OpenML™ Media Library Software Development Kit Programmer's Guide – Errata

March 2004

This document lists errors and omissions in the "OpenML™ Media Library Software Development Kit Programmer's Guide" (SGI document 007-4504-001).

Page 3, Example 1-1

Replace the output of the `mlquery` program by:

```
% mlquery
            SYSTEM:   linux1
        active UST:   (default software UST source)

           DEVICES:
                     Software DV_MMX Codec [0]
                     OSS audio device [0]
```

Page 4, "Step 2"

Replace

```
mluFindPathToJack( jackId, &pathId );
```

by

```
mluFindPathToJack( jackId, &pathId, memoryAlignment );
```

Page 5, "Step 4", example code

Replace

```
ML_FORMAT_S16
```

by

```
ML_AUDIO_FORMAT_S16
```

Pages 8/9, “Step 3”, sample code

Replace the sample code by the following:

```
int i;
for ( i=0, i < 12; ++i )
  {
    MLpv msg[3];
    msg[0].param = ML_AUDIO_BUFFER_POINTER;
    msg[0].value.pByte = (MLbyte*)buffers[i];
    msg[0].length = bufferSize;
    msg[1].param = ML_AUDIO_UST_INT64;
    msg[1].param = ML_END;
    mlSendBuffers( openPath, msg );
  }
```

Page 18, code sample at top of page

The control `ML_PATH_LUT_REAL64_ARRAY` does not exist. For this example code, use `ML_AUDIO_GAINS_REAL64_ARRAY` to set the gain on a 4-channel audio path. Note also the change in the setting of the “length” field.

Replace the code sample by:

```
MLreal64 data[] = { -12.0, 1.0, 1.0, 12.0 };
MLpv message[2];
message[0].param = ML_AUDIO_GAINS_REAL64_ARRAY;
message[0].value.pReal64 = data;
message[0].length = sizeof(data) / sizeof(MLreal64)
message[1].param = ML_END;
mlSetControls( someOpenPath, message );
```

Pages 18 and 19

Replace all further occurences of

```
ML_PATH_LUT_REAL64_ARRAY
```

by

```
ML_AUDIO_GAINS_REAL64_ARRAY
```

Page 24, Example 3-5
Page 25, Example 3-6

Replace

```
mlGetCapabilities( someLogicalDeviceId, someParamId, &paramCap );
```

by

```
mlPvGetCapabilities(someLogicalDeviceId, someParamId, &paramCap);
```

Page 28, Table 3-2

Parameter “`DEVICE_INDEX`” is of type “`INT32`”, not “`BYTE_ARRAY`”.

Page 44, Sending In-Band Messages

Replace the last line of the first paragraph by:

> The ML supports this with the `mlSendControls(3ml)`, `mlQueryControls(3ml)`, `mlSendBuffers(3ml)`, and `mlReceiveMessage(3ml)` calls.

Page 47, Processing In-Band Reply Messages

Replace the third sentence of the second paragraph by:

> It could come from a call to `sendControls`, `queryControls`, or `sendBuffers`, or it could have been generated spontaneously by the device as the result of an event.

Page 50, top half of page

Replace

```
ML_IMAGE_CODING
```

by

```
ML_IMAGE_COMPRESSION_INT32
```

Replace

```
UNCOMPRESSED
```

by

```
ML_COMPRESSION_UNCOMPRESSED
```

Replace

```
DVCPRO_50
```

by

```
ML_COMPRESSION_DVCPRO50_525
```

Page 65, second heading

Replace

```
ML_VIDEO_FILL_A_REAL32
```

by

```
ML_VIDEO_FILL_ALPHA_REAL32
```

Page 65, example code

In 3rd line of example code, replace

```
ML_TIMING_1125_1920x1080_5994
```

by

```
ML_TIMING_1125_1920x1080_5994p
```

Page 73, Note at top of page
Page 73, Heading, middle of page

Replace

```
ML_IMAGE_SIZE_INT32
```

by

```
ML_IMAGE_BUFFER_SIZE_INT32
```

Page 83, Audio Parameters

Replace

```
ML_AUDIO_FRAMESIZE_INT32
```

by

```
ML_AUDIO_FRAME_SIZE_INT32
```

Remove

```
ML_AUDIO_COMPANDING_INT32
```

(parameter does not exist)

