Zelda Ocarina of Time: Process to create Light Temple

Concept : Create the Light Temple in Ocarina of Time

There is no Light Temple in Ocarina of Time, the medallion of light is given as soon as we recover the Master Sword. I wanted to do a Level Design exercise by creating a 3D Map but by having to create this Map as if it was a proposal for Ocarina of Time. The game is over and went out for 20 years, we must imagine how to create a Temple without damaging the player's experience and therefore the difficulty or learning curve. It is therefore necessary to choose the placement of the Temple in the story and take into account what level of difficulty the player is and what he already has in his inventory.

Step 1: Determine the placement of the Temple in the game

Deku Tree   Jabu Jabu   **Light Temple**   Fire Temple   Shadow Temple   Ganon's Tower

Dodongo Cavern   Master Sword   Forest Temple   Water Temple   Spirit Temple

I decided to place the Light Temple just after the recovery of the Master Sword. So what will be important here is to know the difficulty of the dungeons when Link is a child because it is before the Master Sword but also the difficulty of the Forest Temple. Because with this placement, the Light Temple must be easier than the Forest Temple. We must also consider all the abilities of Link at this time and the objects he has in his inventory. That's why, the object that players find in the middle of the Temple will be the **Ocarina of Time**. The gameplay of the Temple is around songs and light area to trigger.

Step 2: List of Link's abilities

Abilities		GET IT	NOTES
GENERALES	SPECIALS		
MOVE	WALK	-	
	RUN	-	
	BACK AWAY	-	
	STRAF	-	
	CROUCH	-	Contextual
JUMP	JUMP	-	
	FLY	-	CUCCOS
	ROLL WHEN TOUCH THE FLOOR	DEKU TREE	
	LONG JUMP		HOVERS BOOTS
CROSS	CLIMB	-	(LADDER, BOX, BIG STAIRS, IVY …)
	HANG ON	-	(ON EVERY EDGE)
	DOWN	-	(LADDER, IVY…)
	CLIMB LEVEL 2	KAKARIKO GRAVEYARD/WATER TEMPLE	HOOKSHOT/LONGSHOT

Link obtains new abilities either according to a context or in the acquisition of an item or an upgrade. That's why I list when Link gets the abilities and add some notes about how he gets it or when it's work.

For example:
- About the jump, Link can do a long jump when he discovers the Hovers boots.
- His climb ability becomes better when he finds the Hookshot in Graveyard and much better with the Longshot in Water Temple.

Step 3: List of Link damage

		ATTACKS					
		VERTICAL ATTACK	HORIZONTAL ATTACK	JUMP ATTACK	SPIN ATTACK (Level1/Level2)	ACTION BUTTON	SECONDARY EFFECT
WEAPONS	KOKIRI SWORD	1	1	2	1 / 2		
	MASTER SWORD	2	2	4	2 / 4		
	BIGORON SWORD	4	4	8	4 / 8		
	MEGATON HAMMER	2	4	4		2	*Stun*
	DEKU STICK		4	4		2	
	FAIRY SLINGSHOT					1	
	BOOMERANG					1	
	HOOKSHOT/LONGSHOT					2	*Stun*
	BOMB					2	
	DIN'S FIRE					2	
	ARROW					2	
	FIRE ARROW					2	
	ICE ARROW					2	*Freeze*
	LIGHT ARROW					2	*give ruppes*
	DEKU NUT					0	*Stun*
	BOMBCHU					2	

Link damage depends on the weapons is use. More player progress in the game, more weapon he got and more the weapon is strong.

For example:

- Kokiri sword just deal 1 as a damage unlike Master Sword deal 2 as a damage. But players meets stronger ennemies when Link becomes adult.
- Some weapons can have a secondary effect like stun,

Step 4: Bestiary of Deku tree and Forest Temple

	ENEMIES	HP	ATTACKS	DG	COMMENTS
1	**DEKU BABA**	1	BITE	1/2	Usually gives a Deku Stick.
2	**BIG DEKU BABA**	2	BITE	1/2	Gives 3 Deku Nuts.
3	**DEKU SCRUB**	1	THROW DEKU NUT	1/2	1 reflected shot at them, then 1 more hit.
4	**SKULLWAL LTULA**	1	Dash	1/2	Dashes only if it faces you. Pounding ground with Hammer will knock them off nearby walls.
5	**BIG SKULLTULA**	2	Big Spin	1/2	Wait for him to turn, then attack. You can hit him in the front if you use the Hookshot/Hammer or arrows.

