

## The access to research as a motor of research.

**ABSTRACT.** *In the quest for more efficient and exacting research on architecture and urbanism in a universe that corresponds to a reality that is currently so widespread (Europe, USA, Brazil, Africa), we propose that a formal model for a doctoral thesis be created that includes remissive indexes (onomastic, toponymic) and that common platforms are also created that can be accessed on-line and where such theses and indexes would converge. Partnerships should be established between different universities which would apply the same formal thesis model and work in collaboration with specialists in the field of semantic web publishing. This tool would make it possible to understand the universe of architecture and urbanism research beyond the geographic frontiers of where the work is undertaken, beyond the subject matter, beyond the title of the thesis, beyond the given keywords, so that research would be the engine leading to new research.*

**KEYWORDS:** architecture, urbanism, theses, research, semantic web publishing, indexes

**RESUMEN.** *En busca de una investigación más eficaz y rigurosa en la arquitectura y el urbanismo en un universo que coincide con la realidad actual de la investigación extensa (Europa, EE.UU., África, Brasil) proponemos la creación de un modelo formal de la tesis doctoral que debe incluir los índices (nombres propios, toponimia) y la creación de una plataforma en línea de acceso común donde convergen estas tesis y estos índices. Deberían establecerse asociaciones entre varias universidades que aplican el mismo modelo formal de la tesis y el trabajo en cooperación con expertos en el campo de la publicación en la web semántica. Esta herramienta podría revelar el universo de la investigación en arquitectura y urbanismo más allá de los límites geográficos de donde se realiza la obra, más allá del tema, más allá del título de la tesis, más allá de las palabras clave asignadas, siendo la investigación motor de nuevas investigaciones.*

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## The access to research as a motor of research.

In the quest for more efficient and exacting research into architecture and urbanism in a universe that corresponds to a reality that is currently so widespread (Europe, USA, Brazil, Africa), we propose that a formal model for a doctoral thesis be created that includes remissive indexes (onomastic, toponymic) and that common platforms are also created that can be accessed on-line and where such theses and indexes would converge. Within the broad and varied list of remissive indexes (analytical, bibliographic, conceptual, chronological, quotes, sources, keywords, titles, iconographical, etc.), we believe that the onomastic index (index of people's names) and the toponymic index (index of place names) would bring together a large number of references. Research in architecture and urbanism can be defined "as an activity conducted to solve problems and whose "main objective is to find answers to questions based on scientific processes"<sup>i</sup> and, considering that we live in the era of the knowledge worker<sup>ii</sup>, we should create tools that raise the potential of that work, and be innovative in terms of indexation and search systems. With this in mind, it will be necessary to work together with specialists in the semantic web publishing field. Although several databases are already working with open fields to enable the continuous fine-tuning of research, semantic web publishing research must also be encouraged, including the search for solutions that may broaden the range of possibilities and enable a global sharing of knowledge. Part of the funding for such a major project could be obtained from company sponsorships and contributions from embassies and foreign offices of the countries whose universities become partners. This would greatly contribute towards the desired visibility for each university. There should be partnerships between different universities that apply the same formal thesis model which would make it possible to intersect the different remissive indexes on a platform. In this way, each new research activity could start from the real historiographical basis of its object of study by being able to swiftly access the vastest universe possible, which would encompass research undertaken beyond the frontiers of Europe. We also believe that academic work must use historical knowledge as a tool for contemporary work and that bringing together both time elements will certainly be advantageous for operative knowledge. It is absolutely necessary to turn academic knowledge, materialized in theses, into productive knowledge so that we may obtain knowledge productivity. In the field of architecture and urbanism, academic production must establish and encourage interactivity between research and architectonic practice. Most academic theses prepared in the field of architecture and urbanism condense research and information that is locked up in museums, archives, estates, exhibitions and inventories, and so the best way to reveal that knowledge is to make it accessible. Academic theses are an

undeniable source of historic, descriptive and experimental research and hold endless and useful information for every area of architecture and urbanism research and related fields. In contemporary society, knowledge is a “key-resource”. University produces knowledge and the best tool for knowledge is research; this is the wealth and modernity of the university. The complexity of research in architecture and urbanism is related to the diverse approaches to the object of study. The tool we advocate would speed up research for national and foreign researchers, for institutions and other interested parties, thus avoiding the waste of knowledge.

