

Towards 3D Property Legislation in Malaysia

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Key words: Land Administration, 3D, Legislation, Cadastre, Property

ABSTRACT

Malaysian land administration provides a variety of rights, depending on the traditions of the country but the legacy cadastre system and land law are still using 2D geometric in legal and law expression (2D legislation) for land and property tenure and not prepared in 3D property legislation. These entire binding and legal document do not give enough 3D property legislation information for 3D property in Malaysia.

This paper describes the overview of cadastre system for 3D purpose and the situation in Malaysia. Some cases on 3D property will be illustrated concerning the 3D property legislation in Malaysia.

Research Questions and objectives have been identified in order to propose and realise the 3D property cadastre system. A study on the contents analysis of secondary data comprising of Registry Title, Land Office Title, Certified Plan, Strata Title Act 1985 (Act 318) and National Land Code 1965 (Act 56) can then be used to identify suitable contents in those legal documents that would change 2D legislation to 3D legislation. The instrument used in the data collection would be a questionnaire that is divided into five areas of study. The respondents comprises of the State Director/Registrar/Land Administrator from State Lands and Mines Office, State District Land Office, Chief Surveyor and Licensed Land Surveyors from Penang, Federal Territory of Kuala Lumpur/Putrajaya, Selangor and Johore.

Throughout the paper is become clear that quite a lot of study will be needed to realise the 3D property legislation for 3D property in Malaysia. Finally, conclusions on scope and contribution of the research are presented.

1. INTRODUCTION

A systematic record of lands matters involving registration of the details of transaction such as transfer of land and interest, lease, charge, releasing of easement and change of condition of land is very important in the land administration, planning and development of land. As stated in ECE/HBP/96 (1996), land administration consists of Cadastral Survey and Mapping Registration System, and Land Registration System. Both systems contain different sets of records about land. These two systems are very important for the formation of a good cadastre system. A cadastre system is an information system consisting of a series of maps or plans showing the size and location of all land parcels together with text records that describe the attributes of the land. This 2D cadastre system is adopted by many countries in the world including Malaysia because the system provides essential information about land and property such as ownership of the lot and land parcel for the country.

2. THE CADASTRE SYSTEM FOR 3D P

There is a need for a refined description of land because land is the most valuable resource for humans and it is the fundamental or base for all forms human activities. Land is the key to human needs as it is the source of shelter, labour, economy, business, food, finance and other resources as well as the basis for meeting the different kinds of societal needs of the community (Nordin, 2001). Without land, there would not be any human activities carry on in the world. This is due to the fact that land is both a physical commodity and an abstract concept of rights of ownership. However, depending on the jurisdiction, the definition of land may or may not include everything which is attached to it, such as building on the surface or vegetation growing on the land or minerals below the ground surface. A definition by Kaufmann (1999) mentioned that:

“As land is an important part of nature and the environment is the basis for nutrition, housing, energy production, resource exploitation, leisure activities, waste disposal, economic activities- in short for the maintenance and survival of humankind- cadastres are crucial aspect of sustainable development....”

It is vital that everyone who is involved in land matter needs to have knowledge of the cadastre because it plays a very important role in Land Administration System where it should provide order and stability in society by creating security for everyone involved (Hassan, 2008) that includes landowners, investors, moneylenders, traders, dealers, and governments (ECE/HBP/96, 1996). Furthermore, a good cadastre system in a country can lead to the stability of social, economic and environment management and development. There is a need to make changes to the present cadastre system in order to meet the changes in the modes of development as Valstard (2006) highlighted the fact that traditionally, land has been described and registered into 2D and all cadastre systems of the world are in fact 2D nature.

2.1 3D cadastre & 3D property

At present, there is a lot of development taking place that is not covered in the 2D cadastre system as there is a lot of interest in utilising land and space above and below the ground surface. From an institutional perspective, land administration includes the formulation of land policy, the legislative framework, resource management, land administration

arrangements, and land information management as well as entails organisational, i.e. both government and private initiatives.

Today's property situations often occur whereby the third dimension play a significant role in determining the legal status of such property, especially in areas with multilayer use of space.

Examples of such property unit can be found in the following situations:

- a. Above surface constructions, such as apartments, constructions on top of each other, overhead infrastructure and utilities & Use of air space.
- b. Below surface constructions, such as underground constructions, infrastructure and utilities, region of polluted area & geological activities

3. THE SITUATION IN MALAYSIA

The cadastre system is adopted worldwide and Malaysia is one of the countries who adopted the system for its land management. Peninsular Malaysia (hereinafter called as "Malaysia") land administration is traditionally based on the Malaysian land law and this provides a variety of rights that are dependent on the traditions of the country. In Malaysia, land use rights are often based on occupation of land over a long period and this is defined in the written law or set by traditions. As the context of land use is no longer confined to the conventional definitions, the application of Malaysian legalistic land law of Malaysian Cadastre System for property which consists of Land Registration System and Cadastral Survey and Mapping System using 2D geometric in legal and law expression for land and property tenure is no longer adequate.

