

3D Property – Types of Rights and Management Factors

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SUMMARY

The use of 3D property rights has become a common feature internationally and has existed for many years. This paper presents a classification of the primary forms of 3D property rights examined into specific types, where the two main forms are the independent 3D property and the condominium. Condominium means ownership of single apartments, while the independent 3D properties are larger units, or units not delimited by a specific building.

The development from 2D property rights towards 3D property rights is also presented with particular focus on Sweden. Different 3D property rights models are exemplified by the independent 3D property model in Sweden, the condominium ownership model in Germany, and a combination of the independent 3D property form and the condominium form as evidenced by the legal systems of two Australian states, New South Wales and Victoria.

A number of key factors related to 3D property rights that seem to be common for most forms and systems are presented. These include the delimitation of property units, the content of the definition of common property, the forms of cooperation between property units, management and regulation issues, as well as the settlement of disputes and insurance solutions.

Due to problems related to these factors and development in the society, more or less substantial amendments to the legislation have been required in the studied countries, with shortcomings still remaining after many years of use. Since the key factors seem to be common for most forms of 3D property rights, it would be of benefit for countries planning on introducing such a system to utilize the experiences of other countries with similar systems.

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1. INTRODUCTION

In the urban society of today the utilization of space has increased as there are many complex situations where there are multiple uses of space. The use of three-dimensional (3D) property rights has become a common feature internationally and has existed for many years. This development can be facilitated by guaranteeing the property right of owners. Different actors are in this way granted 3D property rights in order to use space within the same land parcel. Different forms of such rights can be found internationally. In some countries they have been in use for a long time, but in Sweden the 3D property form was recently introduced. During the years of use the complexity has increased and in particular the management of such properties has become an important matter. Problems connected with these forms have been experienced in these countries and led to new solutions and amendments of existing legislation.

It is possible to notice that 3D property rights can be found all over the world and the condominium form in particular seems to be a well-functioning concept that is widely spread, for example in Europe. During the years of 3D property rights use, the systems have developed with new forms. To a great extent, it will depend on the needs of society and the development forms emerging. However, despite the differences existing between the types of 3D property rights, there are very similar rules within the various types of housing. Generally speaking, it is regarding the type of ownership that we find the greatest differences.

This paper includes some of the main results from the PhD thesis *3D Property Rights – An Analysis of Key Factors Based on International Experience* (Paulsson, 2007). The objectives of the paper are to present a classification of the primary forms of 3D property rights examined into specific types and categories, including a brief overview of international 3D property use. These different forms will be described, their characteristics and the differences between them. The development of such rights, from 2D property rights towards 3D property rights, will also be presented with particular focus on Sweden, exemplifying how the development in society has led to the need of additional forms. As case studies will be presented three different 3D property rights models as exemplified by three countries, including the independent 3D property model in Sweden, the condominium ownership model in Germany, and a combination of the independent 3D property form and the condominium form as evidenced by the legal systems of two Australian states, New South Wales and Victoria. In the objectives are also included to present key factors essential to a well-functioning 3D property rights system and demonstrate different ways of dealing with 3D property rights in the case study countries with a particular focus on management questions.

2. 3D PROPERTY RIGHTS

2.1 Forms of Property Rights

It is by no means evident what is meant by 3D property rights. Are not all property units in fact three-dimensional? The three-dimensional aspect of the property does not concern the actual extent of the property unit, but rather the delimitation of it. However, it is difficult to define the term 3D property, since it is not often used as a general comprising term and the content of it differs between the countries in their legislation. One description of it could be that it is real property that is legally delimited both vertically and horizontally (Paulsson, 2007).

When looking at property rights internationally, it is possible to discern different types of 3D property rights. The specific features for each type depend a lot on the legal system in the specific country, but it is possible to categorise them in some types, which can be done in different ways. Even though a categorisation has been made here subdividing the forms into specific types, there are no clear boundaries between certain of the forms. One such classification is presented below, including the full range of 3D property rights in the broad sense, such as granted rights and leases.

Table 1: Forms of 3D Property Rights (Paulsson, 2007)

(1) Independent 3D property	(a) Air-space parcel
	(b) 3D Construction property
(2) Condominium	(a) Condominium ownership
	(b) Condominium user right
	(c) Condominium leasehold
(3) Indirect ownership	(a) Tenant-ownership
	(b) Limited company
	(c) Housing cooperative
(4) Granted rights	(a) Leasehold
	(b) Servitude
	(c) Other rights

The forms of 3D property rights can vary when it comes to ownership, delimitation, that included in the common property and how the management should be carried out. The two main forms that are the most common are the independent 3D property and the condominium. Condominium means ownership of single apartments, while the independent 3D properties are larger units, or units not delimited by a specific building.

