Discovering Formal Contexts Generated from Conceptual Graphs

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Abstract. Building conceptual lattices from conceptual graphs looks as natural way in Formal Concept Analysis but still is not discovered at length. If conceptual graphs are acquired from natural language texts then they contain specific material for building various contexts. Problem–oriented contexts, contexts with non-ordered set of attributes (order-free context) and invariant contexts are investigated in the paper. The problem of context decomposition is discussed and one way to decompose contexts based on group theory methods is discussed. Discovered results have been used in the learning of bacteria biotopes on the annotated textual corpus.

Keywords: conceptual graphs, problem–oriented formal context, order-free formal context, invariant formal context, formal context decomposition.