

Abstract

Despite the Limes Romanus has already been studied for more than 150 years, fundamental questions such as its construction, later modifications and primary function itself are still a matter of dynamic debate. From the historical sources it is currently known that a major role during the construction and planning of the whole system performed so called *agrimensores* using the simple geodetic tools like *groma*. Therefore, the essential role during the construction of the Limes had the direct visibility between individual sites of the future frontier.

The core of this thesis is the presentation of the results of the so called viewshed analysis of individual sites on the Odenwald Limes (Germany) and on the Antonine Wall (Scotland). Based on combination of this method with results of the other spatial analyses in GIS, the nodal sites for both the surveying and operation of the Limes are detected in each studied sector. The thesis is also dealing with the distribution of the units in the landscape, terrain definition of the positioning of individual parts of the Limes as well as with the possibility of mutual signal communication between individual parts of the frontier.

The main goal of the thesis is to shed a bit more light on the fundamental questions: how the Limes Romanus was supposed to operate and what purpose it was constructed for in the first place? Except of the already mentioned spatial analyses, a comparison of both frontiers is offered at the end of the thesis in order to answer the aforementioned fundamental questions.

Key words: Limes, spatial analyses, Antonine Wall, Odenwald Limes