
How to Design Map of ‘Utopiae’ for Game Players?

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Abstract:

Maps of imaginary lands in many cases become geographic space for game players and these cartographic images are usually designed as stylizations of historical maps. However, such maps have been known in cartography for centuries, an example being Homann's ‘Accurata Utopiae Tabula’ from 1694. Homann's map was based on medieval literature about the ‘Land of Cockaigne’ where food was plentiful and people enjoyed themselves. During the process of historical map adaptation, it is important to minimize the interface but exploit the intuitiveness of touching the screen and the gaming strategy panel with individual mini-windows.

We focus on the problem of designing a strategic game with historical map by adapting map design principles to currently game usage trends and game engine capabilities. The aim of this study is to determine an impact of map design and application programming on the player's visual strategy. The additional pragmatic goal of this research is to identify significant relationships between traditional map design and cartographic application design using a historical map. The game scene, gameplay and strategy panel were designed and programmed using two basic workspaces: graphical (Photoshop, Inscap) and game engine with programming language (Unity, C#, Microsoft Visual Studio).

In fact, key importance for this design process are: adaptation – refactoring of the code for the scene and gameplay, as well as the selection of appropriate parameters of graphic variables such color and transparency of areal objects (provinces and fortresses on the rasterised historical map ‘Accurata Utopiae Tabula’). Principles of high contrast and graphical focus on attention were also used. The design of the ‘Utopiae World War’ application involves the vectorization of provinces and fortresses to be conquered by the player and the creation of scripts: to carry out a fight (CountryManager, CountryHandler, FightSimulator), to save the game (DataManager, GameManage) and to play mini-windows (AttackPanel, StartPanel, SummarizePanel).

The goal of a player is to conquer seven provinces of ‘Utopiae’. His strategy is as follows: the shortest time to conquer all provinces by province area and number of fortresses. After testing the desktop game, a survey was conducted among players to record and visualize their strategy of conquering province by province. An result of the research is an indication of the player's visual strategy in the connection of his actions on the map and in the player's panel.