

DP Václav Fanfule

Generated by Doxygen 1.8.6

Thu Nov 17 2016 14:01:19

Contents

1	Class Index	1
1.1	Class List	1
2	File Index	3
2.1	File List	3
3	Class Documentation	5
3.1	PictureData Struct Reference	5
3.1.1	Detailed Description	5
3.1.2	Member Data Documentation	5
3.1.2.1	data	6
3.1.2.2	frame_count	6
3.1.2.3	height	6
3.1.2.4	size	6
3.1.2.5	width	6
3.2	vector Struct Reference	6
3.2.1	Detailed Description	6
3.2.2	Member Data Documentation	7
3.2.2.1	x	7
3.2.2.2	y	7
4	File Documentation	9
4.1	src/main.cpp File Reference	9
4.1.1	Macro Definition Documentation	10
4.1.1.1	CHUNK_SIZE	10
4.1.2	Function Documentation	10
4.1.2.1	compare	10
4.1.2.2	getVideoInfo	10
4.1.2.3	main	10
4.1.2.4	shiftData	11
4.1.2.5	startFFmpeg	11
4.2	src/main.h File Reference	12

4.2.1	Macro Definition Documentation	12
4.2.1.1	MAX_FILES	12
4.2.1.2	THREADS	12
4.3	src/png_decode.cpp File Reference	13
4.3.1	Function Documentation	13
4.3.1.1	abort_	13
4.3.1.2	process_file	14
4.3.1.3	read_png_file	14
4.3.2	Variable Documentation	14
4.3.2.1	number_of_passes	14
4.3.2.2	x	14
4.3.2.3	y	14
4.4	src/png_decode.h File Reference	15
4.4.1	Function Documentation	15
4.4.1.1	process_file	15
4.4.1.2	read_png_file	15
4.5	src/PSNR.cpp File Reference	16
4.5.1	Function Documentation	16
4.5.1.1	countPSNR	16
4.6	src/psnr.h File Reference	17
4.6.1	Function Documentation	17
4.6.1.1	countPSNR	17
4.7	src/SSIM.cpp File Reference	18
4.7.1	Function Documentation	18
4.7.1.1	countSSIM	18
4.8	src/SSIM.h File Reference	19
4.8.1	Macro Definition Documentation	19
4.8.1.1	C1	19
4.8.1.2	C2	20
4.8.1.3	RECT_SIZE	20
4.8.1.4	RECT_SQRT	20
4.8.1.5	SKIP_SIZE	20
4.8.2	Function Documentation	20
4.8.2.1	countAvg	20
4.8.2.2	countCovariance	20
4.8.2.3	countRectangle	20
4.8.2.4	countRes	20
4.8.2.5	countSSIM	21
4.8.2.6	countVariance	21
4.8.2.7	getRect	21

4.9	src/stvssim.cpp File Reference	22
4.9.1	Function Documentation	22
4.9.1.1	countARPS	22
4.9.1.2	countDelta	23
4.9.1.3	countDeltaSqr	23
4.9.1.4	countMetricSTVSSIM	24
4.9.1.5	countMu	24
4.9.1.6	countSAD	25
4.9.1.7	countSSIM3D	25
4.9.1.8	countSTVSSIM	25
4.9.1.9	fillCube	26
4.9.1.10	generateCube	27
4.9.1.11	generateFilters	27
4.9.1.12	shiftData	27
4.10	src/stvssim.h File Reference	28
4.10.1	Macro Definition Documentation	29
4.10.1.1	FRAME_CNT	29
4.10.1.2	FRAME_SKIP	29
4.10.1.3	INT_MAX	29
4.10.1.4	RECT_SIZE_3D	29
4.10.1.5	RECT_SIZE_ARPS	29
4.10.1.6	RECT_SQRT_3D	30
4.10.1.7	RECT_SQRT_ARPS	30
4.10.1.8	ROOD_SIZE	30
4.10.1.9	ZERO_MVMT	30
4.10.2	Function Documentation	30
4.10.2.1	countARPS	30
4.10.2.2	countDelta	31
4.10.2.3	countDeltaSqr	31
4.10.2.4	countMetricSTVSSIM	31
4.10.2.5	countMu	32
4.10.2.6	countSAD	32
4.10.2.7	countSSIM3D	33
4.10.2.8	countSTVSSIM	33
4.10.2.9	fillCube	34
4.10.2.10	generateCube	35
4.10.2.11	generateFilters	35
4.10.2.12	shiftData	35

Chapter 1

Class Index

1.1 Class List

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

PictureData	5
vector	6

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

src/main.cpp	9
src/main.h	12
src/png_decode.cpp	13
src/png_decode.h	15
src/PSNR.cpp	16
src/psnr.h	17
src/SSIM.cpp	18
src/SSIM.h	19
src/stvssim.cpp	22
src/stvssim.h	28

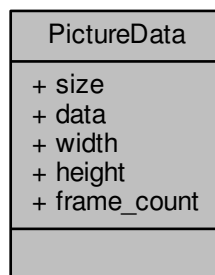
Chapter 3

Class Documentation

3.1 PictureData Struct Reference

```
#include <main.h>
```

Collaboration diagram for PictureData:



Public Attributes

- int [size](#)
- char * [data](#)
- int [width](#)
- int [height](#)
- int [frame_count](#)

3.1.1 Detailed Description

Definition at line 1 of file main.h.

3.1.2 Member Data Documentation

3.1.2.1 `char * PictureData::data`

Definition at line 3 of file main.h.

3.1.2.2 `int PictureData::frame_count`

Definition at line 6 of file main.h.

3.1.2.3 `int PictureData::height`

Definition at line 5 of file main.h.

3.1.2.4 `int PictureData::size`

Definition at line 2 of file main.h.

3.1.2.5 `int PictureData::width`

Definition at line 4 of file main.h.

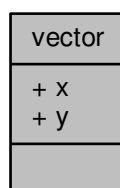
The documentation for this struct was generated from the following files:

- [src/main.h](#)
- [src/png_decode.h](#)

3.2 `vector` Struct Reference

```
#include <stvssim.h>
```

Collaboration diagram for `vector`:



Public Attributes

- `int x`
- `int y`

3.2.1 Detailed Description

Definition at line 15 of file stvssim.h.

3.2.2 Member Data Documentation

3.2.2.1 int vector::x

Definition at line 16 of file stvssim.h.

