

Composer Advanced Install Kit (AIK)

Session 780

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Capabilities and Features

- Creates Dynamic Link Libraries (DLLs) for Procedure Steps, Action Blocks, and Referential Integrity Triggers
- Full integration into the Composer Build Tool
- Support for Oracle PRO*C 1.5.10
- Microsoft Visual C++ 1.5.x bug workaround



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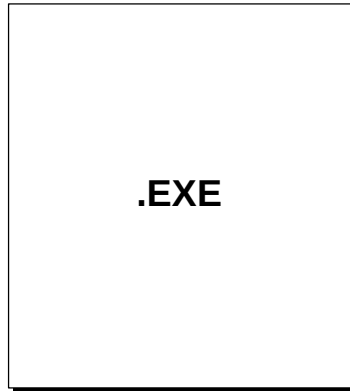
Operating Systems

- 16-bit operating system – Windows for Workgroups
 - 64K limit for data
 - 64K limit for each code segment
 - 16-bit applications run slower than 32-bit applications
- 32-bit operating systems:
 - Windows NT
 - Windows 95
 - OS/2

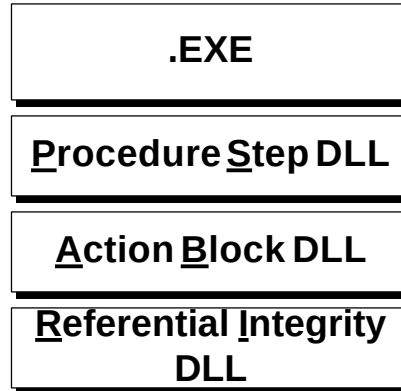


Executable Comparison

WITHOUT AIK



WITH AIK



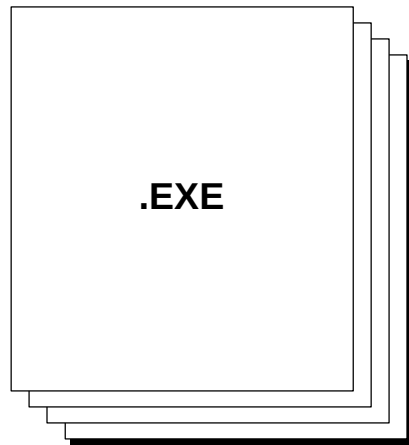
Advantages of DLLs

- Package more procedure steps into one load module
- Increase performance
- Decrease the number of database connections
- Reduce the executable size
- Larger Windows applications

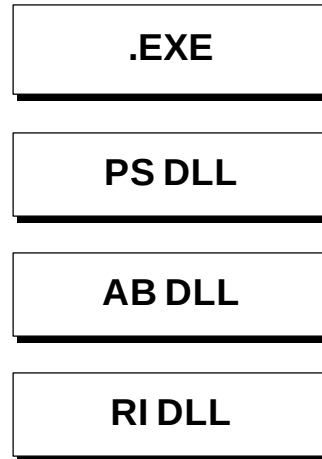


Executable Comparison

WITHOUT AIK



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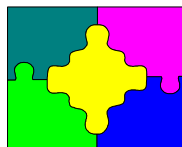
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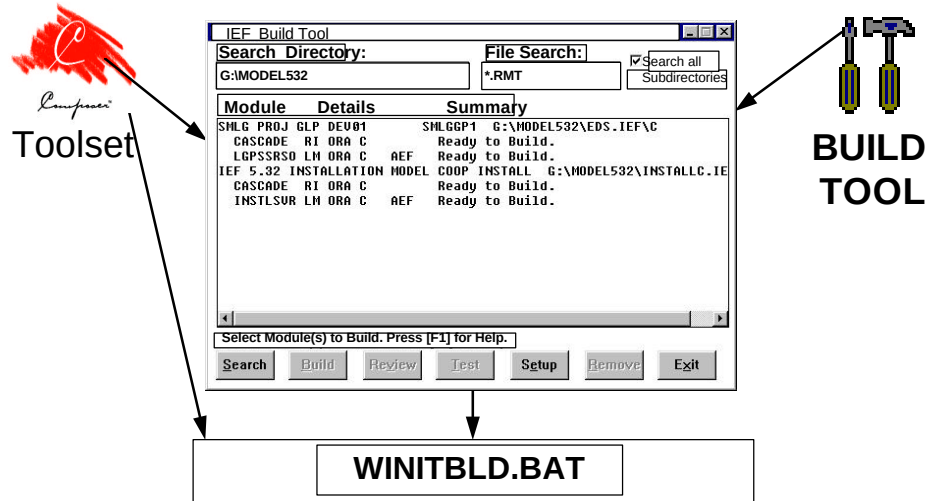


