

TECHNICAL BULLETIN

[Issue No.] T99-0039

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[Title] Corrective actions when an error (code: 77)
occurs when executing the MD function

[Date of issue] May '04

[Relevant Models] Mitsubishi PC boards for general-purpose PCs:
MELSECNET/H interface board, MELSECNET/10 interface board,
CC-Link interface board and PLC CPU board

Thank you for your continued support of Mitsubishi PC boards for general-purpose PC.

This bulletin provides corrective actions together with a sample program for when an error (code: 77, Memory allocation error) occurs when executing the MD function in the Mitsubishi PC interface board.

(1) Applicable models

No.	Product name	Model name
1	MELSECNET/H interface board	Q80BD-J71LP21-25, Q80BD-J71LP21G, Q80BD-J71LP21GE, Q80BD-J71BR11
2	MELSECNET/10 interface board	A70BDE-J71QLP23, A70BDE-J71QLR23, A70BDE-J71QLP23GE, A70BDE-J71QBR13
3	CC-Link interface board	A80BDE-J61BT11, A80BDE-J61BT13
4	PLC CPU board	A80BDE-A2USH-S1

(2) Corrective actions and sample program

Error code (HEX)	Error description	Corrective action
77 (4DH)	Memory allocation error Sufficient memory could not be allocated.	Close all other application programs that are currently running. Check if the system is operating normally. Restart the system. Increase the minimum allocated application work area. *1

Added

*1: Procedures for increasing the minimum allocated application work area.

Increase the minimum application work area in the application program before executing the MD function. (See the following sample program.)

The default minimum application work area of 200KB is set at startup of PC.

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• Sample program

The process overview and sample program for increasing the minimum application work area size are shown below.

(a) Process overview of sample program

- 1) Obtain the application program ID using the GetCurrentProcessID function.
- 2) Using the ID obtained in step 1), obtain the application program handle using the OpenProcess function.
- 3) The current set min/max application work area sizes can be obtained by executing the GetProcessWorkingSetSize function.
- 4) Set a value greater than the minimum application work area set size obtained in step 3) and execute the SetProcessWorkingSetSize.
- 5) Close the application program handle by the CloseHandle function.

(b) Sample program: When setting by VB

(When the application work area set size is min: 1MB and max: 3MB)

```
Dim id As Long      'Application program ID variable
Dim ph As Long     'Application program handle variable
Dim wkmin As Long  'Minimum working set variable
Dim wkmax As Long  'Maximum working set variable

' Obtain the application program ID
id = GetCurrentProcessID()
' Open the application program handle
' PROCESS_SET_QUOTA = 256, PROCESS_QUERY_INFORMATION = 1024
ph = OpenProcess(256 + 1024, False, id)
' Obtain the maximum working set size and minimum working set size of the application program
bret = GetProcessWorkingSetSize(ph, wkmin, wkmax)
'Set the minimum working set size to 1MB
wkmin = 1 * 1024 * 1024
'Set the maximum working set size to 3MB
wkmax = 3 * 1024 * 1024
' Change the maximum working set size and minimum working set size of the application program
bret = SetProcessWorkingSetSize(ph, wkmin, wkmax)
' Close the application program handle
bret = CloseHandle(ph)
```

The set sizes shown here are reference sizes only, adjust the sizes in accordance with the application requirements.



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(c) Sample program: When setting by VC

(When the application work area set size is min: 1MB and max: 3MB)

```
#define ERROR -1
short ChangeWorkingSetSize()
{
    DWORD dwProcessId;           /*Application program ID variable*/
    HANDLE hProcess;             /*Application program handle variable*/
    DWORD dwMinimumWorkingSetSize; /*Minimum working set variable*/
    DWORD dwMaximumWorkingSetSize; /*Maximum working set variable*/

    /*Obtain the application program ID*/
    dwProcessId = GetCurrentProcessId();

    /*Open the application program handle*/
    hProcess = OpenProcess(PROCESS_SET_QUOTA+PROCESS_QUERY_INFORMATION,FALSE,dwProcessId);
    if(hProcess == NULL){
        /*Error end*/
        return(ERROR);
    }

    /*Obtain the maximum working set size and minimum working set size of the application program */
    if(GetProcessWorkingSetSize(hProcess,&dwMinimumWorkingSetSize,&dwMaximumWorkingSetSize)==0){
        /*Error end*/
        CloseHandle(hProcess);
        return(ERROR);
    }

    /*Set the minimum working set size to 1MB*/
    dwMinimumWorkingSetSize = 1 * 1024 * 1024;
    /*Set the maximum working set size to 3MB*/
    dwMaximumWorkingSetSize = 3 * 1024 * 1024;

    /*Change the maximum working set size and minimum working set size of the application program */
    if(SetProcessWorkingSetSize(hProcess,dwMinimumWorkingSetSize,dwMaximumWorkingSetSize)==0){
        /*Error end*/
        CloseHandle(hProcess);
        return(ERROR);
    }

    /*Close the application program handle*/
    CloseHandle(hProcess);

    /*Normal return*/
    return(0);
}
```

The set sizes shown here are reference sizes only, adjust the sizes in accordance with the application requirements.