**Use Case # [6: Manually lights on and off via Amazon Dash buttons]**

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| ***GENERAL CHARACTERISTICS*** | |
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| **Last Update:** | 9/25/2017 |
| **Scope** | Home Automation System |
| **Level** | User-goal |
| **Status** | Incomplete Conceptualization |
| **Primary Actor** | Mobile Application User |
| **Secondary Actors** | Server; Mobile Application |
| **Stakeholders and Interests** | Mobile App User: Wants to manually turn on and off lights in a given room via specific Amazon Dash buttons |
| **Preconditions** | User has Mobile application installed and registered.  User has at least one Amazon Dash button and one connected light source that the button is mapped to. |
| **Success Post Condition** | After pushing the Amazon Dash button, the light is now off it was on prior to pressing the button or the light is now on if it was previously off. |
| **Failed Post Condition** | The light source has the same state as it did prior to pressing the Amazon Dash button |

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| ***MAIN SUCCESS SCENARIO (or basic flow)*** | |
| **Step** | **Action -** description in words of each step in success scenario |
| 1  2  3 | The User has entered a room equipped with an Amazon Dash button and a controllable light source  The User presses the Amazon Dash button.  The light source is now on if it was off prior to pressing the Amazon Dash button or is now off it was on prior to pressing the Amazon Dash button |

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| ***EXTENSIONS or Alternate Flows*** | |
| **Step** | **Branching Action** |
| *n..m* | \*a At any time the server fails:   1. Server attempt to find and fix issues   1a. Server is offline  1. App informs the user that no server is detected  2. User restarts the server  3. App reconnects to the server    1b. Server crash  1. Server auto restart  1a. Server fails to auto restart  1. Mobile app informs the user after 1 minute of no response from the server  2. User manually restarts server   1. Server requests information from the mobile application and resumes normal functionality   \*b At any time the mobile application fails:  1. Mobile app searches for issue  1a. Mobile app has no network connection  1. App attempts to connect to wifi to restore connection  1a. App fails to connect to wifi  1. The information is stored on the app and queue to send when connection is restored  2. The app informs the user that it has no network connection.  2a. Mobile application crashes  1. Mobile app sends information about the cause of the crash  2. App attempts to auto restart  2a. Fails to auto restart  1. User manually restarts the app  2. App sends information to the server  3. Mobile app sends its information to the server and reestablishes connections based on what the server sends back |
|  | 3A. The controllable light source is not mapped to the desired light source   1. The User notifies the administrator of the central server 2. The administrator readjusts the mapping of the specific Amazon Dash button to the specific light source   3B. The light source does not switch states after pressing the Amazon Dash button   1. The User notifies the administrator who readjusts the mapping   3C. Amazon Dash button is not connected to the local wifi network.   1. The User uses Amazon app to connect Amazon Dash button to wifi |
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| ***SPECIAL REQUIREMENTS*** | |
| **Req Num** | **Requirement** |
| *n* | 1. Light connections restricted to users 2. Server communications require authentication 3. The Amazon Dash button is connected to the local wi-fi network 4. Each Amazon Dash Button is mapped to a specific light source by the administrator of the central server |

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| ***TECHNOLOGY AND DATA VARIATIONS LIST*** | |
| **Var Num** | **Variation** |
| *n* | 2a. Communications are done over a wireless network so server would need internet and mobile device would need mobile data or be connected to wifi  2b. Keyboard is required to restart server as admin passwords would be needed  3a. The Amazon Dash button must be connected to the local wifi network.  3b. The Amazon Dash button must be modified to respond to systems not provided and serviced by Amazon. |

***FREQUENCY OF OCCURRENCE***: Common but not necessarily often

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| ***OTHER ISSUES*** | |
| **Issue Num**  **1.** | **Issue**  How is the Amazon Dash button modified to respond to systems other than that provided by Amazon? |