

TEXTOS EN INGLÉS

LAW OF REAL ESTATE CADASTRE (II)*

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Part one of this study concluded that, in matters of cadastral titlehold, the then PLCI (hereinafter, Merged Text of the Law of Real Estate Cadastre, passed by Legislative Royal Decree 1/2004 of 5 March, or TRLCI) was “closer to the old cadastral model than the new one”, since it allowed titleholders to choose whether or not to register the rights of joint owners or members of non physical entities, while the registration of concurrent rights was limited to the rights holders legally required to register in the Cadastre for administration of the Real Estate Tax.

The explanation I gave then for the exception to the rule of compulsoriness turned out to be short-lived. Just a few months later, Law 2/2004, of 27 December, on the 2005 National Budget, thoroughly modified the text of article 9 of the TRLCI. It is therefore necessary to discuss the new rule in order to review the complete replacement of the provisions valid in 2003 and 2004 which have ceased to be valid as of 2005.

The change is far-reaching in scope, and it can no longer be said that the Law of Real Estate Cadastre has taken half measures. On the contrary, the Law has evolved with uncharacteristic speed, shedding what in retrospect can be seen as excessive precaution and serious self-limitation. The new legal regulation on cadastral titlehold is today effectively based on the principle of compulsory registration of concurrent or shared rights. Titlehold has therefore ceased to represent a straight line to become a three-dimensional matrix.

“Cadastral titleholders are” –per the new regulation– “those physical and legal entities registered in the Real Estate Cadastre as the entitled holder, relative to the whole or part of an estate, of one of the following rights:

- a) Right of full or partial ownership.
- b) Administrative concession of the real estate or of the associated public services.
- c) Real rights of surface.
- d) Real rights of use.”

(*) The first part of this work was published in 2003 in edition 48 of CT/CATASTRO. Part 2 now appears following approval of both the (then) Merged Text of the Law of Real Estate Cadastre and its regulations for enactment. With only the new regulation on cadastral appraisal still pending, specific legislation on the purpose and activity of our institution has evolved significantly, and we are now in a position to reinstate the work interrupted at that time precisely because of the need to wait for these provisions to see light.

This first paragraph of article 9 of the TRLCI clearly reflects the change in direction on this matter as of 1 January 2005. The excluding preference defining the rights holder to be the entity liable for payment of Real Estate Tax no longer exists. Rather, cadastral titlehold can and should include all rights holders, of full ownership, bare ownership, concession, surface or usufruct; and each right of each rights holder to the entire estate, or part of the estate. For example, the Cadastre will include the surviving spouse and his/her children (and not only the former, as was the case prior to Law 2/2004), two spouses co-owning their home and, in general, *b* bare owners and *u* usufructuaries of each nth part of the estate.

Having thus solved the quantitative aspect, we should also discuss the matter of quality: why only these rights?

In principle, we can assume that there are two reasons. The first is that these rights –especially a) and d)– are the most common or widespread. This reason justifies the selection made by the combination of articles 61 and 63 of the Merged Text of the Law for Regulation of Local Tax Administration (TRLRHL) to define who is potentially liable for payment of Real Estate Tax.

In short, the inclusion of other uncommon or unusual rights of usage –for example, dwelling rights– is probably not worth considering (once again, because in the event of compulsory registration of these rights in the Cadastre, the costs, both for the individual and the Administration, would outweigh the benefits).

Secondly, the Cadastre is not a Real Estate Register and does not fulfill this function. Therefore, it is not the purpose of the Cadastre to make space for whatever rights are registrable in the Real Estate Register, but rather, to keep to what is our true shared mission: the definition of real estate as objects generating rights, and to register those rights which, due to their majority status and their relevance for taxation, are the principal aim of Real Estate Taxation. (1)

(1) We could here make a passing mention of the debate, widely extended in international forums, on the future functions of the Cadastre, for example, the document CADASTRE 2014 proposed by the International Federation of Geometricians (www.fig.org), or the draft declaration on the Cadastre and the Real Estate Register currently under discussion in EUROGEOGRAPHICS (www.eurogeographics.org) and the Permanent Committee on Cadastre in the European Union (PCC) (www.eurocadastre.org). However, as well as leading us away from our purpose, these documents can not be properly summarised in the space of a footnote although I can now say, without too wide a margin of error, that the future of the relationship and connection between the Spanish Cadastre and the Real Estate Register has not yet been written, and that technology, the demands of society, and the European political and economic context will sooner or later lead to a single shared database, or more generally, to fully coordinated and interoperational databases.

The first of the two reasons outlined above is, however, contradicted in paragraph 4 of article 9 of the TRLCI which, while first denying them the condition of cadastral titleholders, requires registration in the Cadastre of the holders of real usage rights other than those listed in 9.1, although “exclusively for purposes of information relative to the assignment of real estate income in Income Tax”. Once again, a measure that falls far short of the overall objective.

Note that denial of the status of cadastral titleholder –which I will refer to later– neither adds nor subtracts from the substance of what is here being discussed. After all, anyone –cadastral “titleholder” or otherwise– using a mooring, a premises, or an apartment in a marina, having been granted right of usage by concession of the licensee of that marina, must necessarily be included in the Cadastre, given compliance with the remaining terms established in article 87 of Royal Legislative Decree 3/2004 (Merged Text of Income Tax Law) in order to assign presumed income for said rights and estates.

This naturally gives way to the coherence of the rule with what has already been said regarding what is essential for the Cadastre. Once again, Cadastre and taxation go hand in hand, although in this case the pairing, far from being accidental, is strategic in scope. I will explain this when the time comes to discuss other aspects of the reform brought about by Law 2/2004, such as the communications and quasi-communications of the AEAT (article 14.d and 7th Transitory Provision of the TRLCI).

Whatever the case, the legal requirement for titleholders to “declare to the Cadastre” the rights of usage not expressly named in article 9.1 of the TRLCI clearly derives from the order of article 9.4. Some will say that it can also be deduced from article 13.2, which establishes the requirement for “titleholders of the rights referred to in article 9” to “formalize the declarations leading to incorporation in the Real Estate Cadastre of estates and their modifications”, however I believe that this conclusion is mistaken.

The question is, then, does article 13.2 refer to the titleholders of all usage rights referred to in article 9, or only to those named in its first paragraph?

The question is hardly innocent, given the penalties deriving from non-compliance with the obligation to declare, but aside from this, neither is it gratuitous. We must observe two aspects that apparently contradict this obligation: on one hand, as we have seen, the titleholders of usage rights defined in article 9.4 of the TRLCI are not cadastral titleholders; on the other hand, article 13.2 itself adds that “the titleholders of the rights referred to in article 9 are subject to the obligation to ... provide identification details of those who are holders” of the rights referred to in article 9.4. From this perspective, the subjective scope of the first clause of article 13.2 of the TRLCI is unclear.

A first interpretation of the text would lead us straight to an affirmative answer: in effect, inasmuch as the legislator fails to make a distinction and indicates “the titleholders of the rights referred to in article 9”, this undoubtedly includes those in 9.4, meaning that the person acquiring the right of usage of a mooring in a marina must declare it to the Cadastre. Why, then, the correlative and specific requirement for information in the second clause of article 13.2, which would, in this example, fall to the licensee of the mari-

na –who in this case is the “cadastral titleholder”– per article 9.1?

In my opinion, the correct interpretation of 13.2 leads us to the opposite conclusion: that the mention of article 9 should be understood to refer to its first paragraph and not to the whole. For two reasons: firstly, it would be absurd to establish the requirement for information on third parties in parallel with the requirement for these third parties to declare, for such a specific case and in such an inadequate location (the duty of collaboration of third parties is properly located in Title IV of the TRLCI, and not in Title II, which establishes the duty to declare). Secondly, the fact, possibly clearer still, that article 15 establishes as a typical case of cadastral request, that which “may” (and not “must”) be presented by the titleholders of the rights defined in article 9.4. The explicit rule (“the user of the mooring may request that his/her right be registered”) therefore prevails over the more general rule governing the duty to declare, since –and let’s not lose sight of this– in the Law of Cadastre, declarations and requests are always, on principle, disjointed and complementary. In other words: it is absurd for someone to be simultaneously required to declare or inform the Administration of something and to be able, at his/her own discretion, to offer up this same information, since in the case of obligation, free will only serves and is applied as an instrument of compliance (or non compliance) and never as the final purpose. The type of will expressed in “I ask because I should” is not the same as “I ask because I want to”: in the former, will is subject to an external imperative, and in the latter, to free will and will usually seek the benefit of its owner, while in the former case it is also usual for negative consequences to occur.

One last knot remains to be tied in our review of article 9.4: why does the Law deny the holders of these rights the status of cadastral titleholder? Here practical sense again raises its head, or in a better turn of phrase, the need to prevent excessive workload for the Administration, the permanent feedback between reality, administrative capacity and the fullness of concepts and institutions.

