Craftsmen Construction CuteLoop Demonstration Script (To-Be)

John, Mary and Dennis (the naughty one) have just moved into a new house in the up-town. The house is just right for the family having on suite room with bathroom, one bedroom, office room, kitchen, living room, a common bathroom and contains a central boiler placed in the basement that heats up each division using a set of radiators. The house is equipped with state-of-art technologies including the CuteLoop system for supporting repair and maintenance work. John is especially happy with having an office space in this new home as it would facilitate the storage of books, computer systems and have some desks for working at home when needed.

The office space is equipped with humidity sensor, thermal camera, temperature sensor, noise sensor, light sensor all part of to the CuteLoop system. The system is interfaced by an application for PDA and John, as a technology lover, has already downloaded the CuteLoop application and is able now to access the so-called Health-book-to-the-House. Using the application, John can also see that the system stores detailed information about the office room, including blueprints, materials, and products characteristics and past interventions information, and also manuals and specifications sheets of the radiator and the boiler. There, he also figures out that there is an outside unit (in the exterior to the house) that is able to measure external temperature and noise. Neat, he says!

Just six months after being at the new home, John and Mary receive the good news. A new family member is to be born around winter time, a baby girl. The new baby was not planned for now and when the family moved to the new apartment they did not think they would need three rooms and so some adaptation is required. John and Mary have then decided to convert the office-room into a bedroom and want to have it all ready for the time the baby is born.

Being that the room is for the baby John and Mary have even more concerns with some of the issues that they have experienced in the past months of using the division. John thinks that the space is too cold (even with heating set to maximum) and humid, light conditions (both natural and artificial) might not be the best, sometimes noise (coming from the outside) get to some level that present concerns. Mary wants to change the aesthetics of the room (to soft pink tons) and would like to paint the whole room with some quality paint that is both good in terms of isolation and cleaning, and is made of materials that are neutral to the baby health.

**John and Mary decide then to call in a professional craftsmen group for helping them to perform a refurbishment of the existing office space into a functional and cosy room for the baby girl.**

**Scene 1: Dennis kills the RFID Reader >> CuteLoop System Robustness**

1. Dennis is playing in the office-room and sees a nice coloured piece in the wall and pulls it over to play with it. The nice piece is actually an integral part of the CuteLoop system, an RFID reader that enables the system to read information from RFID tags inside the room.
2. A warning is displayed on John’s mobile phone HbotH application stating the connection has been lost to the RFID reader in the office room!
3. Dennis has done it again and the parents are very unhappy with him and fear that some functionality/information might be lost and especially due to the fact the craftsman that will help them with renovation work will arrive in few days and has mentioned that the CuteLoop system will be very helpful to fully assess condition of the space.
4. John checks however the CuteLoop system manuals and where it is stated that the system withstands such kind of issues as the information is automatically replicated.

**Scene 2: Eco-craftsman@work >> HbotH for diagnosing**

1. Eco-craftsman enters house to assess space and related environment as to optimise work
2. Eco-craftsman requests access to the CuteLoop system (using its own PDA device)
3. Owner (via PDA) receives request and grants access to HbotH
4. Eco-craftsman interfaces the CuteLoop system to collect relevant HbotH information
   1. *Eco-craftsman checks exceptional conditions of humidity defined by rules (humidity range), thermal rules (temperature range and dynamic behaviour), noise rules (noise range considered optimal for a baby relaxed sleep) during the last year*
   2. *Eco-craftsman checks characteristics and materials used in walls, windows, ceiling, floor, etc to assess appropriateness for good isolation and health*
   3. *Eco-craftsman overlooks specifications of heating device to assess appropriateness to space dimension and characteristics*
   4. *Eco-craftsman assesses boiler performance by remotely controlling (reading and actuating) the equipment due to boiler being located in basement*
5. Eco-craftsman creates a proposal (plain document) with the options to address condition
6. Owners evaluate options and finally decide to change windows, insulate walls and replace radiator from heating system

