User-Focused Ranking in Legal Information Retrieval

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Introduction

This research project addresses user-focused ranking in legal information retrieval (IR). The goal of this project is to improve ranking in legal IR systems. Ultimately, this will help legal professionals find relevant information more efficiently.

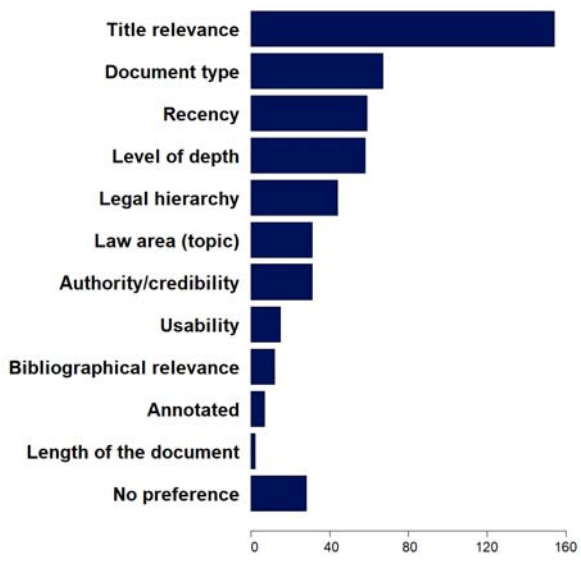
Relevance in legal IR systems

Gineke Wiggers, Suzan Verberne, and Gerrit-Jan Zwenne. 2018. Exploration of Intrinsic Relevance Judgments by Legal Professionals in Information Retrieval Systems. In Proceedings of Dutch-Belgian Information Retrieval Workshop (DIR2018)

Relevance factors were extracted via a user questionnaire in which users of a legal IR system were shown a query and two search results. The user had to choose which of the two results he would like to see ranked higher for the query and was asked to provide a reasoning for his choice. The search results were chosen in the manner of a vignette, to test two potentially relevant factors.

on these factors, which means that users of legal IR systems have, to some extent, a common cognitive relevance, which can be used to improve ranking.

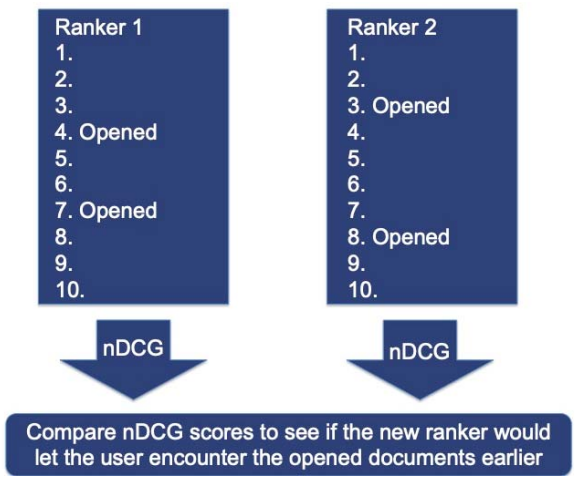
Table 1. Relevance factors sorted by number of mentions in the free text field.



The participants show substantial consensus

Usage variables to improve the ranking of search results

The usage and citation metrics will be used as an additional feature in a ranking algorithm. As a baseline, the existing ranking algorithm of the Legal Intelligence legal IR system will be used. The new algorithm will add variables of usage and citations of the documents to the existing algorithm.



User-centred evaluation for ranking improvements

Because this research is user-focused, the evaluation method for adding the citation and usage information to the ranking algorithm will also be user-focused. I will collect a test set consisting of queries and interactions of actual users. From these interactions relevance assessments will be derived, so that results can be evaluated using normalized Discounted Cumulative Gain (nDCG).

References

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