The first type, the independent 3D property, can be found in several countries. It is when a volume of space is subdivided and separated from the rest of the property. Often it is a bigger unit, including several smaller apartments, or offices, etc. It is also often used for facilities and infrastructure, such as railway tunnels, etc. The air-space parcel can comprise just a volume of air, while the 3D construction property has to be related to a building or construction of some sort, which is the case of the Swedish 3D property form. This type can be found for example in Australia, Canada, and is the form that was recently introduced in Sweden.

A very common type of 3D property is the condominium, or ownership of apartments. It is usually well defined and consists of three components, namely the ownership to a part of a building, a share in the common property and membership in the owners' association. The condominium can be found in many European countries, but also in Australia, Canada, South America and other parts of the world. Most commonly, this type is used to subdivide a building into several apartments, with each resident owning his own apartment. Two main ways of organising the condominium are the condominium ownership form and the condominium user right form. In the condominium ownership model the apartment is owned independently like a piece of land and is regarded as a real property unit, while the land and the common parts of the building are jointly owned. Belonging to the condominium is a share in the common areas, such as stairs and ground. This form exists in countries such as Denmark and France. The condominium user right means that the building and the surrounding grounds are owned jointly by the condominium owners. The owners only own a certain share in the common property and connected to that share is a permanent exclusive right to use a certain condominium apartment in the building. This form can be found in, for example, Norway and the Netherlands. In general, it is possible to say that the condominium type is more common throughout the world than the independent 3D property type.

More indirect ownership forms are also used. In Sweden, for example, ownership of apartments is not yet possible, only larger units are allowed for the independent 3D property. However, Sweden has another way of indirect ownership for apartments, the tenant-ownership, where a tenant-owner association owns the apartment building and the land on which it stands. The members will provide capital for the right to use the apartment, so the tenant-ownership represents a share in the capital of the association, not in the building itself. There is also the limited company system, which exists for example in Finland, where a joint stock company owns the property, and the residents by acquiring shares in this company obtains the right to exclusively use one of the apartments of the building. Granted rights, finally, is the type of rights to space without specific ownership, for example leasehold and servitude or easement.

2.2 Development of Property Rights

The forms of 3D property rights existing in a country are often developing. Many countries have had some other form of such rights before they introduced their 3D property legislation. Such types initially were often indirect forms of ownership, with some type of co-operative as a common feature. From this, it has developed towards either the condominium form or the

independent 3D property, or a combination of these. This development corresponds to a great extent with developments and changes in society.

Development of property rights from 2D to 3D thus often is a gradual process, and that was also the case in Sweden when the 3D property was introduced. The traditional 2D ownership of real property has existed from ancient history and can be regarded as the “basic” form of property right. Rent is also a form that has existed for a long time, where someone is given the right to use e.g. a part of a building. The next step was to introduce co-ownership legislation, which gave the right for several persons to own a building together in shares and occupy separate apartments within that building. The Swedish tenant-ownership was introduced in 1930 and provided an indirect ownership form through membership in an association that owns the property, and through that ownership obtaining the right to use a specific apartment in the building. The limited company system in Finland is a similar form.

The condominium forms the next step in the development towards the “pure” 3D property ownership. The condominium user right, where a share in the property gives the right to use a specific apartment, is followed by the direct condominium ownership, where the actual apartment as a part of the building is owned. This latter form includes a share in the rest of the property, i.e. land and common parts of the building. The last step in the “development chain” of property rights is the independent 3D property, where a volume of space is owned independently, just like a 2D property. Other rights can then be granted to others within this volume.

Before the 3D property, other means were used in the Swedish system to cover the need of using space within a property unit, such as granting easements, utility easements and establishing joint facilities. Different kinds of leaseholds were also possible. One step towards 3D property formation was taken in Sweden with the introduction of the possibility of segregating fixtures from a property without physically removing them from it. The new legislation aimed at making buildings or facilities legally transferable from a property to another right-holder without removing the fixture. The possibility of breaking the link between real property and fixtures in this way prepared way for the 3D property.

