

# Gaming: Back to the Basics

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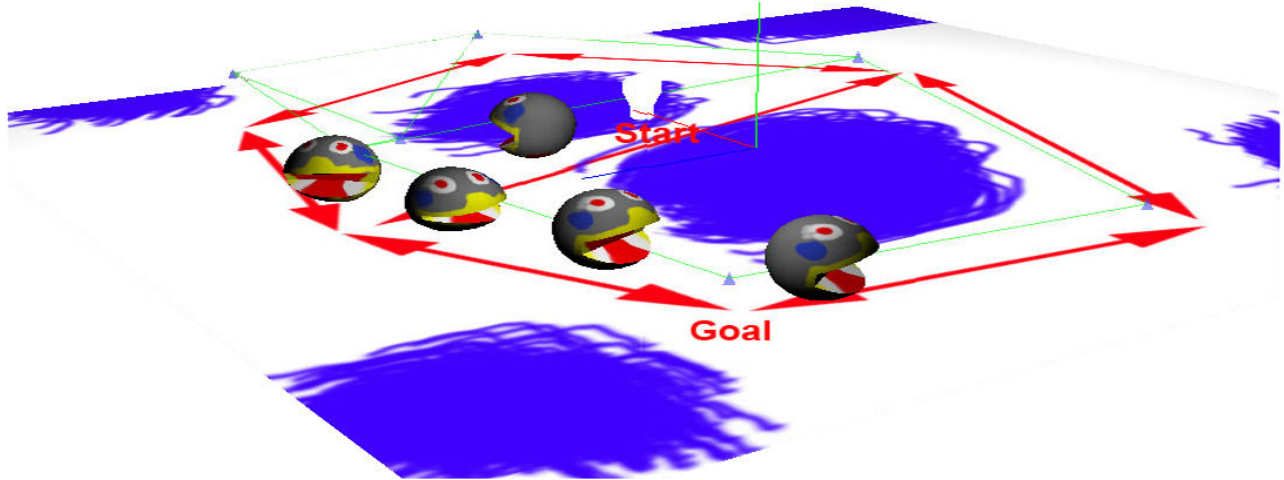


Figure 1: players move obstacles and watch how autonomous characters can adapt by creating new paths.

## Abstract

What makes a viewer's experience more fun? How elements of design associated with behaviors inside a game can help reinforcing (or can be distractions) for the player's experience? This talk covers the exploration of relationships between play, design and interaction. The presentation covers the creation of basic games and observations of the viewer's experience playing interactive prototypes. The demos presented during the talk show how small changes of the game mechanics can change a game scenario. A few 2D and 3D games demos created by students and professionals will be played live with the participation of the audience.

**Keywords:** Asia, Singapore, gaming, player's experience, game mechanics, basic games, small games, game design, navigation.

**CCS:** A.0 GENERAL

## 1 Introduction

By recreating basic games, this talk focuses on going back to the basics of computer games, in order to experiment with game play, game rules and player's psychology. The presentation surveys 2D and 3D games designed as experimental prototypes of "treasure hunting", "plateau" or inspired by "Pac Man".

Players and designers can test how their experience can be affected by slight changes of the game mechanics. For example, in figure 1, players move obstacles and watch how autonomous characters can adapt by creating new

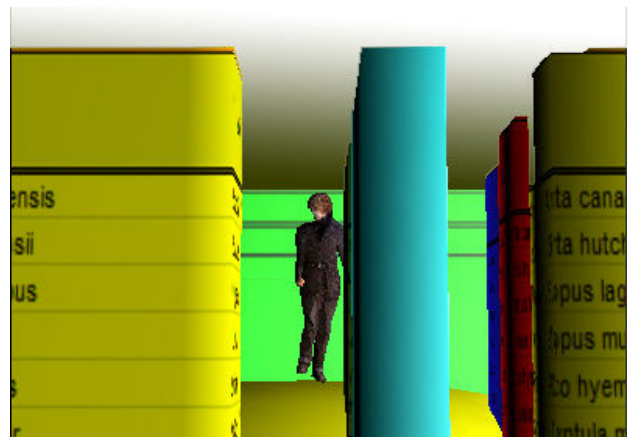
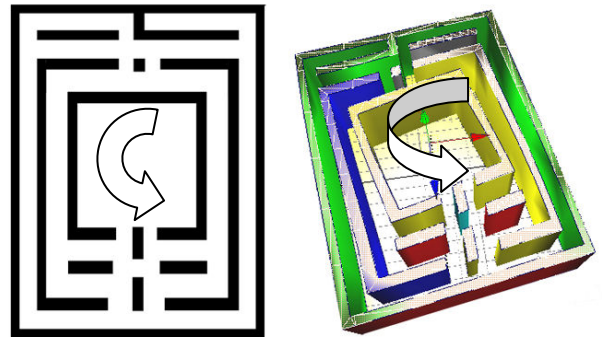