To calculate the difficulty, we need bestiary of the donjon. The important things is the HP number, the definition of the attacks, the damage they deal to Link and some comments. With every of those information, we can determinate later the difficulty of the ennemie.

For example:
- Deku scrub got 1 HP so 1 hit by kokiri sword. Her attack is throw deku nuts. If Link is hit by a nut, he loses ½ heart and to defeat the Deku scrub, Link needs to reflect the nut with his shield.

Step 5: Rational Level Design Settings of Deku Tree

		Difficulty
ABILITIES	KOKIRI SWORD	18%
	KOKIRI SHIELD	14%
	DEKU STICK	7%
	DEKU NUT	4%
	SLINGSHOT	7%
ENEMIES	DEKU BABA	2
	BIG DEKU BABA	4
	DEKU SCRUB	3,5
	SKULLWALLTULA	1
	BIG SKULLTULA	4
	GOLD SKULTULA	2
	GOHMA' EGGS	1,5
	GOHMA LARVA	4
	GOHMA	30

LD METRICS	HOLE	1
	LADDER,IVY	0
	SUSPENDED LADDER	3
	SMALL GALLERY	1
	TORCH	2
	FALLEN PLATFORM	3
	TIMER PLATEFORM	2
	BUTTON	1
	RANGE BUTTON	4
	SPIDER WEB V	3
	SPIDER WEB H	3
	TRUNC WITH SPIKE	5
	ROCK BOX	2
BONUS	MAP	5%
	COMPAST	5%
	HEART	2%
	LITTLE CHEST	1%
	GRASS	5%

To calculate a RLD you must first make settings by level. You have to list all the Link abilities, the LD Metrics present in the Temple, the enemies and the bonuses. Abilities and Bonuses must be scored in% of learning and acquisition difficulty. An ability which is obvious to learn by it design or a small number of input is close to 1%. Enemies must be scored in number of learning patterns and defeat difficulty. For LD Metrics, you have to put a learning difficulty index, in the same way than for abilities, a Metrics which is obvious to learn, like ladder is close to 1.

- In Zelda games, the most difficulty abilities is around the fight, players explore a lot, but when they meet enemies, they need to understand their patterns before use a secondary weapon or the sword. That's why on the beginning of the game, Kokiri sword got 18% difficulty to learn and use because it's the first time that players use it.
- About enemies, if Gohma got a 30 as difficulty, it's because, it's a boss, it got a lot of Heal points, deal more damage to Link than other enemies, get more patterns and the fight combine Slingshot + Sword.

Step 6: Rational Level Design of Deku Tree

		Entrance	Deku Scrub Room 1	Slingshot Room	Entrance	Platform Room	Entrance	River Room	Deku Scrub Room 2	Pool Room	Torch Room	Larva Room	River Room	3 Deku Scrub Room	Gohma Room
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
ABILITIES	KOKIRI SWORD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	KOKIRI SHIELD	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	DEKU STICK	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	DEKU NUT	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	SLINGSHOT	0	0	1	1	1	1	1	1	1	1	1	1	1	1
ENNEMIES	DEKU BABA	2				2		1			1	1	1		
	BIG DEKU BABA	1	0												
	DEKU SCRUB	0	1						1					3	
	SKULLWALLTULA	0	0		2										
	BIG SKULLTULA	0	0			1		2							
	GOLD SKULTULA	0	0			1	3			1		1			
	GOHMA' EGGS	0	0												
	GOHMA LARVA	0	0									2			
	GOHMA	0	0												1
LD METRICS	HOLE	1	0		1										
	LADDER,IVY	2	0	2	1										
	SUSPENDED LADDER	0	0	1											
	SMALL GALLERY	0	0									1			
	TORCH	0	0			1		1			2				
	FALLEN PLATFORM	0	0	1											
	TIMER PLATEFORM	0	0		3										
	BUTTON	0	0			1		1		1					
	RANGE BUTTON	0	0					1	1						
	SPIDER WEB V	0	0				1						1		
	SPIDER WEB H	0	0									1			
	TRUNC WITH SPIKE	0	0							1					
	ROCK BOX	0	0							1			1		
BONUS	MAP	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	COMPASS	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	HEART	0	1	1			1							2	
	LITTLE CHEST	0	0	1		1		1							
	GRASS	1	1	1		1		1	1	1	1	1	1	1	
DIFFICULTY		5,3	2	6	1,9	14	6	12	5,7	9	5	10	6	5,2	15

