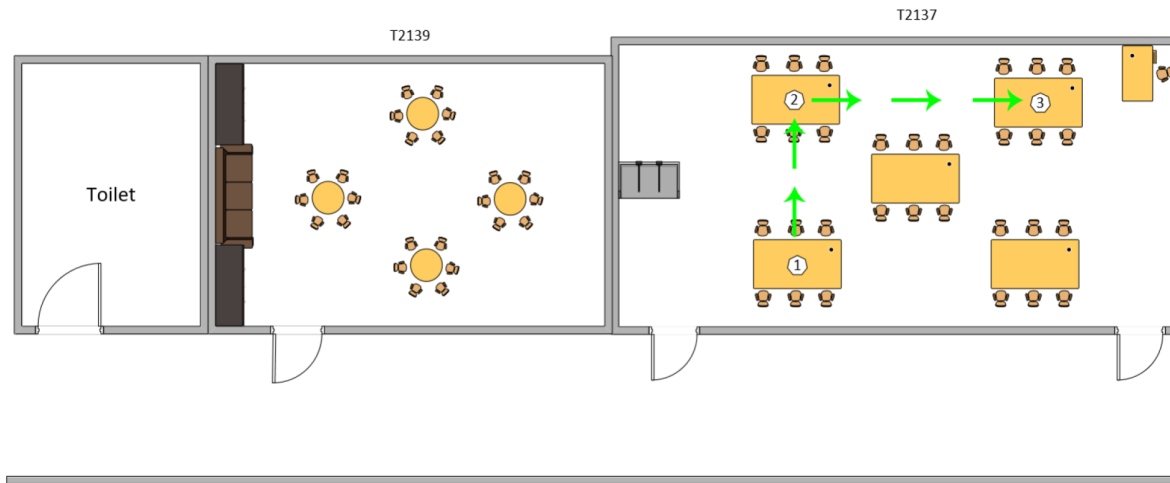


## Test Case 1



Route used for test case 1

**Test Execution Date:** 16/7/2018

**Test Duration:** - minute - seconds

**Pre-Conditions:**

User is not blindfolded.

User must be logged in to an account.

Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **4 meters**

Distance between beacon & ground: **75cm**

Compass Bearing: **+ - 5**

Avg Moving Speed: **unknown**

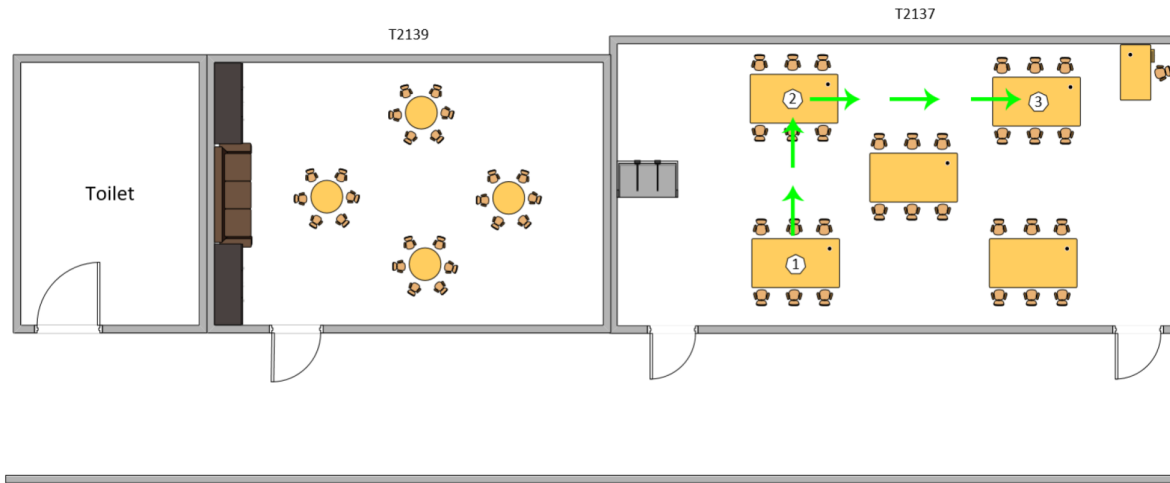
**Description:**

Navigation from beacon 1 which is a desk in T2137 to beacon 3 which is a desk in T2139 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 3	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2. It will also tell the user that beacon 2 is a turning point.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message continuously tries to correct the user into the correct direction towards Beacon 2 without success.</p> <p>User did not reach beacon 2.</p>	Fail
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to turn right and walk straight from beacon 2 to beacon 3.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message continuously tries to correct the user into the correct direction towards beacon 3 without success.</p> <p>User did not reach beacon 3 and went off course.</p>	Fail

## Test Case 2



Route used for test case 2

**Test Execution Date:** 16/7/2018

**Test Duration:** 1 minute 20 seconds

**Pre-Conditions:**

User is not blindfolded.  
User must be logged in to an account.  
Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **4 meters**  
Distance between beacon & ground: **75cm**  
Compass Bearing: **+ - 10**  
Avg Moving Speed: **unknown**

