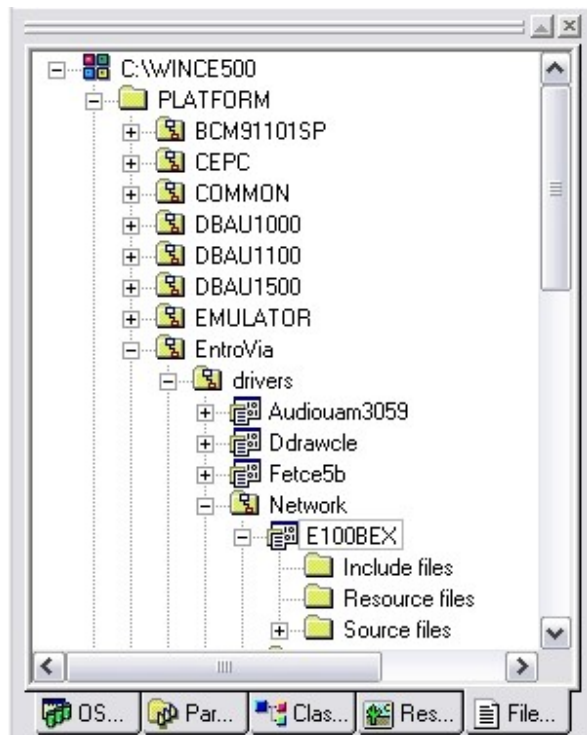**SJJ Embedded Micro Solutions**

Windows CE Tip: Sources File Corruption Solution

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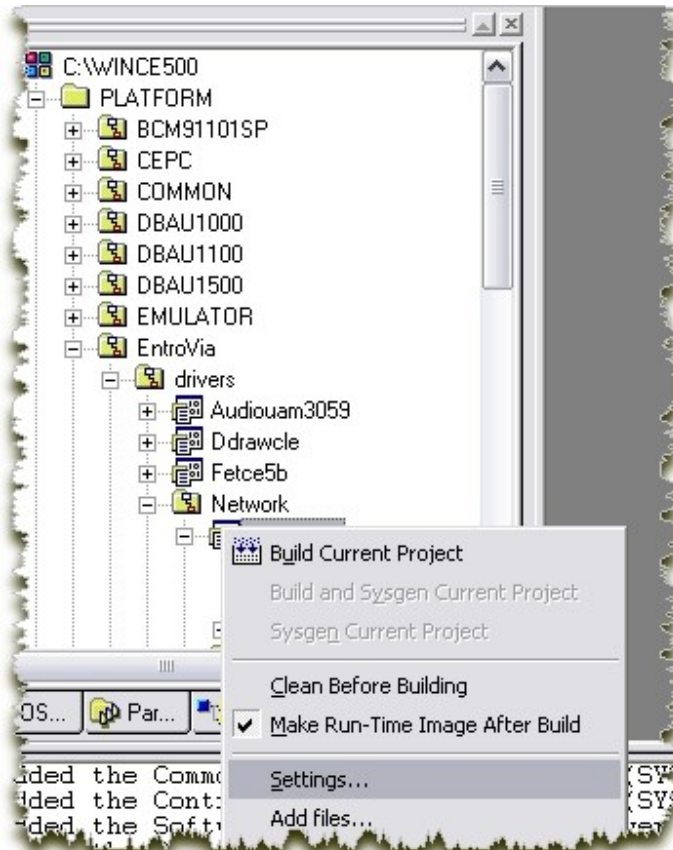SJJ Embedded Micro Solutions

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When changing build parameters for a project by right-clicking the project in the File View, selecting "settings" and modifying parameters and selections shown in the various tabs, Platform Builder will often corrupt the sources file when it makes the changes and writes the file back. The area corrupted most often is the CDEFINES area, even if these parameters were not changed. When reading the statements and looking in the settings, the 'defines' appear to be correct, but when built, the builder and compiler will not view the 'defines' correctly and will not set items which are clearly defined. Platform Builder tries to condense multiple-line defines into a single define line with multiple arguments, and clearly the builder and/or the compiler does not interpret that single line as the Platform Builder GUI and the human reader does. The following is an example which was provoked by changing the compile option from optimize for speed to optimize for size:

First let's examine the sources build options through the Platform Builder GUI. From the File View:
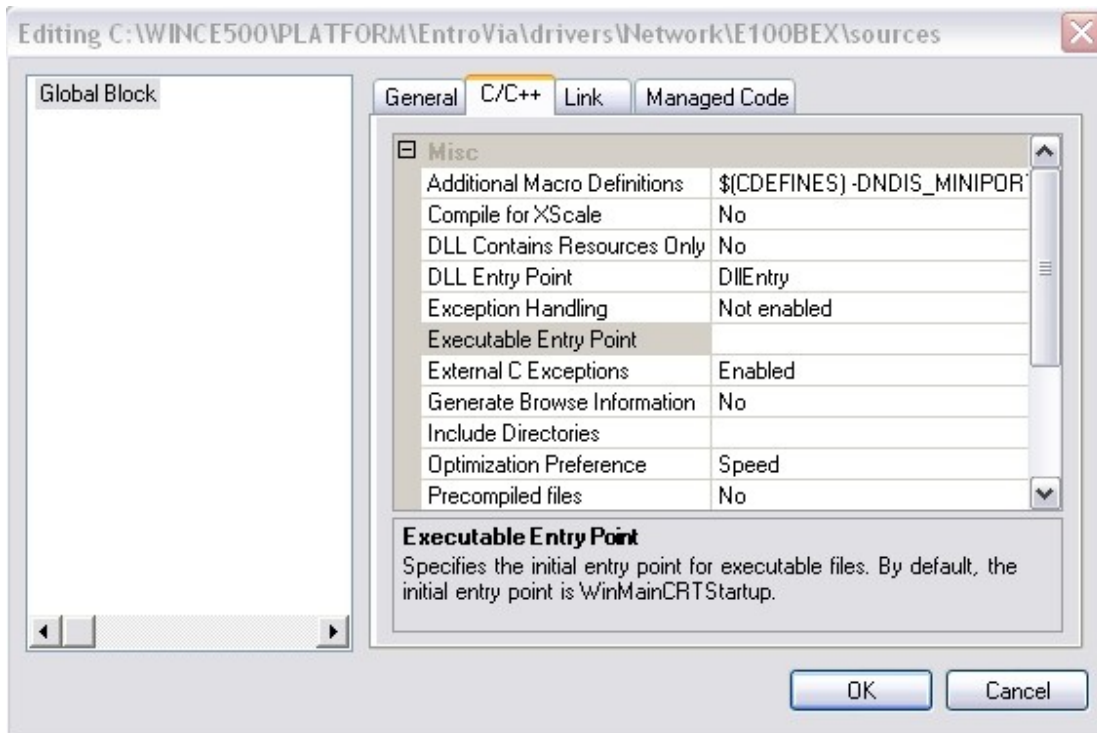
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Right click the project and select *settings*:

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This brings up the Sources dialog, and we will select the *C/C++* tab:

Notice that the "Optimiztion Preference" entry is set for "Speed".

The actual Sources file that the dialog is interpreting is as follows:

```
!if 0
Copyright (c) Microsoft Corporation.  All rights reserved.
!endif
!if 0
Use of this source code is subject to the terms of the Microsoft end-user
license agreement (EULA) under which you licensed this SOFTWARE PRODUCT.
If you did not accept the terms of the EULA, you are not authorized to use
this source code. For a copy of the EULA, please see the LICENSE.RTF on your
install media.
!endif


TARGETNAME=e100bex
RELEASETYPE=PLATFORM
TARGETTYPE=DYNLINK
DLLENTRY=DllEntry
TARGETDEFNAME=$(TARGETNAME)
DEFFILE=$(TARGETDEFNAME).def
TARGETLIBS= \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\coredll.lib \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\ndis.lib \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\ntcompat.lib \
  $(_COMMONOAKROOT)\lib\$(_CPUINDPATH)\ceddk.lib \

CDEFINES=$(CDEFINES) -DNDIS_MINIPORT_DRIVER -DNDIS51_MINIPORT=1

#
# if define LBFO then undefine OFFLOAD
# if define OFFLOAD then undefine LBFO, LBFO and OFFLOAD cannot both be defined
# default LBFO and OFFLOAD are not defined
#
# WINCE_PM_ENABLE is not available yet.
#

#CDEFINES=$(CDEFINES) -DLBFO=1
```

