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STANDARDIZATION AND INTEGRATION OF THE ELECTRONIC REAL ESTATE REGISTRY SYSTEM OF BRAZIL (SREI): THE NACIONAL OPERATOR OF SREI (ONR)

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Abstract

Brazilian real estate registration is carried out by "registrars", legal professionals who receive, through highly competitive examinations, the delegation of the service. The large number of registry circumscriptions has created challenges for the integration of registrars. Having in mind the need of an uniform Electronic Real Estate Registry System (SREI), Federal Law 13.465 of 2017 created an entity called "ONR – Operador Nacional do Sistema de Registro Eletrônico de Imóveis" (National Operator of the Electronic Property Registry System), a private non-profit legal entity, which was committed to the implementation and operation of the Electronic Property Registration System. This entity is composed by all brazilian registrars, who are mandatorily linked to it. The new entity has not yet been formally constituted; even so, its technical aspects are already in full development. This paper explains the legal structure of the ONR, as well as informs the current state of it's technical aspects.

Key Words:

Property registry; electronic registry; standardization; integration.



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1. Introduction: The 2014 Land Governance Report.

For at least ten years Brazil has sought to implement an electronic registration system of real estate with national coverage. In fact, the World Bank Land Governance Assessment report of 2014 pointed out the existence of a substantial amount of non-digitized records (p. XI) as a deficiency of land governance in Brazil, as well as the lack of consolidation of information and the generation of data on number and area of registered properties (p. XIII).

In view of this, the report recommended that regulators and associations of registrars implement a common system of electronic information linked to the registries carried out in each of the states. Also, it recommended to the National Institute of Colonization and Agrarian Reform (INCRA) and to the mentioned associations the implementation of an electronic system of monthly monitoring of the transmission of information from the registry offices to the Institute, in order to have a tool to monitor this exchange. Also in this context, it recommended to the state governments the provision to the courts of justice of the resources (personnel, vehicles and equipment) necessary to improve the supervision of registries and, thus, to strengthen the proper functioning of the registry system (p. XVIII).

As it will be seen, the creation by law 13.097 / 2015 of the National Operator of the Electronic Property Registry (Operador Nacional do Registro - ONR) - which is under development - is a decisive step in eliminating these deficiencies and improving the provision of Brazilian registry services, with gains for the legal certainty and agility of real estate transactions.

2. The Legal-Administrative Regime of the Registration Activity in Brazil.

Before presenting the evolution of the implementation of the electronic registration system in Brazil, it is necessary a brief exposition of the legal-administrative conformation of the registry activity in the country. This brief exposition summarizes what we have already exposed in a previously published work (Lago, Lovis, Guedes & Borba, 2018).

Its essential feature is established by the Constitution of the Republic, in its article 236, which provides that:

Notary and registration services are exercised on a private basis, by delegation of the Public Power.
§ 1º - Law shall regulate the activities, discipline the civil and criminal responsibility of notaries, registry officers and their deputies, and define the supervision of their acts by the Judiciary. § 2º



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Federal law will establish general norms for the determination of payments related to the acts practiced by the notary and registry services. §3° - Admission to the notary and registration activity depends on public competition for evidence and titles, and any service is not allowed to remain vacant, without opening a competition for dismissal or for more than six months.

The main characteristics of the system that derives from the constitutional mandate are (i) a service whose ownership is public; (ii) that, despite the fact that the ownership is public, must be provided by a private individual, by the system of delegation; (iii) that the individuals who will receive the delegation must be chosen by means of a public tender; (iv) that these individuals must be held civilly and criminally responsible under the terms established by a law specially designed for this; (v) that the activity must be subject to supervision by the Judiciary; and (vi) that the remuneration of these individuals must be paid by means of "emoluments", whose legal discipline must be generally governed by federal law, and whose values must be fixed by each member state, according to their reality.

In this way, the real estate registry service (as well as the one performed by notaries), is in Brazil owned by the Member States. However, their provision must be given privately, through an individual. This option of the Constitution was based on the assumption that the private management would be more efficient than the one directly carried out by the Public Power. Since the rendering is private, all the efforts and investments necessary for its execution are carried out by the individual who received the delegation, without burden to the State. The delegate pays all expenses and responsibilities arising from the best possible provision of the service and, in return, is directly remunerated by the interested parties in the practice of the act, through "emoluments". To the price due to the service provider, the Member States, in general, add fees by remunerating the exercise of their police power by supervising the activity, and therefore obtains indirect remuneration, without incurring any costs.

