The Spanish Cadastre and Property Rights Registry: a smart model of coordinated interaction

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CADASTRE

• It is an administrative register that impacts on the government-citizen relationship.
• Registration in the Cadastre is mandatory. Notaries and Registrars are obliged to submit information to the Cadastre.
• It’s used for the valuation of property for tax purposes.
• It offers a continuous homogeneous GIS for the complete territory.
• It offers open and free access to its information, although it guaranties the protection of private data.

PROPERTY RIGHTS REGISTRY

• It is a juridical register with substantive legal effects on private relationships.
• Registration isn’t necessary to have a contractual entitlement, but is needed to have them protected against everybody.
• It serves to ensure legal safety of property rights and ease of property transactions.
• It is financed by the registration fees by owners protected and by sure Registry Publicity.
• Cadastral Cartography is the basis of its graphic information.
The new framework of collaboration

- In Spain there are not licensed surveyors and it is not obligatory to mark the division in the land. The agreement to divide and the boundaries are decided by seller and buyer.

- Reforms introduced legally in 2015 established that the description of properties in the Property Rights Registry is to be done by a geo-referenced graphical representation.

- The goal is to offer a better service to citizens, increasing legal certainty and reducing the administrative burden.

- To achieve this goal, it has been necessary to establish a smart model of coordinated interaction between Cadastre and Registry.

- Technology enables solutions that previously were impossible to consider.
The graphic geo-referenced description of the Property Rights Registry is **based on the cadastral cartography**.

Once the cadastral data have been incorporated in the real estate information in the Property Rights Registry, the delimitation, location and area data are considered to be true for all legal purposes. The Property Rights Registry’s record will also indicate if the real estate is coordinated with the Cadastre and the date of coordination.

In case of disagreement, citizens can provide an “alternative geo-referenced representation” that is then used to update the Cadastre after to pass the appropriate graphical and technical validations.
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1. How the situation of a parcel is expressed?
2. How to make the information available?
3. What tools can be used for the new parcel boundaries?
4. How to know the new parcels fit the continuous cadastral map?
5. How can notaries use accurate graphical information without exploit a GIS?
6. How the Registry store the graphical information?
7. How communicate the changes to Cadastre?
8. How to show coordination information to the citizens?
9. How to advertise the new model to the stakeholders?
1.- How the situation of a parcel is expressed?

The situation of a parcel is expressed with its georeferencing. Georeferencing of a parcel is expressed by including the reference system (ETRS89, REGCAN95), the projection system (UTM) and the coordinates of its vertices (x,y).

The georeferencing information is expressed using the INSPIRE cadastral parcel format (GML format, XML with geographic content).

All the agents that work with real state information in Spain are using the INSPIRE cadastral parcel.
2.- How to make the information available?

First, the GML INSPIRE cadastral parcel can be publically obtained at the Electronic Office of Cadastre through free access from the screen query results.
Second, the GML INSPIRE cadastral parcel can be publically obtained at the Electronic Office of Cadastre as a service using the WFS INSPIRE cadastral parcel.
2. How to make the information available?

And third, the cadastral certification, obtained by the title holders and public partners agents, include attached a GML INSPIRE cadastral parcel. The certificate is used by citizens to describe the parcel in notaries and registry.
2.- How to make the information available?

- This cadastral certification is an electronic document (PDF format).
- The certificate and its attached file are signed electronically using a Secure Verification Code (CSV). With this code on the document it is possible to access the digital file in the Electronic Office of Cadastre.
- Citizens can be sure that the image on the document reflects the coordinates.
- Applications of notaries and registrars use a web service to access the content of the GML attached file using the code CSV.
3.- What tools can be used for the new parcel boundaries?

- Cadastre has not generated programs that can express the new cadastral parcels in the GML format.
- The market and software development communities have generated them.
- In Internet, there are free and proprietary plugins for generating cadastral parcel GML files for major GIS and CAD programs.
4.- How to know the new parcels fit the continuous cadastral map?

- This geo-referenced representation is used to update the cadastre if it passes the appropriate graphical and technical validations.

- The cadastral cartography is the basis. The technicians are required to represent the reality as an overlay on the cadastral cartography, expressing additionally the twists and displacements that they could appreciate.

- If there is a disagreement with the cadastral information, citizens can provide an alternative geo-referenced representation. It’s expressed in the GML cadastral parcel.
4.- How to know the new parcels fit the continuous cadastral map?

The technicians, the notaries, the registrars need to ensure that the new parcels fit in the continuous cadastral index map.

It’s necessary to validate that the perimeters of the new parcels correspond with those of the old parcels to keep the continuity of the map.

HOW??
4.- How to know the new parcels fit the continuous cadastral map?