In principle I would say that there is no theoretical reason for this mutilation, and that one would have to investigate and be satisfied with discovering what differentiates cadastral titleholders from those who are not and draw the appropriate conclusions (but not the reasons, other than those modestly offered by the prudence of the administrator). And we see that:

- 1) in article 10.1, cadastral titleholders “hold the rights recognized in article 34 of Law 58/2003, on General Tax, with the specialties established” in the TRLCI;
- 2) correlatively (article 10.2), titleholders are assigned the generic obligation to collaborate with the Cadastre, including the provision of “whatever data, reports or antecedents may be necessary” for administration of the Cadastre. Further, compliance with this obligation is a condition of the validity and the possibility of presumption of accuracy of the cadastral data benefitting said titleholders and which is established in article 3 of the TRLCI; therefore, the obligation refers to their own data, and not those of third parties, as we will see later.

If this is, in summary, the legal statute of the cadastral titleholder (I will not consider, for now, the special rules of representation of article 9.6 of the TRLCI), we have to conclude that the titleholders of the rights of usage defined in 9.4 should not be subject to application of their assets or liabilities, nor the rights of article 34 of the LGT (but Law 30/1992, ex article 12 of the TRLCI, is still valid and applicable!), nor the obligation to collaborate of article 10.2 of the TRLCI. In view of the above, it occurs to me that this statute could be left behind in the short term, given its limited scope and, to a certain extent, its contradictory nature.

I believe I can affirm here that this rule ("consideration of cadastral titleholders will not apply ...") is notable, not only for its limited productivity, but also for having been the tactical vehicle of the reform introduced at the end of 2004. It was a matter of enabling the Cadastre to satisfy the need for information of the AEAT and for this purpose—was the thought at the time—the text finally approved by Parliament was enough, and a closer connection with the structure and logic of the cadastral law as a whole was not necessary (2).

PREFERENCE OF RIGHTS, REGISTRATION OF SPOUSES AND JOINT OWNERS

Law 2/2004 introduces further innovations, so I have not yet completed the task of discussing the whole, or at least the major part, of the new article 9 of the TRLCI. Other noteworthy aspects, which I will go on to discuss, are the preference of registrable rights or rather, the disappearance of this preference; the registration of spouses and joint owners; and lastly, the afore-mentioned rules of representation.

With regard to preference: possibly the most important innovation of the 2004 reform, from the conceptual viewpoint, is this disappearance of the preference of registrable rights in the Cadastre. As mentioned previously, we are now faced with a matrix of titleholders which, in the most complex case, can be three-dimensional. Thus, since 1 January 2005 the Cadastre contains, as well as the identification of the entity who is the passive subject for the purposes of Real Estate Taxation, any other holder of the rights listed in article 9.1 (and 9.4), regardless of their number and regardless of how minimal their relevance in terms of the entire estate.

Logically, and as I anticipated earlier, this change originated with the Resolution of the Secretary of State of

Taxation of 22 December 2003 (www.catastro.meh.es, regulation, 4.1.5) and with the Plan for the Prevention of Tax Fraud submitted to the Council of Ministers on 4 February 2005 (www.agenciatributaria.es), which places emphasis on the real estate sector and is based on a strategy of close collaboration between the Cadastre and the AEAT within the framework of the provisions of the mentioned Resolution. This brings an end to the long period that began with the creation of the Consortiums for the Administration and Inspection of Territorial Taxes in the mid 1980s which increasingly separated the functions and operations of the two institutions, or more exactly, of the different organizations that in the past twenty years have exercised the competencies that today correspond to the AEAT and the General Directorate of Cadastre (3).

But regardless of its origin, the change we are now discussing has consequences for the traditional perspective from which society has viewed the Cadastre and the way in which society relates with the Cadastre. As well as the improvement in compliance with Income Tax and subsequently in the fairness of Real Estate Tax, it is noteworthy that the cadastral reference has effectively become the single identifier of real estate property for taxation purposes (almost 26 million urban estates have been identified via Cadastral Reference by taxpayers of the 2005 Income Tax in their tax statements presented in 2006). Further, from the viewpoint of local governments, we must also emphasise the repercussions of the change in article 9 of the TRLCI in terms of administration of Real Estate tax, since in the event of several cadastral titleholders it is the local governments who must identify and select which of these titleholders is liable to pay the Real Estate tax by virtue of the level of preference of the titleholder's right, per article 61 of the TRLRHL. Thus, a collateral effect of the new article is that local entities have gained a greater degree of autonomy in the administration of their real estate taxes.

With regard to the registration of spouses in the Cadastre as co-owners of real estate, the 2004 reform introduced a specific paragraph (number 3 of article 9 of the TRLCI) indicating that "when some of the rights referred to in paragraph 1 of this article are common to both spouses, in accordance with the provisions or regulatory pacts of the corresponding marital economic system, cadastral titlehold will correspond to both and will be allocated equally between the two, unless a different share is justified". This means, as a minimum, that (i) both spouses must be registered in the Cadastre as co-titleholders of the real estate properties they share, and that (ii) by defect, the rule presuming equal acquest or 50-50 ownership is applicable.

(2) We should not lose sight here of the dynamic perspective which I have so often tried to explain our cadastral legislation: once again we read that "cadastral titleholders" are those "who may be passive subjects of the Real Estate tax" (before 2005, one could only say "the cadastral titleholder" in the singular, is the person who "should be the passive subject of the Real Estate Tax"). However, as a novelty, and with the timidity of the unknown, a new group of cadastral subjects appears whose characteristics are stated in the positive "those who should allocate assumed income in Income Tax" and also, for historical purposes, in the negative (unrelated to real estate tax).

(3) The first results of the plan can be summarised in the following figures published by AEAT in September 2006: 1.357.626 taxpayers declare income from property rental, 15% more than before the Fraud Prevention Plan. These lessors earned 11,107 million euros from rentals, 19% more than the figure declared before the Prevention Plan. Further, 4.328.739 declared ownership of a second residence, 35% more than in 2004, and the income allocated in Income Tax for these second residences or estates other than the primary residence grew by 31% up to 1,624 million euros.

This paragraph has had far-reaching effects on the Cadastral database and elsewhere since its introduction. For reasons of brevity, I will here only refer to the three main effects. Firstly, more than 7 million spouses have been registered in the Cadastre who were previously unidentified; second, the number of Income Tax proposals issued by AEAT and confirmed by the taxpayers has increased from 2.9 million in 2005 to 4.2 million in 2006; and lastly, every cadastral certificate (more than 1.9 million issued via Internet and nearly 500,000 issued on paper in the first ten months of 2006) now specifies the condition of joint titlehold and identifies the spouse. All three aspects represent a huge change to the situation in place up to the end of 2004.

With regard to joint owners, members or participants in non physical entities, which I addressed in the first part of this work, the 2004 Reform continues to be inspired by former article 33 (now article 35) of the LGT. It likewise maintains cadastral titlehold *by attribution*, also discussed in the previous work, and for the same reasons; however, it introduces the obligatory registration of joint owners, who are considered “also cadastral titleholders” as defined in the last clause of article 9.2 and articles 13.2, 16.2.f) and, *a contrario sensu*, of D.T. 7 of the TRLCI.

This measure puts an end to the provisionality and precariousness of the previous regulation whereby the registration of joint ownership was voluntary and at the same time, conditional upon their unanimous agreement. As I said at that time, “to the extent that it is possible to obtain information on co-titlehold in a less costly fashion –both for the interested parties and the Administration– and that its maintenance can be guaranteed without generating significant transaction costs, the conditions of voluntary and unanimous registration are destined to give way to compulsory registration”. In effect, this has occurred with law 2/2004 and with two posterior administrative actions: firstly, through cross-referencing of information with the AEAT and with the juridical support provided by the 7th Transitory Provision of the TRLCI (also a product of Law 2/2004), more than 600,000 previously unregistered joint owners have entered the Cadastre, free of charge and therefore precluding the need to subject them to formalities or declarations. Secondly, the recent modification, by Joint Resolution of the General Directorate of Registers and Notaries and the General Directorate of Cadastre, of the electronic file required for compliance with the duty to collaborate imposed upon public certifiers by article 35.3 of the TRLCI, includes information that will ensure that, upon its introduction. This improvement is likewise supported by the resolutions of the General Directorate of Cadastre approving new formats for the exchange of information supplied by the agencies collaborating in cadastral administration (4) and by the recent Order of 19 October 2006 (5) approving new declaration formats.