This private management of services proved to be a great example of efficiency, especially when compared to the provision done directly by the Government, which still exists partially in the State of Bahia. Until 2011, all registration offices located in this state were managed directly by the Judiciary. The poor quality of services, the inability to meet demand, and widespread corruption led to the publication of Bahia State Law 12.352 / 2011, which determined the privatization of services. This privatization is still under way, and in the years 2013 to 2016 a public tender was held which delegated to new registrars hundreds of registry offices.

This type of public service provision is analogous to that performed by public service concessionaires present in daily life of Brazilians, such as electric power services, telecommunications, highways, public transportation, etc. This private management covers the administrative and financial



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management of the service, whose responsibility is exclusive to the respective delegate, being responsible for establishing norms, conditions and obligations regarding the assignment of duties and remuneration of its deputies in order to obtain the best quality in the rendering of the services (article 21 of Law 8.935, of 1994).

Each delegate is free to hire as many deputies as he or she may deem necessary for the efficiency of the activity, being his or her the administrative and financial management of the office (article 20 of Law 8.935, 1994). Among these deputies there are the clerks, who carry out the end activity, and the auxiliaries, who are dedicated to supporting activities. And among the clerks the delegate will name as many substitutes as he wants, who can practice the same acts assigned to him as registrar. Finally, among the substitutes, one will be designated by the registrars to act in their absences.

The private nature of the provision of the service also reveals another aspect. Since Brazil adopts a title system of registration of rights, and therefore, it is up to the registrar to carry out a legal analysis of the validity of the wills and documents submitted to him (so-called "registry qualification"), the private nature of the management is an imperative of the independence necessary to the full exercise of this assignment. In situations in which the interest of the State conflicts with the interests of individuals in relation to any decision to be held by the registrar, the registrar acts with exemption, since he is not a public servant, subordinated and remunerated by the State.

On the other hand, it is important to emphasize that the private nature of the management of the service, which guarantees the independence of the professionals that perform it, does not eliminate the ultimate ownership of the activity by the State, which maintains the prerogatives of granting services, supervising them, and declaring them vacant, under the terms of the law.

Regarding the aspect of granting the service, this is done by selecting candidates that must be approved in competitive public tenders, in which there is the assessment of their technical knowledge and experience. With a sense of urgency for the delegation of services, the Constitution established that no registration office could be vacant, that is, without a particular holder of the grant, for more than six months. In a democratic state there is no room for privileges in obtaining public offices, functions and jobs, as well as for notary and registry delegations, or for public permits or concessions.

As for the supervision of the provision of services, this was left to the state courts of justice, which also has the power to discipline its exercise, observing the local peculiarities, and drawing a minimum set of rules, which guides the activities of the registrars, altogether with federal laws. These standards are



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usually gathered in a document called "standards code" or "service standards," and are largely derived from decisions previously made in consultations, inspections, and corrections.

This leads to the existence of slightly different procedures in each state of the federation, which has proved a problem in the effort to create a national electronic registration system.

It is important to emphasize that the Judiciary does not have absolute freedom in the exercise of this function. On the contrary, the rules issued by the competent judicial authority are below the law, and owes, therefore, respect and obedience.

It is also up to the competent judicial authority to compose any conflicts that may occur between the notary and the registrar and the user of the respective service. This conflict arises, for example, when the registrar refuses to perform the act that was requested because he sees some legal impeding fact, that is, to qualify negatively the title or document that was presented to him. In this case, it is up to the registrar to instruct a procedure, which in Brazil is known as "doubt", in which he will deduce the impeding reasons for registration. It shall be for the competent judge to decide whether the refusal by the registrar has been agreed, in which case the registration is not carried out; or if the user of the service was right in his demand, in which case the judge determines the accomplishment of the registration.

As for the duty of inspection of the offices itself, its object is broad. There are several duties assigned to notaries and registrars, who must keep the books, papers, and documents of their office in order, and keep them in safe places; meet the parties with efficiency, civility and promptness; to dignify the function exercised, both in professional activities and in private life; keep secrecy about the documentation and matters of reserved nature of which they are aware because of the exercise of their profession; to observe the emoluments fixed for the practice of the acts of their office; observe the legal deadlines established for the practice of the acts of his office; to supervise the payment of taxes on the acts they must carry out; observe the legal and normative prescriptions and the technical standards established by the competent court; among others. Due to non-observance of these duties, notaries and registrars are subject, with a right of defense, to penalties of reprimand, fine, suspension for ninety days, extendable for a further thirty, and even loss of the office.

There is, therefore, in summary, a scenario in which the registrars have autonomy in the provision of the service, which, nevertheless, is a public service; each registrar submits to the supervision and regulation by the respective court of justice of its state; and there was no normalizing entity of the



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components involved in the creation of a uniform national electronic register until the creation of the National Registry Operator.

