Towards a Portal and Search Engine to Facilitate Academic and Research Collaboration in Engineering and Education

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ABSTRACT

International academic and research collaborations are of great importance at this time but currently it is not easy to search and find researchers in the engineering field in Latin America and the Caribbean. Some countries in this region, such as Colombia, have published online the curriculum vitae of its researchers and classify research group according to their productivity, but the information is in Spanish and other countries in the region do not offer the same information. Many universities in the region do not publish the names and emails of their professors. Scholar and citation databases exist but only list publications written in English. Many scholars in Latin America and the Caribbean publish in other languages, such as Spanish or Portuguese. There is a need for a creation of a portal and search engine to find Who’s Who in Engineering Education in the Americas to facilitate searching for possible collaborators for future research proposals or exchanges. The Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) proposes to develop such a portal with a database of universities and researchers built on top of an object-oriented architecture and include publications in English, Spanish, Portuguese and French indexed by LACCEI to accomplish their objectives of the cooperation and partnerships among member institutions in the areas of engineering education, research, and technology advancement. Here we present the some aspects of the architecture that allows someone to narrow down searches geographical or by engineering discipline.

Keywords: Academic collaboration, international collaboration, research collaboration, database, search engine.

1. THE NEED FOR AN ACADEMIC AND RESEARCH COLLABORATION SEARCH ENGINE

In this day and age, it is critical for the international competitiveness of the Americas to collaborate in research and academically with the rest of the world and increase the international visibility of its scholars and universities. Those researchers that publish in English are visible in many scholar databases and citation indexes but how can one find a researcher that is publishing in other languages? Many universities in the region do not publish the names and emails of their professors, so it is hard to locate, contact and collaborate with them. Scholar and citation databases exist but only list publications written in English. The Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) intends to develop a search engine to facilitate locating and contacting possible partners for academic and research collaborations through a Who’s Who in Engineering Education, a search engine and database with information of professors, researchers and universities in Latin America, the Caribbean and other parts of the world interested in collaborating with this region. It currently has more than 3000 authors in the database that have published within LACCEI and lists their publications. We present here some aspects of the object-oriented architecture of the search engine. We use the Unified Modeling Language (UML) to express the structure and relationships. When completed the goal of the LACCEI portal is to have a complete system where any person could find the information related to Engineering Education and the network of people working in this field, particularly in Latin America and the Caribbean, and at some point in another countries.

2.1. BACKGROUND AND RELATED WORK

There are some sites that offer some information about universities in the region but do not provide for the type of search this project requires. A search of the web resulted in the following databases or listings: Altillo [ALT], Universia [UNI], Universidades24 [UNIV], CEPS
of one’s personal information. Moreover it is important to individual is the email of the person. This will be used as student paper in more detail, but the primary key for the index and the LACCEI search engine will provide more visibility to the researchers. The phases to follow in the project are explained in the database of publications to be searched by field. The publication is classified by the track under which it was submitted to a conference or publication, allowing the person’s publication to be shown in their detail. Each database and linked to their author, permitting the visibility of their research and their university and research groups to be increased to foster international collaboration.

3. CONCLUSIONS

This Portal and Search Engine in Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) for Who’s Who in Engineering Education will provide access to the database with information of professors and researchers and universities interested in collaborating with the Latin America and the Caribbean and their related work in designated disciplines. The design and development of the proposed search engine of the LACCEI database will benefit any person who needs to search for collaborators. The LACCEI database currently contains information on 3000 registrants and authors and their publications within LACCEI. LACCEI intends to honor the privacy of individuals by allowing them to keep their contact information private, yet allowing the visibility of their research and their university and research groups to be increased to foster international collaboration.

REFERENCES


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