The level is divided according to the situations listed above. By situation it is necessary to note each time that a bonus, enemies and metrics are iterated. If in principle, the player constantly uses the line, ex: Kokiri sword, we fill all the boxes of the line by 1. Otherwise by 0. In Bonus we iterate the number of objects found by situation and we do the same thing for the enemies and the LD Metrics.

- Example: Situation 4, in the Entrance, player can use all the abilities that he learns since now. So every box is 1. He meets 2 Skullwalltula. There are 1 hole, 1 Ivy to use and player find the map.

Formula to calculate the difficulty:
=(SOMMEPROD(EveryLignOfEnnemies;'RLD Settings'!$ EveryLignOfEnnemies)*(1-(SOMMEPROD(EveryLignOfAbilities;'RLD Settings'!$EveryLignOfAbilities)))+SOMMEPROD(EveryLignOfLDMetrics;'RLD Settings'!$EveryLignOfLDMetrics))*(1-SOMMEPROD(EveryLignOfBonus;'RLD Settings'!$EveryLignOfBonus))

Example situation 1:
=(SOMMEPROD(C8:C16;'RLD Settings'!$C8:$C16)*(1-(SOMMEPROD(C3:C7;'RLD Settings'!$C3:$C7)))+SOMMEPROD(C17:C29;'RLD Settings'!$C17:$C29))*(1-SOMMEPROD(C30:C34;'RLD Settings'!$C30:$C34))

Step 7: Difficulty curve of Deku Tree

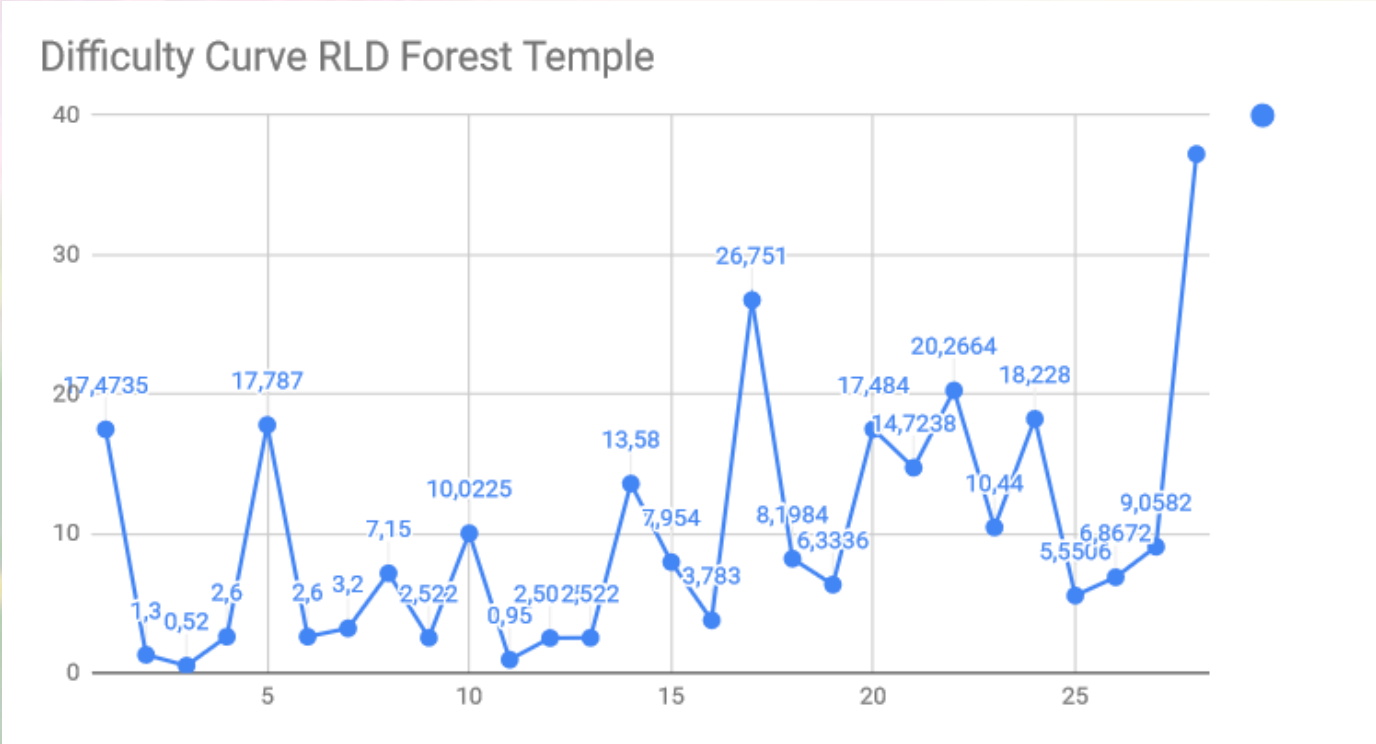| DIFFICULTY	5,3	2	6	1,9	14	6	12	5,7	9	5	10	6	5,2	15

