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Documentation

OSX_MOTION_AR_Exported_Types

MIDDLEWARES » OSX_MOTION_AR
**Data Structures**

| struct       | osx_MAR_input_t |
Enumerations

```c
enum osx_MAR_output_t {
    OSX_MAR_NOACTIVITY = 0x00,
    OSX_MAR_STATIONARY = 0x01,
    OSX_MAR_WALKING = 0x02,
    OSX_MAR_FASTWALKING = 0x03,
    OSX_MAR_JOGGING = 0x04,
    OSX_MAR_BIKING = 0x05,
    OSX_MAR_DRIVING = 0x06
};
```
**Detailed Description**

**Enumeration Type Documentation**

```c
enum osx_MAR_output_t
{
  OSX_MAR_NOACTIVITY,
  OSX_MAR_STATIONARY,
  OSX_MAR_WALKING,
  OSX_MAR_FASTWALKING,
  OSX_MAR_JOGGING,
  OSX_MAR_BIKING,
  OSX_MAR_DRIVING,
}
```

Definition at line 75 of file `osx_motion_ar.h`.

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<td>Data Structure Index</td>
<td>Data Fields</td>
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</tbody>
</table>

**osx_MAR_input_t**

Struct Reference

MIDDLEWARES » OSX_MOTION_AR » OSX_MOTION_AR_Exported_Types

```c
#include <osx_motion_ar.h>
```
### Data Fields

<table>
<thead>
<tr>
<th>Type</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>float</td>
<td>AccX</td>
</tr>
<tr>
<td>float</td>
<td>AccY</td>
</tr>
<tr>
<td>float</td>
<td>AccZ</td>
</tr>
</tbody>
</table>
Detailed Description

Definition at line 68 of file osx_motion_ar.h.
Field Documentation

float AccX

Definition at line 70 of file osx_motion_ar.h.

float AccY

Definition at line 71 of file osx_motion_ar.h.

float AccZ

Definition at line 72 of file osx_motion_ar.h.

The documentation for this struct was generated from the following file:

- Middlewares/ST/STM32_OSX_MotionAR_Library/Inc/osx_motion_ar.h

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# OSX_MOTION_AR_Exported_Functions

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<td>MIDDLEWARES » OSX_MOTION_AR</td>
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</table>
# Functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><code>uint8_t osx_MotionAR_Initialize (void)</code></td>
<td>Initialize the MotionAR engine.</td>
</tr>
<tr>
<td><code>void osx_MotionAR_SetOrientation_Acc (const char *acc_orientation)</code></td>
<td>Set the MotionAR Accelerometer data orientation.</td>
</tr>
<tr>
<td><code>osx_MAR_output_t osx_MotionAR_Update (osx_MAR_input_t *data_in)</code></td>
<td>Run Activity Recognition Algorithm.</td>
</tr>
<tr>
<td><code>uint8_t osx_MotionAR_GetLibVersion (char *version)</code></td>
<td>Get the library version.</td>
</tr>
</tbody>
</table>
Detailed Description

Function Documentation

`uint8_t osx_MotionAR_GetLibVersion ( char * version )`

Get the library version.

**Parameters**
- `version` pointer to an array of 35 char

**Return values**
- **Number** of characters in the version string

`uint8_t osx_MotionAR_Initialize ( void )`

Initialize the MotionAR engine.

**Parameters**
- **None**

**Return values**
- **1** in case of success, **0** otherwise

`void osx_MotionAR_SetOrientation_Acc ( const char * acc_orientation )`

Set the MotionAR Accelerometer data orientation.

**Parameters**
*acc_orientation* reference system of the Accelerometer raw data (for instance: south west up became "swu", north east up became "ned")

Return values

None

```
osx_MAR_output_t osx_MotionAR_Update ( osx_MAR_input_t * data_in )
```

Run Activity Recognition Algorithm.

Parameters

- `data_in` pointer to the `osx_MAR_input_t` structure

Return values

- `activity` index
# Data Structures

Here are the data structures with brief descriptions:

<table>
<thead>
<tr>
<th>osx_MAR_input_t</th>
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## Data Structure Index

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Here is a list of all struct and union fields with links to the structures/unions they belong to:

- AccX : osx_MAR_input_t
- AccY : osx_MAR_input_t
- AccZ : osx_MAR_input_t
- AccX : `osx_MAR_input_t`
- AccY : `osx_MAR_input_t`
- AccZ : `osx_MAR_input_t`
## File List

Here is a list of all files with brief descriptions:

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<th>Inc</th>
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## osxMotionAR Software Library

Middlewares Directory Reference
Directories

| directory | ST |

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### ST Directory Reference
Directories

directory  STM32_OSX_MotionAR_Library

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# STM32_OSX_MotionAR_Library Library Directory Reference

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### Directories

| directory | Inc |

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<td>STM32_OSX_MotionAR_Library</td>
<td>Inc</td>
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</table>

### Inc Directory Reference
<table>
<thead>
<tr>
<th>file</th>
<th>osx_motion_ar.h [code]</th>
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<tbody>
<tr>
<td></td>
<td>Header for osx_motion_ar module.</td>
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<tr>
<td>Middlewares</td>
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<td>STM32_OSX_MotionAR_Library</td>
<td>Inc</td>
</tr>
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</table>

osx_motion_ar.h File Reference

Header for osx_motion_ar module. More...

