

Appendix 2

Test procedures against the systems non-functional requirements

Empty template:

Requirement:

● Acceptance criteria:

○ Test procedure:

○ Further comments:

● Acceptance criteria:

○ Test procedure:

○ Further comments:

Requirement: Performance

- Acceptance criteria: The system needs to calculate the user's current position and deliver the location details via the mobile application within an acceptable time frame of up to 3 seconds.
 - Test procedure: To test this I will time how long it takes to update the user's distance to the iBeacon from the iBeacon after running across a room. If the mobile application calculates the users position from the iBeacon and updates the location details via the mobile application within 3 seconds this will be deemed a success.
 - Pass / Fail: Pass
- Acceptance criteria: The system needs to push data to the database stored on the server within an acceptable time frame of up to 3 seconds if a network connection is available.
 - Test procedure: To test this I will time how long it takes for the user data to be pushed from the mobile application to the database after the user enters the radius. If the data is uploaded to the database within 3 seconds this test will be marked successful.
 - Pass / Fail: Pass

Requirement: Efficient

- Acceptance criteria: Each data item sent from the mobile application to the server will need to be justified and used in the system management interface.
 - Test procedure: To test this I will check the BeaconID, UUID, Timestamp and Status sent from the mobile application are all used by the system management interface. If any one of the BeaconID, UUID, Timestamp and Status are not used by the system management interface this test will be deemed a fail.
 - Pass / Fail: Pass
- Acceptance criteria: Each data item sent from the database to the system management interface will need to be justified.
 - Test procedure: To test this I will check the LogID, BeaconID, UUID, Timestamp, Status, RoomID, RoomName, LocationID, LocationName, Longitude and Latitude retrieved from the database are all used by system management interface. If any one of the LogID, BeaconID, UUID, Timestamp, Status, RoomID, RoomName, LocationID, LocationName, Longitude and Latitude are not used by the system management interface this test will be deemed a fail.
 - Pass / Fail: Pass

Requirement: Compatibility

- Acceptance criteria: All the mobile application functionalities work on iOS mobile devices.
 - Test procedure: To test this I will test each functional requirement that uses the mobile application using an iOS device. Test cases 1a, 2a, 2b, 2c, 3a, 4a and 4b. All functional requirements tests need to be successful for this test will be deemed a success.
 - Pass / Fail: Pass
- Acceptance criteria: All the mobile application functionalities work on Android mobile devices (desirable)
 - Test procedure: To test this I will test each functional requirement that uses the mobile application using an Android device. Test cases 1a, 2a, 2b, 2c, 3a, 4a and 4b. All functional requirements tests need to be successful for this test will be deemed a success.
 - Pass / Fail: Fail
 - Further comments: Due to time constraints it was not possible to convert the mobile application to Android. This has now been added to future work.

Requirement: Portability

- Acceptance criteria: The system management interface functionalities work on Chrome, Internet Explorer, Safari and Firefox.
- Test procedure: To test this I will test each functional requirement that uses the system management interface on each browser. Test cases 2a, 2b, 2c, 3a, 4a, 4b, 5a and 6a. All functional requirements tests need to be successful for this test will be deemed a success.
 - Chrome (Version 42.0.2311.90)
 - Pass / Fail: Pass
 - Further comments
 - Internet Explorer (Version 11.0.9600.16428)
 - Pass / Fail: Pass
 - Further comments
 - Safari (Version 8.0.5 (10600.5.17))
 - Pass / Fail: Pass
 - Further comments:
 - Firefox (Version 37.0.2)

Requirement: Reliability

- Acceptance criteria: The system only delivers content when the user enters within a specific radius of an object.
 - Test procedure: When testing the content delivery functionality I will check if any unexpected content is delivered. If any unexpected content is delivered this test will be deemed a fail.
 - Pass / Fail: Pass