

# A STUDY ON DESIGN TECHNIQUES FOR GAME DESIGNERS : reating design techniques through challenge design, narrative and visual contrasts

ブランセ, マイケル アドリアン ヨハネス アントン

<https://doi.org/10.15017/1500742>

---

出版情報 : 九州大学, 2014, 博士 (芸術工学) , 課程博士  
バージョン :  
権利関係 : 全文ファイル公表済

氏 名 : BRANDSE MICHAEL ADRIAAN JOHANNES ANTOON

論 文 名 : A STUDY ON DESIGN TECHNIQUES FOR GAME DESIGNERS

Creating design techniques through challenge design, narrative and visual contrasts  
(ゲームデザインのためのデザイン手法に関する研究チャレンジデザイン、ナラティブ、視覚コントラストを用いたデザイン技法の創出)

区 分 : 甲

## 論 文 内 容 の 要 旨

Over the years, games have grown exponentially. Not only in terms of popularity, but due to rapid evolution of game technology, games have gone from their simple origins to giant multimedia productions. Due to this, it is now necessary that games composite their content, in order to keep them from becoming confusing. For our research, we addressed three areas; challenge design, narrative and visual perception, for the sake of creating methods to effectively design modern games.

For challenge, we argued that current day challenge definitions were faulty as they didn't properly encompass all forms of challenge. For that we analyzed challenge trends within game design and came to five categories. We continued by researching how a proper challenge should be designed to apply to our found categories and created six design heuristics by which a proper challenge should abide. We also were able to report particular player habits when it comes to challenge, so that future designers can take this into account to enrich their challenge design in games.

For narrative, we addressed how to design visual worlds and make them able to confer information to the player. For this, we analyzed existing game software and created a set of elements that can be used for creating game worlds with narrative content. We further validated these elements through our experiments and found that using these elements had a positive effect on the users' immersion levels, proving their effectiveness.

Our visual perception research was geared towards making navigation in games more accessible to users, as an extension to our narrative research. We found that especially inexperienced users had trouble navigating modern games. We attempted to use colors in order to influence the users' viewing behavior and their decision making. We analyzed two aspects; color contrasts and color luminance. For the contrasts we used Johannes Itten's contrasts, but found that contrasts have no significant effects whatsoever. For our luminance research, we found that areas surrounding "goals" as perceived by the user were more looked at when the luminance contrast values were high, indicating that luminance contrasts are useful as visual cue.

In conclusion, the methods gained through the research we conducted will certainly enable designers to create more effective game design, making sure that even as game technology evolves even further, the designer is prepared for it. Furthermore, through this research

we will also be able to understand games better, opening opportunities for further research into game design.