3.1 Legal documents related to 3D property in Malaysia

The present scenario is that the rights, restrictions and responsibilities of the proprietor of the surface parcel shall also apply to the proprietor of properties above and below the ground surface, however, it have not been fully regulated and legalised by the Malaysian Cadastre System. In order to comprehend further these related matters, the legal documents which are related to lot, land parcel and land registry such as Registry Title, Land Office Title, Cadastral Map, so-called Certified Plan, National Land code 1965 (Act 56), Strata Title Act 1985 (Act 318), Survey Regulation 1976 (Peninsular Malaysia), Federal Constitution 1957, Survey and Mapping Director General Secular, Uniform Building By-Laws 1984, Street, Drainage and Building Act 1957, Building and Common Property (Maintenance and Management) Act 2007, Town and Country Planning Act 1976, Local Government Act 1976 and States Land Code, Act and Rule should be used to make the legislation feasible for all proprietors on the surface, above and below the ground surface.

3.2 The importance of 3D property legislation in Malaysia

Since late 1990s, the population of Malaysia has increased from approximately 21.80 million to 27.73 million in 2008 (Statistics, 2008) and it is predicted to reach 31 million by 2020. Hence, an efficient 3D land use in real estate property especially for multilayer objects is directly linked to the socio-economic and environmental development in Malaysia. As highlighted by Forrai and Kirschner (2002) who stated that the availability of land use for

future further construction is both expensive and limited. Traditionally, the Malaysian Cadastre System has different structures and authorisations whereby the jurisdiction for land registration is under the administration of the state government while cadastral survey and mapping is under the federal government. Both the systems deals with properties located on and above the surface level, as well as the ones below the surface level. Ahmad-Nasruddin and Abdul-Rahman (2006) has highlighted that each country has its own authority that is responsible for managing and monitoring the cadastre system and the cadastral objects can be either lot, or land parcel, or parcel which is held under separate Land Registry, i.e. strata title. However, the system practised in Malaysia is the parcel bounded system with a 2D nature only provides essential land and property information about the lots and land parcels (Hassan, 2008). This, however, does not include the 3D object registration and 3D rights as this current system only apply to the ordinary Land Administration System. For example, the digital cadastral map, registry title, content survey and mapping as well as textual record information about lots or land parcels are still using 2D natural for registration of 3D object rights is not comprehensive enough for 3D objects.

4. ISSUES REGARDING 3D PROPERTY

The basic land code in land administration adopted by many countries includes special legislation governing the operation of the cadastre system and land registration system and the definition with regards to the nature of land and real property. Every country's land administration is aimed at ensuring an undisturbed performance of the ownership rights. Thus, the ability to fulfil this task demonstrates the extent of society's ability to organise the legal base for land ownership. In this regard, legal relations must be precisely defined in land law, and also in other laws which are related to a lot, parcel and land parcel as well as property that is above ground surface. As pointed out by Ossko (2005), multilayer objects property has its own Unique Parcel Identifier (UPI) and physical description which make it possible for the property to be registered within the land registry and cadastre system.

4.1 The legal context

In the present land registry system, there are difficulties to register the ownership and other rights of real estate objects above or below the ground surface. The implication is that public facilities such as roads, streets etc. as well as objects that have been constructed above or below the ground surface of public domains have not been included as a part of the land registry. Some examples of the developments are public utilities, underground tunnels, garages, metro stations, shopping complexes, business centres, skywalks, using of air space as well as the mining and marine rights. Furthermore, the delineation of surface parcels, spatial sub parcels and spatial parcels that are vertically layered require a spatial description that should include data defining the vertical and horizontal boundaries between these units.

In a real world situation, issues of legal and organisational meant for 2D cadastre are insufficient and would not be able to cope with the advanced development of the country especially information concerning 3D constructions and developments. This is in addition to the fact, that land use is becoming so intricate whereby different types of land use and properties are being placed in complicated 3D situations. Therefore, there is an urgency to develop and implement a 3D cadastre system that would fulfil the legal, organisational and technical aspects. This would ultimately be used as a means to solve problems associated with

3D complex situations. Based on the scenario discussed earlier, it shows that there are many issues associated with the legal and organisational aspects of problems associated with the 3D cadastre which need to be investigated further. This proposed new system must also take into account that 3D situations need a good system that must clearly reveal the drawbacks of real work situations (Abdul-Rahman, 2006, and Abdul-Rahman, Stoter and Nordin, 2005).

