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The Borneorobot (BRT) Concept Art

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Abstract

A rapid growth in robotic area in this 21st century has bringing new paradigms in robotic systems. Visual and virtual was introducing to the coming cultural environment study for children, teacher, and school. This article introduced the implementation of art and creativity in robotics technology as a part of human interactive technology studies. Our research focus is principally on creative contents – communication, interactive and learning. The collaboration between creative industries and robotics Industries has becoming a new wave in research trend. This article will introduced and developed the concept board / visual art for BorneoRobot, BRT in Malaysia.

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Keywords: Borneo; Concept Art; Robotics Technology; Creative Design

1. Introduction

This research encompasses toward both innovative and creative design in robot technology (robotech). Robotech involved all parts of electronic component for fixing into a box like compartment but when goes to visual design elements, still not priority. As now developers mostly emphasis on the sophistication of technical, sensor, programming practice in this field, one of the software engineer explain this trend into this statement, “there is no escaping the fact that to make an artwork interactive is fundamentally to build a machine with processes; anything less would simply be a reactive work without autonomy- ‘push button’ art. Artist must think procedurally to create truly interactive art, and fashion these procedures to express their artistic intentions. This requires the artist to have a firm foothold in both artistic practice and computer science” (Stern, 2001). However, the collaboration between artist and technician can bring to an interesting visual art development and also to maintain a better communication

and understanding of the medium in between for both artist and technologist. In the possible way, the artist can has an understanding on technology development and technologist can has a better understanding on visual art, through this method, both can shared a language and process that lead to new type of technology. The researcher, John Maeda (1998) mentioned that “although such collaborations can produce respectable artwork, they rarely lead to works of real power and inspiration. The situation is getting worse because of the relentless progress development in information technology has widened the gap in between artist and engineer. The artist has little understanding of the computer as a medium, and the engineer (who has no artistic training) is not allowed to unlock his creative potential in using the medium he has mastered”. Thus this research allowing the research team from carries a task to develop a robot which called as BorneoRobot / BRT into the context of innovative and creative design / content with the following objectives:

1.1. Objective

- To providing a solution into innovative design and creative content for robotic technology presentation.
- To bring awareness to the society regarding robot in their daily life.
- To bring closer the interaction and reduce the gap in between robot and human.

1.2. Limitation

The limitation of this research is presenting on manual and in form of Computer Graphic Interactive 3D modeling presentation. Overall, this is a model sheet for creative content in robot technology.

1.3. Methodology

The presenting flow chart at below presented the process of development of the model sheet for BorneoRobot/BRT. Firstly, the preparation of concept will done in first stage in which based on the ideas from literature & visual review to present the whole process of pre-production. The next development stage is after collected data and information in which related to Borneo and robotech, the team proceed with the development of synopsis, from the stage of 2 act until the creation of treatment, completing the foundation of the narrative structure with synopsis.

Visual development is the process creating model sheet for character. in the practice, 3 dimensional character design, concept board, environment design, props and weaponry design and concept arts for the whole story. Character design is the stage focusing in detailing and analytical character development from single character until lineup of different character.

When everything stages and steps been delivered, the entire project is prepared for the modeling stage. Computer Generated Imagery / CGI is the process to construct BRT from model sheet which been prepared during preproduction stage. Figure 1 present the 3D modelling concept art, Figure 2 and 3 present the illustration art and 3D model art for BorneoRobot (BRT).

