

Portal - Level Design



"THE PITFALL"

Design, Illustration and Documentation by

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Animated execution of the Level:

<http://www.youtube.com/watch?v=Z3NVqCVuH24>

1. GOAL

To design a sample level for the game of 'Portal' with an added element of Drama. Portal is a 2007 single-player first-person puzzle-platform video game developed by Valve Corporation. My mission is to design a level that balances the puzzle solving nature of the level with the perils that it holds.

Reference : Tomb Raider series and Prince of Persia series.

1.1 Story

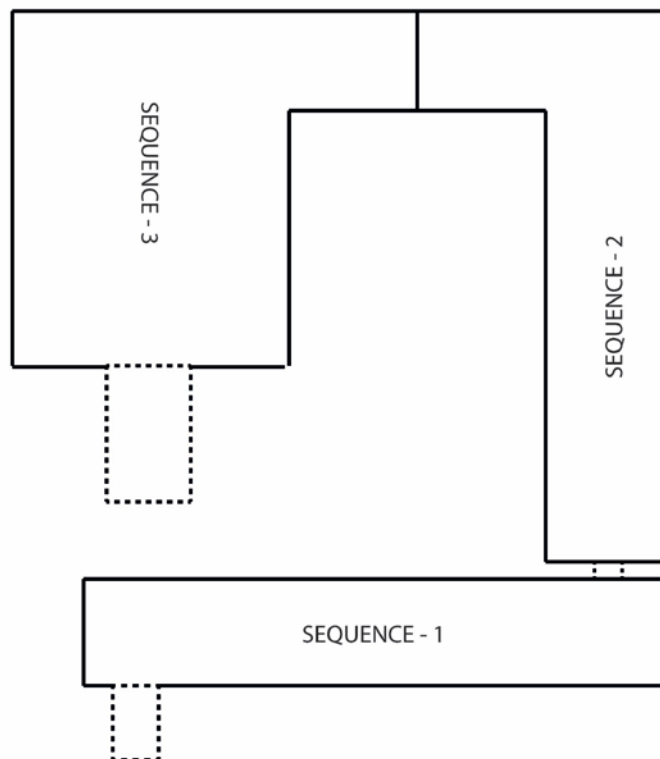
Our story takes place after Chell escapes GlaDOS's attempt to kill her. Chell decides to kill GlaDOS to put an end to this havoc. She starts making her way towards the lair of GlaDOS. But GlaDOS soon realizes Chell's motive and decides to 'terminate' her before she could reach the lair. GlaDOS sabotages the test chambers by adding traps. But Chell, expecting such a response from GlaDOS, manages to escape every trap and finally reaches the elevator, thus coming one step closer to freedom.

2. LEVEL - 'THE PITFALL'

The level has three sequences in the form of different rooms. Each room has a peril which has to be evaded to survive. All perils are trigger-based, activated by the player's action or position.

2.1 In detail - The Layout

The detailed layout of the entire layout can be found below.

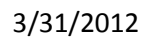


2.2 In detail - Sequence 1

The first sequence has the theme and setting of an observation room. This narrow hallway has observation windows on both sides thus serving the purpose of a high vantage point for the facility. The room is well lit to compensate for the claustrophobic sense that it might give. The Observation windows also serve to distract the player from the trap. Some reference images can be found below.