It is also possible for a country to have several forms of 3D property rights, as we can see for example in New South Wales in Australia. These forms can be combined, where an independent 3D property unit can be subdivided into condominium units. The relationship between them is both complex and flexible. Several countries that have the condominium form also have other types of property rights for apartments, such as indirect ownership similar to tenant-ownership, or tenancy. Such countries are, for example, Denmark and Norway (Brattström, 1999).

2.3 Case Studies

Australia is a country with a combination of the independent 3D property type and the condominium type. They have a long experience of 3D properties and introduced legislation for this in the beginning of the 1960’ies. Each state within the country has its own legislation

and separate systems for 3D property rights, but I have studied two of these states, namely New South Wales and Victoria. Two main types can be found in the state New South Wales: the stratum, which is an independent 3D property form consisting of a volume of space, and strata title, which is a form of condominium ownership. Combinations of these forms are possible and other variants have later been added. Victoria has in recent years simplified its system by incorporating 3D property into the legislation for the traditional 2D property, and by this no difference is made between the traditional 2D property and the 3D property. Since the introduction of the legislation in these Australian states, they have changed and developed their legislation many times, to come to terms with shortcomings that were found through use, as well as to meet changes in society with demands for new forms of ownership and management.

Germany was studied as a representative for the condominium type. This is a form that is common also in many other European countries. Apartment ownership (*Wohnungseigentum*) was introduced in the legislation in 1951. The condominium is regarded as a threefold unity, consisting of ownership of the individual apartment unit, a share in the common property and membership in the association managing the building. The system seems to be successful and has remained mainly unchanged during more than 50 years of use, even though it has been adapted to changes in society, e.g. concerning management of large building complexes with several hundreds of apartments, where a professional manager now is used. No independent 3D property type is in use in Germany.

The independent 3D property type was introduced in Sweden in 2004, after several years of investigations and suggestions. The 3D property (*3D-fastighet*) is defined as a property unit which in its entirety is delimited both horizontally and vertically (Swedish Land Code, Chap. 3, s. 1a). It has to form an enclosed volume of space and must relate to built constructions. It may only contain bigger units, at least five apartments, if it is for residential purposes. There is no special legislation for the 3D property. It is in general regarded as a regular property unit, and only some specific regulations have been added to the regular property legislation, in the Land Code and especially the Real Property Formation Act. Certain features from the condominium type can be found, such as the existence of common property and management associations. Apartment ownership is not yet allowed in Sweden, but recently it was brought up for discussion again and a proposal is to be presented.

3. KEY FACTORS

Through my studies of systems for 3D property rights in different countries, I have focused on the development of the 3D property legislation and what kind of problems that have been experienced and how they have been solved. It has been possible to discern from these international studies certain factors that seem to be important for a successful and lasting system for 3D property rights, regardless the form of 3D property and the legal system. Many of them relate to management aspects, which can be identified in the studied systems as an important area to create rules within. These key factors are listed below.

Table 2: Key Factors and Possible Problems (Paulsson, 2007)

Key factor	Possible problems
Boundaries	Location of boundary: centre/surface Private/joint responsibility for structural parts
Common property	Unclear definitions – what is included
Co-operation between property units	Choice of co-operation form: easement/joint facility Areas included/parties involved
Management	Unclear responsibilities Insufficient and unclear regulations Large, complex developments – need for professional managers
Settlement of disputes	Choice of resolution method: court procedure is expensive, time-consuming
Insurance	What should be included Responsibility: private/joint

One such factor concerns boundaries between the units and the common property, and between the units. For instance, in New South Wales the boundary between two strata units was previously located in the centre of the separating walls, but when problems emerged with this solution, a law amendment was made that fixed the boundaries to the surface of walls, floor and ceiling. When the 3D property is situated within a building, such as the strata title, the boundaries are defined by the building itself, not by coordinates, but if they are stratum units they must be limited in height with the use of height coordinates. The boundaries of the Swedish independent 3D property can be described either with reference to walls, ceiling and floor, which is the usual case for buildings, or be fixed by x, y, and z coordinates for rock shelters, etc. It is decided from case to case where to locate the boundary between two such properties, based on what is regarded as suitable in the specific case. The location of boundaries is important in order to be able to decide who should be responsible for the structural parts of the building, whether it should be the individual property owner or the owners together. This is also related to the responsibility for management.