3.2.2.2 int vector::y

Definition at line 17 of file stvssim.h.

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

- [src/stvssim.h](#)

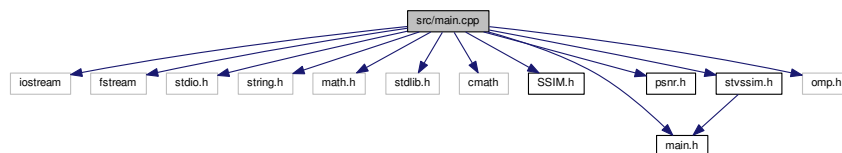
Chapter 4

File Documentation

4.1 src/main.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>
#include <cmath>
#include "SSIM.h"
#include "main.h"
#include "psnr.h"
#include "stvssim.h"
#include <omp.h>
```

Include dependency graph for main.cpp:



Macros

- `#define` `CHUNK_SIZE` 1

Functions

- `int` `compare` (`const void *a`, `const void *b`)
- `PictureData *` `getVideoInfo` (`string path`)
- `FILE *` `startFFmpeg` (`string path`)
- `void` `shiftData` (`unsigned char **data`, `int size`)
- `int` `main` (`int argc`, `char **argv`)

4.1.1 Macro Definition Documentation

4.1.1.1 `#define CHUNK_SIZE 1`

4.1.2 Function Documentation

4.1.2.1 `int compare (const void * a, const void * b)`

Definition at line 16 of file main.cpp.

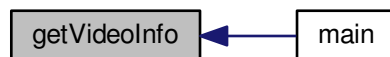
Here is the caller graph for this function:



4.1.2.2 `PictureData* getVideoInfo (string path)`

Definition at line 20 of file main.cpp.

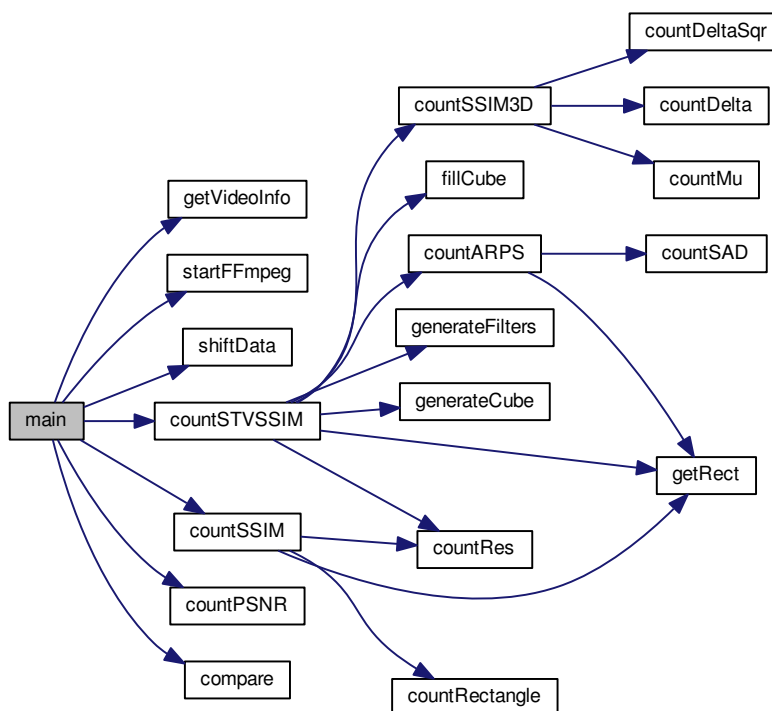
Here is the caller graph for this function:



4.1.2.3 `int main (int argc, char ** argv)`

Definition at line 81 of file main.cpp.

Here is the call graph for this function:



4.1.2.4 void shiftData (unsigned char ** data, int size)

Definition at line 73 of file main.cpp.

Here is the caller graph for this function:



4.1.2.5 FILE* startFFmpeg (string path)

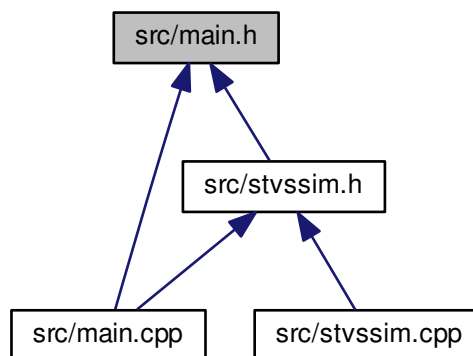
Definition at line 56 of file main.cpp.

Here is the caller graph for this function:



4.2 src/main.h File Reference

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



Classes

- struct [PictureData](#)

Macros

- #define [MAX_FILES](#) 10
- #define [THREADS](#) 256

4.2.1 Macro Definition Documentation

4.2.1.1 #define MAX_FILES 10

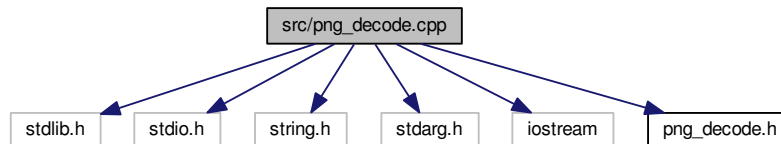
Definition at line 10 of file `main.h`.

4.2.1.2 #define THREADS 256

Definition at line 12 of file `main.h`.

4.3 src/png_decode.cpp File Reference