**Scene 3.1: Intervention Work to Change Windows >> HbotH supporting maintenance (NOT TO DEMO)**

1. Craftsman enters division to change windows
   1. *Craftsman requests access to the CuteLoop system (using its own PDA device)*
   2. *Owner (via PDA) receives request and grants access to HbotH*
2. Craftsman checks manuals and characteristics of the installed windows by retrieving information related to windows in the division from the HbotH. He is assured of work.
3. Craftsman replaces fancy single glass wood windows by triple glass PVC windows equipped with RFID tags
4. Craftsman checks current room performance by PDA using installed room sensors
5. Craftsmen sets new windows as part of the CuteLoop system and deletes old windows
   1. *Request is sent from craftsman PDA to the HbotH for add/delete of components*
   2. *Owner (via PDA) receives request and accepts changes to the HbotH*
6. Craftsman records intervention log to the HbotH
   1. *Craftsman writes log in HbotH expecting moderation from owner to be effective*
   2. *Owner (via PDA) receives request and accepts logging storage*
7. *Job is completed*

**Scene 3.2: Intervention Work for Insulating Walls >> HbotH supporting maintenance (NOT TO DEMO)**

1. Craftsman enters division to perform insulation work on walls
   1. *Craftsman requests access to the CuteLoop system (using its own PDA device)*
   2. *Owner (via PDA) receives request and grants access to HbotH*
2. Craftsman uses HbotH information for supporting the intervention work
   1. *Blueprint information for checking buried systems (pipes, electrical, etc) location before drilling for installing insulation material*
   2. *Information on materials (e.g. paint) used in walls, ceiling, floor is retrieved to check about possible issues related to compatibility with new installation*
3. Craftsman installs insulation apparatus and paints the walls using eco-label paint
4. Craftsmen sets installation and paint (RFIDs in walls) as part of the CuteLoop system
   1. *Request is sent from craftsman PDA to the HbotH for add of components*
   2. *Owner (via PDA) receives request and accepts changes to the HbotH*
5. Craftsman records intervention log to the HbotH (for moderation by owner)
   1. *Craftsman writes log in HbotH expecting moderation from owner to be effective*
   2. *Owner (via PDA) receives request and accepts logging storage*
6. Job is completed

**Scene 3.3: Intervention Work for Replacing Radiator >> HbotH supporting maintenance**

1. Craftsman enters division to replace radiator from heating system
   1. *Craftsman requests access to the CuteLoop system (using its own PDA device)*
   2. *Owner (via PDA) receives request and grants access to HbotH*
2. Craftsman remotely switches off boiler using the interface on PDA device
3. Craftsman uses HbotH information for supporting its intervention work
   1. *Disassemble manuals for better understating of uninstall procedures of old radiator and disposal/recycling of equipment*
   2. *Installation manuals for understating of install and set-up of new radiator and operation/testing procedures*
4. Craftsman removes old radiator and installs new radiator into wall
5. Craftsman remotely checks heating performance by PDA by direct interfacing devices
   1. *Remotely switches on/off, changes operative parameter of boiler in basement*
   2. *Retrieves information related to temperature and humidity condition from sensors*
6. Craftsmen sets new radiator as part of the CuteLoop solution and deletes old one
   1. *Request is sent from craftsman PDA to the HbotH for add/delete of components*
   2. *Owner (via PDA) receives request and accepts changes to the HbotH*
7. Craftsman records intervention log to the HbotH (for moderation by owner)
8. *Craftsman writes log in HbotH expecting moderation from owner to be effective*
9. *Owner (via PDA) receives request and accepts logging storage*
10. Job is completed

**Scene 4: Validation of Work >> HbotH supporting work inspection**

1. Owner checks in PDA the intervention logs from HbotH
   1. *Intervention logs and materials used in windows changing*
   2. *Intervention logs and materials used in walls isolation*
   3. *Intervention logs and materials used in radiator replacement*
2. Owner validates intervention work supported on HbotH data
   1. *Checking work by visual inspection versus overlooking intervention log*
   2. *Assessing room overall performance (against suggested by eco-craftsman proposal) using HbotH sensorial capability (e.g. trial during some days)*
3. Owner either accepts work or rejects work based on findings

**Scene 5: CAPEB-in-the-Loop >> HbotH supporting CEIP**

1. Owner (after finally accepting work) receives an alert (from HbotH in PDA) to anonymously provide CAPEB with the logs of the intervention work performed by the craftsmen
2. Anonymous HbotH information is store at CAPEB
3. CAPEB uses such information to perform statistical analysis on craftsman work and assesses adequate use of eco-artisan guidelines and certification by eco-craftsman
4. CAPEB offers/sells statistical data to third-party (manufacturer, other)