

# COMP08035 Computer Games Design

## Lecture – Level Design



# Lecture Learning Outcomes

During this lecture you will learn the following:

- I. Gain an overview of the concept of Level Design;
- II. Understand the importance of Level Design in the context of the Games Design process;
- III. Obtain a firm understanding of the role of a Level Designer.



# Level Design Defined

- Level Design can be perceived as **applied game design** where its aim is to “*... interpret the game rules, and to translate them into a construct (a level) that best facilitates play*” (Kremers, 2010, p.18);
- “Level Design is the process of designing and implementing the (spatial) rules of a video game” (Nerurkar, 2009);
- “... the process of constructing the experience that will be offered directly to the player using components provided by the game designer” (Adams, 2014, p. 439).



# Level Design Principles

Level designers create the following elements of a player's experience (Adams, 2014, pp. 439-440):

- Space where the game occurs;
- Initial conditions of the level;
- Set of challenges the player might face within the level;
- Termination conditions of the level;
- Interplay between the gameplay and the game's story;
- Aesthetics and mood of the level.



# Level Design Approaches

Organising your game space (Schell, 2015, p.163):

- Is the space of the game discrete or continuous?
- How many dimensions does it have?
- What are the boundaries of the space?
- Are there subspaces? How are they connected?
- Is there more than one useful way to abstractly model the space of the game?

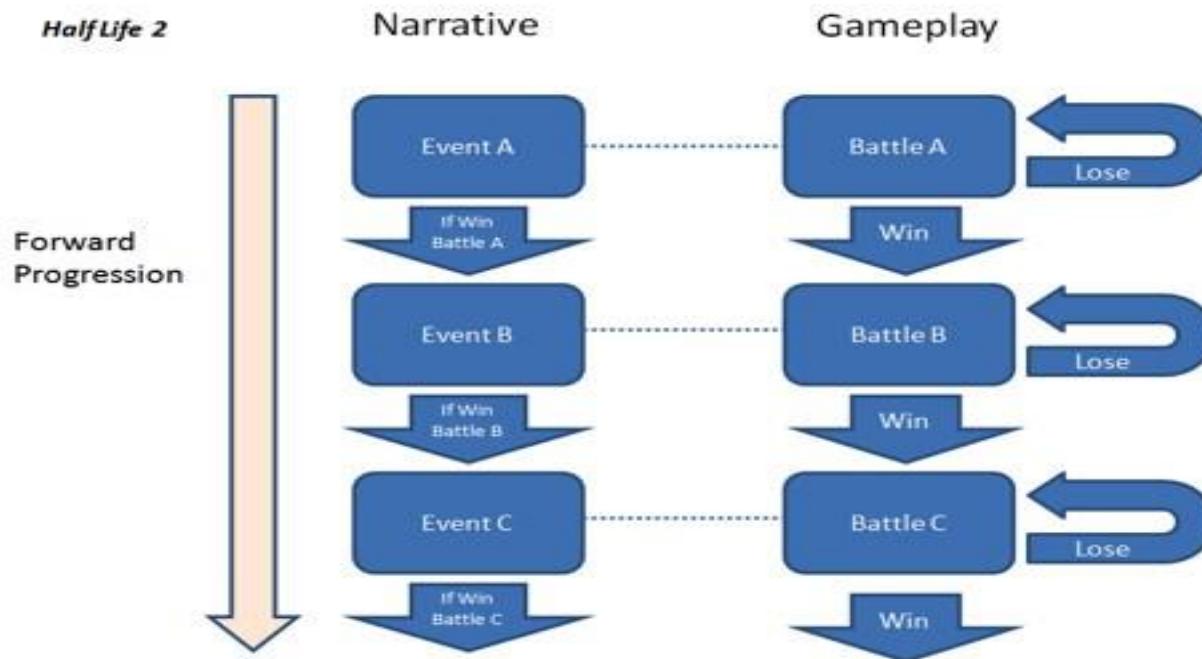


# Level Design Approaches

Some approaches towards designing functional spaces (Schell, 2015, pp. 369-371; Kremers, 2010, pp. 56-63; Adams, 2014, pp. 445-449):

## Linear Levels:

- players move forward and back along a line;
- follow a strict line laid out for the player to follow;
- events unfold in strict order that player cannot deviate from;
- player must go through gameplay events predetermined by designer.