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Create an Executable without the AIK

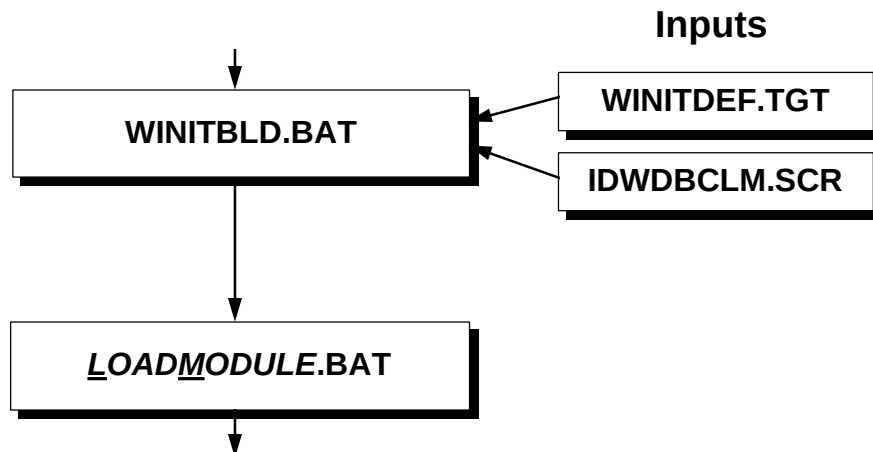


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Create an Executable without the AIK

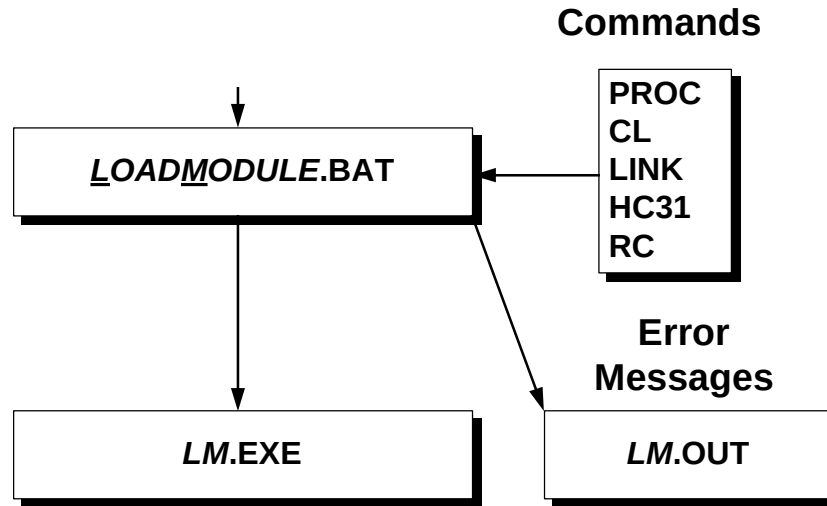


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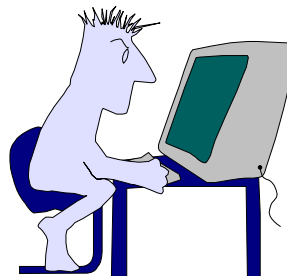


