

ABSTRACT

Structure and content. Master's thesis consists of four sections, containing 52 figures, 8 tables, 1 appendix, 77 sources.

The master's thesis is devoted to the development of a software module for spatial resolution enhancement of aerial images acquired with a quadcopter. The purpose of this research is to improve the quality of images acquired by the digital camera of a quadcopter, using the super-resolution approach.

In overview section the general methods for imagery spatial resolution enhancement are described.

The image reconstruction section is devoted to restoring a high-resolution image using the subpixel processing of input low-resolution images.

The algorithm section contains an algorithm description for the high-resolution image restoring, a description of engaged techniques as well as the software architecture developed for the spatial resolution enhancement of aerial imagery.

The test section presented the both test method and the test results of developed software product.

The conclusion section overviews the research and gives the thesis's general outputs.

**IMAGE, IMAGERY SPATIAL RESOLUTION ENHANCEMENT,
SUBPIXEL PROCESSING, IMAGERY SUBPIXEL SHIFT**