Towards A Reliable Parcel Identification System: The Spanish Land Registry Graphical Bases System

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Summary

1. Introduction
2. Identification of parcels (registered properties)
3. Achievements of the Graphical Bases System
4. The Graphical Bases System and INSPIRE
5. From Geo-base to Geo-reg
6. Conclusions
1. Introduction

- The Graphical Bases System is a project launched by the Spanish Land Registry
- First steps: end of the 80s
- Not compulsory: currently applied by more than half of the Spanish Registries (670 of about 1,300)
- Ruled by an Instruction of the Spanish General Directorate of Land Registries and Notaries of 2 March 2000
- Based on art. 9 LH (version of 2001)
Visor IGRIAM: http://basesgraficasregistrales.registradores.org/igriam/index.html
Graphical bases in Spain
Graphical bases in the Canary Islands
2. Identification of parcels (*validation*)

- **Purpose of the system**
  - to “graphically translate” the literary description of the registered property
  - to allow the registered property to be geo-referenced

- **Software tool that has been used: Geo-base**
  - Based on ortophotos, cadastral cartography and topographic maps; in use since 2002

- **Mixed technical-legal operation**
  - IT specialists and Land Registrars
How would you describe the orange parcel?
Ortophoto + cadastral map
Ortophoto + cadastral map + graphical bases
2. Identification of parcels (*validation criteria*)

<table>
<thead>
<tr>
<th>Non Validation</th>
<th>Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Difference of more than 10% between the graphical base and the area described in the Land Registry’s books</td>
<td>1. Together with the title, the owner presents in the Land Registry a cadastral map or a particular map with the required quality (and both areas are coincident)</td>
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<tr>
<td>2. The area of the graphical base to be validated occupies part of the area of another graphical base previously registered</td>
<td>2. The registered owner declares where the geographic coordinates are</td>
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<tr>
<td>3. Inconsistent fixed boundaries or inconsistent situation with regard to the registered property</td>
<td>3. There are fixed boundaries that cross in a perpendicular way (eg: the registered property is located in an angle between two roads)</td>
</tr>
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Example of a validated graphical base (I)

• Report by the Land Registrar

• It consists of four pages
Example of a validated graphical base (II)

Geographical coordinates of the validated graphical base
Example of a validated graphical base (III)

Definitions and validation criteria
Example of a validated graphical base (IV)

Information on the graphical (orto-photos or cartographic maps) materials used by the Land Registrar to decide about the validation
Example of a non validated graphical base (I)
Example of a non validated graphical base (II)

Geographical coordinates of the graphical base
Example of a non validated graphical base (III)

Definitions and validation criteria
Example of a non validated graphical base (IV)

- Information on the graphical materials used by the Land Registrar to decide about the validation

- Information on the criteria that have led to the non validation
3. Achievements of the graphical bases system

3.1 Solution of juridical problems
3.2 Possibility of linking spatial information to the graphical bases (*información asociada*)
3.3 Use by the Spanish Cadastre
3.1 Solution of juridical problems

- Double registration (doble inmatriculación) is avoided.
- Excess of registered area (exceso de cabida) is also controlled; it is one of the non validation criteria.
3.2 Linking spatial information
3.2 “Linked” spatial information (I)
3.2 “Linked” spatial information (II)
3.2 “Linked” spatial information (III)
3.3 Use by the Spanish Cadastre

Query done through the Cadastre’s Virtual office webpage (using polygon and parcel numbers)
...a label in the cartography informs the user that the cadastral parcel is the registered property (*finca registral*) number 2754.
If the user looks for the same parcel through the graphical bases visor of the Spanish Land Registry ...
... the user will find out that in the same place there is registered property under a different number: the finca registral 31652.
The cause: there has been a “segregation” of *finca* 2754. The *finca* 31652 comes from a segregation of finca 2754. The right representation is the one that can be found in the Land Registry’s visor. The current *finca* 2754 corresponds with the rest of the segregated parcel.
4. The Graphical bases system and INSPIRE

- Can we understand that the Land Registry graphic bases fall under the scope of INSPIRE?
  - Art. 4.1 a), b) and c)
  - Problems with d)
    - Land Registry is not mentioned in an explicit way in INSPIRE’s Annexes
    - But the Data Specification document takes into consideration the Land Registry
- It can be understood that the Draft Act that implements INSPIRE into Spanish law mentions the Land Registry graphical bases in its Annex III h), amongst the General Thematic Data
5. From Geo-base to Geo-reg (I)

- Geo-base was the former tool to graphically translate the registered properties
- The need to
  - easily access to different information layers
  - be able to add new information layers
  - improve interoperability
  - be able to interact with cadastral information
  - promote new functions to be developed by the Land Registry in the environmental area
  - be able to take full advantage of web services
5. From Geo-base to Geo-reg (II)

- A tool under development

- Uses gvSIG free software

- Allows the combination of different layers of information

- Allows the classification of the parcels according to different criteria (town planning, environmental, fiscal...)

- Allows to represent flats (on condominium schemes)
5. From Geo-base to Geo-reg (III)

New possibilities

G. MORA NAVARRO et al., “Gestión y publicación de los datos del Registro de la Propiedad utilizando software libre”
6. Conclusions

• The graphical bases developed by the Spanish Land Registry represent a spatial data set, with direct reference to a specific location.

• They allow a reliable identification of the registered property, as the graphical representation combines legal criteria (by the Land Registrars) and technical reliable up-to-date tools.

• The change from Geo-base to Geo-reg has improved the functionality, possibilities and interoperability of the Land Registry graphical bases.
7. References

- G. CALZADILLA MEDINA, “Digitalización de fincas registrales”, in *La información territorial en el Registro de la Propiedad: la incidencia de la Directiva INSPIRE y de las bases gráficas registrales*, in press
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- J. REQUEJO LIBERAL, *Descripción geográfica de las fincas en el Registro de la Propiedad (Geo-Base)*, ed. Lex Nova, Valladolid, 2007