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```
CDEFINES=$(CDEFINES) -DOFFLOAD

#CDEFINES=$(CDEFINES) -DWINCE_PM_ENABLE

CDEFINES=$(CDEFINES) -DUSE_SEND_RCV_LOCKS
```
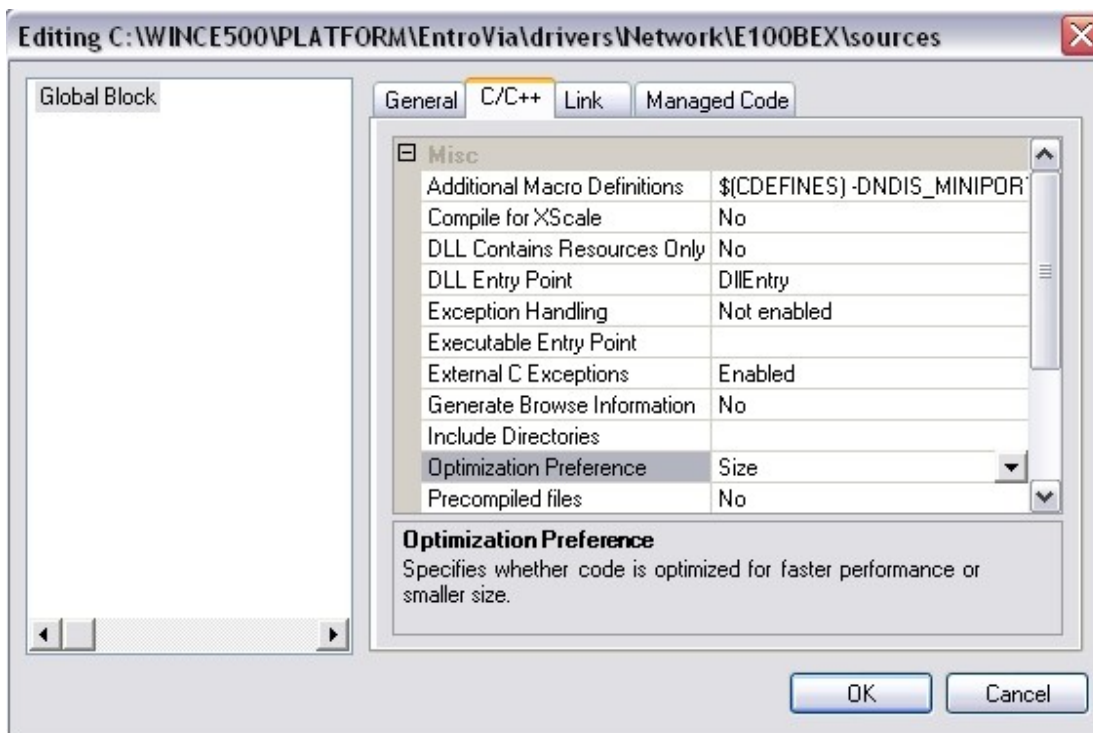
```
SOURCES = \
   mp_main.c  \
   offload.c  \
   mp_init.c  \
   mp_req.c   \
   mp_nic.c   \
   mp_dbg.c   \
   eeprom.c   \
   physet.c   \
   routines.c
```

```
OPTIMIZE_FAVOR=SPEED
```

Note the last line with the speed optimization selection highlighted. Also note the CDEFINES directives highlighted. Each CDEFINE statement is on a separate line.

Now, if we click in the optimization setting, we can change the optimization choice to favor size:

If we then click OK, changes will be made to the Sources file.

The sources file optimized for size (broken) is as follows:

```
# Copyright (c) Microsoft Corporation.  All rights reserved.
# Use of this source code is subject to the terms of the Microsoft end-user
# license agreement (EULA) under which you licensed this SOFTWARE PRODUCT.
# If you did not accept the terms of the EULA, you are not authorized to use
```

