The group theoretical aspects of extending partial isomorphisms

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Abstract

A class $\mathcal{C}$ of structures has the extension property for partial automorphisms (EP) if for every $A \in \mathcal{C}$ there exists $B \in \mathcal{C}$ containing A as a substructure such that every partial isomorphism of A extends to an automorphism of B. This thesis discusses some results of the ongoing research of identifying classes of structures having the EP. Firstly, a group theoretical reconstruction of the Hrushovski theorem will be explained. This theorem is about finding a solution for the problem of EP in the case of the class of finite graphs. Secondly, by building upon the core definitions of this solution, it is shown how a generalization can be formed to broaden the scope of results. This generalization and it's usage is presented.