Steps Toward the Automated Assembly of Knowledge Bases from Text

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The IMPLICATION project seeks a generalized methodology to extract instances of linked causation statements from text. Linked causation statements are statements of the form $A \rightarrow B$ and $B \rightarrow C$ (or, alternatively, $A \rightarrow B \rightarrow C$), where $A$ is the antecedent (cause) for consequent (effect) $B$, and $B$ is the antecedent for $C$. Here, we focus on examples of explicit causation statements that appear in biomedical text, and that are indicated by phrases we have designated “causation signals.” The syntax and semantics of several causation signals will be discussed, along with their computational implementation. The results of this study bring us a step closer toward realizing an automated system for knowledge assembly, where knowledge is here understood to be comprised of sets of linked production rules.