Portal Level Design



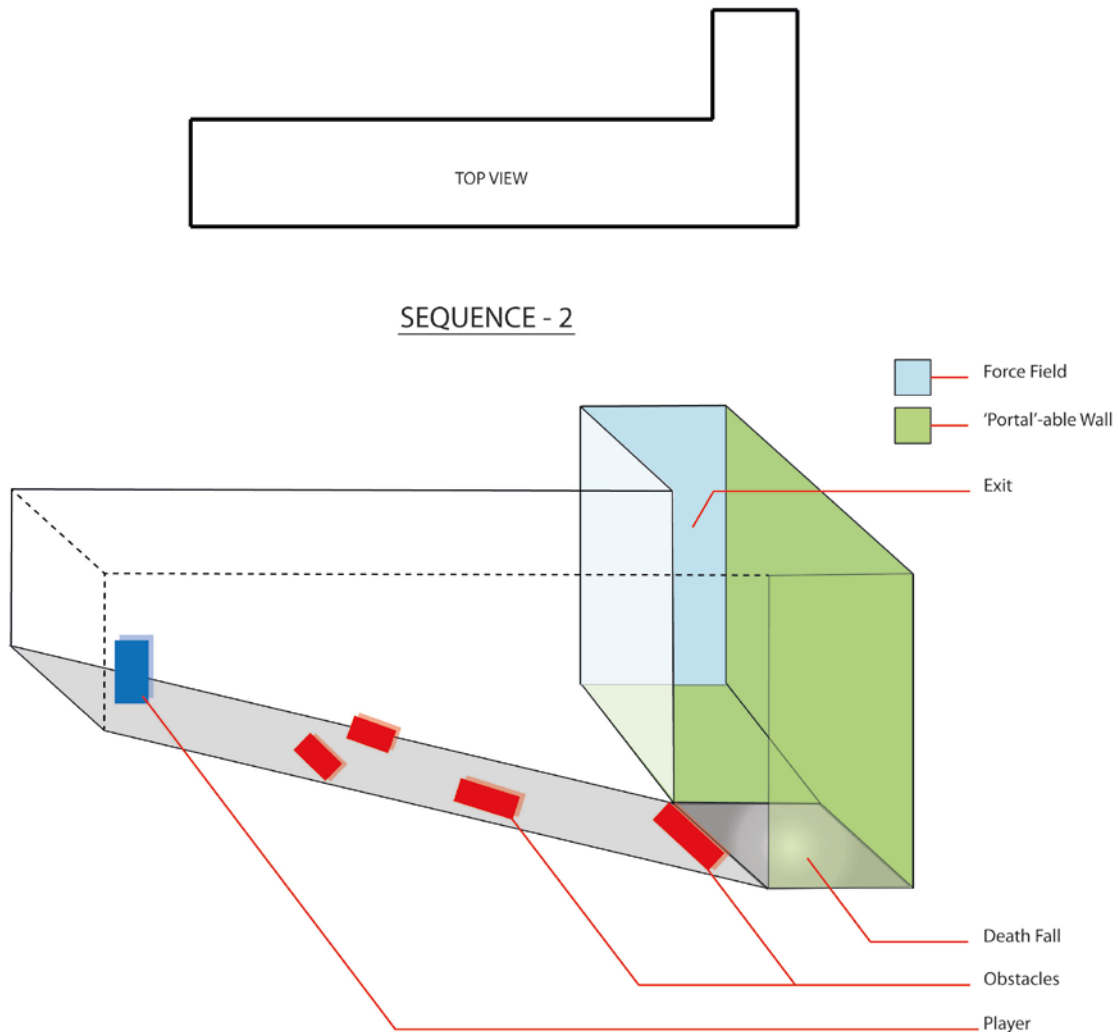
- Mohan Subramanian

2.3 In detail - Sequence 2

The second sequence has the theme and setting of an automated factory-engine room. This massive engine room is filled with pipes and huge engines. There is a catwalk way above on the upper level for supervisors to oversee the operations. The room is not so well light. Probably it is so as to mask the perils that it holds. Some reference images can be found below.



