Sweet Home 3D – Agile Development

This document contains a description of the proposed “Advanced home plan editing plug-in” enhancement to the Sweet Home 3D tool’s current functionality. It also details an agile approach to implementing the improvement in several small releases and the tests which would be undertaken to ensure that the final release is correctly implemented.

# Enhancement Description:

The description of this enhancement has been given using the format for a functional requirement.

## Functional Requirements

### Advanced home plan editing plug-in – R01

This plug-in’s intended purpose is to assist interior designer to resize selected objects in the plan. It enables users to do the corresponding actions for selected objects, which are not present in the current version of the system. This plugin consists of the following sub-functions to be completed, and this improvement would be integrated into current version of the system.

|  |  |
| --- | --- |
| **ID** | **Description** |
| R01-01 | User is able to flip an object horizontally or vertically |
| R01-02 | User is able to resize an object in the home plan to any given size or aspect ratio |
| R01-03 | User is able to move an object to any given location in the 2D region |
| R01-04 | User is able to rotate an object any given number of degrees |

# Agile Development Releases:

In the following table is a sequence of releases that gradually incorporate the Advanced home plan editing plug-in’s functionality into the Sweet Home 3D tool. These releases have been designed with the intention to of being undertaken by an agile development team.

## Release control

|  |  |  |
| --- | --- | --- |
| **Version** | **Description** | **Functional Requirements** |
| 1.0.1 | The system is able to flip an object horizontally or vertically by using either of two checkboxes of a “Flip” menu function | R01-01 |
| 1.0.1 | The system is able to resize an object by inputting any given size in “cm” or “%” or with an aspect ratio | R01-02 |
| 1.0.2 | The system is able to move an object to any given location within the horizontal and vertical bounds of the 2D region | R01-03 |
| 1.0.2 | The system is able to rotate an object by entering any degree between 0 and 360 | R01-04 |
| 1.1-alpha | The System should integrate all the above sub-functions together and ensure compatibility with current version in the integration environment | R01 |
| 1.1-beta | The System should support all functions of the requirements in the staging test environment | R01 |

# Testing:

The following table defines a set of tests that would be conducted by the Agile Development team in order to verify the progress of the releases

|  |  |
| --- | --- |
| **Type** | **Test content** |
| White box test/unit test | This type of testing is hosted by developers.  They are responsible for writing the testing programs of the individual units to be tested. |
| Daily incremental integration/regression test | This is a form of integration testing  This ensures that the new plugin works smoothly when integrated with the current working version of the tool. |
| Block box test/system test | This test is hosted by test engineers.  They are responsible for writing testing scripts of each new function in the staging test environment as well as performing these tests |