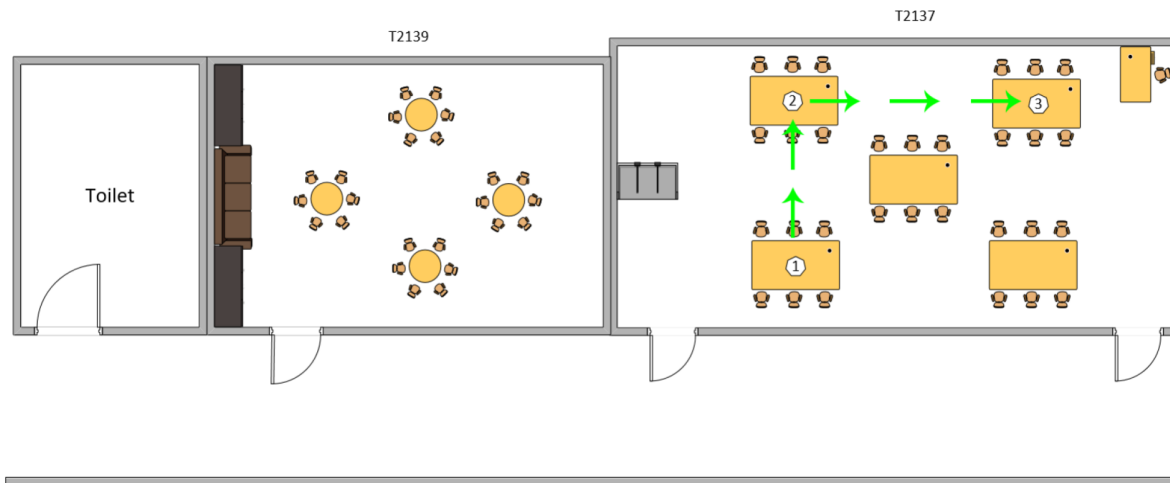
**Description:**

Navigation from beacon 1 which is a desk in T2137 to beacon 3 which is a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination as Beacon 3 and tap on "Start".	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the wrong direction when he is indeed facing the wrong direction and guided the user to face the correct direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2. It will also tell the user that beacon 2 is a turning point.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to turn right and walk straight from beacon 2 to beacon 3.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was delayed even when the user is already on beacon 2.</p> <p>When the user has reached beacon 3, the voice message did not inform the user he has reached the destination and instead continued to tell the user to walk straight.</p>	Fail

### Test Case 3



Route used for test case 3

**Test Execution Date:** 17/7/2018

**Test Duration:** 1 minute 17 seconds

**Pre-Conditions:**

User is not blindfolded.  
User must be logged in to an account.  
Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **4 meters**  
Distance between beacon & ground: **75cm**  
Compass Bearing: **+ - 10**  
Avg Moving Speed: **unknown**

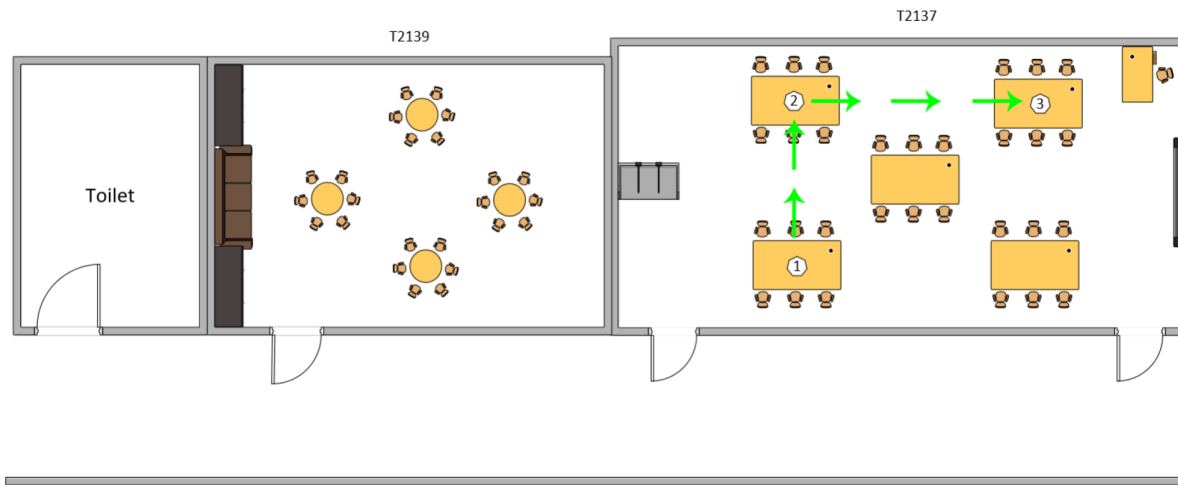
**Description:**

Navigation from beacon 1 which is a desk in T2137 to beacon 3 which is a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination as Beacon 3 and tap on "Start".	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	<p>After entering the destination and tapping on "Start", the voice message informed that the user is facing the wrong direction when he is facing the correct direction.</p>	Fail
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2. It will also tell the user that beacon 2 is a turning point.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to turn right and walk straight from beacon 2 to beacon 3.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was delayed even when the user is already on beacon 2.</p> <p>When the user has reached beacon 3, the voice message did not inform the user he has reached the destination and instead continued to tell the user to walk straight.</p>	Fail