2.3.1 Sequence 2 rundown



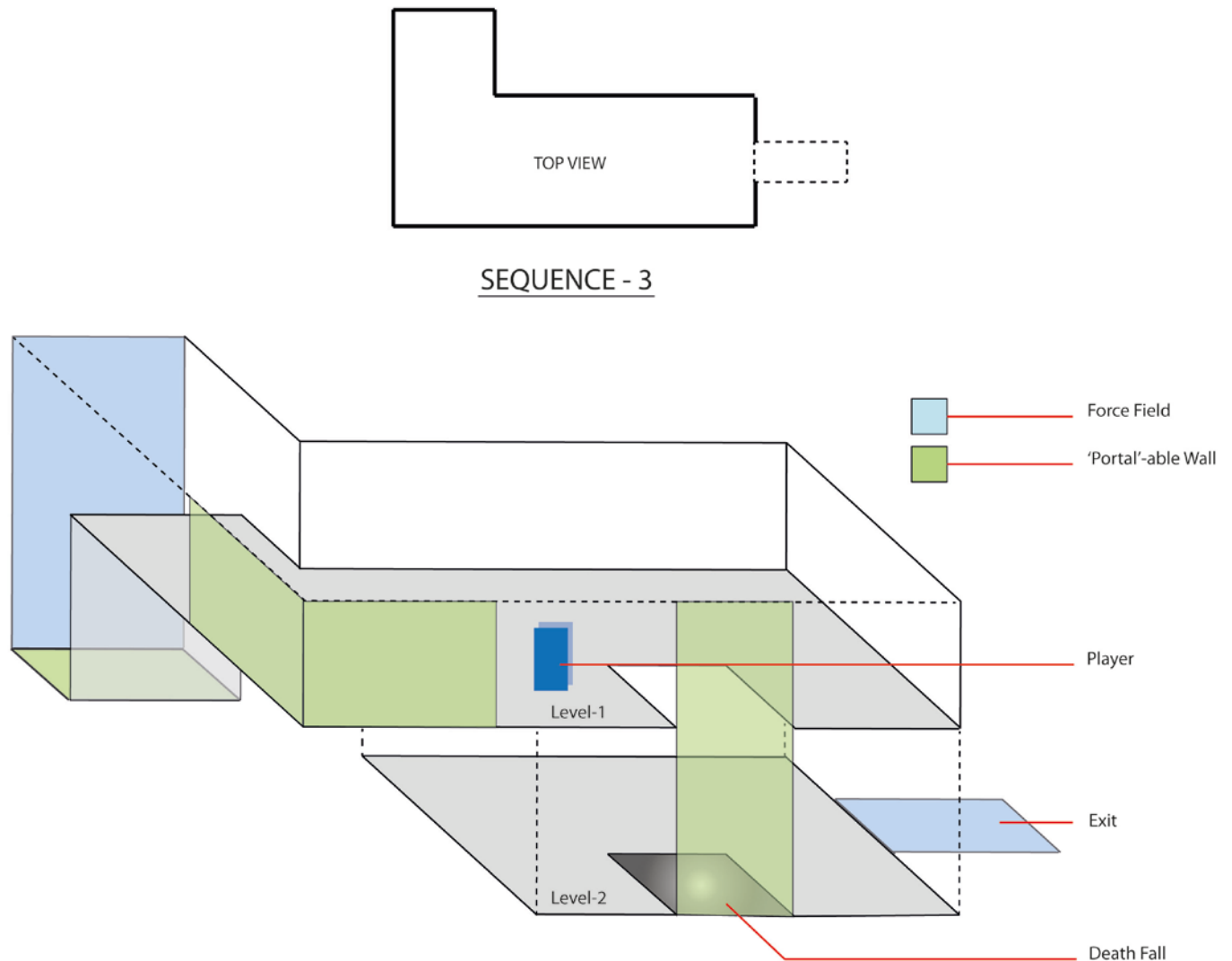
- The exit door of the hallway leads to this engine room.
- This room was supposed to have a catwalk that leads safely to the next room.
- But the catwalk was sabotaged and it is now broken.
- The lower floor of the room has also been sabotaged into a sloping ramp.
- The ramp leads to a hole - impending death.
- The broken parts of the catwalk serve as dangerous obstacles.
- It also happens that one of the catwalk segments actually falls right in front of the player and saves him from the death fall.
- The room leads to the next sequence blocked by a blue force-field.
- Hence the player has to use momentum instead of the portal to cross the hole.

2.4 In detail - Sequence 3

The second sequence has the theme and setting of an dilapidated series of maintenance rooms. This section has two floors of rooms and crossing them leads to the exit elevator. The rooms are poorly lit yet these are not as dangerous as the previous section. Some reference images can be found below.



