Maestría en Gestión e Innovación Tecnológica

Title

Comparative analysis of expert finder tolos

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Comparative analysis of expert finder tools

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1. Introduction

The knowledge management was developed with the goal of using knowledge within an organization as well as possible. One of its tasks is the development of information systems that could support the search for expertise, also known as expertise retrieval, expertise location, expertise identification or yellow expert pages. The ability to rapidly discover individual experts and apply their knowledge is an essential element of innovative organizations

The "Instituto de diseño e innovación tecnológica" IDIT at the Universidad Iberoamericana de Puebla offers I+D+i services to private and public organizations through the professional collaboration of the academic and research university staff. It helps to develop different kind of projects. new products, new process, technology transfer, assessment and training to the business and industry, especially to small and medium enterprises.

When the project leaders need someone to show the right path to solve problem usually look for an expert, that is the specialist available who has more knowledge and experience to analyze the job characteristics and could propose innovative solutions. Their opinion is useful and contributing valued since the evaluation and quotation initial steps to the project finish.

2. Objetives

The general objective of this thesis is to propose a technological tool that helps find expert people that could potentially collaborate on projects based on their knowledge and experience. The first task is define the support elements found on existing expert finder tools that help to identify and select this people.
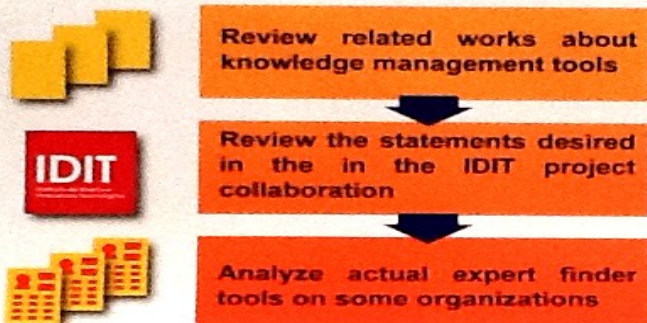
3. Methodology

Figure 1. Methodology used in this research

4. Related works

There is an increased demand for intelligent technologies that can automate the process of initializing and updating profiles in expert finding, some of them have tried to locate expertise residing in email communications, because this document capture candidate experts' activities, interest, and goals. (Balog et all, 2012).

Others process search in social networks. The people that wish to be located as specialist use professional social networks, update their profile frequently, increase their relationships and validate their skills, with the purpose to be located for head hunters or automatic expert finding systems. (Yimam-Seid, 2003)

5. IDIT statements

At present in IDIT the expert search is realized mainly asking to the collaborators to recommend a specialist in the subject. An expert finder tool will help to enable rapid formation of cross disciplinary teams to respond to the projects, accelerate research and development, increase intellectual capital and build social capital by connecting people inside and outside of the university.

In an interview with the project leaders of the IDIT they considered that the variables of the Figure 2 must be desirables on the expert's performance in any project:

Client satisfaction	1	Project results
Innovation impact	2	Contribution of specific ideas
Feasibility	3	Real proposals and implementation, short lead time I+D
Utility and support	4	Knowledge, expertise and I+D that substantiate the propose
Commitment	5	Social, ecologic and community ad value

Figure 2. Expert's performance according to IDIT statements

6. Expert finder tools

Five tools were chosen as cases of analysis, these were selected because they have different context and characteristics in the search, report and manage of the information. Basically all works with a search bar to write the expert's name or specialty needed, some of them has advanced filters to narrow the results. When the searching process ends it display a catalogue with the candidate's summary information, if you select one name you can view the complete profile interface that varies from simple to complex with multiple tabs, like general data, publications, research, awards, linkages or studies and awards.

The objectives of the expert finder tools pages differs: one let the journalists find an specialist to support an article or documental, a university promotes its academic staff, other is a project in development open to all experts, this different objectives make that the principal data changes, edited documents, co-author works, academic degrees, project collaborations, skills and competences are variables used to rank the member expertise.

Figure 3. Expert finder tools revised.

Table 1 provides an overview summary of the key elements in the tools revised. The columns are grouped into clusters including: **Sources** processed to determine expertise, it may be getting by a user capturing her profile or automatically extracted from communications or artifacts of the expert. **Processing** is the task that the software performs to extract, store, search, filter, rank and report data. The **results** are presented to the user in different ways such as in ordered lists of experts, lists of documents, resume or complete expert information and chart graphics.

Table 1. Expert finder tolls analysis

Tool	Sources					Processing				Results			
	Self declaration	Email/Web Page	Document / I+D	Resume	Social network	Ranking	Relation net	Databases	Filter Search	Browse / List	Compare table	Graphic chart	Mobile app
Expertise Finder	●	○	◐	●	●	◐	●	●	○	●	○	○	○
Expert Cloud	●	◐	◐	●	○	○	◐	●	●	●	○	◐	○
Find an expert	●	●	●	◐	○	○	●	●	●	●	○	◐	○
Talent M. Cloud	●	●	●	●	●	●	●	●	●	●	●	○	●
Linkedin	●	○	●	◐	●	○	●	○	○	●	○	○	●

● Full   ◐ Partial   ○ None

Some tools reports a graphic representation for collaboration net, map of science or a web chart with the variables used to evaluate the candidate, for example reputation, agility, cost, trust, expertise.

In these experts finder tools are easy for the users search or browse for people with particular skills, knowledge or background, and have confidence in the search results.

7. Conclusions

The data is the key for find an expert, Linkedin is a good resource of information where the expert can update her data with the motivation to be exposed to any head hunter, search system or collaborate on a project.

Expert finder tools benefit an organization by mapping the tacit knowledge, helps to find "who knows what", but the real value of the organization comes when the knowledge gets applied to a problem, minimize development time, efficient efforts, strength the interdisciplinary work, create social links and propitiate innovative solutions.

The talent finder tools contributes to improve the relations between industry needs and university knowledge.

8. References

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