

**opendivx**

<b>COLLABORATORS</b>
----------------------

	<i>TITLE :</i> opendivx	
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>
WRITTEN BY		July 31, 2024
<i>SIGNATURE</i>		

<b>REVISION HISTORY</b>
-------------------------

NUMBER	DATE	DESCRIPTION	NAME

---

# Contents

<b>1</b>	<b>opendivx</b>	<b>1</b>
1.1	opendivx.doc . . . . .	1
1.2	opendivx.library/DIVX_Decode68k . . . . .	1
1.3	opendivx.library/DIVX_DecodePPC . . . . .	2
1.4	opendivx.library/DIVX_Encode68k . . . . .	3
1.5	opendivx.library/DIVX_EncodePPC . . . . .	4

---

# Chapter 1

## opendivx

### 1.1 opendivx.doc

```
DIVX_Decode68k ()
DIVX_DecodePPC ()
DIVX_Encode68k ()
DIVX_EncodePPC ()
```

### 1.2 opendivx.library/DIVX\_Decode68k

#### NAME

DIVX\_Decode68k -- Decode a OpenDivx using an 68k Function

#### SYNOPSIS

```
result = DIVX_Decode68k(handle, dec_opt, param1, param2)
D0                d0        D1        A0        A1
```

#### FUNCTION

This function decodes a frame of a OpenDivx. It also can be used to initialize or quit the replay, or to set the postprocessing level. If called on a 68k machine, this function is 68k, if called on a PowerPC machine it contextswitches over to the PowerPC, using WarpOS.

On the first call, dec\_opt should be DEC\_OPT\_INIT, and param1 a pointer to a correctly filled DEC\_PARAM structure. On the second call dec\_opt should be DEC\_OPT\_SETPP, and param1 should be a DEC\_SET structure with postproc\_level set to 0.

On a DEC\_OPT\_DECODE\_RGB or a DEC\_OPT\_DECODE\_YUV call param1 should be a correctly initialized DEC\_FRAME structure. bitstream is the input buffer here, bmp the output buffer. In case of YUV-Decoding, the bmp parameter needs to be a char \*\*, with three elements: The pointer to the Y-array, to the U-array, and the V-array.

A DEC\_OPT\_RELEASE operation with param1 and param2 both 0 terminates the Decoding.

---

Once DEC\_OPT\_DECODE\_RGB is implemented 16/24/32 Bit will be possible (RGB16/RGB24/ARGB32 formats), but currently only YUV-Output is supported.

#### INPUTS

handle - currently ignored, for future use, put 0 in there for now  
 dec\_opt - the function you want to perform  
 param1 - the parameter structure, according to the function  
 param2 - for future use, currently set to 0

#### RESULTS

rtnCode - DEC\_OK if no error occurred.  
 DEC\_MEMORY indicates that not enough memory was present to perform the operation. DEC\_BAD\_FORMAT indicates that this was no OpenDivx file. DEC\_OPERATION\_UNIMPLEMENTED indicates that you try to replay with yuv2rgb conversion (DEC\_OPT\_DECODE\_RGB), currently only DEC\_OPT\_DECODE\_YUV is implemented. ↔

SEE ALSO

## 1.3 opendivx.library/DIVX\_DecodePPC

#### NAME

DIVX\_DecodePPC -- Decode a OpenDivx using a PPC Function

#### SYNOPSIS

```
result = DIVX_Decode68k(handle, dec_opt, param1, param2)
r3                r3          r4          r5          r6
```

#### FUNCTION

This function decodes a frame of a OpenDivx. It also can be used to initialize or quit the replay, or to set the postprocessing level. If called on a 68k machine, this function is PPC. It requires a PowerPC to be called. It does not use any contextswitches, but is completely PPC Native (WarpOS).

On the first call, dec\_opt should be DEC\_OPT\_INIT, and param1 a pointer to a correctly filled DEC\_PARAM structure. On the second call dec\_opt should be DEC\_OPT\_SETPP, and param1 should be a DEC\_SET structure with postproc\_level set to 0.