One last new aspect of the current regulation governing cadastral titlehold of joint owners is the eli-

mination of what in the first part of this study I denominated *titlehold by assignment*. The reader will recall that, per the abolished law, “in the event of non compliance with the obligation to obtain and use the Fiscal Identity Number by a community when submitting Cadastral declarations, cadastral titlehold is assigned to any one of the joint owners, members or participants...” (6). However, the 2004 Reform rules that the community is the cadastral titleholder *by attribution*, and the joint owners are *natural* titleholders, each of his/her own share. Titlehold *by assignment* has ceased to exist, due to the perverse effects of this rule, both in terms of the fiscal implications of the false appearance of real estate titlehold, and of any other false appearances that this simplification transmitted to other administrations or users of cadastral information, usually to the disadvantage of the affected party. For this reason, the reform legislator has ordered that cadastral registration of the community or entity use a “sufficiently descriptive” name in the event that the property effectively lacks a Fiscal Identity Number, plus a proper name associated with said number (7), thus avoiding the more misleading formula of the previous rule.

REPRESENTATION OF TITLEHOLDERS BEFORE THE CADASTRE

The last matter addressed in the modified article 9 of the TRLCI is, as mentioned before, the representation of cadastral titleholders before the Cadastre. Paragraph 6 of this article establishes the following:

- “When several cadastral titleholders coincide in the same estate (for example, bare owner and usufructuary), they must assign a representative. Failing this, the representative shall be considered to be the person liable for payment of the Real Estate Tax (in this example, the usufructuary) or preferably, the substitute of the taxpayer if one exists. If said substitute is a non physical entity, representation will fall to any of its joint owners, members or participants”. The rule therefore is that, in the event of proliferation of cadastral titleholders, and taking into account that the Cadastre, as an administrative register of real estate, is subject to rules of common administrative procedure as established in article 12 of the TRLCI (and must therefore notify its actions, offer the possibility of appearance, grant audience and inform interested parties of the proper appeals), these titleholders must unite their representation in a single per-

(6) MIRANDA HITTA, J.S.: La Ley del Catastro Inmobiliario (I). CT/CATASTRO, n° 48, Madrid, 2003, p.26.

(7) A good example is the community of inheritors consisting of the widower (Expedito) and his children (Cínico and Sofista): until they obtain a Fiscal Identity Number, and without prejudice to the infraction and this might represent, the Cadastre will call them, for example, “Heris of Mrs. So and So”, which is evidently more descriptive than the old alternative (“Sofista”).

(4) Resolution of 31 July 2006 (www.catastro.meh.es/normativa)

(5) Orden EHA/3482/2006 of 19 October.

son, to enable formalities and proceedings affecting them (8) to be carried out in an efficient and economic manner.

Is this requirement logical? Certainly, if we consider the case histories that may have inspired the legislator, we won't have far to look. The General Tax Law of 1963, and the current law, did something similar in articles 33 (LGT 1963) and 35 (LGT 2003) (9). In any event, we should here clarify that, firstly, the cadastral ruling is significantly different to the fiscal regulation, and in fact I understand that the latter is not applicable to cadastral matters, whose own regulation prevails. Secondly, that article 35.6 of the LGT is applicable to Real Estate tax, as well as to other types of taxation (although the special rule contained in article 64.2 of the TRLRHL on the shared liability of concurrent titleholders must be taken into account).

But in the area we are now discussing, the Cadastre, it is nonetheless true that the teleological basis of article 9.6 of the TRLCI is not different to that of article 35.6 of the LGT, which is to simplify administration. Regardless of how appropriate I believe this basis to be (it would be absurd to deny a preference, in the interests of better protection of citizens rights, for individual notification, etc.) it is, however, justified by the equally powerful principles of efficiency and efficacy in public spending, especially in view of the precaution contained in the last clause of this paragraph, which I will discuss later.

Granted that it will not always be possible for different "concurrent" cadastral titleholders to reach agreement to name a representative, the law provides a solution to avoid a situation of indeterminacy that would paralyze the process (or alternatively, would require individual notification): in the event several cadastral titleholders exist and only one of them is considered by the law of real estate tax to be the taxpayer, he/she will be considered to be the representative for purposes of Cadastre. Further, if a substitute exists for the taxpayer in real estate taxation, the substitute will be preferred. In short: if the interested parties do not reach agreement, the representative will be, *ope legis*, the person legally liable to pay real estate tax.

Note that the cadastral legislator has again turned his attention to local taxation, in this case to take advantage of the simplifying formula that the local

taxation structure still maintains to decide who is liable to pay the tax. This is also the reason behind the last phrase in paragraph a) of article 9.6 of the TRLCI: if the taxpayer or substitute is a non physical entity, then, as per the article 43.4 of the old LGT 1963 and article 45.3 of LGT 2003, actions will be addressed to any of its members.

Letter b) of article 9.6 of the TRLCI refers to the specific case of co-ownership of property by married couples: "When cadastral titlehold ... corresponds to the two spouses", says the rule, "representation will be considered to have been granted indifferently to either one of them", adding, perhaps unnecessarily, since this presumption is inherently and in essence *iuris tantum*, that said representation will be demolished "in the event of express indication to the contrary".

There are various points that merit brief attention. To start, we have the basic assumption that the cadastral titlehold of the estate is shared by the spouses, regardless – and this is important – of the marital economic system and therefore also regardless of whether they hold equal shares or different percentages.

In effect, the requirement that the estate "be common" to both spouses contained in article 9.3 of the TRLCI can not be understood to mean "in equal parts", for the simple reason that the last clause of this paragraph provides that the "share" in the property of each spouse may be other than 50 per cent. Therefore, the representation regulated in letter b) of article 9.6 of the TRLCI does not require a minimum percentage, nor does it impose a maximum, of ownership by each spouse; rather, in a manner of speaking representation is conferred upon the spouses by the mere fact of marriage, given co-titlehold. Secondly, the presumed representation is applicable indifferently to either spouse and it is this, or even its denial, that can be subject to "express indication to the contrary". This means that only one spouse can be assigned representative or that said representation can be denied unilaterally or mutually. Note here that, contrary to non matrimonial groups, which are required to have a representative for dealings with the Cadastre, spouses can demand to be heard and notified separately. The legislator has clearly been particularly careful with the increasingly frequent situations where the breakdown of a marriage, and the subsequent legal breaking of the marriage ties, give rise to opportunistic behaviours of one spouse at the cost of the other, and by preventing the denial of representation the intention is to protect one spouse from possible abuse by the other.

From the formal viewpoint, the rule refers to an "express indication to the contrary". Unlike the typical "requests" that must be formalized per the provisions of article 44 of Royal Decree 407/2006 of 7 April, for development of the TRLCI (hereinafter, RLCI), we are here apparently faced with a right (that of denying representation or, in better words, of affirming the right to be heard directly, without intermediaries) that can be exercised in any manner at any time, without requiring a cause and obviously, by either of the spouses, fully efficient *ex nunc* and *erga omnes*. In my opinion this indication could even be verbal, although considering the possible repercussions it would be necessary for the

(8) For example: the notification of the new cadastral value of the estate, the requirement to present data or declarations, the initiation of sanctioning proceedings, etc.

(9) Although in the 2003 version the solution adopted is the solidarity of all obligated concurrent titleholders, and not that of compulsory representation, for this purpose the argument is still valid: "seeing that many liable parties exist, and that this will or can complicate administrative management, it is reasonable to deal with only one of them and for them to reach understanding among themselves". (For a critique on how the LGT has gone too far on this point, see MANTERO SÁENZ, A. y GIMÉNEZ-REYNA RODRÍGUEZ, E. (coord.): LA LEY GENERAL TRIBUTARIA. ANTECEDENTES Y COMENTARIOS. Asociaciones de Abogados Especializadas en Derecho Tributario. Madrid 2005. Páginas 229-231).

Administration to issue a document confirming the will expressed by the party to henceforth be heard in the proceedings affecting him/her and to receive notification of their resolution, whether these are final or procedural.

The rule under analysis concludes by referring the remaining assumptions to the rules of representation contained in Law 58/2003, on General Taxation and also, with the recognition of the rights of the represented parties, in general, to “be notified at all times of the proceedings carried out relative to the estate, and of any resolutions that may be adopted”.

The first of these two points is a typical closing clause, intended more to close any potential gaps than to address an identifiable case, since I believe that letters a) and b) of paragraph 6 of article 9 of the TRLC already span all possible assumptions if we limit the context to the subject of the paragraph (“cadastral titleholders”).

THE RIGHT OF THE REPRESENTED PARTIES

Of greater interest is the last paragraph of the article we are discussing: if the *incipit* of paragraph 6 were not enough (“for the purpose of their relations with the Cadastre ...”), we are now provided with additional clarification, by affirming something close to the opposite of what, implicitly, is denied: given that the formalities will be addressed to the representative and that, therefore, the represented party is unable to act on his/her own behalf, the paragraph recognizes the right of the represented party, in compensation, to be notified of the Cadastral acts that affect him/her.

The underlying idea is based on distrust of the fullness of representation: the representative may not have been freely designated, as in article 1709 of the Civil Code, by the represented party. Precisely due to disagreement or lack of communication between the parties, their wishes, while unexpressed, may have to be replaced by a proposal from the legislator to designate as representative the person occupying the subordinate position defined in the TRLCI.