5. QUESTIONS NEED TO BE ADDRESSED

- a) What are the problems in legal and organisational aspects in implementing Malaysian Cadastre System for 3D property and how to address them?
 - i) What are the new 3D property regulations and practices information needed in Registry Title, Land office Title, Certified Plan, Strata Title Act 1985 (Act 318) and National Land Code (Act 56)?
- b) What are the changes needed in the current cadastral and land practices in order to achieve the succession implementation of Malaysian Cadastre System for 3D property in Malaysia?
 - i) How could information about the new 3D property regulations and practices information be collected, structured and presented that would propose a 3D property cadastral survey and mapping which includes registration?
- c) How to identify? Who are the respondents? What are the contents in legal documents that have to be amended in order to translate the legal and organisational expression from 2D to 3D for implementation of Malaysian Cadastre System for 3D property in Malaysia?
 - i) What kind of framework or criteria is needed to establish and implement these new legislations and how would it affect the cadastral survey and mapping practices of the 3D property?

6. OBJECTIVES, METHODOLOGY OF STUDY AND ANALYSING METHODS

6.1 Objectives

- a) To review literatures associated with the execution and application for 3D property legislation in the Malaysian Cadastre System.
- b) To identify the needs of Department of Survey and Mapping Malaysia (DSMM), State Land and Mines Office (PTG), District Land Office (PTD) and Licensed Land Surveyor (LLS) for use in 3D property legislation.
- c) To make recommendations to DSMM, PTG, PTD and LLS for the amendments and performance of the 3D property legislation that are the fundamental principles for the Malaysian Cadastre System and propose changes that would facilitate the cadastral survey and mapping practices.

6.2 Methodology of study and analysing methods

In order to answer the research questions and achieve the research objectives, the following research methodologies will be used:

6.2.1 Stage 1 – Secondary Data Collection and Analysis

The current study will be based on the contents analysis of a collection of secondary data comprising of five types of legal documents. The legal documents data are Registry Title, Land office Title, Certified Plan, National Land Code 1965, (Act 56) and Strata Title Act 1985 (Act 318).

Data Analysis

Specific contents of the legal documents mentioned above will be identified and studied in order to design well-fitted 3D property legislation for property above ground surface. The following criteria for a content analysis will be used to study the documents. Each set of data will be analysed according to the criteria listed in **Appendix A**.

6.2.2 Stage 2 – Development of Instrument Based on Stage 1 and Pilot Study

The findings from the first stage secondary data analysis will be used to design an instrument that would incorporate the proposed changes derived from the findings of the initial secondary data analysis. The changes would be applied to local legal documents that would change 2D legislation to 3D legislation. The instrument used in the data collection would be a questionnaire that is divided into five areas of study. The respondents were asked about their acceptance of the recommended contents made onto the Registry Title, Land office Title, Certified Plan, National Land Code 1965 (Act 56) and Strata Title Act 1985 (Act 318). In the questionnaire, they would need to give the following responses such as agree, disagree or not sure.

The next stage in the data collection would be to pilot the instrument that has been designed earlier. To obtain the data, a field study and focus group interviews will be conducted. The main objective of this pilot is to identify types of answers that reflect the level of seriousness with regards to 2D legislation problems from the perspective of the different stakeholders. The respondents in the study can agree, disagree or stay neutral (no comment) on the issues presented in the instrument. The respondents are classified into these main groups: the federal and state authorities as well as the professionals involved with 3D property in Malaysia.

The first group of respondents comprises of the State Director/Registrar/Land Administrator from State Lands and Mines Office from Penang, Federal Territory of Kuala Lumpur/Putrajaya, Selangor and Johore. The second group of respondents includes the State Director/Registrar/Land Administrator from State District Land Office form Penang (5 District Land Offices), Selangor (9 District Land Offices) and Johore (13 District Land Offices). The third group of respondents will be the Chief Surveyor from State Department of Survey and Mapping Malaysia of Penang, Selangor, Federal Territory of Kuala Lumpur/Putrajaya and Johore. Finally, the fourth group of respondents will be Licensed Land Surveyors who have the license and practise in Penang, Selangor, Federal Territory of Kuala Lumpur/Putrajaya and Johore.

All the selected respondents in the study will be from the public and private sectors who are directly involved in the management of managing land and multilayer ownership properties in Penang, Selangor, Federal Territory of Kuala Lumpur/Putrajaya and Johore. This research focuses on Penang, Selangor, Federal Territory of Kuala Lumpur/Putrajaya and Johore because these are the states that have the most number of multilayer constructions in Malaysia.