In contemporary life, the geographic scope of architecture and urbanism research should encourage a wider range of research tools. The architect Álvaro Siza Vieira (Matosinhos, 1933- ) is an object of study in the United States<sup>iii</sup>, in Brazil<sup>iv</sup>, Spain<sup>v</sup>, and Portugal<sup>vi</sup>, just as the architect Rafael Moneo (Tudela, 1937- ) is an object of study in the United States<sup>vii</sup>, Italy<sup>viii</sup>, Spain<sup>ix</sup>, and Portugal<sup>x</sup>. Also in the field of the history and theory of architecture, there are studies on Adolf Loos (Brno 1870-1933) in the United States<sup>xi</sup>, in Portugal<sup>xii</sup>, Spain<sup>xiii</sup>, and Scotland<sup>xiv</sup>. Anyone who begins new research into the work of an architect needs to be able to efficiently access as many academic studies conducted around the world as possible. If the monographic theses on Álvaro Siza Vieira written in various universities have remissive indexes which can be intersected in the same database, any researcher can begin his work based on work already conducted – this is essential if the research is to be more rigorous and progress better. Moreover, those indexes will also be a useful tool if they allow access to information on Álvaro Siza Vieira that are not non-monographic theses on his work, but which may have focused on different aspects about this architect when dealing with another subject<sup>xv</sup>. A researcher, from Italy for example, working on the architect Eduardo Souto Moura (Porto 1952- ) would undoubtedly find it very useful to be able to have access to a thesis written in Portugal<sup>xvi</sup> or any other country. Or someone who wanted to study the architect Frank Owen Gehry (Toronto 1929- ) would find his research developed more quickly if he/she could access the theses written in Spain<sup>xvii</sup> or in Portugal<sup>xviii</sup>, even if not monographic.

By crossing toponymic remissive indexes, it would also be possible, for example, to obtain information on Lisbon<sup>xix</sup> from theses written in Spain on the urban evolution of Rio de Janeiro. On the other hand, theses on the reality of the city of Lisbon<sup>xx</sup> may be written in Spain. The crossing of toponymic indexes would also mean that a thesis written in Brazil about Praça Brasileira provided information therein on Portuguese urban morphology<sup>xxi</sup>. Turin's urban development is the object of analysis of a doctoral thesis in the United States<sup>xxii</sup> or is mentioned in a thesis prepared in Portugal but dedicated to studying the Brazilian state of Goiás<sup>xxiii</sup>. In the same way that a thesis written in Brazil about the architecture in the São Paulo International Biennials from 1951 to 1961 analyzes the project of the Bairro das Estacas neighborhood in Lisbon<sup>xxiv</sup>. A very good example of the potential of semantic web publishing is provided by theses written in different countries on the urban architect Donat-Alfred Agache (Tours 1875-

1934) which, although monographic, have proven to be operative in a study about him. For illustrative purposes, we would like to highlight a thesis written in France in which Lisbon's urban development<sup>xxv</sup> is the object of study, or another one written in Portugal regarding Lisbon architecture<sup>xxvi</sup>, or a thesis undertaken in the United States<sup>xxvii</sup>, or even in Spain but about the Brazilian towns of Rio de Janeiro<sup>xxviii</sup> and Goiania<sup>xxix</sup>. An architect, or a company, wanting to develop an urban project in Luanda should have access to doctoral theses in the field of architecture and urbanism of the town of Luanda regardless of whether they were written in Portugal<sup>xxx</sup> or in Scotland<sup>xxxi</sup>.

The main objective of our proposal is to create a model for a doctoral thesis and a platform that would make it possible to understand the realm of architecture and urbanism research beyond the geographic frontiers of the place where the research is undertaken, beyond the subject matter, beyond the title of the thesis, beyond the given keywords, so that research would be the engine of new research.

Trying to develop the intentions expressed above we present some computer models built to show the operation.

Firstly a model of the database (Image 1).

Also an example of an application to manage the data (image 2).

And finally two versions of the search screen in operation. The first screen in a free form (Image 3a) and the second screen the same combination of words but also with the option of place (Image 3b).