```
#include <stdlib.h>
#include <stdio.h>
#include <string.h>
#include <stdarg.h>
#include <iostream>
#include "png_decode.h"
Include dependency graph for png_decode.cpp:
```



Functions

- void [abort_](#) (const char *s,...)
- [PictureData](#) * [read_png_file](#) (char *file_name)
- [PictureData](#) * [process_file](#) ([PictureData](#) *data)

Variables

- int [x](#)
- int [y](#)
- int [number_of_passes](#)

4.3.1 Function Documentation

4.3.1.1 void abort_ (const char * s, ...)

Definition at line 11 of file png_decode.cpp.

Here is the caller graph for this function:



4.3.1.2 `PictureData* process_file (PictureData * data)`

Definition at line 84 of file `png_decode.cpp`.

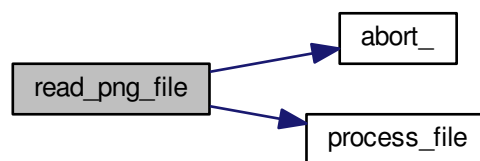
Here is the caller graph for this function:



4.3.1.3 `PictureData* read_png_file (char * file_name)`

Definition at line 29 of file `png_decode.cpp`.

Here is the call graph for this function:



4.3.2 Variable Documentation

4.3.2.1 `int number_of_passes`

Definition at line 24 of file `png_decode.cpp`.

4.3.2.2 `int x`

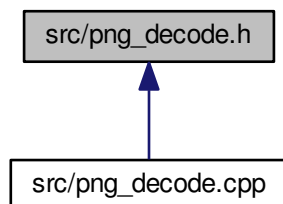
Definition at line 21 of file `png_decode.cpp`.

4.3.2.3 `int y`

Definition at line 21 of file `png_decode.cpp`.

4.4 src/png_decode.h File Reference

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



Classes

- struct [PictureData](#)

Functions

- [PictureData *](#) [process_file](#) ([PictureData *](#)data)
- [PictureData *](#) [read_png_file](#) (char *file_name)

4.4.1 Function Documentation

4.4.1.1 [PictureData*](#) [process_file](#) ([PictureData *](#) data)

Definition at line 84 of file png_decode.cpp.

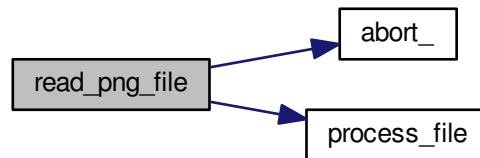
Here is the caller graph for this function:



4.4.1.2 [PictureData*](#) [read_png_file](#) (char * file_name)

Definition at line 29 of file png_decode.cpp.

Here is the call graph for this function:



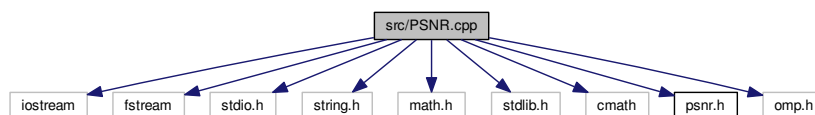
4.5 src/PSNR.cpp File Reference

```

#include <iostream>
#include <fstream>
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>
#include <cmath>
#include "psnr.h"
#include <omp.h>

```

Include dependency graph for PSNR.cpp:



Functions

- double `countPSNR` (unsigned char *data1, unsigned char *data2, int size)

4.5.1 Function Documentation

4.5.1.1 double `countPSNR` (unsigned char * *data1*, unsigned char * *data2*, int *size*)

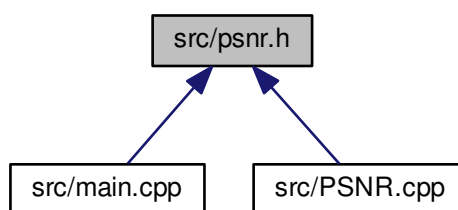
Definition at line 22 of file PSNR.cpp.

Here is the caller graph for this function:



4.6 src/psnr.h File Reference

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



Functions

- double `countPSNR` (unsigned char *data1, unsigned char *data2, int size)

4.6.1 Function Documentation

4.6.1.1 double `countPSNR` (unsigned char * *data1*, unsigned char * *data2*, int *size*)

Definition at line 22 of file PSNR.cpp.

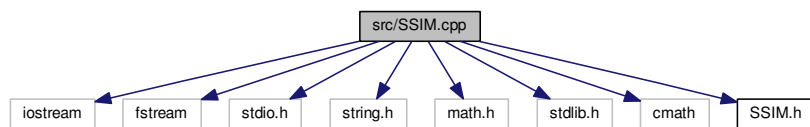
Here is the caller graph for this function:



4.7 src/SSIM.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>
#include <cmath>
#include "SSIM.h"
```

Include dependency graph for SSIM.cpp:



Functions

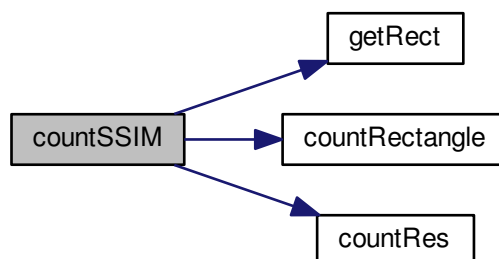
- double [countSSIM](#) (unsigned char *datain1, unsigned char *datain2, int size, int width)

4.7.1 Function Documentation

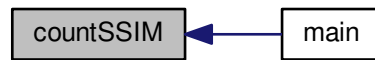
4.7.1.1 double countSSIM (unsigned char * *datain1*, unsigned char * *datain2*, int *size*, int *width*)

Definition at line 17 of file SSIM.cpp.

Here is the call graph for this function:

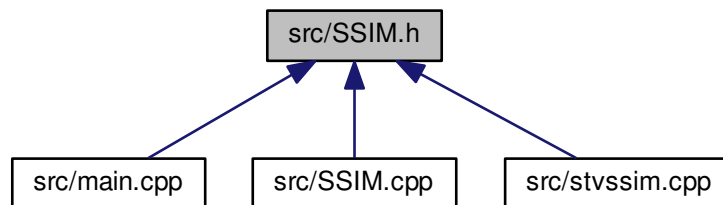


Here is the caller graph for this function:



4.8 src/SSIM.h File Reference

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



Macros

- `#define RECT_SIZE 64`
- `#define RECT_SQRT 8`
- `#define C1 6.5025`
- `#define C2 58.5225`
- `#define SKIP_SIZE 8`

Functions

- `double countSSIM (unsigned char *datain1, unsigned char *datain2, int size, int width)`
- `double countRectangle (unsigned char *data1, unsigned char *data2)`
- `double countAvg (unsigned char *data)`
- `double countVariance (unsigned char *data, double avg)`
- `double countCovariance (unsigned char *data1, unsigned char *data2, double avg1, double avg2)`
- `void getRect (unsigned char *data, int start, int width, unsigned char *out)`
- `double countRes (double *tmpRes, int count)`

4.8.1 Macro Definition Documentation

4.8.1.1 `#define C1 6.5025`

Definition at line 12 of file `SSIM.h`.

4.8.1.2 `#define C2 58.5225`

Definition at line 13 of file SSIM.h.

4.8.1.3 `#define RECT_SIZE 64`

Definition at line 10 of file SSIM.h.