## Test Case 4



Route used for test case 4

**Test Execution Date:** 17/7/2018

**Test Duration:** 1 minute 22 seconds

**Pre-Conditions:**

User is not blindfolded.  
User must be logged in to an account.  
Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **4 meters**  
Distance between beacon & ground: **75cm**  
Compass Bearing: **+/- 10**  
Avg Moving Speed: **22cm/s**

**Description:**

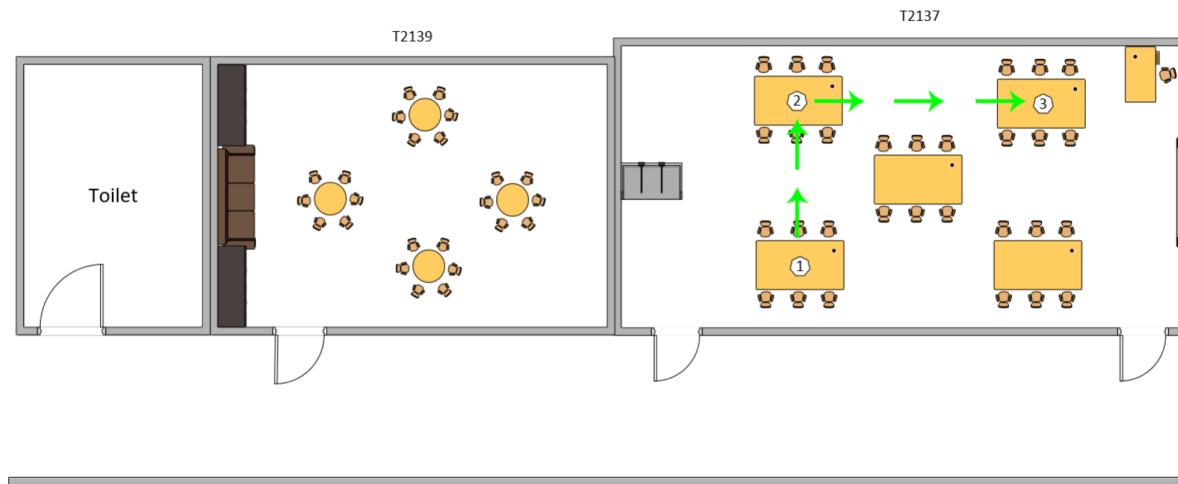
Navigation from beacon 1 which is a desk in T2137 to beacon 3 which is a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination as Beacon 3 and tap on "Start".	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	<p>After entering the destination and tapping on "Start", the voice message informed that the user is facing the wrong direction when he is facing the correct direction.</p>	Fail
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2. It will also tell the user that beacon 2 is a turning point.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user that he is going in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p> <p>Note: Beacon 2 took a long period of time to detect.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to turn right and walk straight from beacon 2 to beacon 3.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was delayed even when the user is already on beacon 2.</p> <p>When the user has reached beacon 3, the voice message informed the user that he has reached the destination.</p>	Pass



## Test Case 5



Route used for test case 5

**Test Execution Date:** 17/7/2018

**Test Duration:** 0 minute 34 seconds

**Pre-Conditions:**

User is not blindfolded.  
User must be logged in to an account.  
Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **4 meters**  
Distance between beacon & ground: **75cm**  
Compass Bearing: **+/- 10**  
Moving Speed: **32cm/s**