3. The Creation of the SREI (Electronic Property Registration System – Sistema de Registro Eletrônico de Imóveis): Background.

In the year 2009, Federal Law 11.977 determined in its articles 37 et seq. that the registrars should institute an electronic registration system. This law also established minimum requirements for this system (compatibility with the Brazilian Public Key Infrastructure - ICP, and with the e-PING (Electronic Government Interoperability Standards) architecture, and set a period of 05 years for inclusion in the new system of all acts practiced by registrars since the establishment of the current Brazilian Public Registers Law (Law 6.015 / 73).

According to Jacomino (2017), a first attempt to comply with the provisions of Law 11.977 was made through the institution, by the National Council of Justice, of the Project for Modernization of the Amazonix Region Registry Offices. This modernization involved the making, through exclusively electronic processes, of all stages involved in the registration. The efforts of this project resulted in the contracting of the LSITec - Laboratory of Integral Technological Systems, linked to the Polytechnic School of the University of São Paulo, which elaborated all the technical documentation related to the SREI. All the documents produced by this time are available online, on the website <https://folivm.wordpress.com/documentos/>.

This documentation was recognized and assimilated by the National Council of Justice, which, based on Recommendation 14/2014, defined it as a standard and recommended it to the registrars inspector offices of the courts of justice of all Brazilian states. It should be noted that this recommendation went beyond the original scope - the registry offices of the Amazonic Region - reaching the entire Brazilian registry system.

The general idea of the system then presented, as it can be seen on the structuring documents (SREI – Sistema de Registro de Imóveis Eletrônico, *n.d.*) considers the possibility of attending users in the offices, in which case their request should be included in the SREI by the attendant, regardless of the format in which it is presented (in paper or born digital), and remote users, who perform their requests through the Internet. For this, the SREI was structured in two main systems, one of Electronic Shared Service (Sistema



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de Atendimento Eletrônico Compartilhado - SAEC) and another used in each service unit, called the Office System (Sistema do Cartório - SC).

The Electronic Shared Service System (SAEC) contains a contact point that must be used by all registry offices in Brazil, through which it receives and forwards information to each registry unit, as well as an interface for remote users, and an exchange of information point with external bodies, such as government bodies.

The Office System (SC) aims to automate the internal activities of the trade, receive requests from users and SAEC, maintain the electronic register, among others that relate to the daily work of each registrar.

Users, in person or remotely, can, through SREI, request a range of services, such as the consultation of information made available to the general public by the registrars, like costs of services, registry requirements etc; request, regularize or cancel requests for certificates or information about real estate, people, specific records, and the progress of orders already made; as well as requesting the execution of proper records, through the presentation of the respective title.

Order processing involves a major paradigm shift, going beyond the mere provision of digitized paper documents. The system proposes that at the request of the user of a new registry (or even, at the discretion of the registrar, when requesting a certificate of registration of the property), the registrar performs what is called "first electronic qualification", in which he finds the current legal situation of the property, and this consolidated situation will become a paradigm for the provision of certificates (structured in XML format + XML Dsig, or unstructured in PDF / A-2 + PAdES format), as well as for the analysis of future titles presented to the registry

At first, as already mentioned, the system was developed to support land regularization, especially in the Amazon. However, the project, with the advent of ONR, intends to design a SREI that will serve the entire Brazilian society, which will be able to perceive all the set of registry offices as a single service, even if the work itself keeps being carried out by each one of them, according to its area of competence.

As an accessory element of this system, state-level registrars' centers have been established, which may or may not be created, according to the convenience of the registrars of each state. Currently, some states rely on deployed exchanges, providing users with a more or less comprehensive list of services. The



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lack of uniformity in these services and the standard of information exchange is one of the main reasons for the implementation of a national standardization body.

It is important to note that SREI has never intended to centralize data from the various records offices on a national basis. The data should remain under the responsibility of each registrar who received a public delegation to keep them. In this way, the data effectively maintained by the national central should be summarized to an anonymous statistical base (which can be used, for example, to provide SDG indicators data), to a base of orders of assets freezing, and to a database of CPF and CNPJ (identification documents generated by the Federal Revenue Service of Brazil, respectively, on individuals and legal entities), in order to enable the location of records relating to a certain person.

4. The Creation of the National Operator of the Electronic Property Registry (ONR).

As mentioned before, the Brazilian registry system - composed of registrars spread throughout the Brazilian territory, subject to slightly different rules according to the federal state in which they are located, and also to the functioning of their respective state-level center, when it exists - calls for the creation of a national standardizing body.