Create an Executable without the AIK



Installation of the AIK

- Step 1 – Save files that will be overwritten
 - WRI530W.DLL
 - WRINFW.LIB
 - WINITDEF.TGT
- Step 2 – Copy all AIK files to the Build Tool directory



AIK Configuration Files

- WINITDEF.TGT – Composer Build Tool parameters
- ORACLE.INI – Oracle PRO*C 1.5.10 parameters



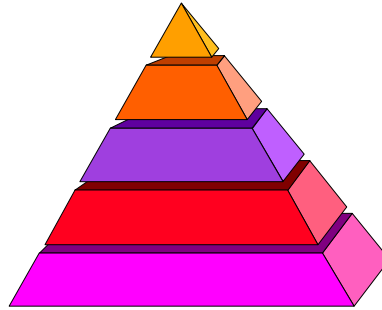
AIK Configuration Files

- *WINITDEF.TGT* – *Composer Build Tool parameters*
- ORACLE.INI – Oracle PRO*C 1.5.10 parameters



WINITDEF.TGT

- Location Parameters
- Optimization Parameters
- Enabling Parameters



WINITDEF.TGT



- ***Location Parameters***
- Optimization Parameters
- Enabling Parameters



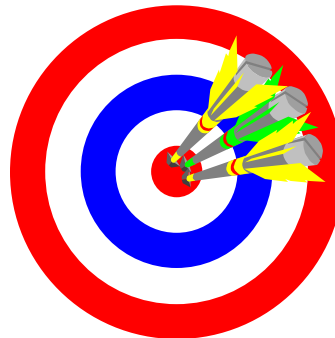
WINITDEF.TGT Location Parameters

- LOC.PROC
 - **PROCWIN** is for PRO*C 1.5.10
 - PROCDOS is for PRO*C 1.5.6 or 1.5.9
- LOC.ORACLEHOME
 - C:\ORAWIN



WINITDEF.TGT

- Location Parameters
- ***Optimization Parameters***
- Enabling Parameters



Optimization Parameters

- LOC.PROCESSOR (-G)
- LOC.OPTIMIZE (-O)
- LOC.xx_THRESHOLD (-Gt)
- LOC.xx_SEG (/SE)
- LOC.xx_ALIGN (/ALIGN)
- LOC.LIBPAGE



LOC.PROCESSOR (-G)

- 286 – default processor
- 386 – for compact code
- 486 – for fast 486 code
- P5 – for native Pentium code



LOC.OPTIMIZE (-O)

- Default – default optimizer
- Speed – optimize for speed
- Standard – generates compact code
- Space – aggressive space optimization



LOC.xx_THRESHOLD (-Gt)

- RI – referential integrity (default: 1)
- WM – window manager (default:16)
- PS – procedure steps (default: 12)
- AB – action blocks (default: 8)



LOC.xx_SEG (/SE)

- RI – referential integrity (default: 600)
- LM – window manager (default:1200)
- PS – procedure steps (default: 800)
- AB – action blocks (default: 600)



LOC.xx_ALIGN (/ALIGN)

- RI – referential integrity (default: 16)
- LM – window manager (default: 256)
- PS – procedure steps (default: 32)
- AB – action blocks (default: 32)



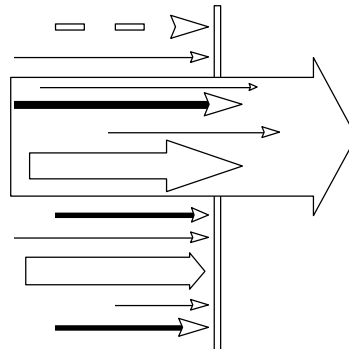
LOC.LIBPAGE (/PA)

- Set to 32
- Without this parameter, the LIB function would default to 4



WINITDEF.TGT

- Location Parameters
- Optimization Parameters
- *Enabling Parameters*



Enabling Parameters

- LOC.xx_DLL
- LOC.AUTODETECT
- LOC.RECOMPILE
- LOC.HELP
- LOC.CODEVIEW



LOC.xx_DLL

- LOC.RI_DLL (YES/NO)
- LOC.PS_DLL (YES/NO)
- LOC.AB_DLL (YES/NO)
 - Load module names must be ≤ 6 characters when generating DLLs
 - If LOC.PS_DLL is set to YES then LOC.AB_DLL is automatically set to YES