#include <stdint.h>

Go to the source code of this file.
Data Structures

struct osx_MAR_input_t
<table>
<thead>
<tr>
<th>Activity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No activity</td>
<td>0x00</td>
</tr>
<tr>
<td>Stationary</td>
<td>0x01</td>
</tr>
<tr>
<td>Walking</td>
<td>0x02</td>
</tr>
<tr>
<td>Fast walking</td>
<td>0x03</td>
</tr>
<tr>
<td>Jogging</td>
<td>0x04</td>
</tr>
<tr>
<td>Biking</td>
<td>0x05</td>
</tr>
<tr>
<td>Driving</td>
<td>0x06</td>
</tr>
</tbody>
</table>

```c
enum osx_MAR_output_t {
    OSX_MAR_NOACTIVITY = 0x00,
    OSX_MAR_STATIONARY = 0x01,
    OSX_MAR_WALKING = 0x02,
    OSX_MAR_FASTWALKING = 0x03,
    OSX_MAR_JOGGING = 0x04,
    OSX_MAR_BIKING = 0x05,
    OSX_MAR_DRIVING = 0x06
};
```
## Functions

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<tr>
<th>Data Type</th>
<th>Function</th>
<th>Description</th>
<th>More...</th>
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<tbody>
<tr>
<td>uint8_t</td>
<td><code>osx_MotionAR_Initialize</code> (void)</td>
<td>Initialize the MotionAR engine.</td>
<td></td>
</tr>
<tr>
<td>void</td>
<td><code>osx_MotionAR_SetOrientation_Acc</code> (const char *acc_orientation)</td>
<td>Set the MotionAR Accelerometer data orientation.</td>
<td></td>
</tr>
<tr>
<td>osx_MAR_output_t</td>
<td><code>osx_MotionAR_Update</code> (osx_MAR_input_t *data_in)</td>
<td>Run Activity Recognition Algorithm.</td>
<td></td>
</tr>
<tr>
<td>uint8_t</td>
<td><code>osx_MotionAR_GetLibVersion</code> (char *version)</td>
<td>Get the library version.</td>
<td></td>
</tr>
</tbody>
</table>
Detailed Description

Header for osx_motion_ar module.

Author
   Central Lab

Version
   V1.2.0

Date
   4-April-2016

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Definition in file osx_motion_ar.h.
Here is a list of all functions, variables, defines, enums, and typedefs with links to the files they belong to:

- OSX_MAR_BIKING : osx_motion_ar.h
- OSX_MAR_DRIVING : osx_motion_ar.h
- OSX_MAR_FASTWALKING : osx_motion_ar.h
- OSX_MAR_JOGGING : osx_motion_ar.h
- OSX_MAR_NOACTIVITY : osx_motion_ar.h
- osx_MAR_output_t : osx_motion_ar.h
- OSX_MAR_STATIONARY : osx_motion_ar.h
- OSX_MAR_WALKING : osx_motion_ar.h
- osx_MotionAR_GetLibVersion() : osx_motion_ar.h
- osx_MotionAR_Initialize() : osx_motion_ar.h
- osx_MotionAR_SetOrientation_Acc() : osx_motion_ar.h
- osx_MotionAR_Update() : osx_motion_ar.h
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- `osx_MotionAR_GetLibVersion()` : `osx_motion_ar.h`
- `osx_MotionAR_Initialize()` : `osx_motion_ar.h`
- `osx_MotionAR_SetOrientation_Acc()` : `osx_motion_ar.h`
- `osx_MotionAR_Update()` : `osx_motion_ar.h`
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<td></td>
</tr>
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<td>Functions</td>
<td>Enumerations</td>
<td>Enumerator</td>
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- **osx_MAR_output_t**: `osx_motion_ar.h`

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- OSX_MAR_BIKING : osx_motion_ar.h
- OSX_MAR_DRIVING : osx_motion_ar.h
- OSX_MAR_FASTWALKING : osx_motion_ar.h
- OSX_MAR_JOGGING : osx_motion_ar.h
- OSX_MAR_NOACTIVITY : osx_motion_ar.h
- OSX_MAR_STATIONARY : osx_motion_ar.h
- OSX_MAR_WALKING : osx_motion_ar.h

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/* Define to prevent recursive inclusion ----------------------------------*/

#ifndef _OSX_MOTION_AR_H_
#define _OSX_MOTION_AR_H_

#ifdef __cplusplus
 extern "C" {
#endif

/* Includes -----------------------------------------------*/
#include <stdint.h>

/* Exported types ------------------------------------------*/
typedef struct {
  float AccX;    /* acc x axes [g] */
  float AccY;    /* acc y axes [g] */
}
float AccZ; /* acc z axes [g] */

typedef enum
{
    OSX_MAR_NOACTIVITY = 0x00,
    OSX_MAR_STATIONARY = 0x01,
    OSX_MAR_WALKING = 0x02,
    OSX_MAR_FASTWALKING = 0x03,
    OSX_MAR_JOGGING = 0x04,
    OSX_MAR_BIKING = 0x05,
    OSX_MAR_DRIVING = 0x06
} osx_MAR_output_t;

/* Exported constants ------------------------------- */
/* Exported variables ------------------------------- */
/* Exported macro ----------------------------------- */
/* Exported functions -------------------------------- */

uint8_t osx_MotionAR_Initialize(void);

void osx_MotionAR_SetOrientation_Acc(const char *acc_orientation);

osx_MAR_output_t osx_MotionAR_Update(osx_MAR_input_t *data_in);

uint8_t osx_MotionAR_GetLibVersion(char
*version);

#ifdef __cplusplus
}
#endif
#ifdef /*__OSX_MOTION_AR_H__*/

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