Figure 1: A small twist of the walls of a labyrinth can create a new reality for the player inside the labyrinth.

paths. Figure 2 illustrates how a small twist of the walls of a labyrinth can create a new reality for the player. The

exploration of game scenarios takes place inside 2D and 3D versions of the same basic games created by students and professionals during workshops where they work on limited time assignments.

We will discuss examples of interface design, navigation, and user interface and their influence on the production process for video games including game overview, storyline, levels, maps, production work flow. A short video of a village in the South France used for as a gaming environment shows how game flow and storytelling can resonate together and enhance the player's experience. The idea of resonance is developed in Jason Rohrer's work, games as art.

The creators of these games reshape behaviors and the relationships governing levels, modes, rules, choices, classes of objects, characters and interactive elements. We show several experiments with game play, flow, rules and navigation; following the psychology of the players and demonstrating the need to be not too simple and not too complex. Topics covered in this presentation include how small variations of the elements of game design can affect a player's experience and how the architecture of a game can repeat from one game to the other and in different times and contexts.

This presentation also shows how to create an interactive interface that allows real time testing of dynamic transformations of a game mechanics and rules of play. Player can also talk out loud about their experience inside the game and they are video recorded. A few game demos will be played live with the participation of the audience. The demos will focus on side by side evaluation of basic 2D games and their recreation as 3D games. Figure 3 illustrates recordings of a player's paths moving between obstacles at various speeds.

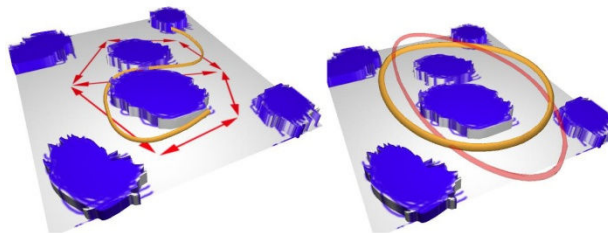


Figure 3: This setup that allows the recording of a player's paths when moving at various speeds and avoiding obstacles.. Players navigate between obstacles creating a "S" path, tight loop and loose loops. The game is created in Microsoft XNA

Players navigated between obstacles using a "S" path, tight loop and loose loops. The presentation will also survey examples of authoring tools, interactive animations and behavioral engines (Torque, Vtools, XNA).

## 2 Roadmap to Interactive game design

### 2.1 Objectives

$$\text{game scenario} = \text{space} + \text{navigation}$$

The small game demos show how small changes in the terms of the equation can influence our experience as a player.

The "flow" as defined by Microsoft Labs can influence the level of immersion of a player inside a game. We can explore the relationships between speed and the "look and feel" of a game. How the visual elements of a game are perceived as obstacles or facilitators. This can provide interesting information about the player being immersed or being distracted by the gaming environment.

For example, we can change elements that can increase the player's sensation of speed and of flow inside the game. Figure 3 shows a setup that allows the recording of players paths when moving at various speeds and avoiding obstacles. Players navigate between obstacles creating a "S" path, tight loop and loose loops. The game is created using Microsoft XNA.

### 2.2 The Lovecraft game assignment, keeping the game design principles and changing the context of the game

The player is placed in the center of the gaming experience. How a player's experience can follow the game principles which are patterns independent from the story or of the technology? How can the architecture of a game repeat inside a game, from one game to the other and in different times and contexts?