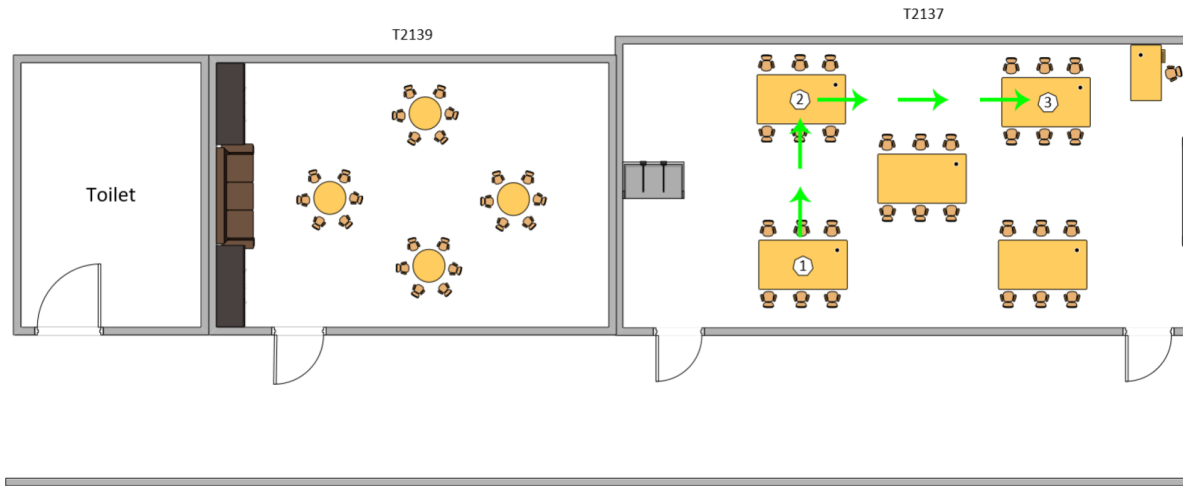
**Description:**

Navigation from beacon 1 which is a desk in T2137 to beacon 3 which is a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination as Beacon 3 and tap on "Start".	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	<p>After entering the destination and tapping on "Start", the voice message informed that the user is facing the wrong direction when he is facing the correct direction.</p>	Fail
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2. It will also tell the user that beacon 2 is a turning point.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user that he is going in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to turn right and walk straight from beacon 2 to beacon 3.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out to the user and it guided the user along the way to the right direction</p> <p>When the user has reached beacon 3, the voice message did not inform the user he has reached the destination and instead continued to tell the user to walk straight.</p>	Pass

## Test Case 6



Route used for test case 6

**Test Execution Date:** 17/7/2018

**Test Duration:** 0 minute 47 seconds

**Pre-Conditions:**

User is not blindfolded.  
User must be logged in to an account.  
Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **4 meters**  
Distance between beacon & ground: **75cm**  
Compass Bearing: **+/- 10**  
Moving Speed: **19.5cm/s**

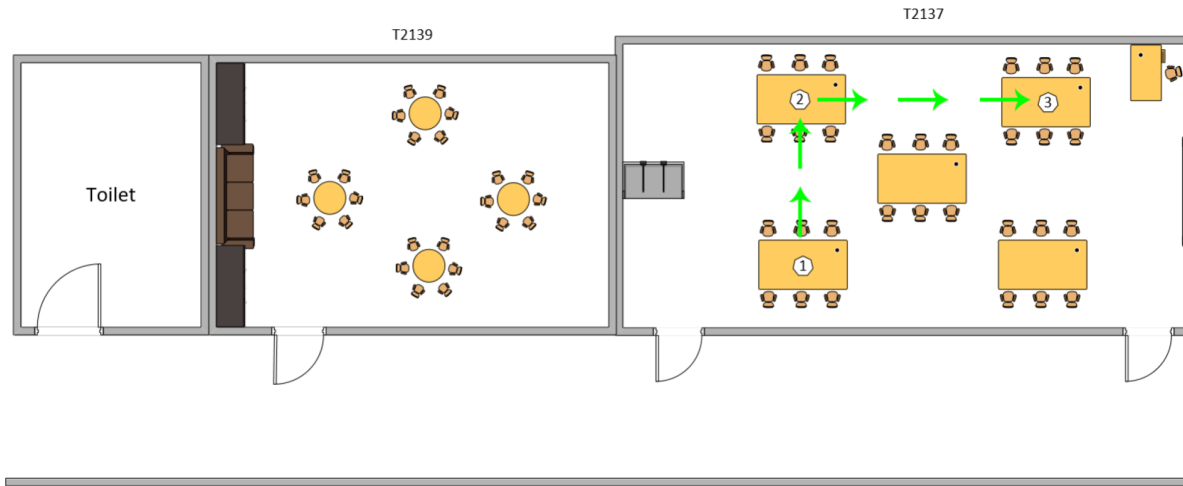
**Description:**

Navigation from beacon 1 which is a desk in T2137 to beacon 3 which is a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 3	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2. It will also tell the user that beacon 2 is a turning point.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to turn right and walk straight from beacon 2 to beacon 3.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>When the user has reached beacon 3, the voice message informed the user that he has reached the destination.</p>	Pass

## Test Case 7



Route used for test case 7

**Test Execution Date:** 18/7/2018

**Test Duration:** 0 minute 32 seconds

**Pre-Conditions:**

User is not blindfolded.  
User must be logged in to an account.  
Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **4 meters**  
Distance between beacon & ground: **75cm**  
Compass Bearing: **+/- 10**  
Moving Speed: **33 cm/s**