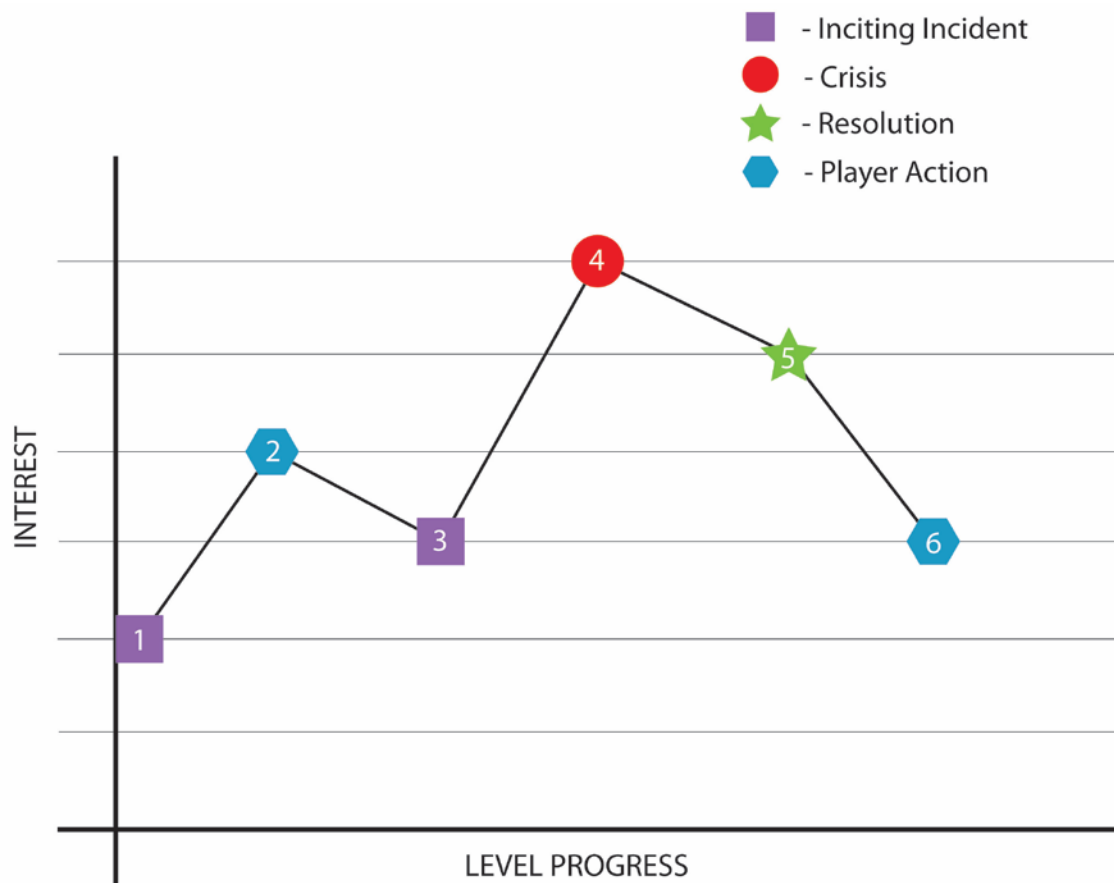
2.4.1 Sequence 3 rundown



- Crossing the blue force-field leads to these two floors of maintenance rooms.
- The exit elevator can be accessed through the lower floor.
- Using the portal gun, the player can easily reach the upper floor.
- The upper floor has a ladder ascending down to the lower floor.
- Both the ladder and the floor tile has been removed to create a challenging trap.
- In order to reach the lower floor, both the portals as well as momentum is required.
- The inadequacy of 'portal'-able walls will provide an added challenge to reach the lower floor.