Connected to the boundary issue is the ownership of common property. There may be uncertainties about what shall be included in the common property, such as supporting walls, service pipes, etc. To clarify the responsibility for this it must be decided to whom these parts belong, which of course is related to where the boundary between the different parts is

located. In some cases it is listed in detail what parts of the building that belong to the common property and in other cases defined exclusively as everything not belonging to the individual property units is regarded as common property (van der Merwe, 1994). The result can be either that supporting structures can be common property and managed by the association, or included in each individual property unit and by that being the responsibility of the owners separately.

Another problem to solve is what solutions to use for the cooperation between property units, including giving access to the building construction between the individual units, stairs, elevators, ventilation systems, etc. It might be unclear both what areas that should be included and what parties that should be involved. Common solutions for this are to form joint facilities, where all properties units will participate, or private ownership with access through easements for parts of a building. A joint facility can be suitable when the properties units are equal in size and function, but if the relationship between them is more uneven and one of the properties is the dominant one, then private properties with access by easements would be more suitable. The advantage with a joint facility is that the responsibility and costs are shared. For a building with the independent 3D property or stratum units, however, private ownership is needed where no common property exists. The use of these structures and services will then be regulated in agreements between the owners.

A major issue that has proved to be important, and a source for problems, is management. For example, when the 3D property system was introduced in Australia, one of the main problems concerned how management of the common property should be taken care of, along with how to solve disputes. There is usually an association, formed by the owners, which is to take care of the management, and an executive committee taking care of the day-to-day management. There is also a possibility to let professional managers run parts of the work of the association, which is common especially for larger and complex building developments where the management often tends to be rather complicated. It is also possible to create a large association that will function as an umbrella for a larger area, with the smaller associations for limited areas being members of the larger one. Rules for management can either be compulsory and included directly in the law, which is often made for important procedure rules, or they can be decided by the associations themselves through by-laws, which can regulate more detailed issues, such as how to maintain order within the building. Even details regarding whether it is allowed to keep pets in the building may be included in such house-rules. The responsibility for the management of common parts may be unclear or insufficient, or there may be unclear regulations in the legislation or by-laws for the building.

It is also important to have a good system for resolving disputes, which often occur when several property owners are in such close connection within one building. If there is no simple procedure for the settlement of disputes, the disputes have to be taken to court, which is both costly and time-consuming. To avoid this, a mediation procedure can be introduced, or a simpler process with an adjudicator. Insurance has also caused difficulties. Among the issues that have to be solved in this area are what matters and parts of the building that should be included in the insurance, the responsible part for insuring the common property and the

apartments respectively – the individual or all owners jointly through the association – and whether it should be done compulsory for everyone or with individual solutions.

4. CONCLUSIONS

In the classification of 3D property forms presented above we can see that the 3D property forms in the broad sense range from complete independent ownership of a volume of space, to specific rights without ownership, just giving the right to use the apartment without having any of the other rights that a property owner is entitled to. At this end of the scale we can find the normal rented apartment. The systems for 3D property use have developed with time, and new forms of 3D property rights and matters connected with such systems, such as regulations on management, have been added when the need has emerged with new phenomena and difficulties in society and the lack of solutions to them. Even though the legislation has developed and improved, the complexity has increased.

The problems experienced within the studied 3D property systems have mainly concerned issues within the mentioned key areas, where the management aspect as mentioned seems particularly difficult. There are of course other issues as well to consider when it comes to 3D properties, but these seem to be the most important ones and the source of the most frequent discussions and disputes. More or less substantial amendments to the legislation have been required in many countries, with shortcomings still remaining after many years of use. However, the 3D property systems in the studied countries seem to be working well. The condominium form in particular stands out as a well-functioning and reliable concept. Another reason for changes in the legislation is development in the society and new building forms, which has created a need for adaptation of the legislation. The need for amendments seems to increase the more detailed and complex the regulations are. The key factors to a large extent correspond with those that could be expected in advance and that can be found from theories concerning important and critical issues in 3D property formation. They can also be said to be somewhat different and more particular than issues relating to traditional property formation.

Since the key factors seem to be common for most forms of 3D property rights, it would be of benefit for countries planning on introducing such a system to utilize the experiences of other countries that had the same type of system for a long period of time, to see what kind of problems they experienced, what mistakes they have done and what solutions that seem to be the best alternatives. However, it is important to consider the differences in legal systems, society, etc and adapt the 3D property system to the conditions within the specific country.

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BIOGRAPHICAL NOTES

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