This is clearly a good measure which provides an additional guarantee, not strictly necessary in principle, for the defence of the rights of the represented party. However it is probably excessive if we note the fact that the underlying hypothesis might not arise, since it is perfectly possible that the commonholders reach agreement to name their representative and in this case, like a happy marriage, the additional precaution of this peculiar “right of information” would be unnecessary.

In any case, as in some other walks of life, there is no harm in excess, and we should welcome it here if only because the sheer volume of cadastral production makes this type of counterweight highly advisable, not only for the interested parties but also for the Administration, which should and does defend the maximum security, certainty and protection of the rights of its clients, even above economic concerns.

In view of the foregoing, we should take a closer look at the material scope of this right. What exactly

is referred to by “the proceedings carried out relative to the estate, and the resolutions...”?

We know from article 52 of the TRLCI and the corresponding articles of the RLCI (80 and following) that “anyone may access information on their own property ...”, therefore the right of article 9.6, *in fine*, can not refer to the same thing (data registered or not registered in the Cadastre, viewed thus, as static data) but rather to everything else, which is exactly what makes up the dynamic aspect of the Cadastre: cases, formalities, the “proceedings” named in article 9.6 to summarize the total of actions. The specific mention of “resolutions” appears to be more didactic than innovative, since it does not contribute anything to the text.

We must address one last item relative to cadastral titlehold to close this phase of our panoramic tour of cadastral law. This is the matter of the anachronic –partially and apparently, at least– article 12.6 of the TRLCI.

The adjective is deserved if only because its text comes directly from Law 48/2002 on Real Estate Cadastre, and has remained unchanged despite the introduction of Law 2/2004. The ruling states that “When several cadastral titleholders coincide in a single estate, the proceedings deriving from procedures of incorporation will be addressed exclusively to the titleholder referred to in paragraph 1 of article 9. Nevertheless, whenever the cadastral description might be affected by the resolution adopted, notification of the proceedings will be given to the registered owner of the estate as per the provisions of paragraph 2 of said article”.

Two main questions arise after reading this transcription. Firstly, the purpose of the text is to regulate who cadastral proceedings will be addressed to in the event that several titleholders exist – this initially seems very similar to the content and purpose of article 9.6. Secondly, it is worth noting the call to “the titleholder referred to in paragraph 1” of the same article 9. As mentioned previously, this paragraph contains the definition of *natural titleholders* versus the *attributed titleholders* referred to in the first half of paragraph 2; however, 12.6 requires “notification” of proceedings “to the registered owner of the estate” precisely by virtue of the aforementioned paragraph 2.

In effect, article 12.6 states that administrative proceedings be addressed “exclusively” to the natural titleholder. The first thing to note here is the purpose of the ruling, clearly visible behind the adverb “exclusively”: to simplify the procedure and reduce costs, as in article 9.6. Up to this point the two articles coincide, and one could say that article 12.6 contributes nothing new. However, closer inspection shows that this article does not only refer to a single individual, since the same estate may feature several natural titleholders, several attributed titleholders, and a simultaneous mix of natural and attributed titleholders. Here, in my opinion, is the root of what may be an interpretation integrating the two rules: in the event of concurrence of natural and attributed titleholders, the article is telling us to address the most genuine titleholder, the one described in article 9.1, and relegate the titleholder defined in 9.2 to the position reserved for him/her by the second clause of article 12.6.

And if this is not the case, then there will only be natural titleholders (the article 9.1 titleholders), and in this case article 12.6 has nothing to say, since it would be tautological to state in this context that “if only A exists, then deal with A”, an affirmation that neither economises nor simplifies and much less adds value.

Nor can we say that the problem which nevertheless arises through this interpretation is that 9.6.a) could lead us to the opposite solution, which would invalidate the former (because 9.6 is *lex posterior*) and with it, the whole of article 12.6. Let's think it through: although 9.6 also refers, as an example of application, to the concurrence of several cadastral titleholders, without distinguishing if these are natural or attributed, in other words, implicitly acceptance the concurrence of both types; and although in this case the article provides that, if the parties fail to reach agreement, the representative will be the Real Estate taxpayer (a taxpayer who may be a community, as the TRLRHL tells us, that is, an attributed cadastral titleholder and therefore excluded from article 9.1), the rule then immediately corrects its course by establishing that, if this were the case, the representative will not be the community, but any one of the commonholders, that is, a natural titleholder (10).

We can therefore conclude the following:

- 1) The first clause of article 12.5 of the TRLCI establishes that administrative actions be addressed to the natural titleholder.
- 2) Article 9.6 of the law provides instructions on how to determine, when necessary, which of the different possible natural titleholders is to be considered the effective representative (representing all the natural titleholders and other titleholders). Indetermination is not an issue in this point.
- 3) The possible contradiction between the mandate of article 12.6 and the fact that concurrent titleholders may designate a community as representative, must be overcome by the analogical application of the last clause of article 9.6.a), whereby the Administration may address any member of said community.

It is more difficult to understand the rest of article 12.6, on the obligation to notify the titleholder defined in article 9.2 of the existence of the proceedings, unless we realize that this is an anachronism. When this phase was approved, article 9.2

(10) It might be worth explaining this point, although the attentive reader will already have discovered it, that although the joint owner appears in 9.2, I am assuming that he/she is a titleholder as defined in 9.1, since he/she is clearly a natural or juridical titleholder, entitled in part to some of the rights defined therein. In effect, the margin of inaccuracy (“the consideration of cadastral titleholders will also be given to ...”) in 9.2 enables us to deny that joint owners are fictitious titleholders like communities, and if they are not, they must be real titleholders in their genuine form which is more in compliance with common law.

referred to the bare owner voluntarily requesting the registration of bare ownership rights in the Cadastre. This bare owner was irrelevant in terms of real estate taxation and therefore also irrelevant in terms of cadastral titlehold as defined in article 9.1 of the original version which, as mentioned in the first study, identified this status with the passive subject of the local tax. However, the former Law of Real Estate Cadastre wished to grant the bare owner, together with the possibility of cadastral registration, the opportunity to be heard in proceedings affecting him/her if, and only if, he/she was previously registered. With the introduction of Law 2/2004, this provision is now senseless and in my opinion has become unapplicable, since it contradicts the rules of representation of article 9.6 which, as well as guaranteeing a hearing through representation at all times, extends and improves upon the situation of the interested party by recognising his/her “right to be informed”, commented upon earlier.

In part one of the study on the Law of Cadastre, published three years ago, I made a detailed analysis of the objectives of what was then a brand new legal text. I also described the pillars of the new Spanish cadastral model, the most important of which are the maximum reliability and accuracy of cadastral data. The paper also described the paths followed to progress from a strictly fiscal Cadastre to a multi-purpose Cadastre, paths that led us to embark upon major projects such as the renovation of the rural cadastre, the creation of the e-Cadastre, and the computerization of all information and procedures.

Detailed analysis of the regulation reflected aspects such as the descriptive capacity of the Cadastre; the Cadastral Reference, conceived as the cornerstone of collaboration in the reinforcement of juridical security and the security of real estate operations; and cadastral cartography, as the means to the physical reality and to the literal information that completes the cadastral description of real estate.

The final part of the article was dedicated to explaining what the Law has represented for the cadastral value, among many other aspects, by reinforcing its legality.

Having summarized the previous work, I wish now to reflect upon what I have discussed in detail in the previous pages. Although the previous work also described the significance at the time of cadastral titlehold, it is here that I have been able to explain the transcendental reorientation of this matter brought about by Law 2/2004 of 27 December.

I have attempted to analyse the new scope of cadastral titlehold, taking apart the characteristics and profiles of the new subjective element defined in article 9 of the TRLCI; the reason for the disappearance of the preference of registrable rights in the Cadastre, an innovation driven, among other reasons, by the emphasis that the Ministry of Finance has placed on the real estate sector and on a policy of close collaboration between the Cadastre and the AEAT. It has also been necessary to explain the new provisions for the registration of spouses in the Cadastre, as co-owners of the estates they share, as well as of joint owners and the communities in which they participate.

Two points, no less important for coming last, are the representation of cadastral titleholders for necessary dealings with the Cadastre on matters of real estate; and the the concurrence of several titleholders in the same estate. In both cases the changes introduced by the regulation are inevitably directed at resolving previous, mostly practical, problems.

I have also left to last what has to be a promise to the reader who has patiently and attentively followed me this far, to continue these annotations in

future editions of CT/Catastro until we have completed our tour of the pages of a regulation, the law of cadastre, that is still largely unknown and unexplored by doctrine but which is transcendental for all public administrations and citizens, and which can reasonably be expected to show significant improvements in the efficiency and quality of this public service, and more important still, in the security and transparency of the real estate market and territorial administration. ■

CADASTRAL MAPS IN GOOGLE EARTH

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In recent years, new technologies applied to the field of cartography have brought huge improvements in terms of the volume of information available, and particularly, of easy access to that information.

