

Summary

The work consists of an introduction, six chapters, startup management project, conclusions, list of references and applications. The main text consists of ... pages, includes ... tables and figures.

In the introduction the urgency problems generated goal and objectives, scientific novelty and practical utility, the basic provisions of the requirements for protection.

The first chapter thesis provides an overview of existing methods fabber technologies described their purpose, areas of use and methods of implementing such systems.

The second chapter discusses the principles of building a 3D printer for the most common technology FDM. Described structural elements and stages of preparation for printing digital model.

The third chapter analyzes the accuracy of the 3D printer and printing processes. Identified and described in detail factors affecting the accuracy of the models produced.

The fourth chapter describes the theoretical study of the effect of moving the engine type linear guides 3D printers.

The fifth chapter presents the results of experimental analysis positioning accuracy of linear motion manipulators using stepper motors and piezoelectric. the results of experimental analysis positioning accuracy of linear motion manipulators using stepper motors and piezoelectric.

Chapter 6 held startup project description, technology audit project idea, the analysis of market opportunities run the startup project built marketing strategy project.

Keywords: instrumentation, 3D printer fabber technology, stepper motor, piezoelectric motor, CAD, linear guides.