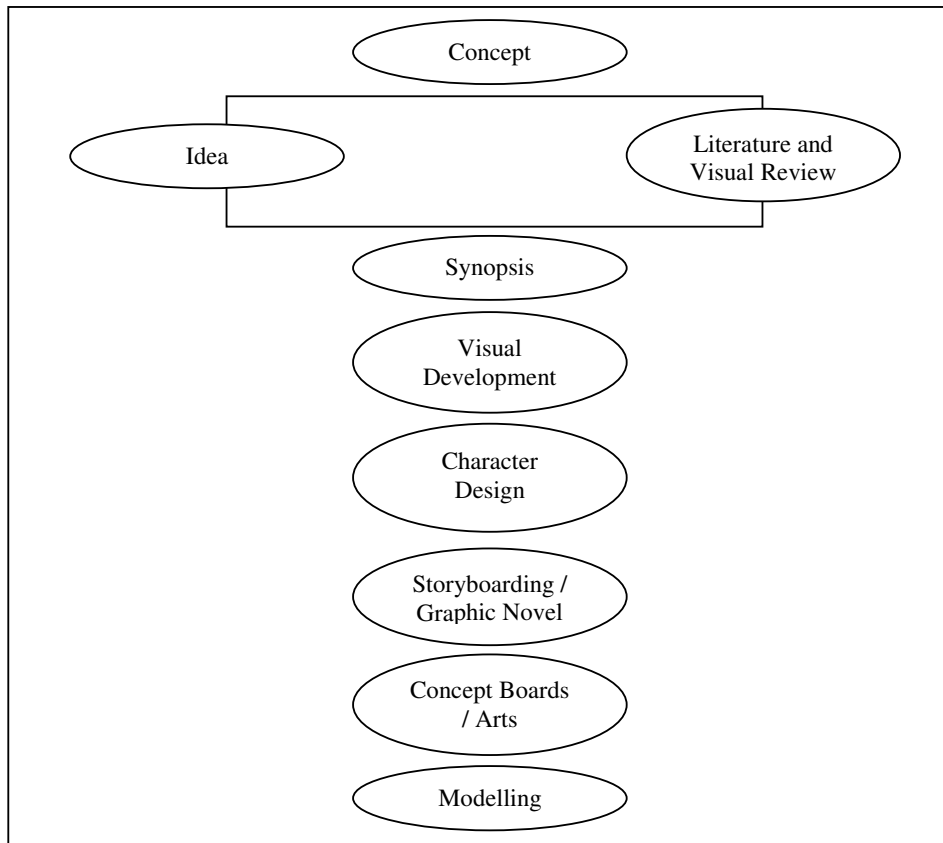


Fig. 1. The flow chart of 3D Modelling Concept Art

2. Illustration

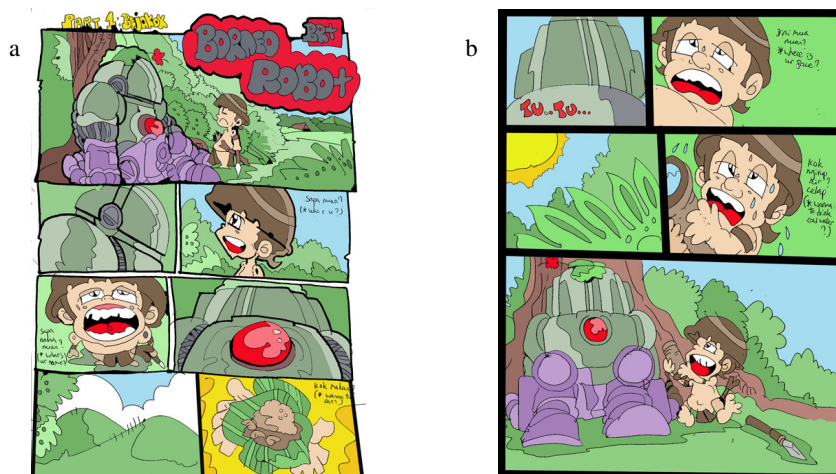


Fig. 2. (a),(b) The comic illustration about the relationship in between a boy and BorneoRobot

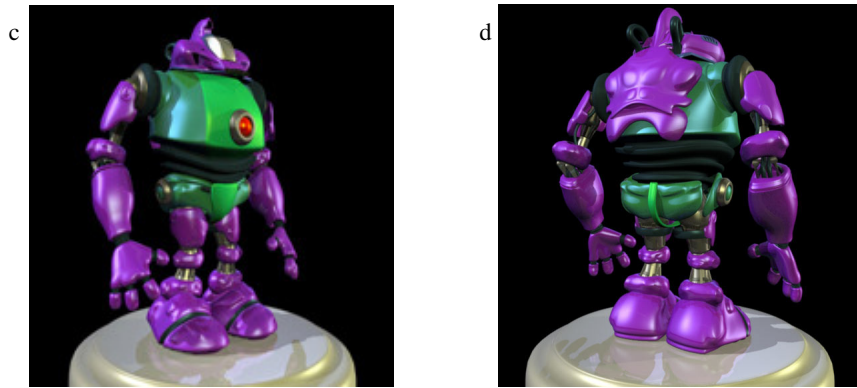


Fig. 3. (a),(b) The 360 degrees of BorneoRobot 3D model art.

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References

1. Yang, Jeff. "The 'Robotech' master". *San Francisco Chronicle*; 2010.
2. Ryan Gosling, Leonardo DiCaprioAnd Zac Efron 'Up For Parts In JJ Abrams Star Wars Episode VII". *Yahoo OMG News*. July 25,2013. Retrieved September 21, 2013.
3. Four-legged Robot, 'Cheetah,' Sets New Speed Record". *Reuters*. 2012-03-06.
4. Polk, Igor. "RoboNexus 2005 robot exhibition virtual tour".*Robonexus Exhibition 2005*.Retrieved 2007-09-10.
5. Pearce, Jeremy. "George C. Devol, Inventor of Robot Arm, Dies at 99", *The New York Times*, August 15, 2011. Retrieved February 7, 2012. "In 1961, General Motors put the first Unimate arm on an assembly line at the company's plant in Ewing Township, N.J., a suburb of Trenton.
6. Robot Dreams : The Strange Tale Of A Man's Quest To Rebuild His Mechanical Childhood Friend". *The Cleveland Free Times*. Retrieved 2008-09-25
7. Nanobots Play Football".*Techbirbal*.Retrieved 2014-02-08.
8. Stern, Andrew. *Deeper Conversations with Interactive Art or Why Artists Must Program*.(p.17-24) *Convergence: The Journal of Research into New Media Technologies* (Vol. 7, No.1), 2001.
9. Smith, C.W. *Material Design for A Robotic Arts Studio*. pp.8, 2002.
10. Maeda, John. *The South Face of the Mountain*, *Technology Review*.July/ August. 1998.