

On the viability of the open source development model for
the design of physical objects
Lessons learned from the RepRap project

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Abstract

While open source software development has been studied extensively, relatively little is known about the viability of the same development pattern for physical objects. The present research reviews the literature on open source and user innovation communities followed by a case study and survey of the RepRap community in which both software and physical objects are collaboratively designed and freely revealed. Patterns observed in the RepRap community provide insight into how physically distributed development of physical objects could become a more general phenomenon. Several important trends are identified, such as the increased digitization of design and manufacturing processes and availability of more affordable development and prototyping tools.

Keywords: Open source development model, open design, distributed innovation

Chapter 1

Introduction

test

- 1.1 Motivation
- 1.2 Problem statement and re-
search questions
- 1.3 Methodology
- 1.4 Outline
- 1.5 Theoretical foundation
- 1.6 Terminology and definitions
- 1.7 Literature review
- 1.8 Findings

Chapter 2

Case study

- 2.1 The RepRap Community: an introduction**
- 2.2 RepRap as an open source community**
- 2.3 Findings**

Chapter 3

Survey

Chapter 4

Confronting theory with practice

Chapter 5

Conclusions

Bibliography