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| General Information | |
| Use Case Name\Number : 004  Subject Area : System Stop  Description : User stops system | Responsible Analyst : Sanchez |

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| Requirements/Feature Trace | |
| **REQ#** | Requirements Name and / or Short Description |
| 1 | The system closes and cleans up all wireless networking components |
| 2 | The system closes and cleans up all controller systems |
| 3 | The system closes and cleans up all video and Oculus components |
| 4 | The system closes and cleans up all sensor system components |

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| Revision History | | |
| Author | **Date** | **Comments** |
| Sanchez | 10/28/14 | Initial draft of system stop use case |
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| **Insertion Points in other Use Cases** | | |
| Use Case Name | **Use Case Number** | **Step Inserted After** |
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| **Actors** | | |
| **Actor Name** | **Person/System** | **Brief Description** |
| Driver | Person | User wishes to stop using the system |
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| **Pre-Conditions** | |
| # | Description |
| 1 | The system was running |
| 2 | The user wishes to stop using the system |

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| **Start Stimulus** |
| The user selects the System Stop function |

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| **Use Case Main Course Steps** | | | |
| **Number** | **Description** | **Adds/Alt Name/Number** | **Bus Rule#** |
| 1 | User initiates stop procedure |  |  |
| 2 | System closes sensor stream |  |  |
| 3 | System closes video stream |  |  |
| 4 | System closes controller stream |  |  |
| 5 | System closes network sockets |  |  |
| 6 | System cleans up Oculus Rift handles |  |  |
| 7 | System cleans up server resources |  |  |
| 8 | System cleans up client resources |  |  |
| 9 | System prompts user on success |  |  |
| 10 | User acknowledges success dialog |  |  |
| 11 | User closes application |  |  |

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| **Exception Conditions** | | |
| **Exception Situations** | **Action(s) on Exception** | **Adds\Alt UC #** |
| Resource fails to release | System attempts to clean up connections in correct dependency order, if it fails, prompt user that resource handles are locked |  |

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| Post-Conditions | |
| **#** | **Description** |
| 1 | Network connections have been closed |
| 2 | All resources have been freed |
| 3 | System is off |

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| **Candidate Objects** | | |
| **Class/Object Name** | **Descriptions** | **Possible**  **attributes** |
| ApplicationManager | Encapsulates the application cleanup code for client and server | OculusManager, ConnectionManager, RCCar, ControllerManager |
| ConnectionManager | Encapsulates the network cleanup code for client and server | ClientSocket, VideoStream, ControlStream, ServerSocket |
| OculusManager | Encapsulates Oculus Rift resource handles and cleanup code | LeftEyeStream, RightEyeStream, OculusHandle |
| RCCar | Encapsulates RC Car resources | Speed, steering angle, RCHandle |
| InertialSensor | Accelerometer sensor interface | Value, Offset, Pin |

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| **Assumptions** | | | | | |
| **#** | **Assumption** | **Date**  **Raised** | **Raised**  **By** | **Date**  **Verified** | **Verified By** |
| 1 | Cleanup occurs without incident | 10/28/14 | Sanchez | 10/28/14 | Sanchez |
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| **Issues** | | | | | |
| **#** | **Issue** | **Date**  **Raised** | **Raised**  **By** | **Date**  **Verified** | **Verified By** |
| 1 | Operating system could have runtime malfunction causing an invalid memory exception | 10/28/14 | Sanchez |  |  |
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| **Other Comments** | | |
| **Author** | **Comment** | **Date** |
| Sanchez | 99% of the time, there won’t be any shutdown memory violations | 10/28/14 |
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| Frequency of Execution |
| **Frequency:**  Minimum: Maximum: Average: (OR)Fixed:  **Per:** Hour:Day:  Week:  Month:  Other: Paired to System Start use case |

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| **Timing Information** | | | | | | | |
| **#** | **At/**  **Between** | **Step(s)** | **Timing**  **Unit** | **Minimum** | **Average** | **Maximum** | **Comments** |
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| **Volume Information** | | | | | | |
| **#** | **Step #** | **Unit of**  **Measure** | **Minimum** | **Average** | **Maximum** | **Comments** |
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| **Alternate Course General Information** |
| Alternate Course Name:  Alternate Course Number:  Parent Use Case Name:  Parent Use Case Number:  Description:  Reason for Execution: Non Exception:  Exception:  Exception #: |

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| Insertion Point |
| Step Inserted After |
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| Pre-Conditions | |
| 1. |  |
| 2. |  |

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| Alternate Course Steps | | | |
| **#** | **Step Description** | **Adds Use Case #** | **Business Rule(s)#** |
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
| 4. |  |  |  |

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| Post-Conditions | |
| 1. |  |
| 2. |  |