Subject: Call External and Win32 API dll's Subroutine calls
Posted by muswick on Sun, 14 Jan 2001 02:59:50 GMT
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Maybe someone has solved these problems with calling standard Win32 api's without having to use a C-Wrapper routine. I search this newsgroup and I have a few examples but none that seems to address this problem directly.

There 3 examples below:
1: Calling a Win32 Subroutine with arguments
The problem is that no data is returned.

2: Calling a Win32 Function without arguments
No problem - This works (from this newsgroup)

3: Calling a Win32 Subrouting with arguments
The problem is an immediate crash.

Example 1

From Win32 API:
```
Public Declare Sub GetLocalTime Lib "kernel32" Alias "GetLocalTime"
(lpSystemTime As SYSTEMTIME)

Public Type SYSTEMTIME
        wYear As Integer
        wMonth As Integer
        wDayOfWeek As Integer
        wDay As Integer
        wHour As Integer
        wMinute As Integer
        wSecond As Integer
        wMilliseconds As Integer
End Type
```

Here is the IDL code I have tried:

```
 timedata = INTARR(8)
 timedata2 = BYTARR(16)
 SYSTEMTIME = {    $
       wYear : 0,  $
       wMonth : 0,  $
       wDayOfWeek : 0,  $
       wDay : 0,  $
       wHour : 0,  $
       wMinute : 0,  $
       wSecond : 0,  $
```

```
        wMilliseconds : 0}

  result = CALL_EXTERNAL('kernel32.dll','GetLocalTime',timedata)
  help,result
  print,timedata

  result = CALL_EXTERNAL('kernel32.dll','GetLocalTime',timedata2)
  help,result
  print,timedata2

  result = CALL_EXTERNAL('kernel32.dll','GetLocalTime',systemtime)
  help,result
  print,systemtime


RESULT          LONG      =           0
      0       0       0       0       0       0       0       0
RESULT          LONG      =           0
   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0
RESULT          LONG      =           0
{       0       0       0       0       0       0       0       0}
```

Example 2

Now a Win32 API function call with no arguments works:

From Win32 API:
Public Declare Function GetLogicalDrives Lib "kernel32" Alias
"GetLogicalDrives" () As Long

The IDL code:

```
  drivemask=CALL_EXTERNAL('kernel32.dll','GetLogicalDrives')
  help,drivemask

DRIVEMASK       LONG      =         125
```

Example 3

From Win32 API:
Public Declare Sub GetSystemInfo Lib "kernel32" Alias "GetSystemInfo"
(lpSystemInfo As SYSTEM_INFO)

```
Public Type SYSTEM_INFO
        dwOemID As Long
        dwPageSize As Long
```

```
        lpMinimumApplicationAddress As Long
        lpMaximumApplicationAddress As Long
        dwActiveProcessorMask As Long
        dwNumberOrfProcessors As Long
        dwProcessorType As Long
        dwAllocationGranularity As Long
        dwReserved As Long
End Type
```

The IDL code:

```
  sysinfo = {SYSTEM_INFO, $
        dwOemID : 0L, $
        dwPageSize : 0L, $
        lpMinimumApplicationAddress : 0L, $
        lpMaximumApplicationAddress : 0L, $
        dwActiveProcessorMask : 0L, $
        dwNumberOrfProcessors : 0L, $
        dwProcessorType : 0L, $
        dwAllocationGranularity : 0L, $
        dwReserved : 0L}

  result = CALL_EXTERNAL('kernel32.dll','GetSystemInfo',sysinfo)
  help,result
  print,sysinfo
```

Causes an immediate Page Fault and crash of IDL.

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I am most likely applying the arguments wrong. I am positive that I could get the above to work using a C-wrapper with (argc, argv) calling, but there are reasons that I would perfer not to go this route.

Any help would appreciated.

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