3. INTEREST CURVE ANALYSIS

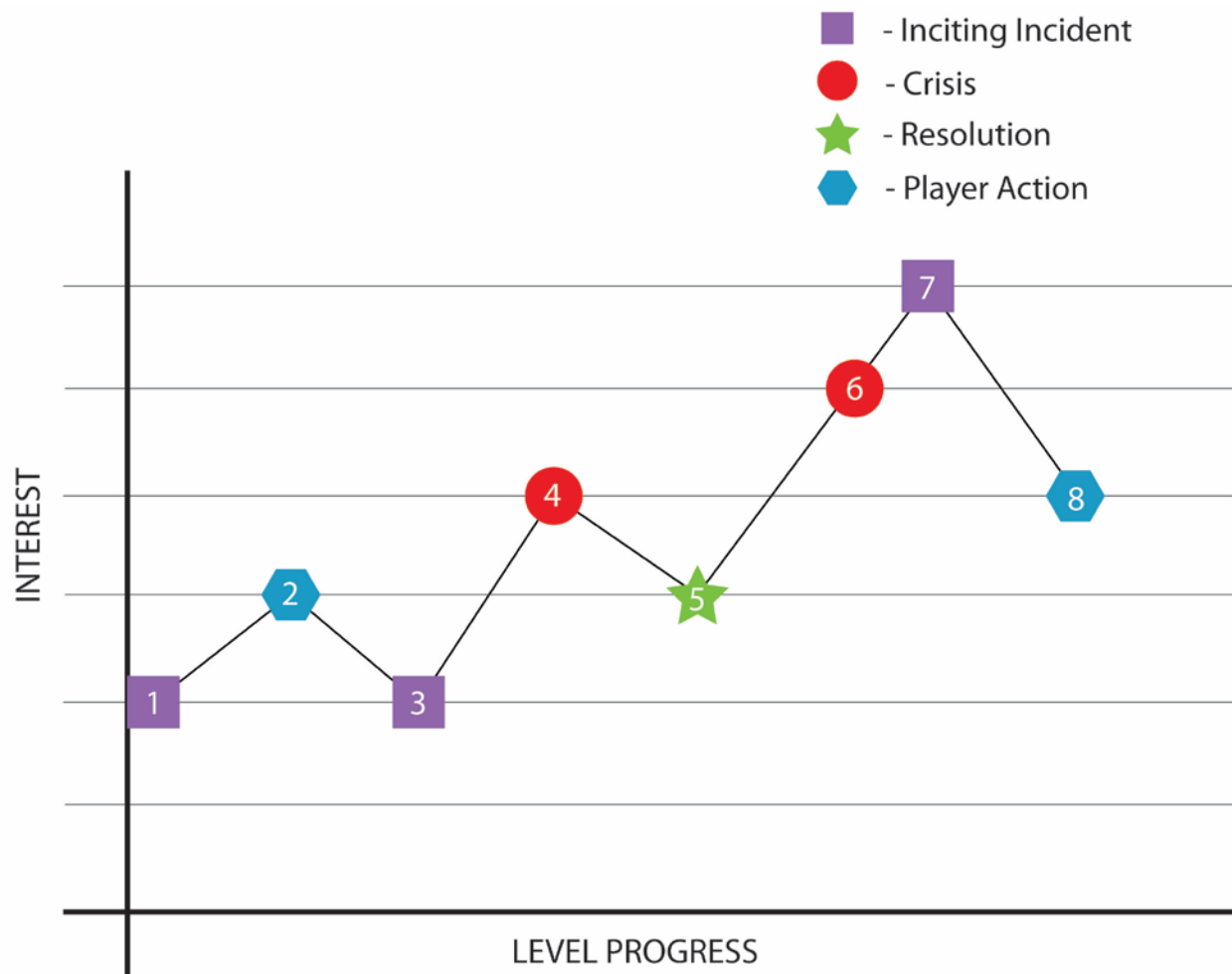
3.1 Sequence 1



Beats of the Level :

1. The player arrives at the new level - a new challenge.
2. Exploration of the new room in search of a way out.
3. The room is empty and it has nothing special or challenging to offer.
4. Surprise : A massive sphere is avalanching towards the player.
5. The player finds a way to use the portals to evade the sphere and bring it to a halt.
6. After confirming the room has no more hidden traps, the player moves towards the exit door.

3.2 Sequence 2



Beats of the Level :

1. The player finds herself in an engine room.
2. The player moves on to the catwalk to get a better view of the room.
3. The catwalk is broken and it seems there is no other way out.
4. Surprise : The catwalk suddenly breaks down causing the player to slide down the ramp.
5. The player uses the portal gun to avoid the broken catwalk parts as she continues to slide down.
6. On sliding down further, the player realizes that the ramp leads to a hole and there is nothing that she can do to save herself as there are no 'portal'-able walls nearby.
7. Surprise : A catwalk segment which was dangling above, falls down right in front of the player. This gets jammed right before the hole, thereby saving the player from the death fall.
8. The player uses the jammed catwalk segment to 'portal' herself across the blue force field.

3.3 Sequence 3



Beats of the Level :

1. The player makes it across the blue force field into the maintenance rooms.
2. Player's search for the elevator.
3. Exploration reveals that there is another room below this room.
4. The means to reach down to the floor below has been removed.
5. The player figures out a way to use the portal to gain momentum and reach the floor below.
6. The player safely reaches the floor below and finds the exit - the elevator.
7. The elevator is bound to take the player to the new level, one step closer to freedom.