4.8.1.4 `#define RECT_SQRT 8`

Definition at line 11 of file SSIM.h.

4.8.1.5 `#define SKIP_SIZE 8`

Definition at line 14 of file SSIM.h.

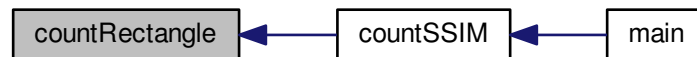
4.8.2 Function Documentation

4.8.2.1 `double countAvg (unsigned char * data)`

4.8.2.2 `double countCovariance (unsigned char * data1, unsigned char * data2, double avg1, double avg2)`

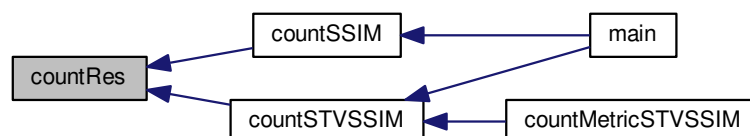
4.8.2.3 `double countRectangle (unsigned char * data1, unsigned char * data2)`

Here is the caller graph for this function:



4.8.2.4 `double countRes (double * tmpRes, int count)`

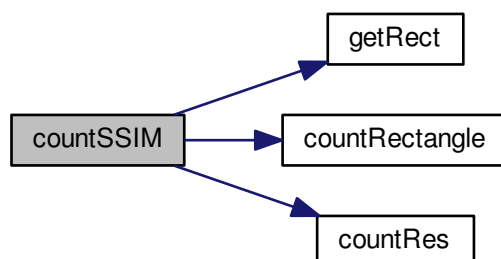
Here is the caller graph for this function:



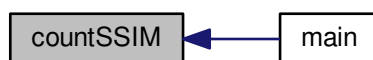
4.8.2.5 `double countSSIM (unsigned char * datain1, unsigned char * datain2, int size, int width)`

Definition at line 17 of file SSIM.cpp.

Here is the call graph for this function:



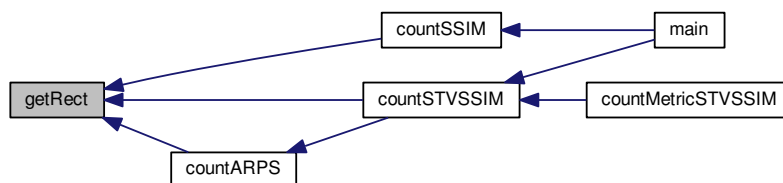
Here is the caller graph for this function:



4.8.2.6 `double countVariance (unsigned char * data, double avg)`

4.8.2.7 `void getRect (unsigned char * data, int start, int width, unsigned char * out)`

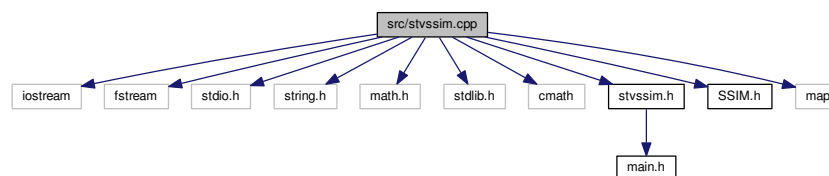
Here is the caller graph for this function:



4.9 src/stvssim.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>
#include <cmath>
#include "stvssim.h"
#include "SSIM.h"
#include <map>
```

Include dependency graph for stvssim.cpp:



Functions

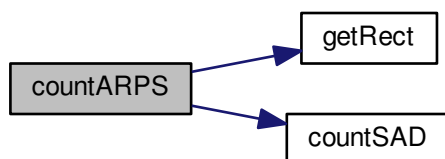
- double ** [countMetricSTVSSIM](#) (FILE **streams, FILE *ref, int files_count, [PictureData](#) *frame, string type, double **results, int *&frames)
- double [countSTVSSIM](#) (unsigned char **datain1, unsigned char **datain2, int size, int width)
- double [countSSIM3D](#) (unsigned char ***filter, unsigned char ***cube1, unsigned char ***cube2)
- double [countMu](#) (unsigned char ***filter, unsigned char ***cube)
- double [countDeltaSqr](#) (unsigned char ***filter, unsigned char ***cube, double mu)
- double [countDelta](#) (unsigned char ***filter, unsigned char ***cube1, unsigned char ***cube2, double muX, double muY)
- unsigned char *** [generateCube](#) ()
- void [fillCube](#) (unsigned char **datain, int pos, unsigned char ***out, int width)
- unsigned char **** [generateFilters](#) ()
- [vector](#) [countARPS](#) (unsigned char *block, unsigned char *framePrev, int x, int y, int width, int height, int T)
- void [shiftData](#) (unsigned char **data, int size)
- int [countSAD](#) (unsigned char *rect1, unsigned char *rect2)

4.9.1 Function Documentation

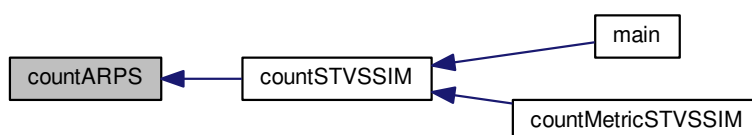
4.9.1.1 [vector](#) [countARPS](#) (unsigned char * *block*, unsigned char * *framePrev*, int *x*, int *y*, int *width*, int *height*, int *T*)

Definition at line 316 of file stvssim.cpp.

Here is the call graph for this function:



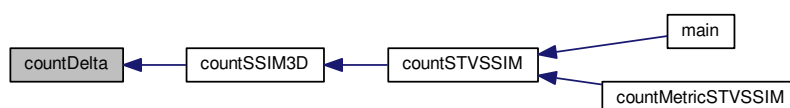
Here is the caller graph for this function:



4.9.1.2 `double countDelta (unsigned char *** filter, unsigned char *** cube1, unsigned char *** cube2, double muX, double muY)`

Definition at line 235 of file `stvssim.cpp`.

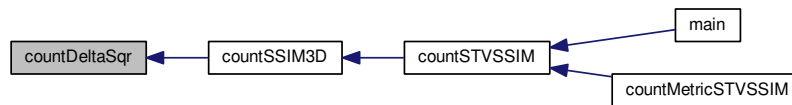
Here is the caller graph for this function:



4.9.1.3 `double countDeltaSqr (unsigned char *** filter, unsigned char *** cube, double mu)`

Definition at line 222 of file `stvssim.cpp`.

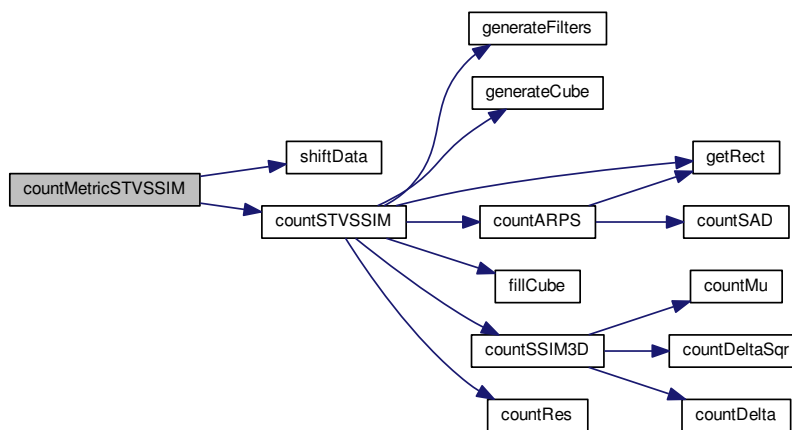
Here is the caller graph for this function:



4.9.1.4 `double** countMetricSTVSSIM (FILE ** streams, FILE * ref, int files_count, PictureData * frame, string type, double ** results, int *& frames)`

Definition at line 16 of file `stvssim.cpp`.

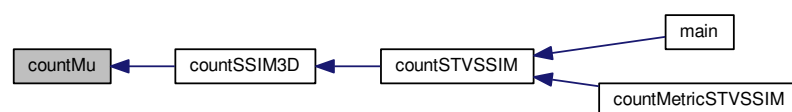
Here is the call graph for this function:



4.9.1.5 `double countMu (unsigned char *** filter, unsigned char *** cube)`

Definition at line 208 of file `stvssim.cpp`.

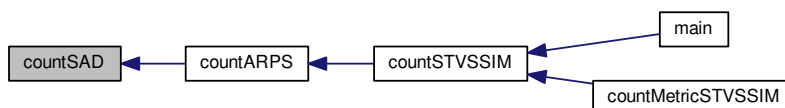
Here is the caller graph for this function:



4.9.1.6 int countSAD (unsigned char * *rect1*, unsigned char * *rect2*)

Definition at line 390 of file stvssim.cpp.

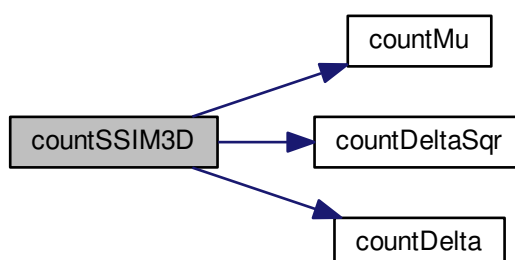
Here is the caller graph for this function:



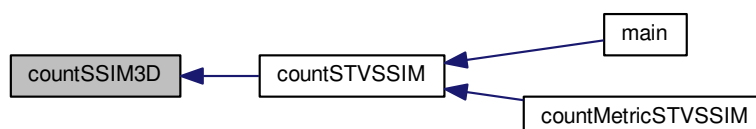
4.9.1.7 double countSSIM3D (unsigned char *** *filter*, unsigned char *** *cube1*, unsigned char *** *cube2*)

Definition at line 196 of file stvssim.cpp.

Here is the call graph for this function:



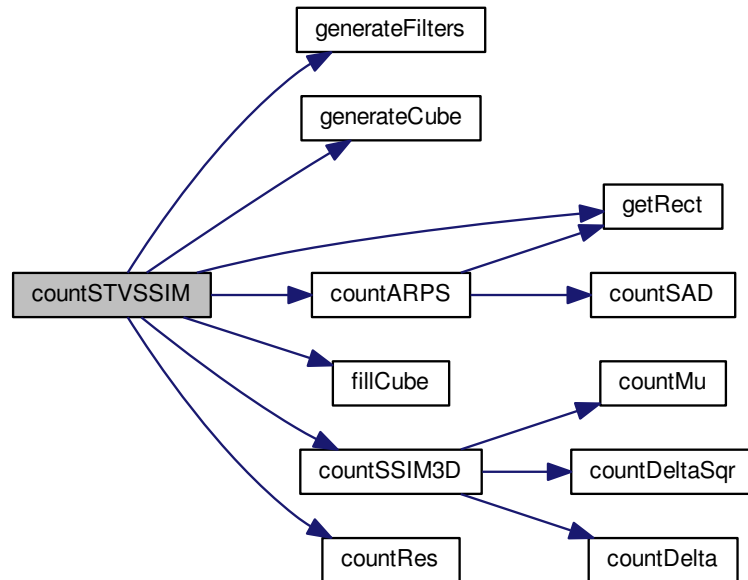
Here is the caller graph for this function:



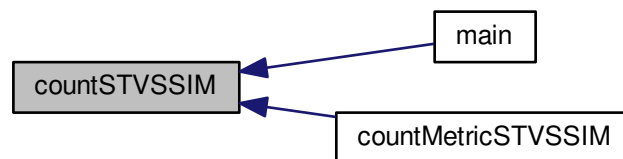
4.9.1.8 double countSTVSSIM (unsigned char ** *datain1*, unsigned char ** *datain2*, int *size*, int *width*)

Definition at line 81 of file stvssim.cpp.

Here is the call graph for this function:



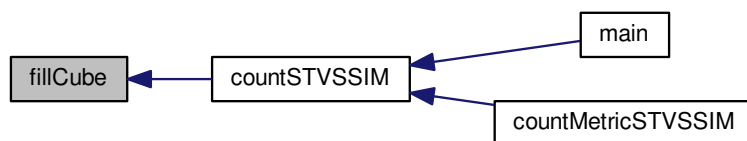
Here is the caller graph for this function:



4.9.1.9 void fillCube (unsigned char ** *datain*, int *pos*, unsigned char *** *out*, int *width*)

Definition at line 261 of file stvssim.cpp.

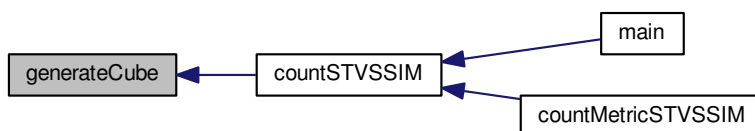
Here is the caller graph for this function:



4.9.1.10 `unsigned char*** generateCube ()`

Definition at line 248 of file `stvssim.cpp`.

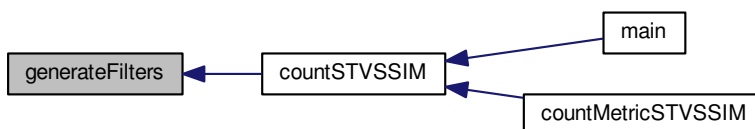
Here is the caller graph for this function:



4.9.1.11 `unsigned char**** generateFilters ()`

Definition at line 270 of file `stvssim.cpp`.

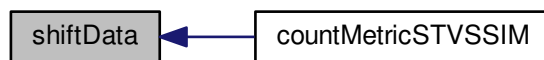
Here is the caller graph for this function:



4.9.1.12 `void shiftData (unsigned char ** data, int size)`

Definition at line 383 of file `stvssim.cpp`.

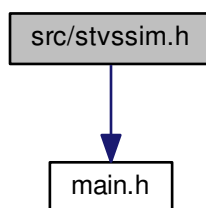
Here is the caller graph for this function:



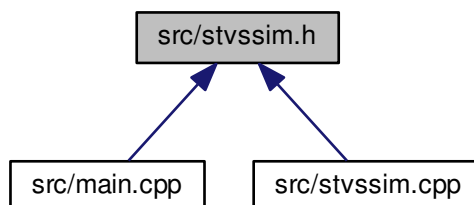
4.10 src/stvssim.h File Reference