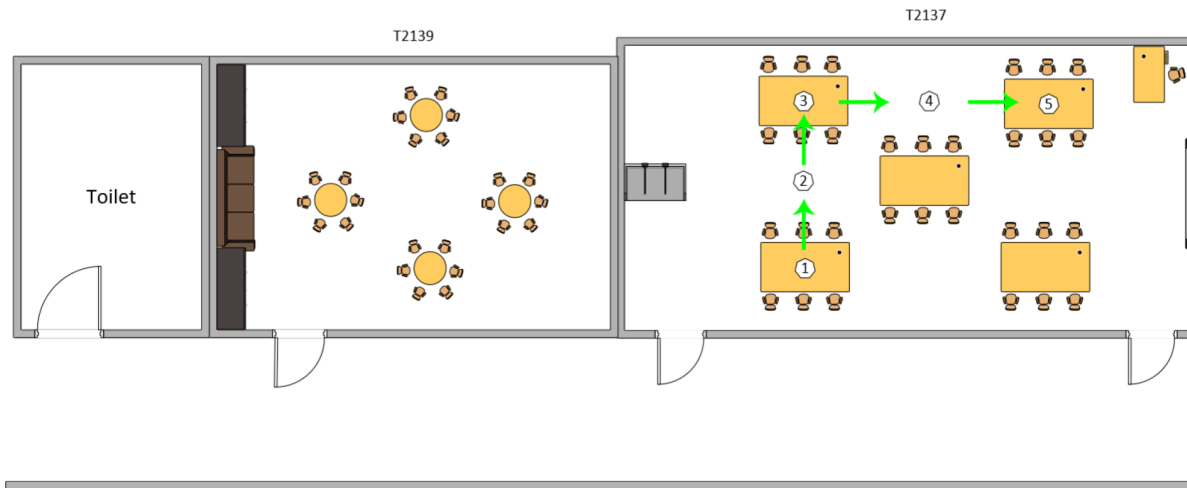
**Description:**

Navigation from beacon 1 which is a desk in T2137 to beacon 3 which is a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 3	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2. It will also tell the user that beacon 2 is a turning point.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached the beacon 2</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to turn right and walk straight from beacon 2 to beacon 3.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>When the user has reached beacon 3, the voice message informed the user that he has reached the destination.</p>	Pass

## Test Case 8



Route used for test case 8

**Test Execution Date:** 20/7/2018

**Test Duration:** 0 minute 43 seconds

**Pre-Conditions:**

User is not blindfolded.

User must be logged in to an account.

Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **3 meters**

**Detection Range: 30 meters**

Distance between beacon & ground: **0cm**

Compass Bearing: **+/- 10**

Avg Moving Speed: **42 cm/s**

**Description:**

Navigation from beacon 1 which a desk in T2137 to beacon 5 which which a desk in T2137 as well.

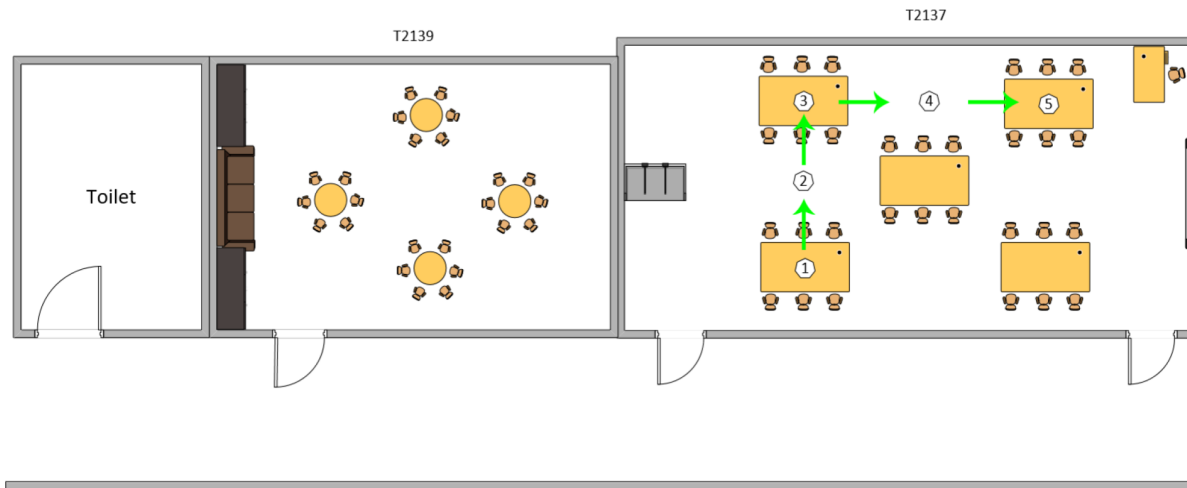
Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 5	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to walk straight from beacon 2 to beacon 3 and also inform the user that beacon 3 is a turning point.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 3 and the voice message has informed the user of it.</p>	Pass
6	User navigates from beacon 3 to beacon 4.	<p>A voice message will tell the user to turn right and walk straight from beacon 3 to beacon 4.</p> <p>User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.</p>	<p>The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 4 and the voice message has informed the user of it.</p>	Pass



7	User navigates from beacon 4 to beacon 5.	<p>A voice message will tell the user to walk straight from beacon 4 to beacon 5.</p> <p>User will reach beacon 5 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 5 and the voice message has informed the user that he has reached the destination.</p>	Pass
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## Test Case 9



Route used for test case 9

**Test Execution Date:** 20/7/2018

**Test Duration:** 0 minute 48 seconds

**Pre-Conditions:**

User is not blindfolded.

