

This thesis aims to study a connection between indecomposable elements in the cubic fields and the Jacobi-Perron algorithm (JPA). JPA is a multidimensional generalization of the usual continued fractions algorithm. We work in the family of Ennola's cubic fields and we examine how the indecomposable elements are related to elements originating from this algorithm and whether some of these elements generate all indecomposable elements in the fields. We formulate conjectures on how to determine which elements will generate the indecomposable elements. We also prove some necessary conditions that have to hold for elements originating from this algorithm to generate indecomposable elements.