Video Quality Tool

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Data Structure Documentation

3.1 string_t Struct Reference

Data Fields

- char name [256]

3.1.1 Field Documentation

3.1.1.1 char string_t::name[256]

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

- main.c

Chapter 4

File Documentation

4.1 main.c File Reference

```
#include <stdint.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <sys/time.h>
#include <fcntl.h>
#include <unistd.h>
#include <math.h>
#include "mse.h"
#include "psnr.h"
```

Data Structures

- struct string_t

Macros

- #define MAX_WIDTH 3840
- #define MAX_HEIGHT 2160

Functions

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

4.1.1 Macro Definition Documentation

4.1.1.1 #define MAX_HEIGHT 2160

4.1.1.2 #define MAX_WIDTH 3840

4.1.2 Function Documentation

4.1.2.1 int main (int *argc,* const char * *argv[ ]*)

4.2 mse.c File Reference

```
#include <stdint.h>
#include <stdio.h>
#include <math.h>
```

Functions

- int mse (uint32_t wxh, double *mse_luma, double *mse_cr, double *mse_cb, const uint8_t *src, const uint8_t *cmp)

  Compute Mean Square Error between two frames.

4.2.1 Function Documentation

4.2.1.1 int mse (uint32_t *wxh,* double * *mse_luma,* double * *mse_cr,* double * *mse_cb,* const uint8_t * *src,* const uint8_t * *cmp*)

Compute Mean Square Error between two frames.

The **mse** function computes Mean Square Error between source frame and frame to be compared.

Parameters

wxh	width x height
mse_luma	output address of luma mse
mse_cr	output address of cr mse
mse_cb	output address of cb mse
src	input address of source frame
cmp	input address of frame to be compared

Returns

- 0: Successful
- 1: Failed

4.3 mse.h File Reference

Functions

- int mse (uint32_t wxh, double *mse_luma, double *mse_cr, double *mse_cb, const uint8_t *src, const uint8_t *cmp)

  Compute Mean Square Error between two frames.

4.3.1 Function Documentation

4.3.1.1 int mse (uint32_t *wxh,* double * *mse_luma,* double * *mse_cr,* double * *mse_cb,* const uint8_t * *src,* const uint8_t * *cmp*)

Compute Mean Square Error between two frames.

The **mse** function computes Mean Square Error between source frame and frame to be compared.

Parameters

wxh	width x height
mse_luma	output address of luma mse
mse_cr	output address of cr mse
mse_cb	output address of cb mse
src	input address of source frame
cmp	input address of frame to be compared

Returns

- 0: Successful
- 1: Failed

4.4 psnr.c File Reference

```
#include <math.h>
```

Macros

- #define TWENTY_MULTIPLAY_LOG_BASE_10_OF_MAX (48.130804)

Functions

- double psnr (double mse)

  Compute Peak signal-to-noise ratio.

4.4.1 Macro Definition Documentation

4.4.1.1 #define TWENTY_MULTIPLAY_LOG_BASE_10_OF_MAX (48.130804)

Precomputed the value of the formula: 20 ∗ log10(255)

4.4.2 Function Documentation

4.4.2.1 double psnr (double *mse*)

Compute Peak signal-to-noise ratio.

The **psnr** function computes peak signal-to-noise ratio.

Parameters

mse	mean square error

Returns

psnr

4.5 psnr.h File Reference

Functions

- double psnr (double mse)

  Compute Peak signal-to-noise ratio.

4.5.1 Function Documentation

4.5.1.1 double psnr (double *mse*)

Compute Peak signal-to-noise ratio.

The **psnr** function computes peak signal-to-noise ratio.

Parameters

mse	mean square error

Returns

psnr

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