Indoor Navigation API Document

|  |  |  |
| --- | --- | --- |
| Updated Date | Author | Description |
| 30/5/2017 | Yuntian | Change the “resquest” to “request”. Change the “mapdatarRequest” to “mapdataRequest”. |
| 11/9/2017 | Yuntian | Add floorPlan API  Add field “endFloor”, “endBuildingName”. Change field “floor” to “startFloor”.  Change field “building” to “startBuildingName”  Change field “name” to “locationName” in Navigation API. |
| 20/9/2017 | Yuntian | Change “mapDataResponse” to “mapData”  Change “mapDataRequest” to “pathData”.  Change “floorPlan” to “floorData” in request.  Change “floorPlanResponse” to “floorPlanData” in response |
| 24/09/2017 | Kaelan | Added several revisions to the API which are required by the front end, and have been highlighted in red. The number of changes are too numerous to list in detail here, but broadly include the creation of a new API call to get room data, as well as adjusting the floorplan request to gather all the floor plan IDs of a specified building, and to use integers to represent floors. There was also the addition of floors for each of the path nodes returned in the path request. |

* FloorPlan

**Request Address**:http://localhost:8080/floorPlan

**Content-type**: application/json

**Request Json Format**:

{

"requestMessage": "",

"floorData": {

"buildingName": "ComputerScience"

}

}

**Request Params Description:**

|  |  |  |
| --- | --- | --- |
| Param | Type | Description |
| requestMessage | String | Recommended not to be empty because of security issue when floorPlan is empty. |
| floorData | String | If it’s empty, backend returns all ground floor plan IDs.  If it’s not empty, backend returns the floor plan IDs for the specified building. |
| buildingName | String | The name of the building for which the floor plan IDs are being requested |

**Response Json Format:**

*If floorData is empty example.*

{

"responseMessage": "SUCCESS",

"responseCode": "0000",

"floorPlanData": [

{

"buildingName": "computerScience",

"floor": "0",

"floorPlanID": "7348 - 4948 - 9834 - 3924"

},

{

"buildingName": "ECM",

"floor": "0",

"floorPlanID": "7348 - 4948 - 9834 - 3924"

},

{

"buildingName": "Environment",

"floor": "0",

"floorPlanID": "7348 - 4948 - 9834 - 3924"

}

]

}

*If floorData requests floors for the comp sci building.*

{

"responseMessage": "SUCCESS",

"responseCode": "0000",

"floorPlanData": [

{

"buildingName": "computerScience",

"floor": "0",

"floorPlanID": "7348 - 4948 - 9834 - 3924"

},

{

"buildingName": "computerScience",

"floor": "1",

"floorPlanID": "7348 - 4948 - 9834 - 3924"

},

{

"buildingName": "computerScience",

"floor": "2",

"floorPlanID": "7348 - 4948 - 9834 - 3924"

}

]

}

**Response Params Description:**

|  |  |  |
| --- | --- | --- |
| Param | Type | Description |
| responseMessage | String | SUCCESS or ERROR  More detail see *Success Description* |
| responseCode | String | SUCCESS or ERROR  More detail see *Success Description* |
| floorPlanData | String | A list of JSON objects containing information about the floors of the specified building in the request, sorted from the lowest to the highest floor. If no building is specified, then it provides all of the ground floor plan IDs for the supported buildings. |
| buildingName | String |  |
| floor | String | The floor of the building the floor plan ID represents, as an integer. |
| floorPlanID | String | The IndoorAtlas floor plan ID |

**Success Description:**

|  |  |  |
| --- | --- | --- |
| responseMessage | responseCode | Description |
| SUCCESS | 0000 |  |

**Error Description:**

|  |  |  |
| --- | --- | --- |
| responseMessage | responseCode | Description |
| ERROR | 0001 | Response params are empty |

* Navigation

**Request Address**:http://localhost:8080/path

**Content-type**: application/json

**Request Json Format**:

{

" requestMessage": "",

"pathData": {

"startBuildingName": "ComputerScience",

"startFloor": "2",

"startLongitude": "-31.97444473",

"startLatitude": "115.8599",

“endBuildingName": "ECM",

“endFloor”: “2”

"endLongitude": "-31.97222274",

"endLatitude": "115.823",

"algorithm": "DJ"