User must be logged in to an account.

Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **2 meters**

Detection Range: **30 meters**

Distance between beacon & ground: **0cm**

Compass Bearing: **+/- 10**

Moving Speed: **27 cm/s**

**Description:**

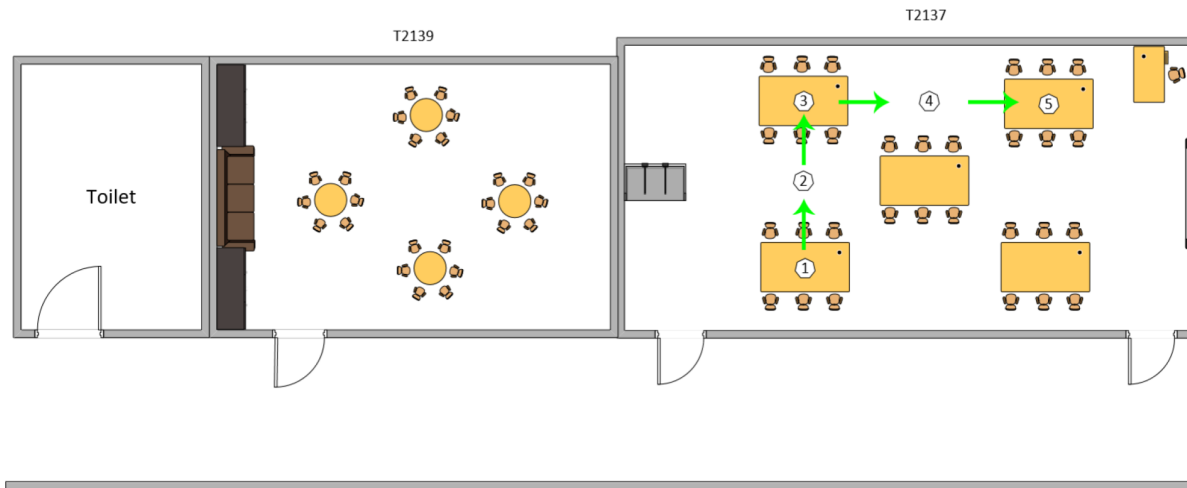
Navigation from beacon 1 which a desk in T2137 to beacon 5 which which a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	<p>The voice message informed the user of the current location as Beacon 2 instead of Beacon 1 and prompted for a destination.</p>	Fail
3	Enter the destination to be Beacon 5	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	<p>After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.</p>	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to walk straight from beacon 2 to beacon 3 and also inform the user that beacon 3 is a turning point.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 3 and the voice message has informed the user of it.</p>	Pass
6	User navigates from beacon 3 to beacon 4.	<p>A voice message will tell the user to turn right and walk straight from beacon 3 to beacon 4.</p> <p>User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.</p>	<p>The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 4 and the voice message has informed the user of it.</p>	Pass

7	User navigates from beacon 4 to beacon 5.	<p>A voice message will tell the user to walk straight from beacon 4 to beacon 5.</p> <p>User will reach beacon 5 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 5 and the voice message has informed the user that he has reached the destination.</p>	Pass
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## Test Case 10



Route used for test case 10

**Test Execution Date:** 20/7/2018

**Test Duration:** 0 minute 43 seconds

**Pre-Conditions:**

User is not blindfolded.

User must be logged in to an account.

Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **2 meters**

Detection Range: **30 meters**

Distance between beacon & ground: **0cm**

Compass Bearing: **+/- 10**

Moving Speed: **31cm/s**

**Description:**

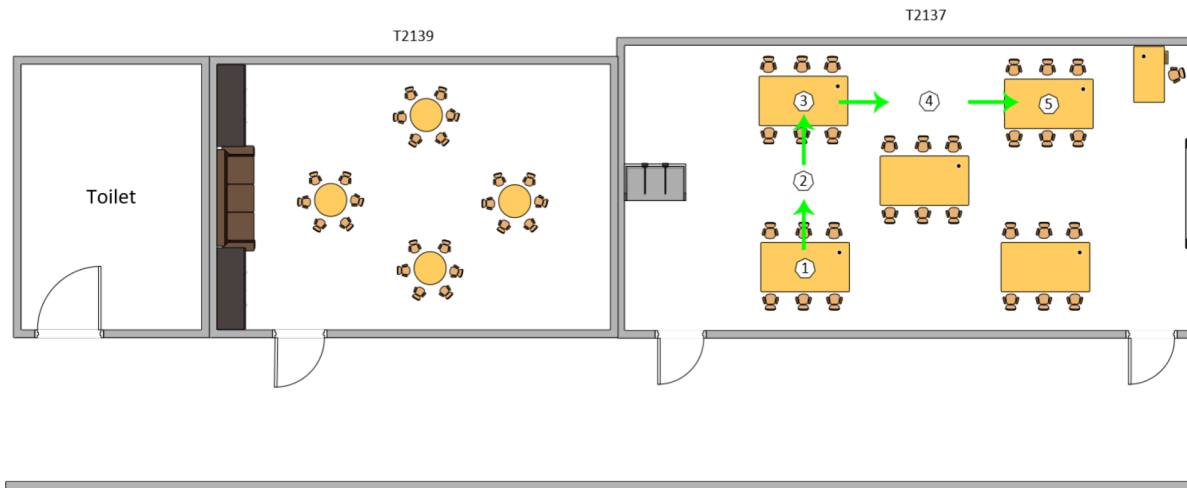
Navigation from beacon 1 which a desk in T2137 to beacon 5 which which a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 5	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to walk straight from beacon 2 to beacon 3 and also inform the user that beacon 3 is a turning point.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 3 and the voice message has informed the user of it.</p>	Pass
6	User navigates from beacon 3 to beacon 4.	<p>A voice message will tell the user to turn right and walk straight from beacon 3 to beacon 4.</p> <p>User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.</p>	<p>The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 4 and the voice message has informed the user of it.</p>	Pass