Since Google launched its Beta version of Google Earth in the Summer of 2005 for all Internet users, this product has evolved significantly and has become universally popular. It is a phenomenon that has made geographical information easily and directly available to a large number of users unfamiliar with handling geographic data, especially data from satellite images and orthophotos.

The product concept is attractive and highly spectacular. Starting with a first image of the globe on our computer screen, and using a simple set of controls, we can zoom in to any point of the earth's surface and obtain a bird's eye view with a surprising level of detail. We can change perspective to view relief details, find the route between two points, or attach additional layers of information, such as roads, streets, signs, places of interest, etc. We can also locate an area using these image controls in combination with a powerful search engine of geographic names, business names and even postal addresses.

Other navigators supply spatial information, using systems similar to Google Earth, but none of these has achieved Google's level of implementation and acceptance. Its success is due to a combination of factors:

Google had already consolidated a leading position among search engines worldwide, providing its Google Earth product with wide exposure. Its user-friendliness, speed, and spectacular results have all been key to its success. This, together with the sheer quantity of information, supplied free of charge, makes it the ideal product for a wide range of users seeking immediate answers to queries related to spatial positioning. On the technical side, Google Earth allows users to overlay 2D and 3D spatial objects, in KML or KMZ format, onto its own database of orthoimages and digital ground model, harnessing the application's powerful viewing and navigation controls.

PRODUCT DESCRIPTION

Google Earth, requiring local download to a PC, has been developed for several operating systems: Windows, Linux and Mac. Using an open Internet connection, it allows the user to view orthoimages, digital ground model and other spatial information of

the entire planet. It features a navigation system with simple controls to manage perspective, together with a powerful search engine and a route searcher.

The application's speed of reply, which is the key to its potential, is provided by a multitude of servers distributed all over the world, all supplying immediate responses to user queries. And behind it all is Google's infrastructure of servers and search engines.

Depending on the area, scope of coordinates, and degree of zoom, the resolution and quality of the image will vary. The more developed the country, the more populated an area, or the higher the degree of interest in a specific location, the resolution and level of detail provided will usually be higher. Large cities and the coastal areas of a country normally offer the best quality images. The name of the supplier or suppliers of the data is located bottom center of the image.

Images can be shown on a 3D surface –the application's own digital ground model –to view the orography of the terrain and distinguish valleys and mountains, with a vertical emphasis factor for additional relief detail. This gives added attraction to the image, providing more realistic results.

Different types of spatial information can be overlaid onto this "cartographic" base (digital ground model + orthoimages):

KML format is required to overlay spatial information. This is a version of xml language whose syntax allows construction of spatial objects:

- KML : ASCII file
- KMZ : Compressed (zipped) KML file

Specific, linear, surface, 3D and image objects –all of which can be translated into KML– must be in geographic coordinates in the WSG84 reference system, and can be drawn in different styles, colours and transparencies. The latest version accepts textures for application to 3D objects and even to images overlaid on these objects, which in the case of buildings can be texturised with photographs of the facade.

LIMITATIONS

One of the main limitations is the lack of universal coverage of orthoimages in maximum resolution meeting a general standard. There are also precision errors in the location of images, with some cases of significant displacement. Another issue is the degree of updating, and the lack of information on the exact date on which the image was recorded. Cases of intentional manipulation of information have been detected, for security reasons or due to strategic interests.

It is also true, however, that these limitations are gradually being corrected. Google has introduced additional functions, higher resolution images are becoming available for larger areas, positioning errors

are being corrected, updated images are replacing older versions, and additional layers of information are being added.

Google Earth is not an adequate product for certain technical purposes, for example purely topographical matters or queries requiring a reliable, guaranteed answer in terms of precision. But for the majority of users seeking a quick answer to a spatial query, Google Earth is a rapid and easy tool, solidly established and offering a growing range of additional services to resolve specific needs.

Figure 1: Google Earth Application (Page: 25)

GOOGLE EARTH AND THE CADASTRE

The General Directorate of Cadastre, as the public service responsible for the production of national cartography in Spain, has had to adapt to new Geographic Information System (GIS) technologies in the field of data production and exploitation. To ensure availability of data, these new technologies have been designed for publication in Internet, either through graphic navigators on geosites or through web-based map services.

Per the basic principles of INSPIRE, the proposed European directive, the provision by public map services of unrestricted, free access to information is a requirement that will become obligatory in the short term. The General Directorate of Cadastre has started to adapt to these new initiatives and technologies, and has already launched its Web Map Service (WMS) in accordance with the international standards established by the Open Geospatial Consortium (OGC) for publication of cadastral cartography. WMS has already become a significant reference in the Spanish cartographic field due to its nature, territorial scope, degree of precision, level of updating and other product benefits.

Although Google Earth does not meet international standards for the publication of cartography, it has become solidly established and widely popular in all sectors of society. This, added to the fact that it allows the inclusion of external information in KML format, has led the General Directorate of Cadastre to carry out development in order to supply information from cadastral cartography to a larger number of potential users via Google Earth. In summary, we can consider Google Earth basically as a navigation tool, but which provides additional utilities and information from its own base.

CADASTRAL CARTOGRAPHY IN GOOGLE EARTH

The General Directorate of Cadastre has developed a utility enabling users to view and query Cadastral cartography on Google Earth.

It consists of a KML file containing a network link. Whenever a pause occurs in navigation, this link drives a query to the server with the parameters of the coordinates of the area under view. The response is an image using cadastral cartography on the Cadastre's WMS and the central location marks of the parcels in the centre of the selected area.

Figure 2: Catastro_WMS. KML file structure (Page: 25)

With a simple ASCII file weighing just over 2Kb, plus the Google Earth application and a connection to Internet, the user can access all cartographical information and non-protected data on any cadastral parcel, with the added advantage that these data are continually updated.

Figure 3: Cadastral cartography on Google Earth (Page: 26)

There are two options to view cadastral maps: the transparent view, allowing visualization of the basic information provided by Google Earth's orthoimagery supplier, and the opaque view, allowing visualization of the cadastral map containing the Cadastre's own symbology. Using the opaque view and adjusting the degree of transparency of the object, the user can obtain a hybrid view showing both sets of information at the same time.

Figure 4: Different aspects of visualization of Cadastre WMS on Google Earth (Page: 26)

Location marks are situated in the centre of each parcel selected, in a 100 x 100 sq.m. area, positioned at the centre of the viewing area. The address of the property (urban parcels) and the polygon/parcel number (rural parcels) are expressed in text. The Cadastral reference serves as a hyperlink to the e-Cadastre, which provides non-protected data on the parcel, and from here the user can access the e-Cadastre's map navigator, print maps and drawings, etc.

Figure 5: Hyperlink from location marks to the e-Cadastre (Page: 27)

The KML file includes a utility to seek parcels by cadastral reference. Other search parameters, such as postal address, are already included in Google Earth.

Figure 6: Finding a parcel on Google Earth (Page: 27)

The result of a search by Cadastral Reference is a KML file containing a single object, the location mark in the centre of the queried parcel. When activated, it automatically positions on the area, with a hyperlink to the e-Cadastre.

GENERATION OF KML FILES IN 3D FROM FXCC

As well as cadastral cartographical information, there are a series of documents called Cadastral Drawings (croquis catastrales, or CC) which contain information on the distribution of premises in each main floor of buildings.

Figure 7: Document CU-1Drawing of each main floor of a building (Page: 28)

This information is computerised using an exchange format called FXCC. It consists of two files per cadastral parcel: an ASCII file with literal information of the description of the parcel, its floors and commercial premises; and a DXF file with vectorial information, a standard format that can be read by the

majority of CAD applications. There is also a complimentary .jpg file with a photograph of the main facade of the building.

With indirect 3D data on the premises in each parcel, we can reconstruct the building to view it on Google Earth.

The General Directorate of Cadastre has made available to users a generic tool for validation of FXCC formats, allowing generation of KML files to obtain a 3D view of buildings and to check for errors of interpretation in the creation of these files.

The end result of the KML file is a series of objects in three-dimensional geometry arranged into a hierarchy. The possibility of making a single or group selection facilitates analysis of each object, activating or deactivating the view. The distribution of FXCC documents on KML files is the following:

- KML file
 - Cadastre logo
 - PHOTO (*photograph of the facade*)
 - Symbology (*colours assigned per type of use of premises*)
 - Ground Floor (*located on top of floors below street level*)
 - Enclosure of the ground plan, labelled per attribute.
(*each object is a flat figure providing surface data*)
 - Floors (*in ascending order, starting with underground floors*)
 - Enclosure of each premises on each floor.
(*Three-dimensional objects with surface information*)

Each local object is colour-coded depending on usage. Geometry features the floor, walls (3m high) and ceiling. There are some exceptions: outdoor terraces show floor, 1.5m walls but no ceiling; porticoes show floor and ceiling but no walls; swimming pools and other non-constructed objects are shown as flat figures.