}

}

**Request Params Description:**

|  |  |  |
| --- | --- | --- |
| Param | Type | Description |
| requestMessage | String | Can be empty |
| startBuildingName | String | Can’t be empty |
| startFloor | String | Can’t be empty |
| startLongitude | String | Can’t be empty |
| startLatitude | String | Can’t be empty |
| endBuildingName | String | Can’t be empty |
| endFloor | String | Can’t be empty |
| endLongitude | String | Can’t be empty |
| endLatitude | String | Can’t be empty |
| algorithm | String | Could be empty. Default algorithm is DJ. |

**Supplement Description:**

The params startBuildingName/ startFloor/ startLongitude/ startLatitude/ endBuildingName/ endFloor/ endLongitude/ endLatitude can’t be empty. The backend checks the above params first, if it is empty, backend will response the *responseMsg: ERROR* and *responseCode:0001*

**Response Params Description:**

|  |  |  |
| --- | --- | --- |
| Param | Type | Description |
| responseMessage | String | SUCCESS or ERROR  More detail see *Success Description* |
| responseCode | String | SUCCESS or ERROR  More detail see *Success Description* |
| startBuildingName | String |  |
| startFloor | String |  |
| startLongitude | String |  |
| startLatitude | String |  |
| endBuildingName | String |  |
| endFloor |  |  |
| endLongitude | String |  |
| endLatitude | String |  |
| algorithm | String |  |
| latitude | String |  |
| locationName | String |  |
| longitude | String |  |

**Response Json Format:**

{

"responseMessage": "SUCCESS",

"responseCode": "0000",

"mapData": {

"startBuildingName": "ComputerScience",

"startFloor": "2",

"startLongitude": "-31.97444473",

"startLatitude": "115.8599",

"endBuildingName": "computerScience",

"endFloor": "2",

"endLongitude": "-31.97222274",

"endLatitude": "115.823",

"algorithm": “DJ”,

"path": [

{

"latitude": "115.81638582",

"longitude": "-31.97766959",

"floor": "2",

"locationName": "2.28Door",

"building": "computerScience"

},

{

"latitude": "115.81637409",

"longitude": "-31.97767016",

"floor": "2",

"locationName": "2.28Door",

"building": "computerScience"

}

] //*end path*

}// *end mapDataResponse*

}

**Success Description:**

|  |  |  |
| --- | --- | --- |
| responseMessage | responseCode | Description |
| SUCCESS | 0000 |  |

**Error Description:**

|  |  |  |
| --- | --- | --- |
| responseMessage | responseCode | Description |
| ERROR | 0001 | Request params are empty |
| ERROR | 0002 | Response Path is empty |

* Rooms

**Request Address**:http://localhost:8080/rooms

**Content-type**: application/json

**Request Json Format**:

{

"requestMessage": "",

"roomData": {

"buildingName": "ComputerScience"

}

}

**Request Params Description:**

|  |  |  |
| --- | --- | --- |
| Param | Type | Description |
| requestMessage | String | Recommended not to be empty because of security issue when floorPlan is empty. |
| roomData | String | Backend returns all the rooms for the specified building. |
| buildingName | String | The name of the building for which the rooms are being requested |

**Response Json Format:**

{

"responseMessage": "SUCCESS",

"responseCode": "0000",

"roomInfoData": [

{

"roomName": "Lab 2.05",

"floor": "2",

"roomDescription": "Computer lab 2.05 – Windows/Linux"

"latitude": "115.81638582",

"longitude": "-31.97766959"

},

{

"roomName": "Room 1.18",

"floor": "1",

"roomDescription": "Office of Dr Rachel Cardel-Oliver"

"latitude": "115.81638582",

"longitude": "-31.97766959"

},

{

"roomName": "Lab G.09",

"floor": "0",

"roomDescription": "Research laboratory"

"latitude": "115.81638582",

"longitude": "-31.97766959"

}

]

}

**Response Params Description:**

|  |  |  |
| --- | --- | --- |
| Param | Type | Description |
| responseMessage | String | SUCCESS or ERROR  More detail see *Success Description* |
| responseCode | String | SUCCESS or ERROR  More detail see *Success Description* |
| roomInfoData | String | A list of JSON objects containing information about the rooms of the specified building in the request. |
| roomName | String | Name of the room |
| floor | String | The floor of the building the floor plan ID represents, as an integer. |
| roomDescription | String | The description of the room. |
| latitude | String |  |
| longitude | String |  |

**Success Description:**

|  |  |  |
| --- | --- | --- |
| responseMessage | responseCode | Description |
| SUCCESS | 0000 |  |

**Error Description:**

|  |  |  |
| --- | --- | --- |
| responseMessage | responseCode | Description |
| ERROR | 0001 | Response params are empty |