CMPSCI 546 (590R)
Applied Information Retrieval

Evidence Combination

Inference Network Operators

$$
\begin{aligned}
bel_{not}(q) &= 1 - p_1 \\
bel_{or}(q) &= 1 - \prod_i^n (1 - p_i) \\
bel_{and}(q) &= \prod_i^n p_i \\
bel_{wand}(q) &= \prod_i^n p_i^{wt_i} \\
bel_{max}(q) &= max\{p_1, p_2, \ldots, p_n\} \\
bel_{sum}(q) &= \frac{\sum_i^n p_i}{n} \\
bel_{wsum}(q) &= \frac{\sum_i^n wt_i p_i}{\sum_i^n wt_i}
\end{aligned}
$$

Operators

#filter-require(*proximity_expression any_query*)

#filter-reject(*proximity_expression any_query*)

#boolean_and(*proximity_expression*+)

where:

proximity_expression => term | ordered_window |
unordered_window | boolean_and

any_query => one of the belief combination operators