Figure 8: Selection of premises on a floor (Page: 28)

This way of viewing information from an FXCC format helps provide a clear view of the aspect of a building, how its premises are distributed, and its uses.

Figure 9: Viewing example (1) of KML files (Page: 29)

Figure 10: Viewing example (2) of KML files (Page: 30)

EXPORTING TO KML FILES FROM SIGCA2

Several utilities have been designed on SIGCA2 –the General Directorate of Cadastre’s Geographic Information System for cartographical management and maintenance– to enable viewing of cadastral cartography on Google Earth. These utilities, which serve to filter information and improve data quality, offer a new vision of cartography and, more importantly, open new doors to developments based on cadastral cartography.

KML files have been included in the SIGCA2 export tools menu enabling the user to export part of a map (both urban and rural) by selecting a specific area or entire towns.

Figure 11: Partial export of a parcel to KML (Page: 29)

The KML file generated from cadastral maps is different depending on the map layer selected. For example, for buildings with the number of floors expressed in Roman numerals, we can generate 3D objects using this value as the height of the prismatic object; the colour of objects is also provided by the standard symbology used in cadastral maps. In the case of objects lacking a 3D representation, such as sub-parcels (farm land), these are represented as surfaces that adapt to the digital ground model. The resulting KML file is composed of several hierarchical levels distributed on a tree. Each level or group of levels can be activated or deactivated independently for viewing or degree of transparency.

Figure 12: Transparency example (Page: 30)

The hierarchical levels are:

- Constructions (buildings in 3D)
 - Buildings
 - Underground
 - Swimming pools
 - Plots
 - Other constructions
- Parcels (vacant surface objects which define cadastral parcels by their perimeter line).
- Cadastral References
Location marks of the centre of each parcel, with a hyperlink to open queries on parcel data in the e-Cadastre.

For rural maps an additional sub-parcel level is included, as a surface object in green with a red perimeter adjusted to the digital ground model.

Figure 13: Example of urban cartography (Page: 31)

Figure 14: Example of rural cartography (Page: 31)

KML FILES WITH RASTER IMAGES

Using the “save as image” function, the print menu of SIGCA2 allows the user to generate a KML document associated with the image on screen, correctly geo-referenced, which allows overlay onto Google Earth of cadastral maps, orthophotos, theme maps or any other document available on SIGCA2.

Figure 15: Example of raster image on Google Earth (Page: 32)

OTHER TOOLS

SIGCA2 also includes a module for generation of KML files using vectorial information in Shapefile format. Based on the topology of the SHP file –point,

line, or precinct— and the attribute values of each element, this tool lets you generate KML files to show thematic information using colours, thicknesses and height of three-dimensional objects.

Figure 16: Example of KML files with thematic information (Page: 32)

CONCLUSIONS

Due to its degree of implementation and potential, Google Earth has represented a revolution in the world of cartography, enabling us to view spatial information from a new perspective. This has been possible thanks to the increase in the volume of geographic data and the development of new access technologies.

The General Directorate of Cadastre, committed to offering more and better services to the maximum number of citizens and to keeping up with the latest innovations in all matters related to cartography, has recognised the potential of Google Earth as a means of diffusion of cadastral information.

The ability to view cadastral maps, using the Web Map Service and cadastral references for access to non-protected data in the e-Cadastre, provides the user with a simple tool to locate a property and all its associated data.

Combined services and future development open up new tools for potential users who need to work with cadastral maps.

Lastly, a list of some of the main advantages and disadvantages of Google Earth for cadastral purposes:

- **Advantages:**
 - Widely popular.
 - User friendly.

- Maximum agility and optimization.
 - Future potential.
 - Spectacular results.
 - System-generated orthophotos and digital ground model.
 - Easy-to-programme code format.
 - Ideal for use with cadastral maps.
- **Disadvantages:**
 - Non-proprietary application.
 - Orthophotography from different origins, in varying degrees of quality and resolution.

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AUTOMATED VALUATION MODELS IN LITHUANIA

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KEY WORDS

Mass valuation, real property database; real property taxation; value maps, appeals.

SUMMARY

Ad valorem principle in real property taxation has hardly fought its way in Lithuania. For a long time real property tax has been paid only by legal entities. Taxable value of buildings and structures has been estimated with reference to nominal values.

The specialists of the State Enterprise Centre of Registers commenced preparatory activities regarding the implementation of mass valuation system for land and other real property from 1998. OECD and Lincoln Institute of Land Policy (USA) provided much support in this field. Mass land valuation has been performed in Lithuania since 2001.

In June 2005, the Seimas (Parliament) of the Republic of Lithuania has enacted a new wording of the Law on Real Property Tax. The Law provided that taxable value of buildings and constructions was estimated against the property market value set using mass valuation approach and in separate cases (for industrial property) – against the replacement costs of property. It also established that real property value set by individual valuation might be also considered as taxable value. This Law came into force as of 1 January 2006.

The Centre of Registers has developed mass valuation models for buildings and prepared value maps. ORACLE Discover, NCCS, GIS software were used in this process. In case the specialists failed to adopt standard software for certain works they tried to search for own solutions (GIS, merging valuation results with the Real Property Register data) in order to have full automation of valuation system and implementation of basic AVM and CAMA principles. On 29 December 2005, the Minister of Finances of the Republic of Lithuania in his order has approved building mass valuation reports and value maps after the procedures of public discussions were completed.

With the Law on Real Property Tax and mass valuation results coming into force, the process of appeals began. Many taxpayers were shocked by the increased tax amount compared to the previously paid tax against

the taxable value that was set using other principles. The appeals brought to light a wish of taxpayers to reduce taxable value by any means. Property valuers more often use income (income capitalisation) and residual value approach in the individual valuation reports.

Implementation of Building Taxation and Mass Valuation in Lithuania. Outcomes and Lessons Learnt

Some years ago Lithuania has started the development of mass valuation system, that was unambiguously associated with the intended introduction of a market value based real property tax. Lithuania is one among the EU member states with its rapidly growing economy and developing real property market. Favourable political decisions, a modern real property cadastre and register system with its adequate institutional structure enabled to develop a mass valuation system of land and constructions. Flexible mass valuation system allows yearly update of value maps at low costs, makes valuation results accessible to the public and use for different needs in the public and private sectors.

The analysis of some years of experience shows that the appearance of mass valuation system of land and construction structures, which was originally associated only with the real property tax reform, stimulated the interest of the society, public and municipal institutions in values estimated by mass valuation approach. Previously they had to use either expensive services offered by independent valuers or to be content with the cadastral values that were far from being actual ones. Mass valuation allows estimating average market values that are cheap to calculate and accurate enough for certain purposes.

Developing an effective taxation and valuation framework

Taxes on property are used almost in all countries around the world. As property tax is typically based on values, there is a need for correct valuation, i.e. tax fairness is understood as the right and sound estimation of taxable value. World practice shows that the market value and the taxable value of real property computed on its base is the most easy to explain, it reflects the actual property value on the market, the benefit of this property, also the receivable and expected income of sale.

At present, the market value is estimated in two ways: by single or individual valuation and mass valuation. Mass valuation and single-property valuation have similar steps and are based on the same principles. In the course of property valuation for taxation in most cases individual valuation is not applied since it is much-time-and-work consuming,

i.e. the costs are too high and difficult to apply for large amount of properties.

In mass valuation the main stresses are laid upon valuation of a large amount of property by applying standardised statistical data processing. Mass valuation also has some drawbacks: it hinders evaluation of the part of property characteristics; therefore the accuracy of value suffers. The opportunities of applying mass valuation are also restricted by availability of market data and other information on property that is needed for a valuer.

Despite this, due to its low-price and potential to assess a large amount of real property objects within a short time, mass valuation meets best the needs of real property taxation and is the most optimal tool for setting value of property, subject to taxation. The use of CAMA and GIS in mass valuation expands additionally the possibilities of this valuation method and increases the accuracy of values set during mass valuation.

When developing a mass valuation system and analysing an opportunity to implement AVM and CAMA system in Lithuania, a conclusion was made that a key element for the establishment of mass valuation system and its successful operation is an automated real property formation and registration system developed in Lithuania, also a fully integrated real property, cadastre, register and GIS database, covering all types of properties, and a system of transaction data created on the basis of such database. Therefore, while introducing our experience of mass valuation, at the same time we have to talk about the real property database developed and its operation.

In 1991, Lithuania started the restitution of real property and privatisation, and at present has the information on all registered real property in the computerised real property databanks. Centralised real property register databank has the comprehensive cadastre, register and property values information, which is constantly updated. The development of an automated real property information system started at the very beginning of the reform, and it provided a basis for the successful development of the computerised mass appraisal system based on market principles.

