Innovation Search

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1 Aims, Scope and Learning Objectives of the Tutorial

Innovation search presents many challenges to the research community and also to professional searchers and search solution providers. Patents are complex technical documents, whose content appears in many languages and contains images, chemical and genomic structures and other forms of data, intermixed and cross-referring with the text material. Further much innovation search involves the search of other forms of technical information such as scientific papers, or the integration of open linked data and so on with the patent data. Finally, the realistic presentation of search and analysis results to often non-technical and time-poor audiences for purpose of strategic decision making presents particular challenges.

The course reviewed the state of the art and pointed out where the key challenges are, especially for early stage researchers and innovation professionals in patent search and related disciplines. The objectives of the tutorial were:

- Understand the international patent system, patent searching and the relevant state-of-the-art.
- Understand the key limitations and challenges for the research community in the development of patent retrieval and innovation search systems in general.
- Understand how recent developments in information retrieval, multilingual and interactive information access may be applied to patent searching research.

2 Relevance and Significance to TPDL2017

The patent related business is worth billions, but still many problems of innovation search are solved on a daily basis by the patent community, often in somewhat inadequate labor-intensive ways. The challenge for the research and scientific community is to provide better solutions without increasing the already heavy burden on relevant technical, legal and language experts.

3   Target Audience

Intellectual property and patents in particular have been extremely present in research, public discussion as well as in the media, in the last ten years. Innovation is very important in today's society and heavily reflected on the economic analyses, calls for collaborative research etc., therefore it demands for a serious consideration also by researchers and experts from related disciplines. We hence expected the target audience to consist mainly of two groups. First, postgraduate students and post-doc researchers from academia engaging in studies related to information retrieval, professional search systems and natural language processing. Second, researchers from other related disciplines and professionals (e.g. search solutions providers) who will be given the opportunity to enhance their expertise towards the area innovation search.

Since the class introduced foundations and basic concepts of patents and innovation search, it was also accessible to individuals not familiar with the field of information retrieval. We did not rely on any particular prior knowledge.