```
# this source code. For a copy of the EULA, please see the LICENSE.RTF on your
# install media.
#
# if define LBFO then undefine OFFLOAD
# if define OFFLOAD then undefine LBFO, LBFO and OFFLOAD cannot both be defined
# default LBFO and OFFLOAD are not defined
#
# WINCE_PM_ENABLE is not available yet.
#
# CDEFINES=$(CDEFINES) -DLBFO=1
# CDEFINES=$(CDEFINES) -DWINCE_PM_ENABLE

TARGETNAME=e100bex
RELEASETYPE=PLATFORM
TARGETTYPE=DYNLINK
DLLENTRY=DllEntry
TARGETDEFNAME=$(TARGETNAME)
DEFFILE=$(TARGETDEFNAME).def
TARGETLIBS= \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\coredll.lib \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\ndis.lib \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\ntcompat.lib \
  $(_COMMONOAKROOT)\lib\$(_CPUINDPATH)\ceddk.lib \

CDEFINES=$(CDEFINES) -DNDIS_MINIPORT_DRIVER -DNDIS51_MINIPORT=1 -DOFFLOAD -DUSE_SEND_RCV_LOCKS
SOURCES= \
  mp_main.c \
  offload.c \
  mp_init.c \
  mp_req.c \
  mp_nic.c \
  mp_dbg.c \
  eeprom.c \
  physet.c \
  routines.c \

OPTIMIZE_FAVOR=SPACE
```

Notice the last line with that the optimization choice has been changed to favor space highlighted. Also notice the CDEFINES statement highlighted above.   Even though we made no changes to the CDEFINES, the GUI reformatted the information when it wrote back the file with the optimization choice changed.   Recall that the CDEFINES were each on a separate line.   The new formatting has put the CDEFINES on a single line with multiple arguments. This should be perfectly good syntax, but not all the defines will be set and the source files will not compile as expected.

The corrected sources file with optimization preference set for space should be as follows:

```
!if 0
Copyright (c) Microsoft Corporation.  All rights reserved.
!endif
!if 0
Use of this source code is subject to the terms of the Microsoft end-user
license agreement (EULA) under which you licensed this SOFTWARE PRODUCT.
If you did not accept the terms of the EULA, you are not authorized to use
this source code. For a copy of the EULA, please see the LICENSE.RTF on your
install media.
!endif

TARGETNAME=e100bex
RELEASETYPE=PLATFORM
TARGETTYPE=DYNLINK
DLLENTRY=DllEntry
TARGETDEFNAME=$(TARGETNAME)
DEFFILE=$(TARGETDEFNAME).def
TARGETLIBS= \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\coredll.lib \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\ndis.lib \
  $(_COMMONSDKROOT)\lib\$(_CPUINDPATH)\ntcompat.lib \
  $(_COMMONOAKROOT)\lib\$(_CPUINDPATH)\ceddk.lib \

CDEFINES=$(CDEFINES) -DNDIS_MINIPORT_DRIVER -DNDIS51_MINIPORT=1
```

```
#
# if define LBFO then undefine OFFLOAD
# if define OFFLOAD then undefine LBFO, LBFO and OFFLOAD cannot both be defined
# default LBFO and OFFLOAD are not defined
#
# WINCE_PM_ENABLE is not available yet.
#

#CDEFINES=$(CDEFINES) -DLBFO=1

cDEFINES=$(CDEFINES) -DOFFLOAD

#CDEFINES=$(CDEFINES) -DWINCE_PM_ENABLE

CDEFINES=$(CDEFINES) -DUSE_SEND_RCV_LOCKS


SOURCES = \
   mp_main.c  \
   offload.c  \
   mp_init.c  \
   mp_req.c   \
   mp_nic.c   \
   mp_dbg.c   \
   eeprom.c   \
   physet.c   \
   routines.c



OPTIMIZE_FAVOR=SPACE
```

Note that the CDFINES highlighted above have been formatted on individual lines as they were in the original Sources file. This file will cause the source files to be compiled as expected.

Conclusion:

Although it is convenient to view the Sources file parameters in the GUI using the file view, any changes should be made by directly editing the Sources file in the Platform Builder editor. This will eliminate any reformatting of Sources parameters by the GUI.