The first and most important point of the development is use of automated system for collection and processing of the data necessary for valuation. Since 1997, an integrated real property cadastre and register system is in operation in Lithuania. The State Enterprise Centre of Registers that was established in 1997 administers the real property cadastre and register in Lithuania. The Government of the Republic of Lithuania charged the Centre of Registers with storage and updating of the real property cadastre and register data, to administer database of the real property cadastre and register, to create a GIS system in Lithuania and assess real property for public needs, including taxation. Data about the entire registered real property amounting to over 5,5 million objects is stored in the integrated database.

Data collected in uniform digital format is a basic factor of success in developing an automated mass valuation model based on statistical methods. The developed computer-based mechanism for data collection and processing evidenced that having made proper adjustments to the enquiry formats, data of real property market transactions are stored in the database from 1998. Annually the number of transactions increases (see Figure 1), and the total number of registered transactions currently exceeds 700 000.

Data on market transactions and involved property stored in a uniform format creates a possibility to standardise and automate mass valuation process, to identify main valuation criteria and factors influencing value. Increasing use of statistical methods for the selection and processing of data reduces the potential of mistakes and random factors making influence on value.

Figure 1: Number of registered transactions in Lithuania (Page: 64)

In 2002-2003, a computerised mass appraisal system was developed, which integrated the information systems of cadastre, register and market database into a united system. It provided a possibility to evaluate real property located in the entire territory of the country based on standardised principles, within the defined time and using the updated market data. It also allows the periodical re-evaluation of property considering the market developments. The results were integrated with GIS, resulting in a possibility to have public access to value maps and the mass appraisal results obtained.

The Centre of Registers, compared to other valuation enterprises, has the best technical and organisational potential to perform this work. It disposes of a computerised database of all real property registered in the country. 11 branch offices cover the whole territory of Lithuania. The branch offices employ certified real property valuers, who have valuation experience and are familiar with the local market. The automated databases at the Centre of Registers enable to provide valuation results to the clients in digital form and link data with property owners. The aforementioned measures enable to perform mass land valuation works with the minimum additional technical, human and financial resources, as well as the lowest time input, and ensure the quality of valuation results. The existing legislation provides for a regular updating and provision of this valuation system with new data – newly formed property units and revision of cadastral data of the registered land parcels and property units. The mass valuation system enables to change valuation models, in case of the change in property market – re-estimation of property value.

The State Enterprise Centre of Registers performed the first mass land valuation during 2002-2003. Annual mass valuation is performed on the basis of market as of 1 July of each year. Mass valuation of land has been performed for four years. The compared volumes of works executed during the first, the second and the third mass land valuation are given in Figures 2 and 3.

Figure 2: Volume of work performed during the first, second and third land mass Valuation (Page: 65)

Figure 3: Number of assessed land parcels the first, second and third land mass Valuation, thousand (Page: 65)

The second and third land mass valuation has been performed with more precise and accurate consideration of not only the most important factor to the real property value – location factor – but also of other factors having influence upon value. The number of value zones is higher in the counties with big cities, such as Vilnius, Kaunas, Klaipeda, Siauliai, Panevezys.

A more precise consideration of location is caused by high land values. In these areas the inaccuracy of zones would result in higher value deviations than in those areas, where land is not marketable, and its value is low.

The first experimental mass valuation of constructions and buildings in Lithuania was performed in 2003. When the Law on Real Property Tax was passed, valuation of real property gained legal status and the results of valuation became very important; for this reason this group of property was revaluated anew in 2005. From 2006, mass valuation of construction, as of land parcels, shall be performed annually. General statistics on construction structures in the country and market data are given in Table 1 and factors taken into consideration are given in Table 2.

VALUATION MODELS AND VALUE MAPS

There were 540 valuation models (formulas) developed for the assessment of constructions, a separate report on mass valuation of constructions for every municipality (60 reports) and a report on mass valuation of structures in the whole country (4 volumes) were prepared.

Value maps and real property valuation models play an important role in the mass valuation system. The more fairly and reasonably these components are developed with respect to the market, the more accurate results are obtained with regard to the market value. The principle scheme of building land parcel

valuation models and compiling value maps is illustrated in Figure 4.

Labour expenditure and quality of the results depend very much on the reliability of data. Statistical methods and graphical measures are used for checking and revision. The experience of property valuers as specialists and the knowledge of real property market within the territory being valued are very important. After elimination of the disputed transactions, a specification of the land valuation model is worked out, i.e. factors and characteristics affecting market prices as well as their relationship shall be determined. The impact of time factor on the transaction prices is being analysed in this phase. Having estimated the influence of the time factor, the adjustment of prices is done. The impact of the location factor results in land value zones, the boundaries thereof are defined, analysing the distribution of sales prices in the area, considering the purpose of land and types of the land use, the development of communications, street (road) network, satisfaction of social needs and other infrastructure elements, prestige of the site. Evaluation of the impact of the location factor ends in land value mapping. In the phase of model specification, land parcel data are grouped by the characteristics, essential to the land market value: value zones, purpose of use, agricultural land, size of the land parcel, productivity grade and its use for recreation. The mathematical expression of relationship between these factors and prices make up a model. The influence of factors (characteristics describing property) in the model upon the land value is determined by calibration of models.

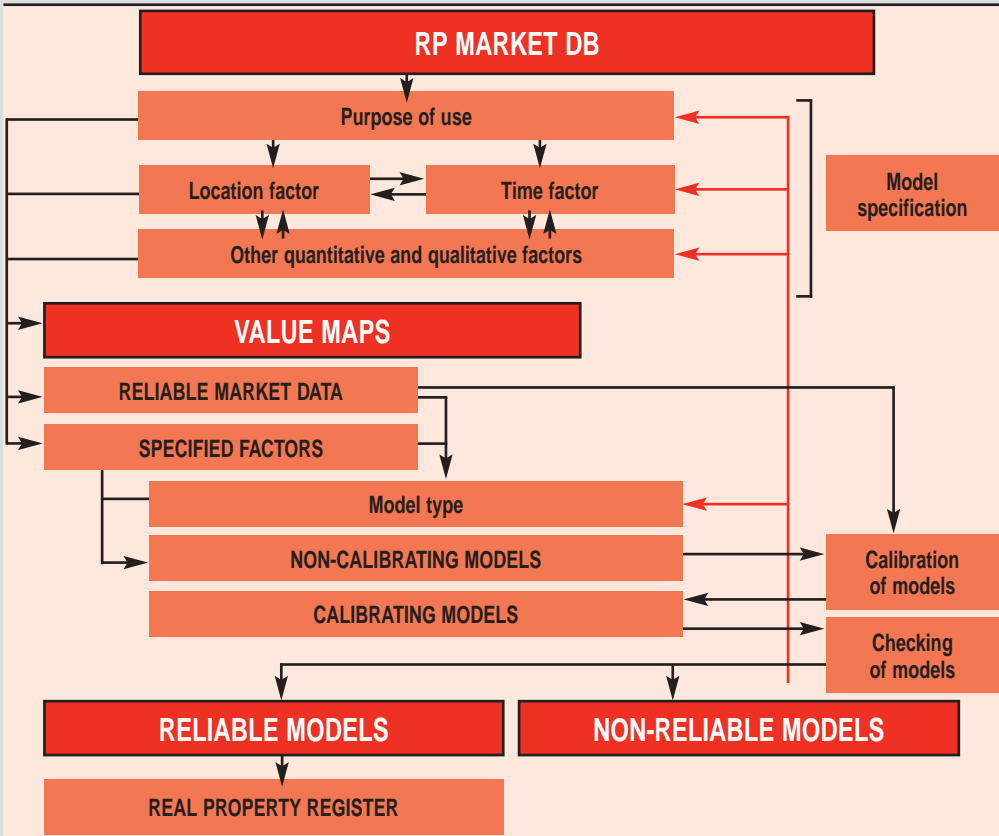
Table 1
Statistical and market data on construction structures in the country by 1 January 2005

Date of recording data	Type of structures	Number of objects in the RPR	Volume, m ³ and areas, m ²	Number of sales	Market activity %
01/01/2005	Buildings	2.077.921	912.645.700 m ³	52.510	2,53
	Premises	930.815	51.399.117 m ²	42.043	4,52

Table 2
Factors considered in the structure valuation models, the number of separate factor clusters

Number of value zones	948	Number of floors of buildings	+
Number of purpose groups	10	Number of rooms	+
Area, volume	+	Number of heating types	4
Number of groups of wall materials	13	Basement	Yes, no
Number of value zones	+	Gas	Yes, no
First floor	Yes, no	Water supply	Yes, no
End floor	Yes, no	Sewage	Yes, no
		Completeness of construction	Up to 99 %

Figure 4
Principle scheme of building valuation models for land parcels and other Real Estate (constructions) and compiling value maps



Calibration of the model is the process of estimating the coefficients in a mass valuation model. The calibration shall use the multiple regression analysis (the MRA) and other statistical methods. The MRA is statistical approach of estimating the unknown data, using the known and available information. In mass valuation, the unknown data shall be market value of the real property, and the known and available data – sales prices and characteristics of the objects. The reliability of the estimated coefficients shall be evaluated using the statistical indices estimated in the MRA. Those models, the statistical checking indices thereof match with the ones set or specified in valuation standards, shall be considered as designed correctly and integrated into the Real Property Register database for estimation of mean market values. If it turns out that the indices are incorrect, the model shall be analysed anew – the original market data are checked, the zoning and the specification of models is revised.