7	User navigates from beacon 4 to beacon 5.	<p>A voice message will tell the user to walk straight from beacon 4 to beacon 5.</p> <p>User will reach beacon 5 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 5 and the voice message has informed the user that he has reached the destination.</p>	Pass
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## Test Case 11



Route used for test case 11

**Test Execution Date:** 20/7/2018

**Test Duration:** 0 minute 43 seconds

**Pre-Conditions:**

User is not blindfolded.

User must be logged in to an account.

Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **2.5 meters**

Detection Range: **30 meters**

Distance between beacon & ground: **0cm**

Compass Bearing: **+/- 10**

Moving Speed: **31cm/s**

**Description:**

Navigation from beacon 1 which a desk in T2137 to beacon 5 which which a desk in T2137 as well.

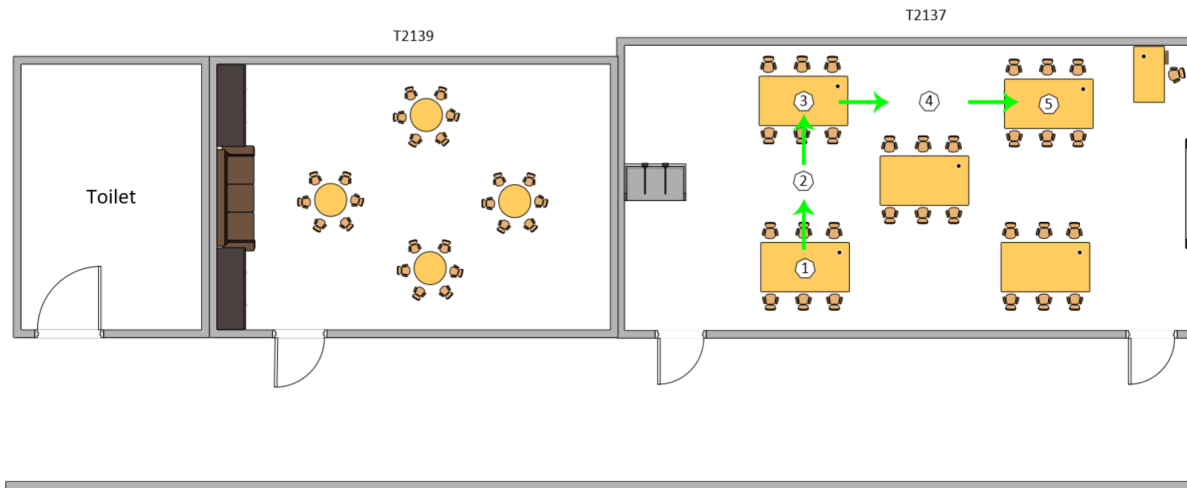
Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass



2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 5	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to walk straight from beacon 2 to beacon 3 and also inform the user that beacon 3 is a turning point.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 3 and the voice message has informed the user of it.</p>	Pass
6	User navigates from beacon 3 to beacon 4.	<p>A voice message will tell the user to turn right and walk straight from beacon 3 to beacon 4.</p> <p>User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.</p>	<p>The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 4 and the voice message has informed the user of it.</p>	Pass

7	User navigates from beacon 4 to beacon 5.	<p>A voice message will tell the user to walk straight from beacon 4 to beacon 5.</p> <p>User will reach beacon 5 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 5 and the voice message has informed the user that he has reached the destination.</p>	Pass
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## Test Case 12



Route used for test case 12

**Test Execution Date:** 20/7/2018

**Test Duration:** 0 minute 43 seconds

**Pre-Conditions:**

User is not blindfolded.

User must be logged in to an account.

Bluetooth and Microphone must be granted permission on the phone.