# Level Design Approaches

Some approaches towards designing functional spaces (Schell, 2015, pp. 369-371; Kremers, 2010, pp. 56-63; Adams, 2014, pp. 445-449):

## Semi-Linear Levels:

- allow players to sometimes direct their own gameplay experiences;
- players can follow a script in other scenarios (conditional event);

## Non-Linear Levels:

- order of gameplay actions left to the player;
- associated with *emergent* gameplay;
- e.g. physics system allows players to manipulate their environment (within constraints of the physics system);

## Other examples of game layouts:

- parallel layouts, ring layouts, network layouts, hub-and-spoke layouts (see Adams, 2014, pp. 446-449).

# Level Design Concept Art

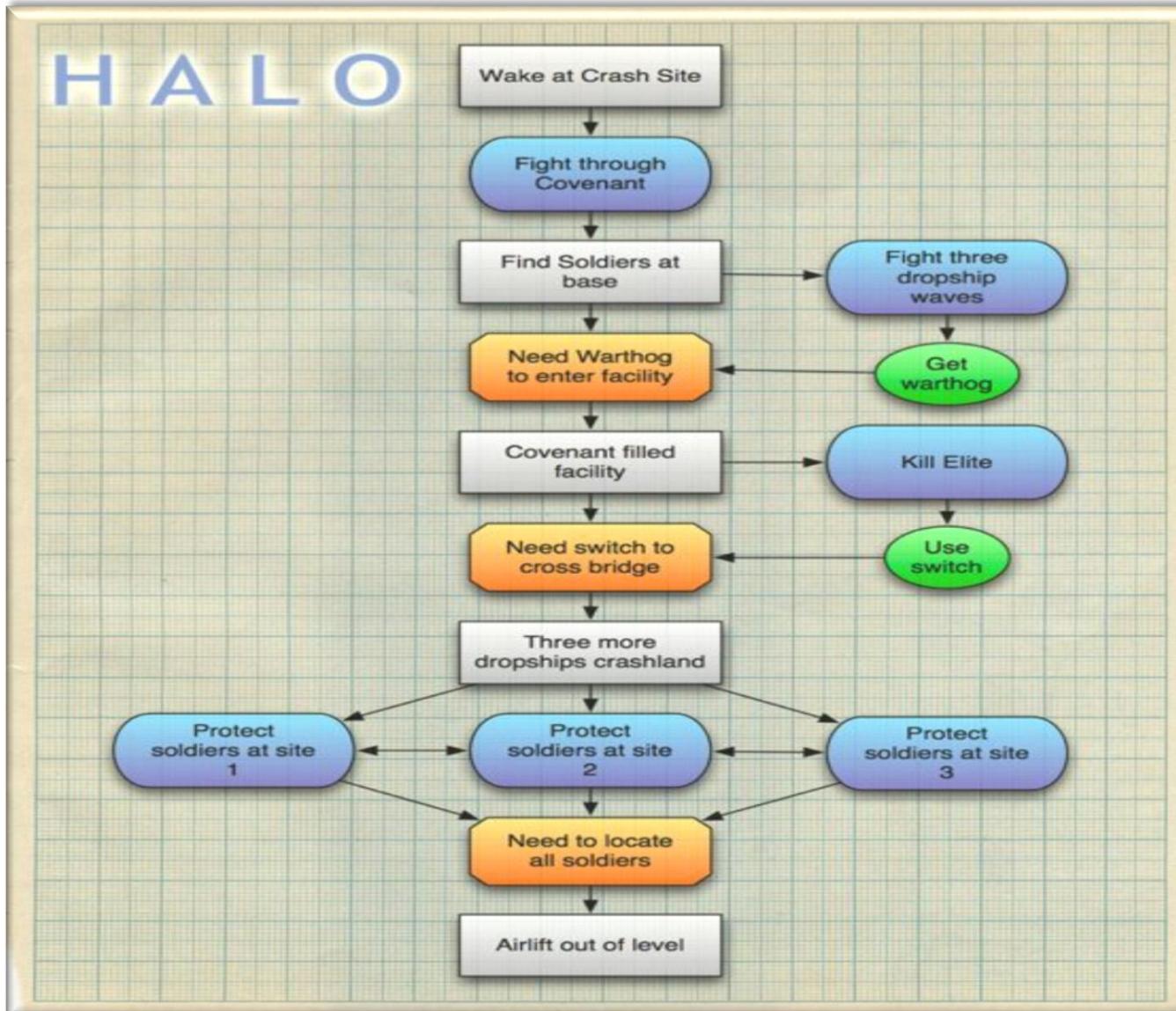


# Level Design Concept Art



# Level Design Flow Charts

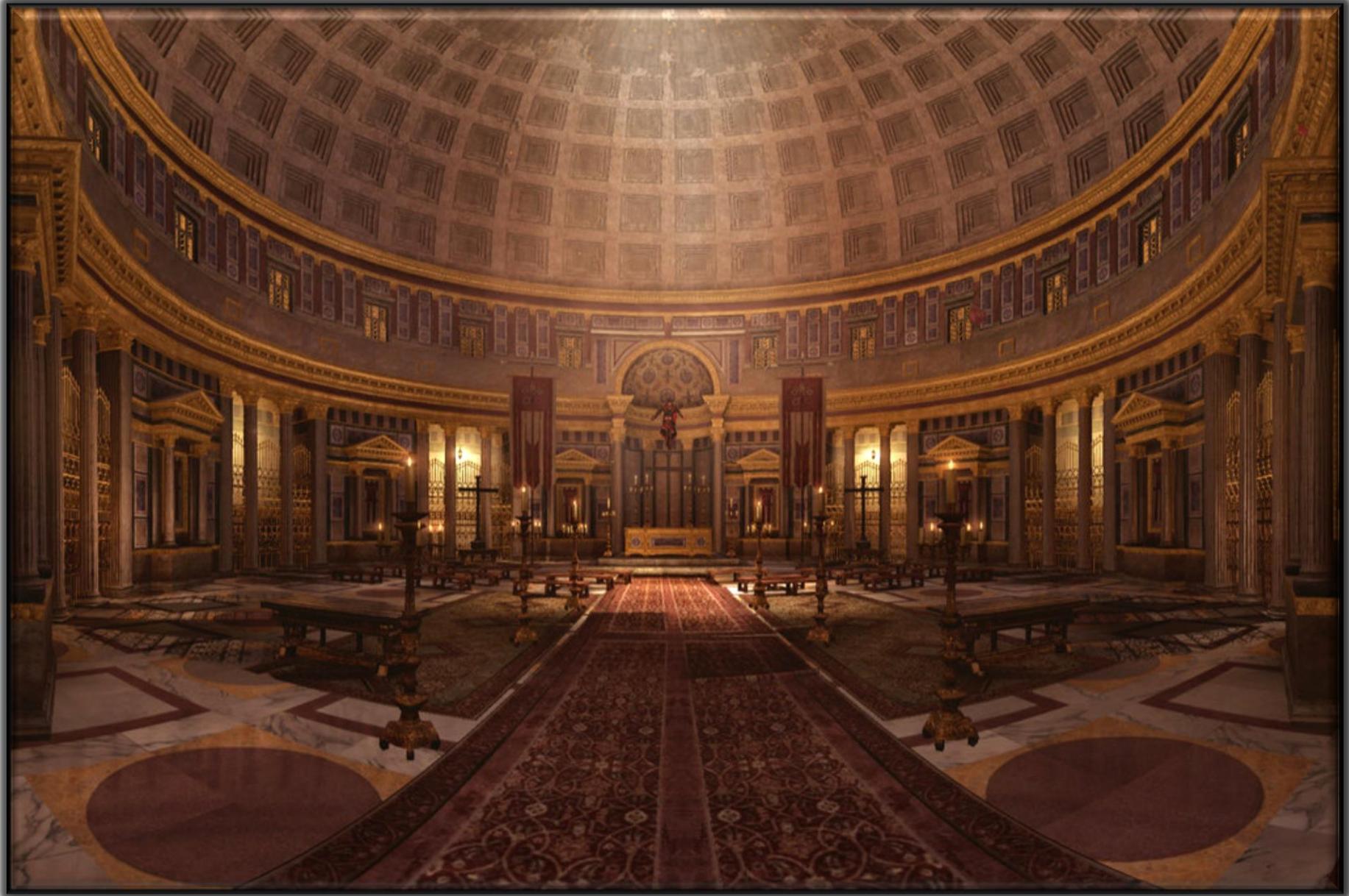
Level design progression expressed via Flow Charts:



# Level Design Structure and Architecture

- “The primary purpose of architecture is to control a person’s experience” (Schell, 2015, p.368);
- In game design structures are created for players to enter and use;
- Experientially-focused buildings utilise space to evoke ideas broader than the architecture itself (Totten, 2014, p.5);
- Structural elements add to the “*structural believability*” of a gamespace;
- Knowledge of architectural style and form aids in creating the ambience of games;
- Gamespaces should accommodate specific game rules and play styles (Totten, 2014, p.35).

# Level Design Structure and Architecture



# Level Design Structure and Architecture



# Level Design Structure and Architecture



# Level Design Spatial Size Types

Space size types (spatial conditions) can be used in various gameplay scenarios (Totten, 2014, p.118-125):

## Narrow Space:

- player feels confined and unable to move;
- applied for dramatic or skill-based gameplay scenarios;
- create tension by giving spaces scarcity;
- vulnerability limiting player movement options;
- stealth games also use narrow spacing;



# Level Design Spatial Size Types

Narrow space example (Resident Evil hallways of the Spencer Mansion):



# Level Design Spatial Size Types

Narrow space example (Metal Gear Solid):



# Level Design Spatial Size Types

## Intimate Space:

- “Intimate spaces are ones where everything within the space is accessible by the player character with its inherent abilities” (Totten, 2014, p.121);
- Intimate spaces are known as “metric appropriate” – neither confining or overly large;
- Support the size and movement of metrics of player characters;
- “multilateral intimate space” – creates equal spatial parity for multiple players.

# Level Design Landmarks

Princess Peach's Castle (Super Mario 64): example of an intimate space:



# Level Design Landmarks

Batman: Arkham Asylum: example of “predator gameplay”



# **Lighting and Level Design**

Level Designers require to have knowledge of the visual arts (i.e. visual design);

**Use of darkness** (Kremers, 2010, pp. 205-207) :

- creates fear and unease;
- loss of sight means loss of control for the player;
- darkness can aid a player (i.e. remaining undetected).

**Use of light:**

- creates a sense of safety;
- focuses attention or changes the mood of an area;
- aids player towards a goal via visual direction;
- light is equated with a positive outcome;
- Builds towards a rewarding scene.

# Level Design: Summary

“Levels are the structure within which the players will experience the gameplay you have designed” (Fullerton, 2014, p.397);

Level design is often perceived to be an art;

Level designers work in close proximity with the game designers;

Responsibilities of level designers include:

- Implementing level designs;
- Producing ideas for level concepts;
- Testing levels;
- Liaising with the designer to improve gameplay.

“Level design is different for every game, because every game is different” (Schell, 2015, p.381).

# Today

- Ensure your GitHub accounts for project management and version control are up-to-date;
- Finalise aspects of your design documents;
- Commence the development of your prototype (assign tasks);
- Document the progress of implementation;
- Continue to review progress.



# References

- Adams, E. (2014, 3<sup>rd</sup> ed.). Fundamentals of Game Design. New Riders.
- Fullerton, T. (2014, 3<sup>rd</sup> ed.). Game Design Workshop: A Playcentric Approach to Creating Innovative Games. CRC Press.
- Kremers, R. (2010). Level Design: Concept, Theory, & Practice. A K Peters, Ltd.
- Nerurkar, M. (2009). Level Design is Game Design. [Online] Available:  
[http://www.gamasutra.com/blogs/MartinNerurkar/20090828/85329/Level\\_Design\\_is\\_Game\\_Design.php](http://www.gamasutra.com/blogs/MartinNerurkar/20090828/85329/Level_Design_is_Game_Design.php) [Accessed 04 July 2017].
- Schell, J. (2015, 2<sup>nd</sup> ed.). The Art of Game Design: A Book of Lenses. CRC Press.
- Totten, C.W. (2014). An Architectural Approach to Level Design. CRC Press.