Difficulty curve LD Deku Tree
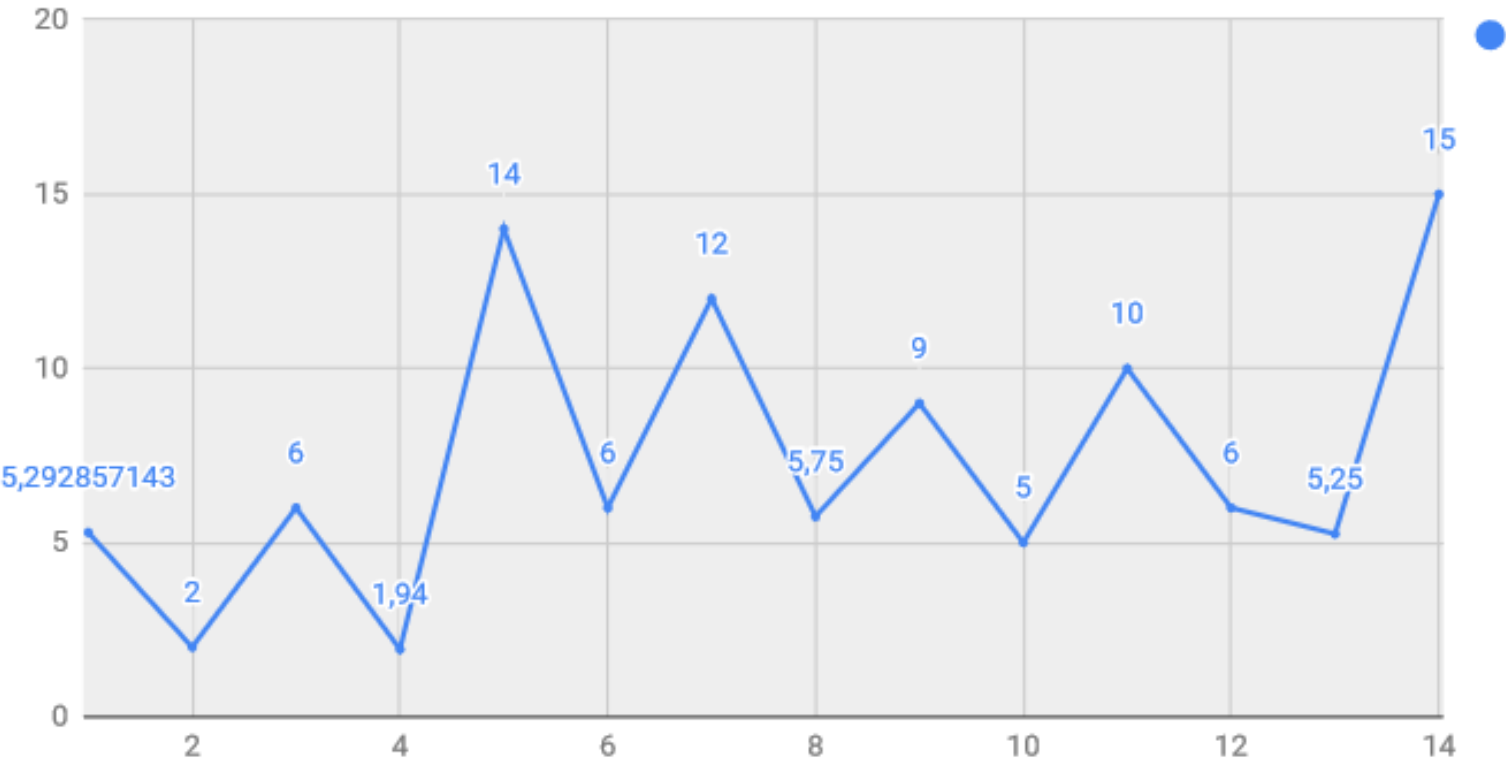
For this diagram, we have to tack the line of the RLD painting about situation and the line about difficulty. We can see the curve of difficulty in the whole level. Some situations are easier than other.

