BebopPilotingNewAPI

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Contents

Chapter 1

README

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Purpose of BebopPilotingNewAPI

This sample shows how to send and receive commands to communicate with a Parrot drone. The example is based on the Bebop Drone, using the new ARController API.

Dependencies of BebopPilotingNewAPI

You will need ncurses-dev

On Linux you can get ncurses-dev apt-get: &apt-get install ncurses-dev

You will need mplayer to use the DISPLAY_WITH_MPLAYER.

To compile SDK Example BebopPilotingNewAPI

On Linux and MacOS X platform : &make

To run SDK Example BebopPilotingNewAPI

On Linux and MacOS X platform : &make run

After having run the sample, you might have a weird terminal, because we use ncurses. To fix it, you can simply run the command *reset*.

To clean the compilation of BebopPilotingNewAPI

On Linux and MacOS X platform : &make clean

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 3

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

Chapter 4

Class Documentation

4.1 IHM_t Struct Reference

Public Attributes

- WINDOW * **mainWindow**
- ARSAL_Thread_t **inputThread**
- int **run**
- IHM_onInputEvent_t **onInputEventCallback**
- void * **customData**

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

- ihm.h

Chapter 5

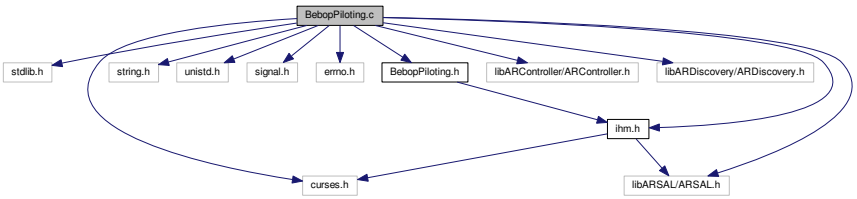
File Documentation

5.1 BebopPiloting.c File Reference

This file contains sources about basic arsdk example sending commands to a bebop drone for piloting it and make it jump it and receiving its battery level.

```
#include <stdlib.h>
#include <curses.h>
#include <string.h>
#include <unistd.h>
#include <signal.h>
#include <errno.h>
#include <libARSAL/ARSAL.h>
#include <libARController/ARController.h>
#include <libARDiscovery/ARDiscovery.h>
#include "BebopPiloting.h"
#include "ihm.h"
```

Include dependency graph for BebopPiloting.c:



Macros

- #define **TAG** "SDKExample"
- #define **ERROR_STR_LENGTH** 2048
- #define **BEBOP_IP_ADDRESS** "192.168.42.1"
- #define **BEBOP_DISCOVERY_PORT** 44444
- #define **DISPLAY_WITH_MPLAYER** 1
- #define **FIFO_DIR_PATTERN** "/tmp/arsdk_XXXXXX"
- #define **FIFO_NAME** "arsdk_fifo"
- #define **IHM**

Functions

- int **main** (int argc, char ∗argv[ ])
- void **stateChanged** (eARCONTROLLER_DEVICE_STATE newState, eARCONTROLLER_ERROR error, void ∗customData)
- void **commandReceived** (eARCONTROLLER_DICTIONARY_KEY commandKey, ARCONTROLLER_DI↩ CTIONARY_ELEMENT_t ∗elementDictionary, void ∗customData)
- void **batteryStateChanged** (uint8_t percent)
- eARCONTROLLER_ERROR **decoderConfigCallback** (ARCONTROLLER_Stream_Codec_t codec, void ∗customData)
- eARCONTROLLER_ERROR **didReceiveFrameCallback** (ARCONTROLLER_Frame_t ∗frame, void ∗customData)
- void **onInputEvent** (eIHM_INPUT_EVENT event, void ∗customData)
- int **customPrintCallback** (eARSAL_PRINT_LEVEL level, const char ∗tag, const char ∗format, va_list va)

Variables

- int **glHMRun** = 1
- char **gErrorStr** [ERROR_STR_LENGTH]
- IHM_t ∗ **ihm** = NULL
- FILE ∗ **videoOut** = NULL
- int **frameNb** = 0
- ARSAL_Sem_t **stateSem**
- int **isBebop2** = 0

5.1.1 Detailed Description

This file contains sources about basic arsdk example sending commands to a bebop drone for piloting it and make it jump it and receiving its battery level.

Date

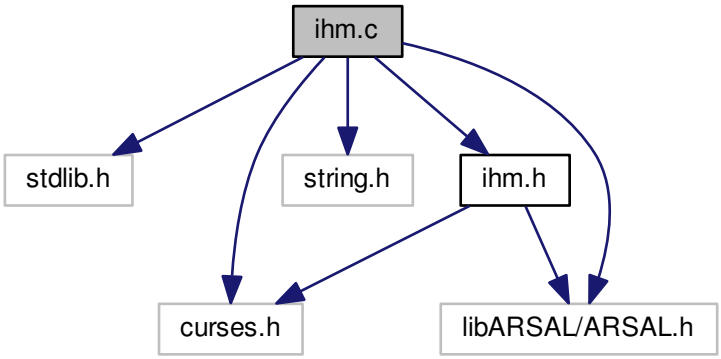
15/01/2015

5.2 ihm.c File Reference

This file contains sources about ncurses IHM used by arsdk example "JumpingSumoPiloting".

```
#include <stdlib.h>
#include <curses.h>
#include <string.h>
#include <libARSAL/ARSAL.h>
#include "ihm.h"
```

Include dependency graph for ihm.c:



Macros

- #define **HEADER_X** 0
- #define **HEADER_Y** 0
- #define **INFO_X** 0
- #define **INFO_Y** 2
- #define **BATTERY_X** 0
- #define **BATTERY_Y** 4

Functions

- void * **IHM_InputProcessing** (void *data)
- IHM_t * **IHM_New** (IHM_onInputEvent_t onInputEventCallback)
- void **IHM_Delete** (IHM_t **ihm)
- void **IHM_setCustomData** (IHM_t *ihm, void *customData)
- void **IHM_PrintHeader** (IHM_t *ihm, char *headerStr)
- void **IHM_PrintInfo** (IHM_t *ihm, char *infoStr)
- void **IHM_PrintBattery** (IHM_t *ihm, uint8_t percent)

5.2.1 Detailed Description

This file contains sources about ncurses IHM used by arsdk example "JumpingSumoPiloting".

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15/01/2015

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