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| General Information | |
| Use Case Name\Number : 010  Subject Area : RC Car connection  Description : User is disconnecting the RC system | Responsible Analyst : Sanchez |

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| Requirements/Feature Trace | |
| **REQ#** | Requirements Name and / or Short Description |
| 1 | Network components are cleaned up and destroyed |
| 2 | Controller components are cleaned up and destroyed |
| 3 | Video components are cleaned up and destroyed |
| 4 | Sensor systems are shut down and cleaned up |

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| Revision History | | |
| Author | **Date** | **Comments** |
| Sanchez | 10/28/14 | Initial draft of 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 | Driver is disconnecting the server system from the client |
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| **Pre-Conditions** | |
| # | Description |
| 1 | Client and server systems were connected and functioning |

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| **Start Stimulus** |
| User is done using the OculusRC device |

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| **Use Case Main Course Steps** | | | |
| **Number** | **Description** | **Adds/Alt Name/Number** | **Bus Rule#** |
| 1 | User selects the disconnect from server operation |  |  |
| 2 | Client sends disconnect notice to server |  |  |
| 3 | Server shuts down sensor systems and stream |  |  |
| 4 | Server shuts down controller daemon |  |  |
| 5 | Server shuts down camera feed |  |  |
| 6 | Server cleans up resources |  |  |
| 7 | Server sends good-bye message to client and shuts down |  |  |
| 8 | Client receives good-bye message and cleans up all network sockets and streams |  |  |
| 9 | Client notifies user of disconnected status |  |  |

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| **Exception Conditions** | | |
| **Exception Situations** | **Action(s) on Exception** | **Adds\Alt UC #** |
| Invalid Memory Operation | In some rare circumstances, the server system can run into memory corruption during cleanup and shut down procedures, system retires shutdown and forces system kill if second failure occurs |  |
| Client queries server | Client sends mistimed request to server, server is off so client receives nothing, system begins timeout, cancels request after 60 seconds and notifies the user that the server is offline |  |

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| Post-Conditions | |
| **#** | **Description** |
| 1 | Server is offline |
| 2 |  |

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| **Candidate Objects** | | |
| **Class/Object Name** | **Descriptions** | **Possible**  **attributes** |
| NetworkManager | Handles all socket and stream cleanup | ClientSocket, ClientStream, ServerStream |
| ApplicationManager | Contains all manager objects crucial to system operation | NetworkManager, OculusManager |
| SensorManager | Handles sensor system shutdown | SensorHandle |
| OculusManager | Handles all Oculus Rift software interaction | OculusHandle |
| XInputManager | Manages the driver access of the controller data | ControllerHandle |
| RCCar | Manages the transfer of RC control data to the server | RCPacket |
| ControllerDaemon | Manages the shutdown procedure of server control systems | SteeringServo, DriveMotor |

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| **Assumptions** | | | | | |
| **#** | **Assumption** | **Date**  **Raised** | **Raised**  **By** | **Date**  **Verified** | **Verified By** |
| 1 | No adverse system events have occurred | 10/28/14 | Sanchez | 10/28/14 | Sanchez |
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| **Issues** | | | | | |
| **#** | **Issue** | **Date**  **Raised** | **Raised**  **By** | **Date**  **Verified** | **Verified By** |
| 1 | Client/Server communications can break down and fail | 10/28/14 | Sanchez |  |  |
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| **Other Comments** | | |
| **Author** | **Comment** | **Date** |
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| Frequency of Execution |
| **Frequency:**  Minimum: Maximum: Average: (OR)Fixed:  **Per:** Hour:Day:  Week:  Month:  Other: Tied to System Stop 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. |  |