Data Analysis

The recommended 3D legislation changes from the first stage secondary data analysis, questionnaire and field study will be evaluated and compared with Land Code, Act and Regulations from local such as Survey Regulation 1976 (Peninsular Malaysia), Survey and Mapping Director General Secular (PKPUP) as well as from a foreign country obtained through an internship programme with foreign universities such as Sweden, Norway, Denmark and the Netherlands for further improvement. These improvement made onto the five local legal documents will later be reviewed by the interviewers through personal interviews. Furthermore, the technical data development known as Electronic Strata Survey Module (eSSM) from the Department of Survey and Mapping Malaysia will be used as a technical reference for the evaluation and comparison for the recommended 3D legislation.

6.2.3 Stage 3 – Refinement of Instrument, Final Data Collection and Analysis

After piloting the instrument and conducting Stage 2 data analysis, the findings will be used to refine the instrument further. The focus in this data analysis is to gather the respondents' feedback to help determine the needed changes for a 2D legislation to become a 3D legislation and the respondents' acceptance of the changes. The results and analysis from the pilot study process will be used to improve the initial recommendations proposed to change the 2D legislation to 3D legislation for property above ground surface in the content of Registry Title, Land office Title, Certified Plan, National Land Code 1965 (Act 56) and Strata Title Act 1985 (Act 318). Selected respondents from the initial study will be asked to review the changes made to the instrument. Findings from the final stage will be highlighting the needed changes.

Data Analysis

The final recommendations made in the content of Registry Title, Land office Title, Certified Plan, National Land Code 1965 (Act 56) and Strata Title Act 1985 (Act 318) will be tested and checked through several personal interviews with selected respondents. Findings will be analysed qualitatively for changes to be made for the transformation of 2D legislation to 3D legislation.

7. CONCLUSIONS

The research will focus on five types of legal documents. The legal documents are Registry Title, Land office Title, Certified Plan, National Land Code 1965, (Act 56) and Strata Title Act 1985 (Act 318). These legal documents are chose because they require the inclusive of 3D into the current 2D cadastre system for 3D property above ground surface and they are directly involved in the registration and cadastral survey of the multilayer property above ground surface. Besides, the eSSM is chose because it gives the 3D technical registration, cadastral survey and processing methods.

The Department of Survey and Mapping Malaysia (DSMM), State Lands and Mines Office (PTG), State District Land Office (PTD) and Licensed Land Surveyors (LLS) from Penang, Selangor, Federal Territory of Kuala Lumpur/Putrajaya and Johore are chose because they are directly involved in the registration, cadastral survey and processing for multilayer properties above ground surface.

These methodologies adopted are study of secondary data as the basis for developing the instrument to transform 2D legislation to 3D legislation. Finding and analysis from the pilot study using the instrument will be used to refine the instrument furthers.

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Appendix A

	Secondary Data	Content Analysis
1	Registry Title	Annual rent, Area, Category of land use, Express conditions, Restrictions in interest, Plan of the land, Record of dealings and Other matters affecting title
2	Land Office Title	Annual rent, Area, Category of land use, Express conditions, Restrictions in interest, Plan of the land, Record of dealings and Other matters affecting title
3	Certified Plan	Area, Coordinates, Bearing/distance, Height/depth and Plan of the land
4	National Land Code 1965 (Act 56)	<p>Division I-Introductory, Part One-Preliminary-Section 5-Interpretation, Part Three-Rights and powers of the state authority, Chapter 1-Property in land and powers of disposal, Chapter 2-Classification and use of land –Classification, Chapter 3-Rights of access to, and use of alienation land.</p> <p>Division II-Disposal of land, Part Four-Disposal otherwise than by alienation, Chapter 1-Reservation of land, Chapter 4-Permit to use air space above state land and reserved land, Part Five-Disposal by alienation, Chapter 1-Introductory, Chapter 2-Approval of land for alienation, Chapter 3-Alienation under final title.</p> <p>Division III-Alienation lands: Incidents and registration of title, Part Six-Rent, Chapter 1-General, Chapter 2-Collection of arrears of rent, Chapter 3-Revision of rent, Part Seven-Conditions and restrictions in interest, Chapter 1-General, Chapter 2-Summary of conditions and restrictions in interest affecting alienated lands, Chapter 4-Express conditions and restrictions in interest, Chapter 5-Enforcement of conditions, Part Nine-Subdivision, partition and amalgamation, Chapter 1-Sub-division of lands, Chapter 2-Partition of lands, Chapter 3-Amalgamation of lands, Part Ten-Preparation and maintenance of registers of final title, Chapter 1-The registers.</p> <p>Division VI-General and miscellaneous, Part Twenty Nine-Survey, Chapter 1-General, Chapter 2-Deposited plans.</p>
5	Strata Title Act 1985 (Act 318)	Part I-Preliminary-Section 4-Interpretation, Part II-Application for subdivision of building or land, Part III-Registration of Strata Title, Part IV-Provisional block : Issue of strata titles upon completion of building, Part V-Subdivided buildings : Division and amalgamation of parcels, Part VI-Rights and obligations attaching to individual parcels and provisional blocks