire the design process [Boess and De Jong, 2005]. Obviously there are many differences between these two domains, but still there may be some possibilities for architects to retrieve some valuable information from usage of houses. However, it seems that in the domain of housing, qualitative research to modern western housing is scarce [Cieraad, 1999]. Here may lie a gap in methodology available to the architects to design a house in a way that is suited for usage in a longer time span, or to design usage of the house in a sustainable way.

As a first step to arrive at some starting points for research, we've collected information through interviews with five architects. Our main question in the research was whether and how architects then imagine the use of houses by their occupants. The method for designing a home for the user is analysed from the point of view of the architect. In answer to the main question, it appears that the architects' ideas about usage of the house are strongly dependent of the type of dwelling: individual or serial. In the case of designing individual housing, more informal and personal contact is possible between the architect and the end user, which is not the case in serial housing. In serial housing, architects rely on standardizations of housing in light of a specific group of occupants and usage of the house is not regarded as explicitly as in individual housing.

Further research may elaborate on these issues and reveal ways of usage research for architects to inform their design process.

Advances in mass-appraisal methodology - An international perspective

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Mass appraisal may be defined as a systematic appraisal of groups of properties using standardized procedures. The accurate assessment of the value of a predefined set of properties, or one particular property, indirectly, using a model, for a given practical purpose, is the main target of these methodologies. Several contributions have addressed the importance of mass appraisal, exploring the relationship between the property value, the property characteristics and urban social and economic problems. Arguably, the standard multiple regression analysis (MRA) based hedonic price models are not suitable for capturing all the necessary information involved in the formation of value, and the literature on how to develop the value modeling tools further is evolving. Although the problems are highlighted, MRA remains at the moment the most important theoretical framework in mass appraisal.

The quantitative, MRA-based methodology may be referred to as the current advanced or orthodox approach to mass appraisal valuation. However, several other methodologies have been applied, which define a new approach to property mass appraisal valuation. In this work these methodologies may be dubbed as emerging or heretic because of their different theoretic basis from the MRA, the dominant approach to mass appraisal. Model-free estimation techniques such as neural networks and fuzzy logic have been introduced to bring some flexibility to the property value calculations, without neglecting the mathematical rigor. Pattern

recognition is yet another relatively untried approach within this realm. Indeed a number of contributions here offer ingenious and pragmatic, if not totally transparent, modeling methodology.

This paper is intended as an academic project involving cross-disciplinary and cross-cultural aspects. It is also intended as a guideline for practitioners. We will approach the issue of methodological evaluation on the basis of technical and institutional criteria.

Multi-stakeholder planning in an urban decision room

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Professionals in the field of urban planning are being confronted more and more frequently with huge solution spaces, filled with thousands of alternative combinations of possible sub-solutions supplied by a host of involved stakeholders (specialists, users, politicians, investors, etc.). Their quest for the optimum urban plan tends increasingly to run aground in a 'combinational explosion'. At such moments, there are too many options, too many opinions, and too many alternatives.

To cope with decision questions made complex by a multitude of stakeholders, the concept of a decision room was developed in the field of management science. A decision room is literally a room where decision makers come together to discuss, define, and combine alternative decisions, while using computer simulation models to analyse these.

Based on this concept, a specific decision room has been developed by the Open Design Research Group for decision questions concerning urban planning: the Urban Decision Room. Unlike the general decision room, the Urban Decision Room has the urban planning object under consideration represented in the computer simulation model. This Room enables the stakeholders and urban planners to jointly analyse their alternative decisions on their consequences to the urban objects, plans, land use schemes, etc.

To prevent stakeholders working only towards their own individual solutions and the bottleneck that subsequently arises when their proposals are combined, the UDR offers the possibility of first defining and representing a common solution space.

The Urban Decision Room is illustrated with the actual urban planning problem of the Heijsehaven port area in Rotterdam. Various initiatives and ideas have been developed for this port area by numerous private parties, as a means of transforming the Heijsehaven in the near future from an area dominated by port functions to one with a mix of urban functions.

Mapping and managing local knowledge in urban planning

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Sustainable development of a city presumes that diverse knowledge produced by numerous local stakeholders is being incorporated into urban planning processes. The planners try to utilize information in various forms. However, this information is often 'hard' by nature: formal, technical or register based. It is usually produced by authorities and experts. But how to manage local knowledge produced by the residents, other local stakeholders and organizations? It seems to be difficult to find a place for this 'soft' informal knowledge in a planning process. Furthermore, the means of gathering and handling local knowledge seem to be laborious and inadequate.

In this paper, preliminary results of two case studies with Internet-based mapping tools are introduced. My Maunula Neighbourhood Map was a part of a city quarter's web site in Helsinki, Finland. Development Forum of Espoon keskus is a local web portal in Espoo, Finland. The focus in both cases is on the residents' own experiences in their living environment. Interactive maps, GIS technologies and content management systems are used to collect, present and analyze data. The aim is to build up new links between informal and formal knowledge in local

planning processes. In order to do this, focal issues of governance on a local level are brought up. The case studies show that knowledge produced by the residents is cross- and multi-sectoral. The versatile nature of this knowledge challenges municipal governance in many levels since a single comment in a map may come under many administrative sectors: landscape management, housing policy, health care, traffic planning, social welfare and zoning. Consequently, new practices in knowledge management and communication in urban planning domain are needed.

Using census data to target housing resources

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In 1997 the British government announced its objective to make all social homes 'decent' that is to say, warm, weatherproof, and with reasonably modern amenities. They also expressed a desire to ensure that any privately owned homes containing vulnerable occupants were also made decent by the year 2010.

This presents a challenge for the local government bodies who must carry out this task. Aside from the issues of raising money and conducting the repairs, they must also find out just where all these vulnerable people and non-decent homes are, they must find out how much money will be needed to repair them, and they must demonstrate to the government that they have done so.

In the UK local governments are required to regularly survey the private housing stock, in order to gather this information and to prove that their strategy is working. But surveys are expensive. How then can a local authority get the best value for money from its survey? How can it be sure to find the people it wants to help amid the many people who are living in comfort?

This paper explains how a national house condition survey can be combined with data from a national census to produce detailed maps showing where resources can best be targeted. A statistical method allows us to predict where various housing problems will occur, leading to effective surveys, efficient targeting of resources, and the generation of superior information with which to lobby for nationally available funds.