Use Case 2: Monitor Countdown
Scope: Launch Simulator
Level: Flight Controller Goal
Primary Actor: Flight Controller
Secondary Actors: Astronaut. Engineer/Technician
Related Use Cases: *Use Case 1: The Flight Controller Shall Monitor Pre-Launch Activities*
Stake Holders & Interrests:

- Flight Controller: wants to monitor the Countdown Time
- Flight Controller: wants to control the Countdown Time
  - Enter the Countdown Time
  - Start the Countdown Time
  - Hold the Countdown Time
  - Re-Enter the Countdown Time
- Engineer/Technician: wants to monitor the Countdown Time
- Astronaut: wants to monitor the Countdown Time

Pre-Conditions: The System is ready to accept Countdown Time Entry from the Flight Controller
Post-Conditions: The Countdown Timer has reached zero (see *Use Case 1: The Flight Controller shall monitor Pre-Launch Activities*)

Flow of Events:

Flight Controller	**System**
1. Enters the Countdown Time	
	2. Displays the Countdown Time in Coundown Timer
3. Starts the Countdown Timer	
	4. Countdown from entered time to zero
	5. Displays the Current Countdown Time
	6. Countdown Time Zero

Alternative Flows:

1a. The Flight Controller can re-enter another Countdown Time prior to starting the Countdown Timer: entering the Countdown Time as many times as desired

2a. If the Flight Controller enters a Countdown Time too low as pre-determined for adequate launch safety, then the System does not set the entered Countdown Time, alerting the Flight Controller of the error. The Flight Controller can choose to enter an appropriate Countdown Time

4a. If the Flight Controller chooses to hold the Countdown, then the System stops the Countdown: displaying the stopped Countdown time. Countdown Time resumes upon Flight Controller restart: resuming from the time stopped.

4b. If the Countdown is on hold, then the Flight Controller can chose to abort the Countdown–Clearing the Countdown and aborting the Rocket Launch *See Use Case 1: Flight Controller shall Monitor the Pre-Launch*

Special Requirements:

- There is only one point of decision for the Countdown Hold, Countdown Abort: The Flight Controller

Technology & Variations List:

4a. A typical Countdown Timer.

4b. The Countdown Timer is interchangeable.

Frequency of Occurence: Almost Continuosly: Based on the number of desired Launches and the number of desired Countdowns.

Open Issues:

- What is considered a "safe" Countdown Launch Time?
- Does a "safe" Countdown Launch Time depend on the type of launch and type of Delivery Vehicle (Rocket)?