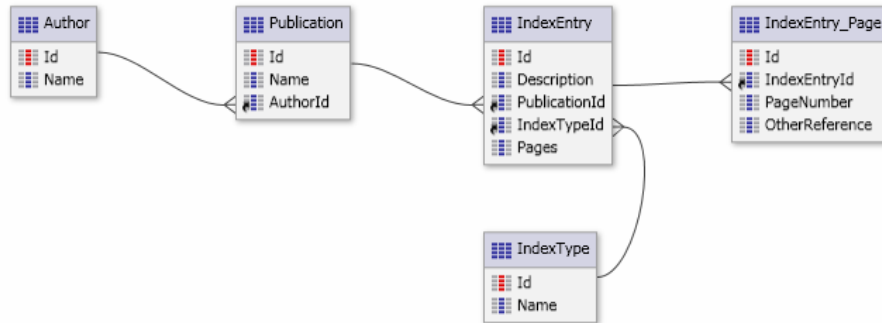


Image 1 - Minimalistic Data Model for a repository of Index data.

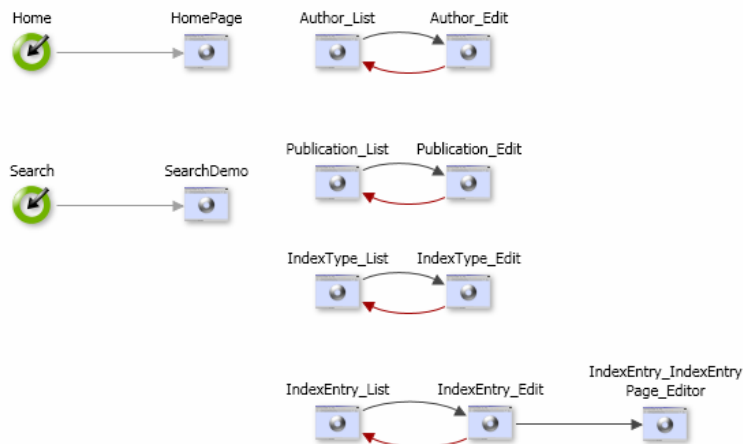


Image 2 - Application data flow for a back-office application to manage and publish Index data.

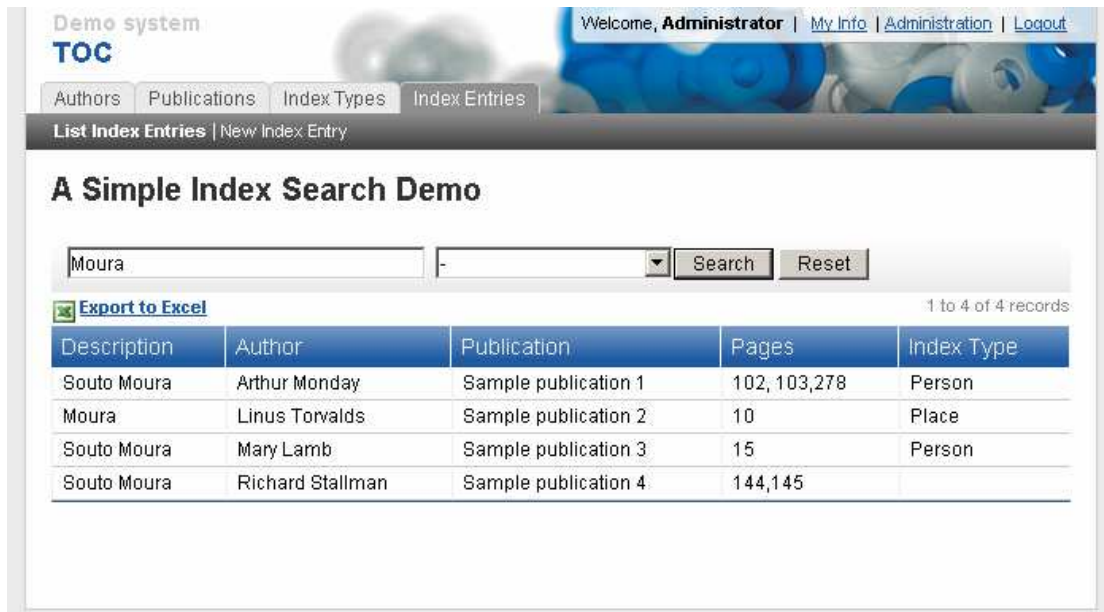


Image 3a – Search page demo for Index data.

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