```
#include "main.h"
```

Include dependency graph for stvssim.h:



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



Classes

- struct [vector](#)

Macros

- `#define RECT_SIZE_ARPS 64`
- `#define RECT_SQRT_ARPS 8`
- `#define ZERO_MVMT 12`
- `#define FRAME_CNT 33`
- `#define ROOD_SIZE 2`
- `#define RECT_SQRT_3D 11`
- `#define RECT_SIZE_3D 11*11`
- `#define FRAME_SKIP 16`
- `#define INT_MAX 2147483647`

Functions

- `double ** countMetricSTVSSIM (FILE **streams, FILE *ref, int files_count, PictureData *frame, string type, double **results, int *&frames)`
- `double countSTVSSIM (unsigned char **datain1, unsigned char **datain2, int size, int width)`
- `void shiftData (unsigned char **data, int size)`
- `vector countARPS (unsigned char *block, unsigned char *framePrev, int x, int y, int width, int height, int T)`
- `double countDelta (unsigned char ***filter, unsigned char ***cube1, unsigned char ***cube2, double muX, double muY)`
- `double countDeltaSqr (unsigned char ***filter, unsigned char ***cube, double mu)`
- `double countMu (unsigned char ***filter, unsigned char ***cube)`
- `double countSSIM3D (unsigned char ***filter, unsigned char ***cube1, unsigned char ***cube2)`
- `unsigned char *** generateCube ()`
- `void fillCube (unsigned char **datain, int pos, unsigned char ***out, int width)`
- `unsigned char *** generateFilters ()`
- `int countSAD (unsigned char *rect1, unsigned char *rect2)`

4.10.1 Macro Definition Documentation

4.10.1.1 `#define FRAME_CNT 33`

Definition at line 7 of file stvssim.h.

4.10.1.2 `#define FRAME_SKIP 16`

Definition at line 11 of file stvssim.h.

4.10.1.3 `#define INT_MAX 2147483647`

Definition at line 12 of file stvssim.h.

4.10.1.4 `#define RECT_SIZE_3D 11*11`

Definition at line 10 of file stvssim.h.

4.10.1.5 `#define RECT_SIZE_ARPS 64`

Definition at line 4 of file stvssim.h.

4.10.1.6 `#define RECT_SQRT_3D 11`

Definition at line 9 of file stvssim.h.

4.10.1.7 `#define RECT_SQRT_ARPS 8`

Definition at line 5 of file stvssim.h.

4.10.1.8 `#define ROOD_SIZE 2`

Definition at line 8 of file stvssim.h.

4.10.1.9 `#define ZERO_MVMT 12`

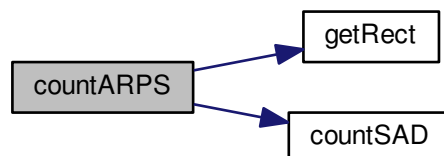
Definition at line 6 of file stvssim.h.

4.10.2 Function Documentation

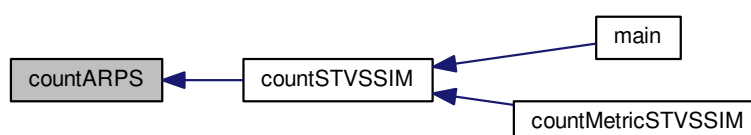
4.10.2.1 `vector countARPS (unsigned char * block, unsigned char * framePrev, int x, int y, int width, int height, int T)`

Definition at line 316 of file stvssim.cpp.

Here is the call graph for this function:



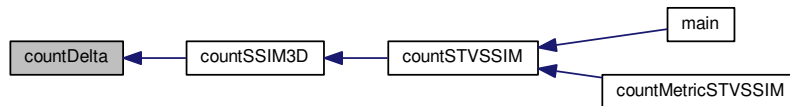
Here is the caller graph for this function:



4.10.2.2 `double countDelta (unsigned char *** filter, unsigned char *** cube1, unsigned char *** cube2, double muX, double muY)`

Definition at line 235 of file stvssim.cpp.

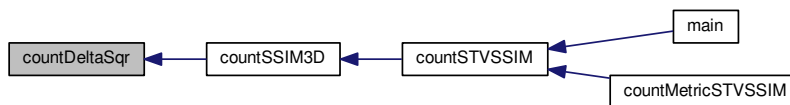
Here is the caller graph for this function:



4.10.2.3 `double countDeltaSqr (unsigned char *** filter, unsigned char *** cube, double mu)`

Definition at line 222 of file stvssim.cpp.

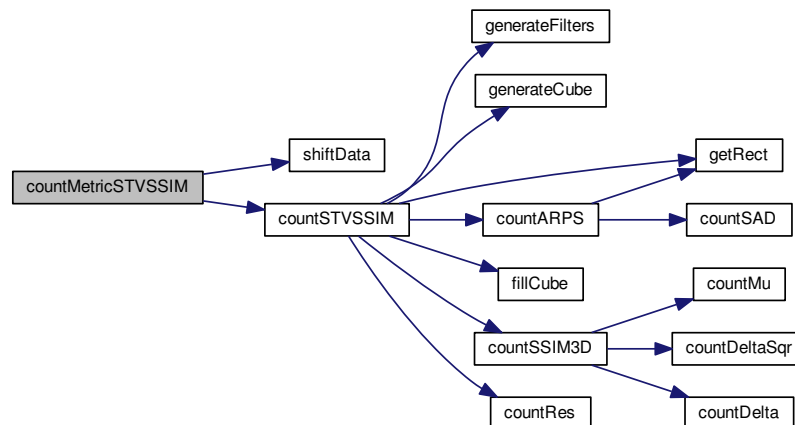
Here is the caller graph for this function:



4.10.2.4 `double** countMetricSTVSSIM (FILE ** streams, FILE * ref, int files_count, PictureData * frame, string type, double ** results, int *& frames)`

Definition at line 16 of file stvssim.cpp.

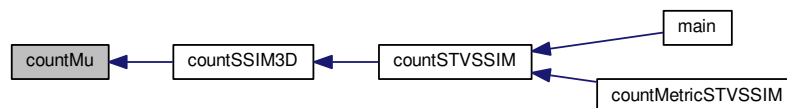
Here is the call graph for this function:



4.10.2.5 double countMu (unsigned char *** *filter*, unsigned char *** *cube*)

Definition at line 208 of file `stvssim.cpp`.

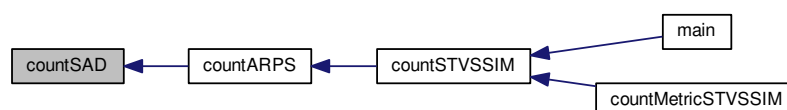
Here is the caller graph for this function:



4.10.2.6 int countSAD (unsigned char * *rect1*, unsigned char * *rect2*)

Definition at line 390 of file `stvssim.cpp`.

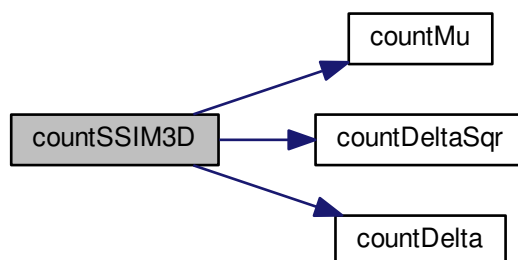
Here is the caller graph for this function:



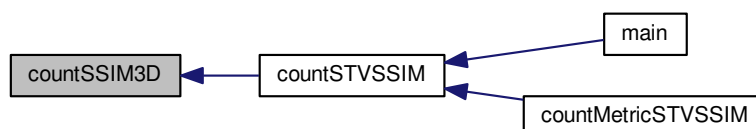
4.10.2.7 double countSSIM3D (unsigned char *** *filter*, unsigned char *** *cube1*, unsigned char *** *cube2*)

Definition at line 196 of file stvssim.cpp.

Here is the call graph for this function:



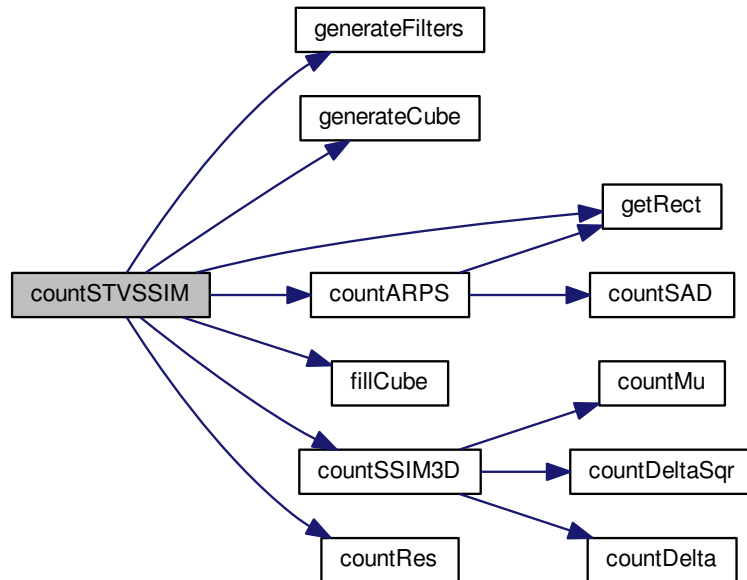
Here is the caller graph for this function:



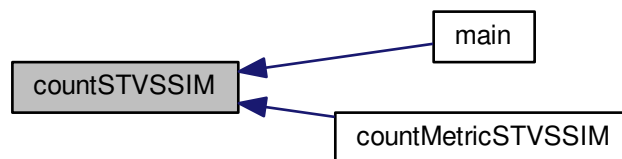
4.10.2.8 double countSTVSSIM (unsigned char ** *datain1*, unsigned char ** *datain2*, int *size*, int *width*)