Such a body - the National Electronic Property Registry Operator (ONR) – it is good to say, does not intend to issue legal norms regarding the registration itself, nor to supervise the work of the registrars, being these attributions, according to the Federal Constitution, of the Judiciary. In this sense, the ONR itself is subject to regulation by the Judiciary, through the National Inspector of Justice, of the National Council of Justice. The ONR also does not intend to interfere in the administrative and financial management of each registry office, which is the sole responsibility of each registrar. However, it should act in the standardization of SREI, which means establishing technical requirements applicable to the operation of software and hardware involved in the registration, as well as the way of structuring the operation of the whole system. Once again, all the normalization made by the ONR is subject to the scrutiny of the Judiciary, which supervises everything.

In this way, the registrars, who perform the service; the Judiciary, as the regulatory and supervisory body; and the ONR, the normalizing entity, will coexist in the SREI.



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A draft statute of the ONR is, right now, under analysis by the National Council of Justice. The ONR, according to article 76 of Federal Law 13.465 / 2017 and article 1 of its draft statute, is a non-profit private legal entity and is being organized by the Brazilian Real Estate Registry Institute (IRIB) and the Association of Notaries and Registrars of Brazil - ANOREG-BR (Estatuto do Operador Nacional do Sistema de Registro de Imóveis Eletrônico – ONR, 2017). Its purpose, in terms of article 4 of the draft statute, is to implement and operate, at the national level, the SREI, through the integration of the various registry offices. To this end, it encompasses the universalization of SREI and the adoption, in its management, of corporate governance principles, optimizing the use of new technologies, and thereby generating greater efficiency in the provision of services, as well as better interconnection between the offices of registration among themselves, as well as between all of them and the Judiciary, Public Administration and society as a whole.

As already mentioned, it is its role, according to Article 5 of the Draft Statute, to implement and coordinate the operation of SREI, and to issue technical instructions for standardization for safe operation of the system, as well as to implement the centralized operation of the Electronic Shared Service and supervise and coordinate the various state-level electronic service centers in operation. It is also the responsibility of the ONR to edit an electronic gazette for publication of acts issued by the ONR or other publications related to the SREI, to formulate indicators of efficiency and supervision of services, and to structure the interconnection of the SREI with registries maintained by the public authorities.

The ONR is composed by all the registrars of the country, who are included by express legal provision (Federal Law 13.465 / 2017, article 76, §5). The registrars participate in the management of the entity, and are subject to the decisions and normative acts issued by it. This management is given by a set of bodies, of which the maximum body is the general assembly, which is composed of all the registrars linked to the system.

In addition to the general assembly, the draft statute also provides for the existence of other collegiate bodies, such as a Deliberative Council, a deliberation body composed of representatives of each federal state and the Federal District, and with the attribution of electing the Executive Board and approving the policy of the ONR; a Board of Directors, composed of representatives of IRIB and similar entities present in each of the federal states, with attribution to deliberate on management plans and guidelines, in addition to monitoring and evaluating the Executive Board; a Consultative Council, composed of representatives of the Judicial Branch - regulatory agent of the ONR - and the attribution of hearing



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suggestions and opinions on matters submitted to it; and a fiscal council, responsible for the budgetary, accounting and patrimonial oversight of the entity.

The technical and administrative management of the ONR shall be made by a Board of Executive Officers composed of one CEO and four Vice-Presidents, all elected by the Board of Directors, for three-year terms, regardless of the possibility of appointing other nominee directors with term of office established by the Chief Executive Officer. The Board of Directors is responsible for managing the entity, as well as for the entire information technology infrastructure of the ONR.

Finally, the draft statute also provides for the existence of a Technical Standards Committee, an organism composed of five registrars and responsible for issuing technical standardization instructions that reconcile legal norms and technological-operational language, which are applicable to registrars and state-level centers linked to the SREI.

The draft statute was approved by registrars at the plenary of the XLIV Meeting of Officials of Property Registry of Brazil, promoted by IRIB in Curitiba, Paraná, on May 30, 2017, and is currently under analysis by the National Council of Justice.

5. Current state of system development: Proof of Concept¹.

IRIB, the entity in charge of structuring the ONR, together with ANOREG-BR, is developing a Proof of Concept (POC) for the systems that make up the SREI. The progress of the project is available on the website www.registrodefuturo.org.

