

GCCE

GCCE (GNU Compiler Collection for Embedded) is an ARM-based compiler used in Symbian OS 9. Before Symbian OS 9, GCC is used to compile for the target. It is intended for building third party applications. It cannot be used to compile the full operating system.

GCCE is developed by CodeSourcery in partnership with ARM Ltd. It is developed based on the GNU Toolchain for ARM processors.

GCCE is distributed together with the Symbian OS 9 SDKs, including S60 3rd Edition SDK and UIQ 3.0 SDK.

GCCE compiler solutions

GCCE 3.4.3 does not produce right description for the parent class "CAknAppUi" which has quite some inheritance and data members.

```
04424c: 109 = 0x13 (DW_TAG_structure_type)
04424d: DW_AT_sibling 0x21137 (0x4426a)
044251: DW_AT_name CAknAppUi
044255: DW_AT_declaration 0x1
044256: 12 = 0x2e (DW_TAG_subprogram)
044257: DW_AT_external 0x1
044258: DW_AT_name CAknAppUi
04425c: DW_AT_type 0x21137 (0x4426a)
044260: DW_AT_artificial 0x1
044261: DW_AT_declaration 0x1
044262: 9 = 0x5 (DW_TAG_formal_parameter)
044263: DW_AT_type 0x21137 (0x4426a)
044267: DW_AT_artificial 0x1
044268: 0 null
044269: 0 null
```

Using a newer version of GCCE, the 2007q1-21 release of Sourcery G++ Lite (GCC 4.2.0) from Codesourcery.com solves this problem. However, the new version of GCCE does not work directly with the SDK (S60 3.1), issuing these errors:

```
<-----
/Symbian/9.2/S60_3rd_FP1/EPOC32/include/aknquerydialog.h extra qualification
'CAknQueryDialog::' on member 'FindControlOnAnyPageWithControlType'
  S60_Gui_01      line 462

/Symbian/9.2/S60_3rd_FP1/EPOC32/include/d32locd.h
array bound is not an integer constant
  S60_Gui_01      line 179
----->
```

To fix the compile errors:

1. Modify the file

```
C:\Symbian\9.2\S60_3rd_FP1\Epoc32\include\d32locd.h
```

by commenting out these lines:

```
__ASSERT_COMPILE(_FOFF(TLocalDriveCaps,iSize)%8 == 0);
```

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```
__ASSERT_COMPILE(_FOFF(TLocalDriveCapsV3,iFormatInfo.iCapacity) % 8 == 0);
```

2. Also modify the file

```
C:\Symbian\9.2\S60_3rd_FP1\Epoc32\include\aknquerydialog.h
```

by changing the line:

```
CCoeControl* CAknQueryDialog::FindControlOnAnyPageWithControlType(...) const;
```

to

```
CCoeControl* FindControlOnAnyPageWithControlType(...) const;
```

Internal links

- [RVCT](#)
- [GCC](#)
- [Microsoft C++ compiler](#)
- [Nokia x86 compiler](#)