Definition at line 81 of file stvssim.cpp.

Here is the call graph for this function:



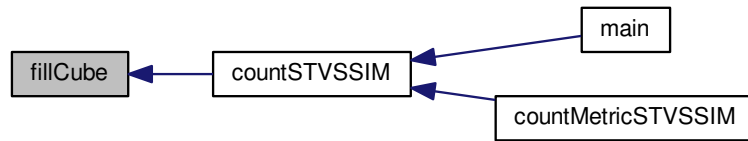
Here is the caller graph for this function:



4.10.2.9 void fillCube (unsigned char ** *datain*, int *pos*, unsigned char *** *out*, int *width*)

Definition at line 261 of file stvssim.cpp.

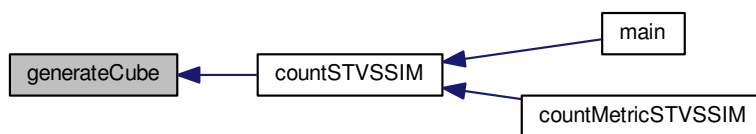
Here is the caller graph for this function:



4.10.2.10 `unsigned char*** generateCube ()`

Definition at line 248 of file `stvssim.cpp`.

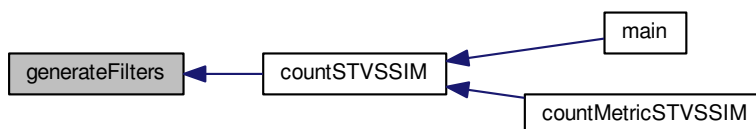
Here is the caller graph for this function:



4.10.2.11 `unsigned char**** generateFilters ()`

Definition at line 270 of file `stvssim.cpp`.

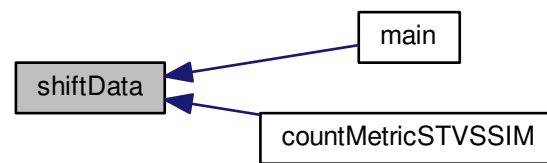
Here is the caller graph for this function:



4.10.2.12 `void shiftData (unsigned char ** data, int size)`

Definition at line 73 of file `main.cpp`.

Here is the caller graph for this function:



Index

abort_
 png_decode.cpp, 13

C1
 SSIM.h, 19

C2
 SSIM.h, 19

CHUNK_SIZE
 main.cpp, 10

compare
 main.cpp, 10

countARPS
 stvssim.cpp, 22
 stvssim.h, 30

countAvg
 SSIM.h, 20

countCovariance
 SSIM.h, 20

countDelta
 stvssim.cpp, 23
 stvssim.h, 30

countDeltaSqr
 stvssim.cpp, 23
 stvssim.h, 31

countMetricSTVSSIM
 stvssim.cpp, 24
 stvssim.h, 31

countMu
 stvssim.cpp, 24
 stvssim.h, 32

countPSNR
 PSNR.cpp, 16
 psnr.h, 17

countRectangle
 SSIM.h, 20

countRes
 SSIM.h, 20

countSAD
 stvssim.cpp, 24
 stvssim.h, 32

countSSIM
 SSIM.cpp, 18
 SSIM.h, 20

countSSIM3D
 stvssim.cpp, 25
 stvssim.h, 32

countSTVSSIM
 stvssim.cpp, 25
 stvssim.h, 33

countVariance
 SSIM.h, 21

data
 PictureData, 5

FRAME_CNT
 stvssim.h, 29

FRAME_SKIP
 stvssim.h, 29

fillCube
 stvssim.cpp, 26
 stvssim.h, 34

frame_count
 PictureData, 6

generateCube
 stvssim.cpp, 27
 stvssim.h, 35

generateFilters
 stvssim.cpp, 27
 stvssim.h, 35

getRect
 SSIM.h, 21

getVideoInfo
 main.cpp, 10

height
 PictureData, 6

INT_MAX
 stvssim.h, 29

MAX_FILES
 main.h, 12

main
 main.cpp, 10

main.cpp
 CHUNK_SIZE, 10
 compare, 10
 getVideoInfo, 10
 main, 10
 shiftData, 11
 startFFmpeg, 11

main.h
 MAX_FILES, 12
 THREADS, 12

number_of_passes
 png_decode.cpp, 14

PSNR.cpp

- countPSNR, 16
- PictureData, 5
 - data, 5
 - frame_count, 6
 - height, 6
 - size, 6
 - width, 6
- png_decode.cpp
 - abort_, 13
 - number_of_passes, 14
 - process_file, 13
 - read_png_file, 14
 - x, 14
 - y, 14
- png_decode.h
 - process_file, 15
 - read_png_file, 15
- process_file
 - png_decode.cpp, 13
 - png_decode.h, 15
- psnr.h
 - countPSNR, 17
- RECT_SIZE
 - SSIM.h, 20
- RECT_SIZE_3D
 - stvssim.h, 29
- RECT_SIZE_ARPS
 - stvssim.h, 29
- RECT_SQRT
 - SSIM.h, 20
- RECT_SQRT_3D
 - stvssim.h, 29
- RECT_SQRT_ARPS
 - stvssim.h, 30
- ROOD_SIZE
 - stvssim.h, 30
- read_png_file
 - png_decode.cpp, 14
 - png_decode.h, 15
- SKIP_SIZE
 - SSIM.h, 20
- SSIM.cpp
 - countSSIM, 18
- SSIM.h
 - C1, 19
 - C2, 19
 - countAvg, 20
 - countCovariance, 20
 - countRectangle, 20
 - countRes, 20
 - countSSIM, 20
 - countVariance, 21
 - getRect, 21
 - RECT_SIZE, 20
 - RECT_SQRT, 20
 - SKIP_SIZE, 20
- shiftData
 - main.cpp, 11
 - stvssim.cpp, 27
 - stvssim.h, 35
- size
 - PictureData, 6
- src/PSNR.cpp, 16
- src/SSIM.cpp, 18
- src/SSIM.h, 19
- src/main.cpp, 9
- src/main.h, 12
- src/png_decode.cpp, 13
- src/png_decode.h, 15
- src/psnr.h, 17
- src/stvssim.cpp, 22
- src/stvssim.h, 28
- startFFmpeg
 - main.cpp, 11
- stvssim.cpp
 - countARPS, 22
 - countDelta, 23
 - countDeltaSqr, 23
 - countMetricSTVSSIM, 24
 - countMu, 24
 - countSAD, 24
 - countSSIM3D, 25
 - countSTVSSIM, 25
 - fillCube, 26
 - generateCube, 27
 - generateFilters, 27
 - shiftData, 27
- stvssim.h
 - countARPS, 30
 - countDelta, 30
 - countDeltaSqr, 31
 - countMetricSTVSSIM, 31
 - countMu, 32
 - countSAD, 32
 - countSSIM3D, 32
 - countSTVSSIM, 33
 - FRAME_CNT, 29
 - FRAME_SKIP, 29
 - fillCube, 34
 - generateCube, 35
 - generateFilters, 35
 - INT_MAX, 29
 - RECT_SIZE_3D, 29
 - RECT_SIZE_ARPS, 29
 - RECT_SQRT_3D, 29
 - RECT_SQRT_ARPS, 30
 - ROOD_SIZE, 30
 - shiftData, 35
 - ZERO_MVMT, 30
- THREADS
 - main.h, 12
- vector, 6
 - x, 7
 - y, 7

width

PictureData, [6](#)

x

png_decode.cpp, [14](#)

vector, [7](#)

y

png_decode.cpp, [14](#)

vector, [7](#)

ZERO_MVMT

stvssim.h, [30](#)