In this example, we show several game scenarios built on the same game principle. Each story is cloned from the same game scenario with small variations. The small games are inspired by the stories of Lovecraft's "The Call of Cthulhu and Other Weird Stories".

Objectives:

### 4- The sword fight game, creating several gaming worlds from one narrative

We will present several demos of a sword fight. Each version of a game is created with the same character animations, following the same time sequence and the same set of rules. An interactive interface allows to change the speed of the opponents and to create several versions of the same game by small changes of the game flow. This demo allows monitoring how players perceive characters and their narrative attributes. The observation of the players shows how designers can effectively map elements of narration on visual elements of a game.

Other evaluations of the players responses show how players perceive a game scenario as a sequence of goals organized along a path. Several scenarios can also be organized as a network of narrative threads throughout the game (Bioshock, Half Life).

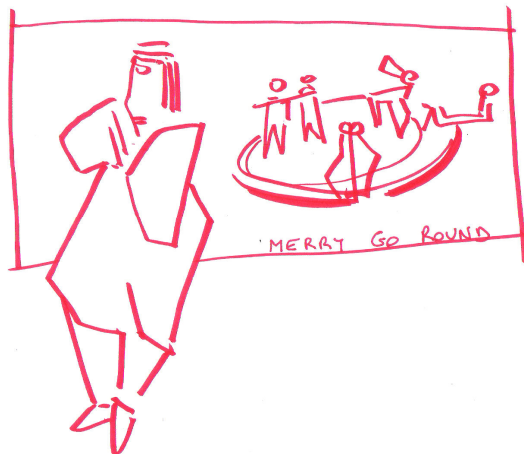


Figure 4: We show several game scenarios built on the same game principle. Each story is cloned from the same game scenario with small variations. The small games are inspired by the stories of Lovecraft's "The Call of Cthulhu and Other Weird Stories".

## 5- Speed drawing inside the labyrinth

The small game is inspired by Pac Man. The interactive interface allows to sketch a labyrinth, to drag and drop several objects and characters, to use a 2D image, a top view in order to control a 3D version of a labyrinth. The players can induce deformations of the labyrinth while playing the game. The game engine is Virtools. Players can also trace a path inside the maze on a top view. They can replay the path using various vehicles or characters of their choice. Cameras are attached to the virtual actors or located inside the cockpit of the virtual vehicles.

## 6- Conclusion

This method of evaluation offers new insights on player's perception inside a game. The small games used in this presentation are similar to three dimensional versions of treasure hunting, plateaux, and generic type 'Space Invaders', "Pac Man". This evaluation method can be built inside a game prototype and help outlining what works, what does not work in the game scenario. This can lead to revisions of the original concept. Another application is testing a game during the design process and making strategic design choices under time constraints

Other objectives of this research include influencing game mechanics in order to allow old games to evolve into new games and new imaginary worlds. This offers new perspectives on standard conventions and how they can be manipulated for designing games. This can be used for writing a plot, a dialog, a storyboard.

## References

NYU, Tisch School of the Arts Asia, (Singapore) website [www.tischasia.nyu.edu.sg](http://www.tischasia.nyu.edu.sg)

Gauthier, JM. website [www.tinkering.net](http://www.tinkering.net)

The Gaming Seminar, Skirball Center for New Media, Tisch School of the arts, New York University <http://itp.nyu.edu/gaming/>

Gauthier, JM. *Building Interactive Worlds in 3D*, 2005, Focal Press

Gauthier, JM. *Creating Interactive 3D Actors and Their Worlds*, Jean-Marc Gauthier, MKP

Lovecraft, "Tales", 2005, Litterary Classics of the United States

Natkin S. *Video Games and Interactive Media*, 2006, AK Peters

J.Rohrer, website <http://hcsoftware.sf.net/passage>

C. Thompson, *Halo 3: How Microsoft Labs Invented a New Science of Play*, Wired 09/2007 15.09

3DVia, Virtools, website, <http://www.virttools.com/>

XNA, Microsoft, website, <http://creators.xna.com/>