You assure the graphical fit using an interactive service and web service that is called “**Graphical validation report**”, available in the Electronic Office of Cadastre.
4.- How to know the new parcels fit the continuous cadastral map?

- The report is an electronic document signed with the secure verification code (CSV) always accessible at the Electronic Office of Cadastre. It has an XML file containing all the information.

- The report avoids the physical exchange of files, shows the new representation and enables the automated capture of its contents preventing transcription errors.

- The result of the technical work could be only this CSV. Notaries don’t need to use GIS. Registrars access the graphical content in the XML file automatically.

- The report doesn’t validate the legal transactions giving rise to a new configuration of the parcels, and that the parcels comply with the necessary authorizations from the legally mandatory administration or public authority.
4.- How to know the new parcels fit the continuous cadastral map?

- The report shows the result of the graphic validation (green mark !!)
- The technician’s identification and the technical data of his/her work
- The XML file is attached to the PDF
4.- How to know the new parcels fit the continuous cadastral map?
4.- How to know the new parcels fit the continuous cadastral map?
5.- How can notaries use accurate graphical information without a GIS?

- The answer is the Cadastral Certification and the Graphical Validation Report !!
- Both of them avoid the physical exchange of files, show the new representation and enable the automated capture of its contents (GML cadastral parcel file) preventing transcription errors.
- Notaries don’t need to use a GIS. They incorporate the PDF directly to the deed.
- They trust that the representation on the document reflects the true coordinates of the new parcels. They can represent the content of the report using its CSV code in a service available in the Electronic Office of the Cadastre.
- Notaries send the graphical validation report to the registrars.
5.- How can notaries use accurate graphical information without a GIS?

- The exchange of information between the different agents that intervene in the real estate traffic is reduced to the CSV code, just only 16 digits.
6.- How the Registry store the graphical information?

- Graphical georeferenced representation gets into Property Rights Registry by a GML INSPIRE file or a graphical validation report.
- Land Register takes the UTM coordinates, unique registered estates code and number of registration entry to make a new GML file that is electronically signed. The secure verification code (CSV) now assigned is incorporated to the registration.
- Graphical georeferenced representation registered produces the strong effects of registration.
6.- How the Registry store the graphical information?
7.- How to communicate the changes to Cadastre?

- All the exchange of information is made through web services between the College of Registrars and the Electronic Office of Cadastre.
- The use of paper is expressly eliminated !!
- Automatically, without human supervision in most cases, the information in Cadastre is modified and the documents for the citizens are generated.
- Notary and registrars have a feedback. They can communicate the results to the citizens.

![Image of Cadastre communication system]
8.- How to show coordination information to the citizen?
9.- How to advertise the new model to the stakeholders?

There is a lot of information in our web http://www.catastro.minhap.es

- Complete FAQ with different topics (45 Q&A)
- “Guide for the management of cadastral graphical information in real estate market”
- Technical documentation (about services, products and formats)
- Links to the “knowledge communities” that are in the web
9. How to advertise the new model to the stakeholders?

- Internal and external training courses.
- Training in Latin America (the last week!!)
- Meetings with all the agents involved
- Technical papers
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Technical Conclusions

- Technology enables solutions that previously they were impossible to think about (we have been trying to coordinate both institutions since 1906 !!)
- The smart model of coordinated interaction is now working. All the applications, products and services have been developed and work together.
- All stakeholders are actively involved. All the agents in the real state market are using the model. Graphical information is present in real state traffic.
- We have faced technical problems whit a multidisplinary approach (computer engineers, legal advisors, topographers).
- The use of standards facilitates the adoption curve of the solution.
COORDINACIÓN Catastro - Registro de la Propiedad

Technical Conclusions

Con Certificación Catastral
- Obtención de la Certificación Catastral Descriptiva y Gráfica
- Captura y generación de ficheros por técnico competente

Con Representación Gráfica Alternativa
- Validación Gráfica en SEC
- Obtención de informes de validación

Inscripción de la Representación Gráfica en el Registro
- Intercambio de información con el Catastro

Certificación Catastral Descriptiva y Gráfica
- Nota Simple del Registro
Business Conclusions

- Technology is not enough. It’s necessary a political boost (Commission on the Reform of Public Administration in Spain) that fix the legal framework.
- Cadastre and Registry preserve their autonomy, but work together, offering a good service to citizens.
- The use of the model increase legal certainty and transparency.
- Coordination is aligned with the ideas of Open Government (OGP): accountability (legal certainty), participation, transparency and reducing administrative burdens.
- Coordination is not a specific action, it is a gradual process that is implemented property to property as entries are made in the Property Rights Registry.
- Coordination is a challenge for all actors. The challenge is also an opportunity for progress, enabling new synergies and ways of simplifying and improving.
The Spanish Cadastre and Property Rights Registry: a smart model of coordinated interaction

Thank you for your attention!!