This is a simplification of SREI, using the "Agile" concept of project management, and the expected result will be a "MVP" (Minimum Viable Product). The scope of the POC comprises the development of a functional prototype of software covering all the steps necessary for the electronic registration of a structured born digital title, which, for the demonstration, will have the feature of a private contract of sale, with an annex fiduciary sale pact as collateral. The prototype covers from the receipt of the title in the

¹ This section of the article would not have been possible without the collaboration of the POC developers, Adriana Jacoto Unger (adriana.unger@terra.com.br) and Nataly Cruz (nataly.cruz22@gmail.com).



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property registry office, until its registration in the electronic registration system, according to the standards established for the SREI.

The project was divided into four work packages, comprising an ontology package (XML Ontology), a shared electronic attendance system development package (SAEC), a system package linking each registry bound to SREI (SC) and a package for archival document management (SIGAD).

The ontology package comprises the modeling and definition of the data structure of each structured born digital document. The SREI specification, approved in Recommendation 14 of the National Council of Justice, contemplated the concept of digital content structured document, and recommended the application of digital semantic representation (RDF and RDFS). Based on this model, the POC intends to use "Semantic Web" technology to define the ontology of the registered data, so as to enable its future interoperability, and broaden the idea of "machine and human readable" document. This will be a key element in providing the data demanded by the SDG indicators.

With semantic web one can define objects, properties, axioms and the vocabulary of a given domain, and interoperate with other domains. This will allow a more intense application of artificial intelligence, not based only on "big data", but also on logical inferences. Furthermore, this technology allows the connection of human-readable symbols to the machine's processing capacity (Guizzardi, 2005). The use of this method in the field of law is not new, having already been proposed to organize legal concepts and represent analyzes of conformity with different legal systems (Guizzardi, 2005).

For example, one can use the principle of creating a structure that works with the concepts of "person," "living person," "dead person," "ascendant," "descendant," etc. (Guizzardi, 2005), which can reverberate in other areas: Law provides a concept of person, but Medicine defines what is a "dead person." Again, the law establishes what means ascendants, descendants or people collaterally related, and connects consequences to these legal situations; but biology also provides concepts in this regard.

However, despite the legal background, the use of this method in the property registry, as the POC proposes, is done in a pioneering way, for example, establishing concepts such as "lot", "apartment", "owner", "usufructuary" etc., and still using concepts from other domains, such as "natural person", "legal entity", "price", etc. With respect to the limits of the POC itself, this package is being developed with the OWL language, and, for example, establishes an ontology for the concepts of address, property, person, electronic document, protocol and registration,



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The development of the shared electronic attendance system (SAEC) concerns the National Shared Services Center, and is already in the final stages of completion. In the POC, the SAEC will register the service applicants, receive the application for registration by means of an electronic title presented to the system, manage the payment of the costs due, and forward the title to the competent registrar for protocol. It will be up to SAEC, also - after the stage in which the title is processed in the registration office - send the applicant the result of his request.

The third package concerns the Office System (SC), that is, the system responsible for the electronic registration performed by each registry office. It's development is in progress. Its specification should follow the electronic bookkeeping standard set for the SREI, with electronic signatures linking structured born digital documents composing electronic books - analogously to what happens in the chain of blocks of a blockchain. It is proposed to use a new electronic registration format, which will contain the consolidated legal situation of the property, and which will be updated after the practice of each act. It should also be noted that the POC involves, in order to increase security in the registry, the launching of hash codes of records (which themselves consist in structured born digital electronic documents, protocols and registrations of properties) in blockchain, using the platform <https://bismuth.cz/>. However, the architecture foresees, for the future, the shared use of a blockchain integrated by all the brazilian registrars. For security reasons, the blockchain will contain only the hash codes of the records and not their contents, which will remain stored exclusively in the registry office in which they are performed.

And the fourth package, which deals with the development of the Computerized Archives Records Management System (SIGAD), includes the development of structural tools for the management of the documents processed by the Property Registry, establishing a classification code according to the type of document, a temporality table with guard deadlines, as well as the definition of archival metadata that allow its management.

This is an essential part of SREI, since it is the management and preservation of born digital documents. For the purpose of the POC, a prototype of SIGAD was developed based on the parameterization of Alfresco, a free software platform for document management, in which the mentioned elements are implemented taking into account exclusively the documents proposed for the demonstration - the title itself; accompanying evidence, such as proof of payment of taxes; protocol book opening term; the protocol of the title and its receipt; term closure of the protocol book; the registration seat itself; the certificate of property; and the certificate that the acts were practiced. All metatags were defined taking into account national and international standards and standards (Dublin Core, e-PNG, e-Arq).



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This, in short, the structure of the POC that will be carried out in the coming months, which, together with the definitive approval of the ONR by the National Courts of Justice, will constitute a decisive step towards the structuring of a Brazilian system of integrated electronic registration, with national coverage.

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