

In this paper, we propose a new evidential link-based approach for re-ranking XML retrieval results. The approach, based on Dempster-Shafer theory of evidence, combines, for each retrieved XML element, content relevance evidence, and computed link evidence (score and rank). The use of the Dempster–Shafer theory is motivated by the need to improve retrieval accuracy by incorporating the uncertain nature of both bodies of evidence (content and link relevance). The link score is computed according to a new link analysis algorithm based on weighted links, where relevance is propagated through the two types of links, i.e., hierarchical and navigational. The propagation, i.e. the amount of relevance score received by each retrieved XML element, depends on link weight which is defined according to two parameters: link type and link length. To evaluate our proposal we carried out a set of experiments based on INEX data collection