LOC.AUTODETECT

- LOC.AUTODETECT (YES/NO)
- LOC.RECOMPILE (YES/NO)
 - Microsoft Visual C++ bug in version 1.5.x is only visible at runtime
 - » 'Couldn't Start Load Module'
 - » 'Not Enough Memory'
 - » Failure to start without any error message

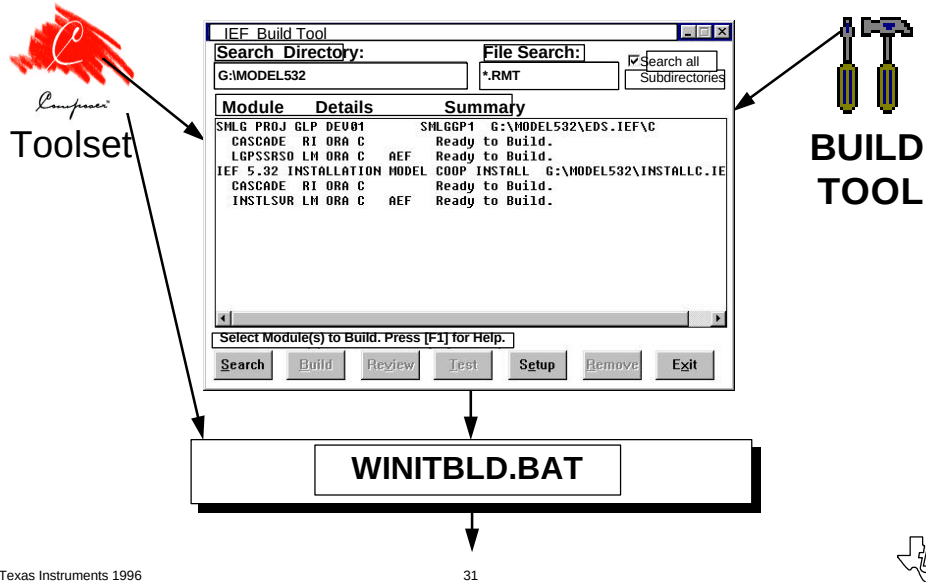


LOC.HELP

- LOC.HELP (YES/NO)
 - Enable/Disable the help compiler
 - Help compiler is a memory hog
- LOC.CODEVIEW (YES/NO)



Create an Executable with the AIK

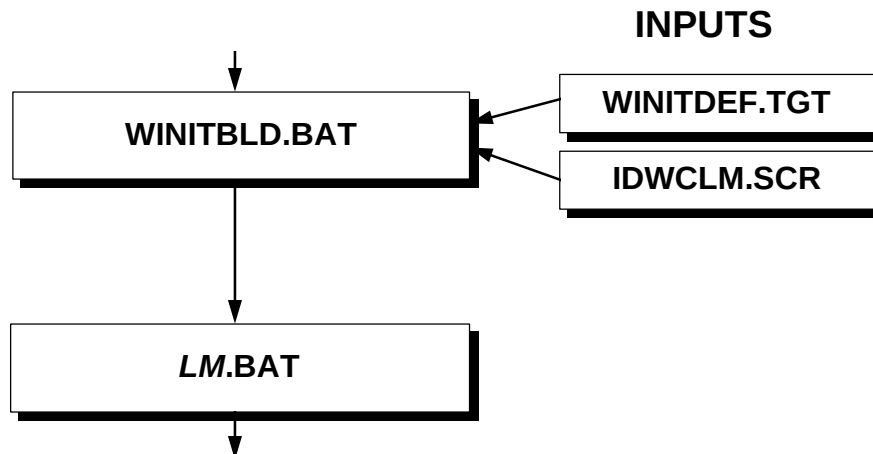


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Create an Executable with the AIK

