My Project

Generated by Doxygen 1.8.8

Wed Mar 30 2016 11:54:27

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Chapter 4

Namespace Documentation

4.1 vaso Namespace Reference

Enumerations

- enum Side { Side::Left, Side::Right }

Functions

- std::string CurrentDataName ()
- std::string InitialDataName (std::string dir)
- std::string PatientName ()
- DataParams ReadParams (std::string filename)
- std::string WriteParams (DataParams params, std::string filename)
- void fft (cfloat32 *data, uint32 size)
- void play (std::string filename)
- void * process (void *procdata)
- void StartProcessing (ProcData procdata)
- void * processing (void *procdata)

Variables

- const std::string PATIENT_PATH = "/home/pi/patients/"

4.1.1 Detailed Description

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4.1.2 Enumeration Type Documentation

4.1.2.1 enum vaso::Side [strong]

Enumerator

Left

Right

Definition at line 57 of file definitions.hpp.

4.1.3 Function Documentation

4.1.3.1 std::string vaso::CurrentDataName ( )

Definition at line 23 of file fileio.hpp.

4.1.3.2 void vaso::fft (cfloat32 * *data*, uint32 *size*)

Replaces the values of an array of cfloat32's with the array's DFT using a decimation-in-frequency algorithm.

This code is based on code from http://rosettacode.org/wiki/Fast_Fourier_transform#C.↩2B.2B.

Parameters

data	the array whose values should be replaced with its DFT
size	the number of elements in the data array

Definition at line 28 of file sigmath.hpp.

4.1.3.3 std::string vaso::InitialDataName (std::string *dir*)

Definition at line 30 of file fileio.hpp.

4.1.3.4 std::string vaso::PatientName ( )

Definition at line 37 of file fileio.hpp.

4.1.3.5 void vaso::play (std::string *filename*)

Definition at line 11 of file sound.hpp.

4.1.3.6 void* vaso::process (void * *procdata*)

4.1.3.7 void* vaso::processing (void * *procdata*)

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4.1.3.8 DataParams vaso::ReadParams (std::string *filename*)

Definition at line 44 of file fileio.hpp.

4.1.3.9 void vaso::StartProcessing (ProcData *procdata*)

Definition at line 32 of file threadproc.hpp.

4.1.3.10 std::string vaso::WriteParams (DataParams *params*, std::string *filename*)

Definition at line 51 of file fileio.hpp.

4.1.4 Variable Documentation

4.1.4.1 const std::string vaso::PATIENT_PATH = "/home/pi/patients/"

Definition at line 18 of file fileio.hpp.

Chapter 5

Class Documentation

5.1 DataParams Struct Reference

`#include <definitions.hpp>`

5.1.1 Detailed Description

Definition at line 39 of file definitions.hpp.

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

- src/definitions.hpp

5.2 ProcData Struct Reference

`#include <definitions.hpp>`

5.2.1 Detailed Description

Definition at line 46 of file definitions.hpp.

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

- src/definitions.hpp

Chapter 6

File Documentation

6.1 bin/start File Reference

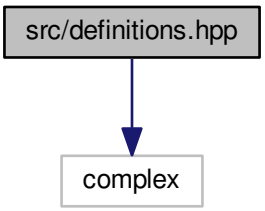
6.2 etc/doxygen.config File Reference

6.3 makefile File Reference

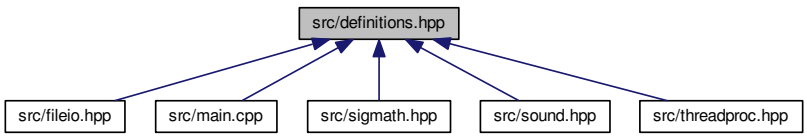
6.4 src/definitions.hpp File Reference

```
#include <complex>
```

Include dependency graph for definitions.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- struct DataParams
- struct ProcData

Namespaces

- vaso

Macros

- #define ENUM signed char

  Contains declarations of system-independant (universal size) integers and float types, shortened type names for some commonly used types, and enumerations.

Typedefs

- typedef unsigned char byte
- typedef unsigned char uint8
- typedef signed char sint8
- typedef unsigned short uint16
- typedef signed short sint16
- typedef unsigned int uint32
- typedef signed int sint32
- typedef unsigned long long uint64
- typedef signed long long sint64
- typedef float float32
- typedef double float64
- typedef std::complex< float32 > cfloat32

Enumerations

- enum vaso::Side { vaso::Side::Left, vaso::Side::Right }

6.4.1 Macro Definition Documentation

6.4.1.1 #define ENUM signed char

Contains declarations of system-independant (universal size) integers and float types, shortened type names for some commonly used types, and enumerations.

Author

Samuel Andrew Wisner, awisner94@gmail.com

Definition at line 13 of file definitions.hpp.

6.4.2 Typedef Documentation

6.4.2.1 typedef unsigned char byte

Definition at line 15 of file definitions.hpp.