Step 8: Repeat the RLD work for Forest Temple

| DIFFICULTY	17,5	1,3	0,52	2,6	17,8	2,6	3,2	7,15	2,5	10	0,9	2,5	2,5	13,6	7,9	3,8	26,7	8,2	6,3	17,5	14,7	20,3	10,4	18,2	5,5	6,9	9,1	37,2

Difficulty Curve RLD Forest Temple

For this diagram, we have to tack the line of the RLD painting about situation and the line about difficulty. We can see the curve of difficulty in the whole level. Some situations are easier than other.

Light Temple

Master Sword   Forest Temple

For the workshop, I've decided to put the Light Temple before the Forest Temple. That mean, when I'll create the map and the situation, I need to take care that the difficulty of the Light Temple is weaker than the difficulty of Forest Temple. That's why I take Forest Temple difficulty as a reference.

Step 9: Top view Map of the Light Temple in Top View

2

2

2

Light area

1

1
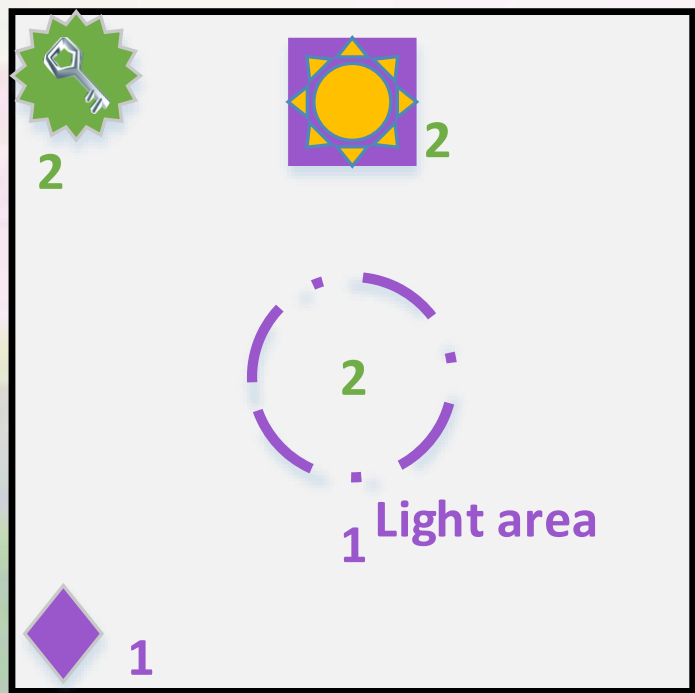
Crystal sun room

It's better to start with a Top view Map because we can see every LD Metrics like key. The most important thing is the Legend because that will help Graphist and Programmer to understand the Map,

LEGEND

Bonus

Song of Time box

Chest with key

Door with key

Chest with Boss key

Door with bars

Chest with Ocarina

Trigger crystal

Enemies

Movable statue

Statue enemie

Mirror

Wallmaster (celling)

Timing button

Normal button

Zelda lullaby