**Specifications:**

Beacon Distance: **1 meter**

Detection Range: **30 meter**

Distance between beacon & ground: **0cm**

Compass Bearing: **+/- 10**

Moving Speed: **16 cm/s**

**Description:**

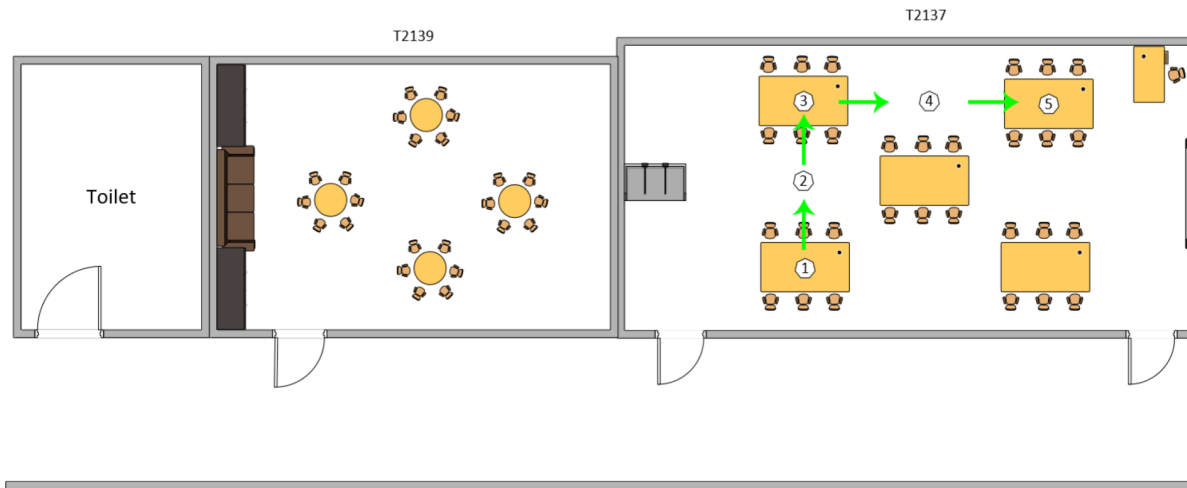
Navigation from beacon 1 which a desk in T2137 to beacon 5 which which a desk in T2137 as well.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 5	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to walk straight from beacon 2 to beacon 3 and also inform the user that beacon 3 is a turning point.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 3 and the voice message has informed the user of it.</p>	Pass
6	User navigates from beacon 3 to beacon 4.	<p>A voice message will tell the user to turn right and walk straight from beacon 3 to beacon 4.</p> <p>User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.</p>	<p>The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 4 and the voice message has informed the user of it.</p>	Pass

7	User navigates from beacon 4 to beacon 5.	<p>A voice message will tell the user to walk straight from beacon 4 to beacon 5.</p> <p>User will reach beacon 5 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 5 and the voice message has informed the user that he has reached the destination.</p>	Pass
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### Test Case 13



Route used for test case 13

<b>Test Execution Date: 20/7/2018</b>				
<b>Test Duration: 0 minute 43 seconds</b>				
<b>Pre-Conditions:</b> User is not blindfolded. User must be logged in to an account. Bluetooth and Microphone must be granted permission on the phone.				
<b>Specifications:</b> Beacon Distance: <b>1 meter</b> Detection Range: <b>30 meter</b> Distance between beacon & ground: <b>0cm</b> Compass Bearing: <b>+/- 10</b> Moving Speed: <b>18 cm/s</b>				
<b>Description:</b> Navigation from beacon 1 which a desk in T2137 to beacon 5 which which a desk in T2137 as well.				
Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass

2	Detect current location automatically as Beacon 1.	<p>A voice message will inform the user of his/her current location to be Beacon 1 automatically.</p> <p>The destination will also be prompted.</p>	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be Beacon 5	<p>After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon.</p> <p>If the user is not facing the correct direction, the voice message will guide the user to the correct position.</p>	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	<p>A voice message will tell the user to walk straight from beacon 1 to 2.</p> <p>User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.</p>	<p>The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 2 and the voice message has informed the user of it.</p>	Pass
5	User navigates from beacon 2 to beacon 3.	<p>A voice message will tell the user to walk straight from beacon 2 to beacon 3 and also inform the user that beacon 3 is a turning point.</p> <p>User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.</p>	<p>The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 3 and the voice message has informed the user of it.</p>	Pass
6	User navigates from beacon 3 to beacon 4.	<p>A voice message will tell the user to turn right and walk straight from beacon 3 to beacon 4.</p> <p>User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.</p>	<p>The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 4 and the voice message has informed the user of it.</p>	Pass

7	User navigates from beacon 4 to beacon 5.	<p>A voice message will tell the user to walk straight from beacon 4 to beacon 5.</p> <p>User will reach beacon 5 successfully and the application will inform that he has reached the destination.</p>	<p>The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction.</p> <p>The user has successfully reached beacon 5 and the voice message has informed the user that he has reached the destination.</p>	Pass
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