Later, the calibration of models is done once more. This process will be repeated until the estimated value results are reliable. Works in the transaction database will be completed with the preparation of land value maps covering the territories of municipalities and reliable land valuation models. The obtained results with explanations are included in the reports on mass land or buildings valuation of municipal territories.

An automated property valuation system is inseparable from the integration of graphical information. Today, the integration of CAMA and GIS is a common and integral process. The use of GIS information is expanding in the mass valuation of land and constructions (Figure 5). Reorganizing and justification of the boundaries of value zones with the help of GIS information becomes one of the most relevant tasks in the current phase of real property mass valuation.

As it was mentioned before, the results of mass valuation in Lithuania are used not only for calculation

of real property taxes, but also for other public purposes. The users of data are various institutions and organisations, as well as the residents of Lithuania. It is very important to offer an opportunity for all interested institutions and persons to receive property values quickly, as well as to ensure a possibility to receive comprehensive data in such a format that is accessible for all, and at the same time to ensure protection of personal data. In supplying mass valuation data to the users in Lithuania, several ways are applied. The most popular is the supply of data via Internet according to the unique number of the property. Separate applications with valuation, cadastre and register data set are developed for the institutions, which need specialised information (municipalities, tax inspectorates). There is also an opportunity offered for the owner to order an official (approved) excerpt from the Real Property Register specifying a relevant (up-to-date) value of property. Such excerpts are necessary for concluding transactions, documenting succession or gift.

MASS VALUATION OF BUILDINGS (CONSTRUCTIONS)

On 1 January 2006 the Law on Real Property Tax came into effect. It defined that the taxable value of commercial property shall be estimated by an average market value of commercial property that is calculated by the way of mass valuation and in some specific cases the taxable value of industrial real property shall be established on the basis of replacement value of the property. It is also established that the taxable value may be considered as the real property market value calculated by the way of individual valuation. It is possible to order an individual valuation for the revision of taxable value may only in case of appeal submitted to the State Enterprise Centre of Registers. The Centre of Registers shall decide whether to correct the taxable value following the submitted report of individual valuation or not.

Initial version of the Law on Real Property Tax has provided for a rather short period – one month that was given to appeal against the valuation results and submit the appeals. In practice, however, this term became longer after the State Tax Inspectorate has submitted a Law explanation. At the end of March 2006 the legislator amended the version of the Law on Real Property Tax and specified a 6-month term for

submission of such appeals from the establishment of taxable value and its publication.

There are first results from the appeals submitted regarding the taxable value established by the way of mass valuation. Reaction to the changes in taxable value of the commercial buildings and constructions was rather nervous and stormy. Taxpayers as well as local politician and mass media have reacted. The law granted the right to the councils of local authorities to decide upon the reduction of tax rate. This has also helped to ease the tension and unnecessary disputes.

Taxable values of commercial properties in 18 municipalities (out of 60) decreased or remained unchanged in comparison with the previously ones (before 01 01 2006). Market value of real property, i.e. taxable value as well, has significantly increased in Vilnius city, Kaunas city and other large cities of the country. The increase in some cases reaches 2 times and even more. The State Enterprise Centre of Registers, i.e. the main valuer for estimation of taxable value by the way of mass valuation, observed the following basic principles for public information and communication:

- maximum openness and transparency;
- clear establishment of the boundaries for competence and responsibility;
- positive attitude towards the taxpayers and public interest groups.

Figure 5: Use of GIS in compiling value maps: Building age of the Kaunas City, LT (Page: 69)

Slightly more than three million real property objects were valued by the way of mass valuation that pursuant to the definition specified by the law may be considered as the properties for commercial use. Within the first period (short one) of appeals there were 1617 appeals submitted regarding the taxable value of more than 2000 real property objects. Only half of them is submitted together with the report of individual valuation and therefore were analysed. The results of submission and investigation of appeals are presented in Table 3.

The Centre of Registers set up the Appeals Investigation Commission, which has carefully investigated the appeals submitted together with the reports of individual valuation. Main reasons for acceptance of appeals and correction of values are as follows:

Table 3
Results of the investigation of appeals submitted against the taxable value estimated by the way of mass valuation (in units)

Total number of appeals	Rejected because no valuation reports were submitted	Investigation suspended under the request of applicants	Appeal and Valuation reports investigated	
			Taxable value is corrected	Rejected because of (wrong report)
1.617	811	31	458	317

- part of premises are located in the basements;
- property is in bad shape and out-of-use;
- objects with large areas in the closed territories;
- commercial objects in expensive zones, however, located inside the yards without show windows and access to the premises from the street.

Main reasons for rejection of appeals:

- valuation for another purpose than that registered in the Real Property Register;
- another methods and approach applied than those specified by the Law;
- having estimated the market value of a building the value of land has been subtracted in addition;
- errors in the calculation of values.

Out of 317 decisions to reject the appeals submitted with individual valuation reports 3 decisions were appealed against to the Commission of Administrative Disputes and 40 decisions were appealed against to the Vilnius County Administrative Court.

After the extension of the term for submission of appeals there about 200 revised individual valuation reports submitted with repeat appeals and over 100 new appeals. In addition it makes the revision of taxable values for about 500 buildings and constructions.

ISSUES FOR DISCUSSION. NEW TECHNOLOGIES IN REAL PROPERTY VALUATION

Property valuers more and more apply the use income value (income capitalisation) and residual value approach in the individual valuation reports. The Lithuanian Association of Hotels and Restaurants makes an especially great pressure regarding the use of use income approach. This business interest group puts all efforts to reduce the taxable value of hotel buildings. Up to now everybody thought that the best way out is to apply the use income value approach. However it is very difficult to separate the cash flows attributable to the hotel real property and to another property (business) and to make an actual valuation of the building.

Comparative analysis of the taxable values for hotel real property establishment by the sales comparison method and the use income value method shows that both methods for estimation of taxable value of hotels have drawbacks. This is to state that considering the current market conditions in Lithuania the market value of commercial property, especially including hotels, is higher than the use value by the income received. In other words the value of commercial property on the market by the sales (market) value and income method differs. This causes many discussions in period for introducing the real property taxation based on *ad valorem* principles. This also stimulates the methodological discussions regarding the justification of taxable value, the purpose of the tax and its expedience and application of new mathematical models.

The development of a system for mass valuation of real property in Lithuania where a computerised cadastre and register as well as storage of transaction data in the common database served as a base, also methods taken over from the developed countries, was a successive process with applying new technolo-

gies, improving valuation procedure and obtaining more accurate values.

With regard to the improvement of the mass valuation system, the long-range plans provide for the expanded use and storage of lease contracts for assessing property by income approach, to develop a list of indices stored in the Real Property Register (e.g. separating areas of basements and lofts in the property description, to expand descriptions of engineering infrastructure, etc.).

FINAL REMARKS AND CONCLUSIONS

The system for mass valuation of buildings and constructions in Lithuania is introduced later than the system of mass valuation of land. It allows avoiding certain methodological and technological problems. Finally, the system for training the capacities of mass valuation specialists has been introduced with the help of experts from Sweden, Finland, USA and other countries.

The development of a valuation model (formula) and identification of value zones are of great importance for both: the mass valuation of land and of buildings. The practice of mass valuation of land shows that the number of zones after the repeat valuation is increasing. To make the identification of value zones more exact the application of GIS methods and integration of graphical information and different registers is of special importance.

The base of market transactions data in the Centre of Registers is in the process of constant development what makes a solid background for the estimation of taxable value under the *ad valorem* principle. The use of statistical methods allows estimating rather accurate average market value of real property. Any inadequacies encountered may be revised upon the request of a taxpayer on the basis of individual valuation. The system of appeals protects and defends the rights and lawful interests of a taxpayer.

The tasks in the nearest future associate to wider use of GIS in the process of mass valuation of buildings, the application of the use income value method (income approach) for commercial buildings in estimating the taxable value. More clear regulation of the mass valuation and individual valuation still remains a very important issue from both the methodological and legal point of view. Amendments to legal acts and improvement of the methodology will allow achieving better results in real property valuation.

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