How does the use of the Factory Method Pattern in FreeCol affect maintainability

Håkan Gudmundsson
Computer Engineering
Linköping University
Linköping, Sweden
Email: hakgu806@student.liu.se

***Abstract*—This report will analyze the implementation of the Factory Method design pattern in the game FreeCol and analyze how it affects the games maintainability. A selected piece of code found in the game will be analyzed.**

The abstract goes here.

I. Introduction

Software is used in almost everything these days, in your phone, in cars, and even in your home. We depend a lot on software and therefore it's important that the quality is high. **??** According to the *CISQ's quality model* **??** there are five desirable characteristics that are needed to provide value for a product. These characteristics are: reliability, efficiency, security, maintainability and size. This paper will focus solely on the maintainability part of this lot.

mds
August 26, 2015

II. Theory

A. Maintainability metric

B. Factory Method pattern

Gamma et. al **??** introduces the function of a factory method pattern as follows: "Define an interface for creating an object, but let subclasses decide which class to instantiate. The Factory method lets a class defer instantiation it uses to subclasses". This leads to lower coupling, since it decouples the client code in the superclass from the code that creates the object in the subclass.

III. Factory method pattern in FreeCol

IV. Conclusion

The conclusion goes here.

Acknowledgment

The authors would like to thank...

References

[1] H. Kopka and P. W. Daly, *A Guide to LaTeX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.
[2] D. Chappell, *THE THREE ASPECTS OF SOFTWARE QUALITY: FUNCTIONAL, STRUCTURAL AND PROCESS*
[3] http://it-cisq.org/standards/