Web Sites Privacy Policy
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Web Site Ranking

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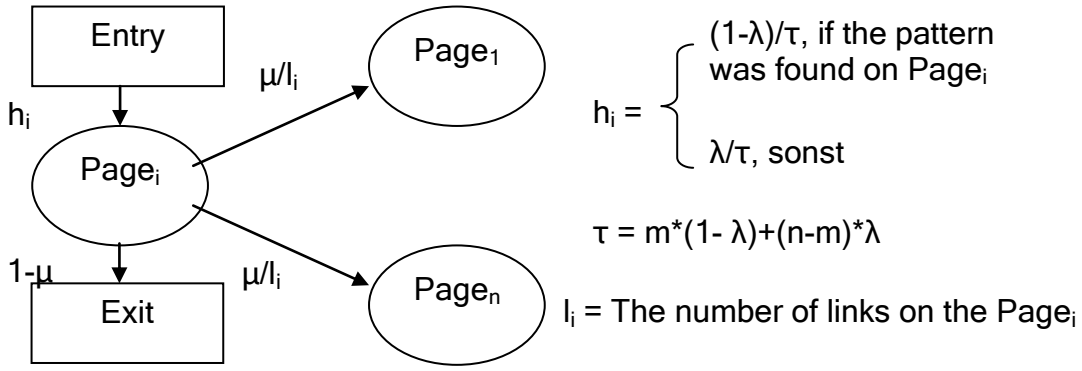
1 Introduction

The main web site www.herbrand.ai and its satellite web sites can be searched via text search by typing a search expression into the search box. A result list will be produced from which you can choose a document. The ranking of the results is detailed below.

2 Ranking

The ranking measures the hit on the page, as well as the contribution of each other page. Is there a hit on the page, then the contribution is (1-λ)/τ, otherwise the contribution is λ/τ. This can be depicted graphically as follows:



By the way that the rank includes also pages without hits, the ranking is a mix of a general weighting of the pages in the whole collection and of a weighting with respect to the pages inside the collection that match the pattern. But because the links between the pages can lead into cycles, the rank becomes a recursive matrix equation:

$$R = L*R + H$$

We solve this equation exactly in that we calculate $R = (E-L)^{-1}*H$. The matrix inversion $(E-L)^{-1}$ is only computed once for the web site and is stored across the pages of the web site. During each search only H is recomputed and the matrix multiplication is performed. In consequence the method behaves time quadratic on queries, and not cubic.