

NAME

TIFFswab - byte- and bit-swapping routines

SYNOPSIS

```
#include <tiffio.h>
```

```
const unsigned char *TIFFGetBitRevTable(int reversed)
```

```
void TIFFReverseBits(u_char *data, unsigned long nbytes)
```

```
void TIFFSwabShort(uint16_t *data)
```

```
void TIFFSwabLong(uint32_t *data)
```

```
void TIFFSwabLong8(uint64_t *lp)
```

```
void TIFFSwabFloat(float *fp)
```

```
void TIFFSwabDouble(double *dp)
```

```
void TIFFSwabArrayOfShort(uint16_t *wp, tmsize_t n)
```

```
void TIFFSwabArrayOfTriples(uint8_t *tp, tmsize_t n)
```

```
void TIFFSwabArrayOfLong(uint32_t *lp, tmsize_t n)
```

```
void TIFFSwabArrayOfLong8(uint64_t *lp, tmsize_t n)
```

```
void TIFFSwabArrayOfFloat(float *fp, tmsize_t n)
```

```
void TIFFSwabArrayOfDouble(double *dp, tmsize_t n)
```

DESCRIPTION

The following routines are used by the library to swap 16-, 32- and 64-bit data and to reverse the order of bits in bytes.

TIFFSwabShort() and *TIFFSwabLong()* and *TIFFSwabFloat()* swap the bytes in a single 16- and 32-bit item, respectively.

TIFFSwabLong8() and *TIFFSwabDouble()* swap the bytes in a single 64-bit item.

TIFFSwabArrayOfTriples() swap the first and the third byte of each triple (three bytes) within the byte array. The second byte of each triple stays untouched.

TIFFSwabArrayOfShort() and *TIFFSwabArrayOfLong()*, *TIFFSwabArrayOfFloat()* swap the bytes in an array of 16- and 32-bit items, respectively.

TIFFSwabArrayOfLong8() and *TIFFSwabArrayOfDouble()* swap the bytes in an array of 64-bit items.

TIFFReverseBits() replaces each byte in *data* with the equivalent bit-reversed value. This operation is performed with a lookup table, which is returned using the *TIFFGetBitRevTable()* function. The *reversed* parameter specifies which table should be returned. Supply *1* if you want bit reversal table. Supply *0* to get the table that do not reverse bit values. It is a lookup table that can be used as an "identity function"; i.e. `TIFFNoBitRevTable[n] == n`.

DIAGNOSTICS

None.

SEE ALSO

libtiff (3tiff)

AUTHOR

LibTIFF contributors

COPYRIGHT

1988-2022, LibTIFF contributors