

My Project

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Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

vaso	7
--------------------------------	---

Chapter 2

Class Index

2.1 Class List

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

DataParams	11
ProcData	11

Chapter 3

File Index

3.1 File List

Here is a list of all files with brief descriptions:

makefile	13
bin/start	13
etc/doxygen.config	13
src/definitions.hpp	13
src/fileio.hpp	16
src/main.cpp	17
src/sigmath.hpp	17
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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 *procddata)
- void [StartProcessing](#) ([ProcData](#) procddata)
- void * [processing](#) (void *procddata)

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

<i>data</i>	the array whose values should be replaced with its DFT
<i>size</i>	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 * procddata)`

4.1.3.7 `void* vaso::processing (void * procddata)`

Definition at line 28 of file threadproc.hpp.

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 procddata)`

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

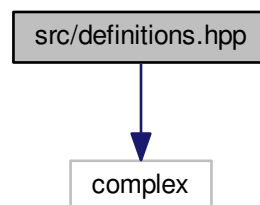
6.2 etc/doxygen.config File Reference

6.3 makefile File Reference

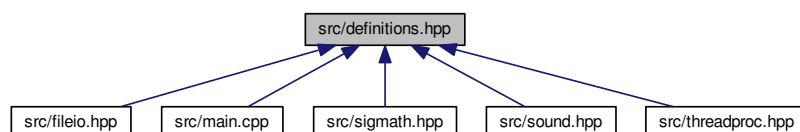
6.4 src/definitions.hpp File Reference

```
#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.

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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`

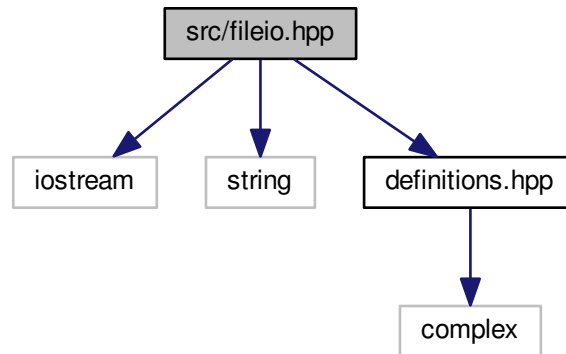
Definition at line 25 of file definitions.hpp.

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)

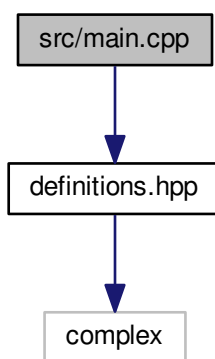
Variables

- `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

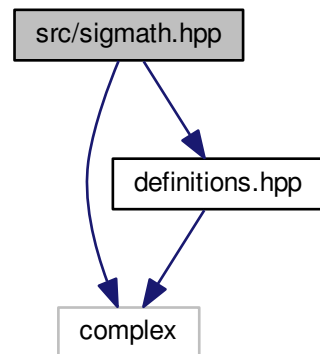
6.6.1.1 `int main (const char ** argv, int argc)`

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](#)

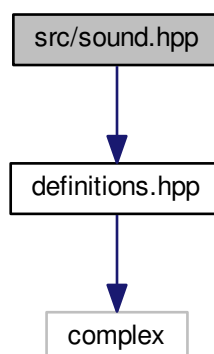
Functions

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

6.8 src/sound.hpp File Reference

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

Include dependency graph for sound.hpp:



Namespaces

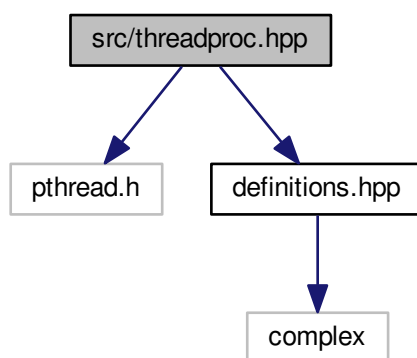
- [vaso](#)

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 *procddata)
- void [vaso::StartProcessing](#) ([ProcData](#) procddata)
- void * [vaso::processing](#) (void *procddata)

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