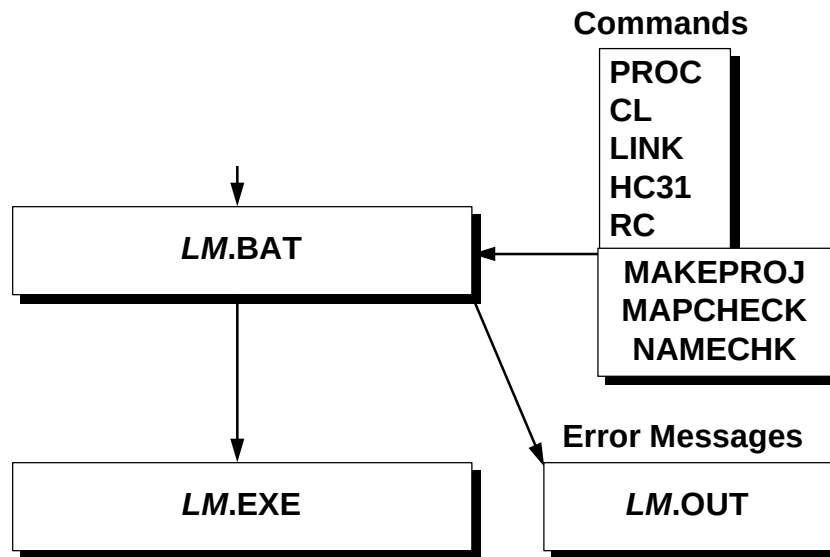


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Create an Executable with the AIK



AIK Configuration Files

- WINITDEF.TGT – Composer Build Tool parameters
- ORACLE.INI – Oracle PRO*C 1.5.10 parameters



ORACLE.INI

- ORACLE.INI – located in build tool directory
 - VERSION=1.5.10
 - IREC=256
 - OREC=256
 - SQLCHECK=NONE
 - SQLMODE=ANSI
 - INCLUDE=C:\ORAWIN\PRO15\C

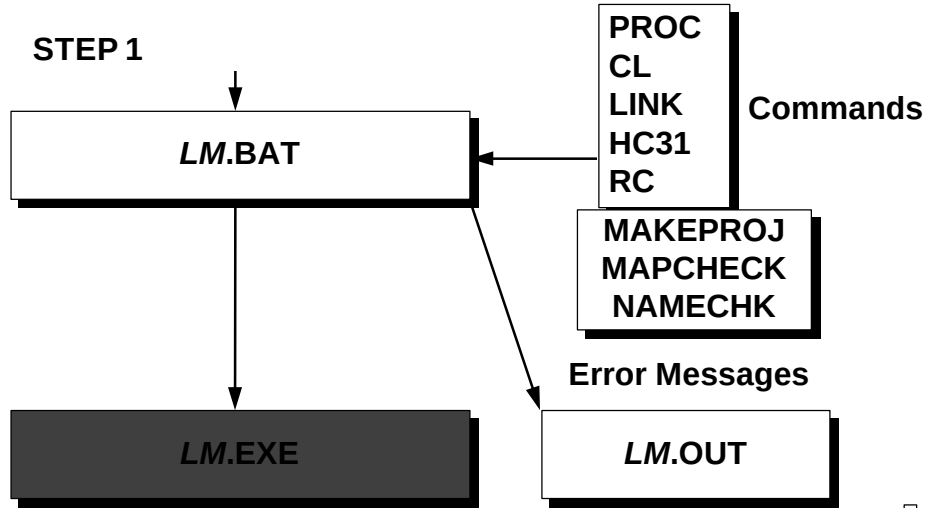


ORACLE PRO*C 1.5.10

- Native Windows executable (cannot be executed in DOS)
- Standard Composer batch file will not run
- Load module installation requires a 3-step process
 - Step 1: Run 'Build', receive 'Run Oracle PRO*C First'
 - Step 2: Run PRO*C from icon
 - Step 3: Run 'Build' to complete the install