Page 85 (bottom), Page 86 (top)

Replace

```
ML_FORMAT_U8
ML_FORMAT_S16
ML_FORMAT_S24in32R
```

by

```
ML_AUDIO_FORMAT_U8
ML_AUDIO_FORMAT_S16
ML_AUDIO_FORMAT_S24in32R
```

Page 86, ML_AUDIO_COMPANDING_INT32

Remove entire section (parameter does not exist).

Pages 89 and 90, ML Program Structure (example code)

Replace the example code by the following:

```
// get list of available media devices
mlGetCapabilities( systemId, &capabilities );

// search the devices to find the desired jack, path, or xcode to open
// (See Chapter 7: ML Capabilities for function description)
mlGetCapabilities( deviceId, &capabilities );

// query the jack, path or xcode to discover allowable open options
// and parameters (See Chapter 7)
mlGetCapabilities( objectId, &capabilities );

// query for individual parameter characteristics (See Chapter 7)
```

```
mlPvGetCapabilities( deviceId, paramId, &capabilities );

// free memory associated with any of the above get-capabilities
// (See Chapter 7)
mlFreeCapabilities( capabilities );

// open a logical connection to the desired object
mlOpen( objectId, options, &openId );

// get and set any necessary immediate controls
mlGetControls( openId, controls );
mlSetControls( openId, controls );

// send any synchronous controls
mlSendControls( openId, controls );

// pre-roll buffers
mlSendBuffers( opendId, buffers );

// prepare for asynchronous processing by getting wait handle
mlGetWaitHandle( openId, &waitHandle );

// start the path or xcode transfer
mlBeginTransfer( openId );

// perform synchronous xcode work (if applicable)
mlXcodeWork( openId );

// check on the status of the queue
mlGetSendMessageCount( openId, &sendMsgCount );
mlGetReceiveMessageCount( openId, &receiveMsgCount );

// process return messages
mlReceiveMessage( openId, &status, &replyMsg );

// find specific returned parameters
mlPvFind( replyMsg, param );

// repeat mlSendControls, mlSendBuffers, mlXcodeWork, etc. as required

// stop the transfer
mlEndTransfer( openId );

// close the logical connection
mlClose( openId );

// other useful functions
mlGetVersion( &major, &minor );
mlGetSystemUST( systemId, &UST );
statusName = mlStatusName( status );
msgName = mlMessageName( messageType );
```

Page 109, Get Wait Handle

At the end of the 2nd paragraph (wait handles on Windows), replace

```
WaitForSingleDevice
WaitForMultipleDevices
```

by

```
WaitForSingleObject
WaitForMultipleObjects
```

Page 115, GetVersion

Replace prototype of function by

```
MLstatus mlGetVersion( MLint32* majorVersion, MLint32* minorVersion );
```

Page 122, UST/MSC/ASC Parameters

The following parameter names are incomplete (they are missing the suffix identifying the parameter type):

```
ML_IMAGE_BUFFER
ML_VIDEO_MSC
ML_VIDEO_UST
ML_VIDEO_ASC
ML_AUDIO_UST
ML_AUDIO_MSC
```

Replace them by:

```
ML_IMAGE_BUFFER_POINTER
ML_VIDEO_MSC_INT64
ML_VIDEO_UST_INT64
ML_VIDEO_ASC_INT64
ML_AUDIO_UST_INT64
ML_AUDIO_MSC_INT64
```

Also replace

```
ML_AUDIO_IMAGE_POINTER
```

by

```
ML_AUDIO_BUFFER_POINTER
```

Page 147

Replace the following parameters:

```
ML_IF_VIDEO_UST_LT
ML_IF_AUDIO_UST_LT
```

by:

```
ML_IF_VIDEO_UST_LT_INT64
ML_IF_AUDIO_UST_LT_INT64
```