On a DEC\_OPT\_DECODE\_RGB or a DEC\_OPT\_DECODE\_YUV call param1 should be a correctly initialized DEC\_FRAME structure. bitstream is the input buffer here, bmp the output buffer. In case of YUV-Decoding, the bmap parameter needs to be a char \*\*, with three elements: The pointer to the Y-array, to the U-array, and the V-array.

A DEC\_OPT\_RELEASE operation with param1 and param2 both 0 terminates the Decoding.

Once DEC\_OPT\_DECODE\_RGB is implemented 16/24/32 Bit will be possible (RGB16/RGB24/ARGB32 formats), but currently only YUV-Output is supported.

## INPUTS

handle - currently ignored, for future use, put 0 in there for now  
dec\_opt - the function you want to perform  
param1 - the parameter structure, according to the function  
param2 - for future use, currently set to 0

## RESULTS

rtnCode - DEC\_OK if no error occurred.  
DEC\_MEMORY indicates that not enough memory was present to perform the operation. DEC\_BAD\_FORMAT indicates that this was no OpenDivx file. DEC\_OPERATION\_UNIMPLEMENTED indicates that you try to replay with yuv2rgb conversion (DEC\_OPT\_DECODE\_RGB), currently only DEC\_OPT\_DECODE\_YUV is implemented.

## SEE ALSO

## 1.4 opendivx.library/DIVX\_Encode68k

## NAME

DIVX\_Encode68k -- Encode a OpenDivx using an 68k Function

## SYNOPSIS

```
result = DIVX_Encode68k(handle, dec_opt, param1, param2)
D0                d0          D1          A0          A1
```

## FUNCTION

This function encodes a frame of a OpenDivx. It also can be used to initialize or quit the Encoding. If called on a 68k machine, this function is 68k, if called on a PowerPC machine it contextswitches over to the PowerPC, using WarpOS.

On ENC\_OPT\_INIT (which requires to be the first call of the encoder) you have to provide a correctly initialized ENC\_PARAM structure, on ENC\_OPT\_WRITE or ENC\_OPT\_KEY you can encode a frame, and need to provide a ENC\_FRAME structure, where bmp is a 24 Bit image, and bitstream is the buffer for the encoded Bitstream. The structures are passed into param1. In param2 you get a ENC\_RESULT returned, which tells you if the encoded frame was a keyframe or not (note, that ENC\_OPT\_WRITE and ENC\_OPT\_KEY currently make no difference).

## INPUTS

handle - currently ignored, for future use, put 0 in there for now  
dec\_opt - the function you want to perform  
param1 - the parameter structure, according to the function  
param2 - for future use, currently set to 0

## RESULTS

rtnCode - DEC\_OK if no error occurred.  
DEC\_MEMORY indicates that not enough memory was present to perform the operation. DEC\_BAD\_FORMAT indicates a format error.

## SEE ALSO

## 1.5 opendivx.library/DIVX\_EncodePPC

### NAME

DIVX\_EncodePPC -- Encode a OpenDivx using an 68k Function

### SYNOPSIS

```
result = DIVX_EncodePPC(handle, dec_opt, param1, param2)
r3                r3      r4      r5      r6
```

### FUNCTION

This function encodes a frame of a OpenDivx. It also can be used to initialize or quit the Encoding. This function is PPC, using WarpOS. It is a complete PPC Native function without contextswitches.

On ENC\_OPT\_INIT (which requires to be the first call of the encoder) you have to provide a correctly initialized ENC\_PARAM structure, on ENC\_OPT\_WRITE or ENC\_OPT\_KEY you can encode a frame, and need to provide a ENC\_FRAME structure, where bmp is a 24 Bit image, and bitstream is the buffer for the encoded Bitstream. The structures are passed into param1. In param2 you get a ENC\_RESULT returned, which tells you if the encoded frame was a keyframe or not (note, that ENC\_OPT\_WRITE and ENC\_OPT\_KEY currently make no difference).

### INPUTS

handle - currently ignored, for future use, put 0 in there for now  
dec\_opt - the function you want to perform  
param1 - the parameter structure, according to the function  
param2 - for future use, currently set to 0

### RESULTS

rtnCode - DEC\_OK if no error occurred.  
DEC\_MEMORY indicates that not enough memory was present to perform the operation. DEC\_BAD\_FORMAT indicates a format error.

### SEE ALSO