Creating an Executable with PRO*C 1.5.10

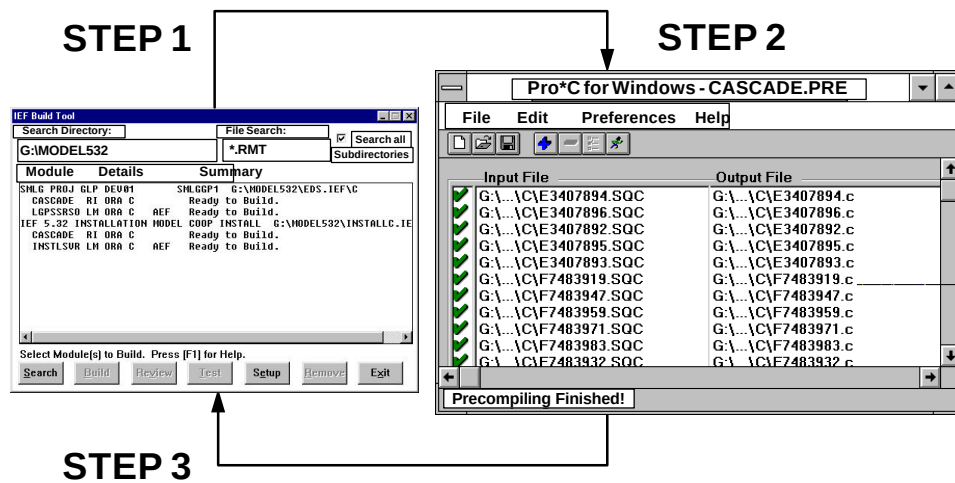


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Creating an Executable with PRO*C 1.5.10



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AIK Default Configuration

- PRO*C 1.5.10
- No DLL generation
- CPU = 386
- Optimization = SPACE
- CODEVIEW = NO
- Automatic detection and recompile = YES



AIK Gotcha's

- The *LM.BAT* is intelligent and will not recompile unless the .OBJ files are deleted
- Delete the .OBJ anytime a parameter is changed in the WINITDEF.TGT



Problem Solving



C1050

- CODE SEGMENT TOO LARGE
 - Change LOC.OPTIMIZE to STANDARD or SPACE
 - Change LOC.PROCESSOR to 386
 - Generate without trace



L1073

- FILE SEGMENT EXCEEDED
 - Change LOC.OPTIMIZE to STANDARD or SPACE
 - Change LOC.PROCESSOR to 386
 - Split load modules into DLLs
 - Generate without trace



L2028

- AUTOMATIC DATA SEGMENT PLUS HEAP EXCEEDS 64K
 - Split load modules into DLLs
 - Generate without trace



L1070

- SEGMENT SIZE EXCEEDS 64K
 - Set LOC.OPTIMIZE to STANDARD or SPACE
 - Set LOC.PROCESSOR to 386
 - Split load modules into DLLs
 - Generate without trace



CANNOT START LOAD MODULE

- CANNOT START LOAD MODULE
XXXX.EXE (RC=8)
 - Set OPT.AUTODETECT and OPT.RECOMPILE to YES
 - Increase LOC.LM_TRESHOLD to 24, 28 or 32.



U1150

- PAGE SIZE TOO SMALL
 - Increase the value in LOC.LIBPAGE and re-run the CASCADE build



AIK Versions

- 2.0 is for IEF 5.31 or Composer 3
- 1.1 is for IEF 5.2, 5.3, or 5.31
- Composer 4 will not need the AIK-DLLs will be part of a standard install



Windows Tips

- Conventional memory – ensure that at least 500K is available
- Device drivers – load as many as possible in high memory and remove the gadgets
- Disk fragmentation – disk fragmentation slows down all processes



Recommendations

- Design the application to use DLLs
- Package neighborhood procedures in the same load module
- Package many procedures in the same load module



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