6.4.2.2 typedef std::complex<float32> cfloat32

Defines a type for complex float32's.

Definition at line 34 of file definitions.hpp.

6.4.2.3 typedef float float32

Definition at line 28 of file definitions.hpp.

6.4.2.4 typedef double float64

Definition at line 29 of file definitions.hpp.

6.4.2.5 typedef signed short sint16

Definition at line 20 of file definitions.hpp.

6.4.2.6 typedef signed int sint32

Definition at line 23 of file definitions.hpp.

6.4.2.7 typedef signed long long sint64

Definition at line 26 of file definitions.hpp.

6.4.2.8 typedef signed char sint8

Definition at line 17 of file definitions.hpp.

6.4.2.9 typedef unsigned short uint16

Definition at line 19 of file definitions.hpp.

6.4.2.10 typedef unsigned int uint32

Definition at line 22 of file definitions.hpp.

6.4.2.11 typedef unsigned long long uint64

Definition at line 25 of file definitions.hpp.

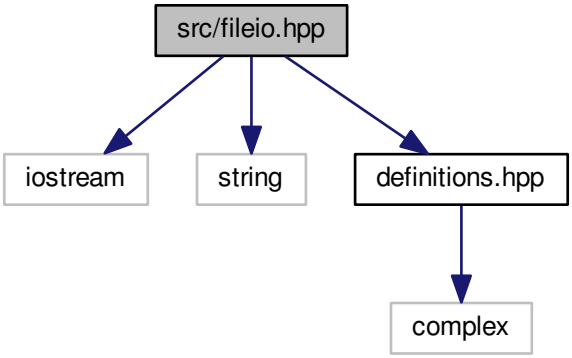
6.4.2.12 typedef unsigned char uint8

Definition at line 16 of file definitions.hpp.

6.5 src/fileio.hpp File Reference

```
#include <iostream>
#include <string>
#include "definitions.hpp"
```

Include dependency graph for fileio.hpp:



Namespaces

- vaso

Functions

- std::string vaso::CurrentDataName ()
- std::string vaso::InitialDataName (std::string dir)
- std::string vaso::PatientName ()
- DataParams vaso::ReadParams (std::string filename)
- std::string vaso::WriteParams (DataParams params, std::string filename)

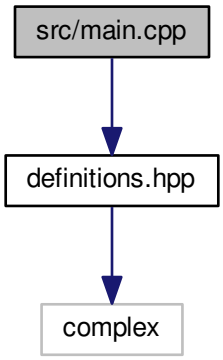
Variables

- const std::string vaso::PATIENT_PATH = "/home/pi/patients/"

6.6 src/main.cpp File Reference

```
#include "definitions.hpp"
```

Include dependency graph for main.cpp:



Functions

- int main (const char **argv, int argc)

6.6.1 Function Documentation

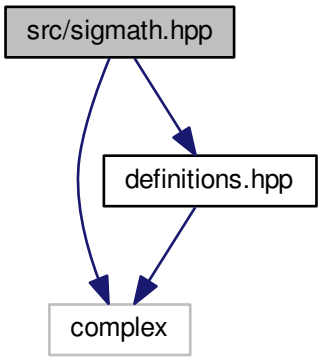
6.6.1.1 int main (const char ** *argv*, int *argc*)

Definition at line 13 of file main.cpp.

6.7 src/sigmath.hpp File Reference

```
#include <complex>
#include "definitions.hpp"
```

Include dependency graph for sigmath.hpp:



Namespaces

- vaso

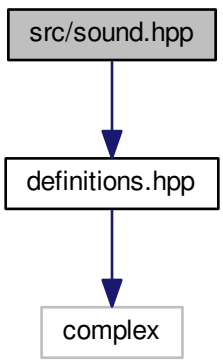
Functions

- void vaso::fft (cfloat32 *data, uint32 size)

6.8 src/sound.hpp File Reference

```
#include "definitions.hpp"
```

Include dependency graph for sound.hpp:



Namespaces

- vaso

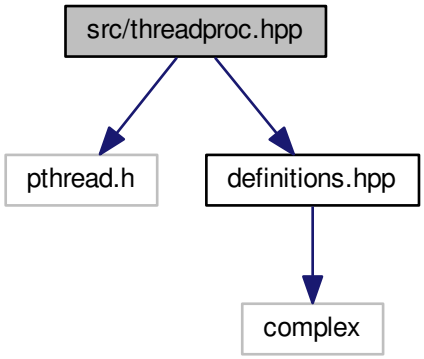
Functions

- void vaso::play (std::string filename)

6.9 src/threadproc.hpp File Reference

```
#include <pthread.h>
#include "definitions.hpp"
```

Include dependency graph for threadproc.hpp:



Namespaces

- vaso

Functions

- void * vaso::process (void *procdata)
- void vaso::StartProcessing (ProcData procdata)
- void * vaso::processing (void *procdata)

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