

Proof complexity is an interesting mathematical part connecting logic and complexity theory. It investigates which proof systems are needed for effective theorem proving. The aim of this paper is to present a relation between propositional proof systems and *SAT* algorithms. We will see that a run of an algorithm on the unrealizable formula can be seen as a propositional proof of its unsatisfiability, so the algorithm practically defines whole proof system. The thesis is mainly recommended for readers interested in proof complexity, but it can also independently illustrate a resolution principle and perhaps show some less common view of *SAT* assuming reader's basic knowledge of propositional logic, graph theory and complexity.