

*Getting Started*

# **SIMSCRIPT II.5**



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## SparcStation Getting Started Instructions

### I. Introduction

This guide describes the installation of SIMSCRIPT II.5 release 2.0 for SparcStations running Solaris 2.4 or higher. This release is distributed on CD or tape. It can also be downloaded from CACI's ftp or web sites. The CD distribution also contains the SIMSCRIPT II.5 online documentation viewable with the provided Acrobat Reader 3.0.

### II. System Requirements

#### A. C/C++ Requirements

To run SIMSCRIPT II.5 release 2.0, you must have the SunMicrosystems' C/C++ 4.2 workshop compiler installed on your system. It need not have the debugger and visual development tools. You must also have the SPARC Solaris 2.4 operating system (SunOS 5.4) or higher with Motif installed.

#### B. Disk Requirements

The table below lists the disk space required for the different parts of SIMSCRIPT.

Component	KB
SIMSCRIPT	12986
SIMGRAPHICS I	7070
SIMGRAPHICS II	31878
Total	51934

Examples and demonstration programs require 3 MB. An additional 30 MB of disk space is required for the online documentation.

### III. Installation

#### A. Characteristics of the SIMSCRIPT Installation

##### 1. Software License Protection

The release has built-in software license protection. The CACI license server and license key must be installed before SIMSCRIPT II.5 can be used.

##### 2. Automatic Installation

The SIMSCRIPT standard installation procedure is automatic and allows you to install SIMSCRIPT anywhere in the file system. Root privileges are not required for installing SIMSCRIPT, but they are required for installing the CACI license server and license key. The installation supports the use of SIMSCRIPT in heterogeneous networks (with multiple types of machines), installation on file servers, and is available for use with multiple window systems at the same time.

##### 3. One Directory

All components of SIMSCRIPT must be installed in one directory, the 'SIMSCRIPT home directory'. The executables will go into the subdirectory named **bin**. The libraries will go into the subdirectory named **lib** and the include files will go in the subdirectory **include**.

##### 4. Support for Different Versions of SIMSCRIPT

To access SIMSCRIPT each user must define an environment variable **SIMHOME** in their **.profile/cshrc** and put **\$SIMHOME/bin** into the **PATH**. The installation automatically creates setup scripts that can be copied into the **.profile/cshrc** or can be activated by the **source** command. Details on how to 'source' a setup are provided in paragraph B, SIMSCRIPT Installation—Step-by-Step. With the **source** command you can install different versions of SIMSCRIPT and select the version you want to use by 'sourcing' the setup script of the appropriate version. You can also install SIMSCRIPT on a file server (or **NFS**) and use it from different machines.

##### 5. Easy Deletion of SIMSCRIPT

Since all parts of SIMSCRIPT are kept in one directory when installed using the standard installation, deleting SIMSCRIPT from your computer consists simply of removing one directory and its subdirectories.

**B. SIMSCRIPT Installation — Step-by-Step**

## 1. Create a Temporary Directory

The temporary directory will become the “installation source” directory. Go into the installation source directory.

## 2. Distribution Media.

If your distribution is on CD-ROM see (3). If your distribution is on tape see (4).

## 3. Copy the Contents of the CD-ROM

a) Mount the CD as **/cdrom**.

**Note:** Determine if the Volume Manager is running:

```
/usr/bin/ps -ef | /bin/grep vold
```

The Volume Manager is running if you get a response similar to:

```
root 28158 16925 7 13:14:27 1 0:06 /usr/sbin/vold
```

In this case the CD will be automatically mounted. Go to step (b).

If the Volume Manager is not running, become root and mount the CD manually:

```
mkdir -p /cdrom  
mount -F hsfs -r /dev/dsk/c0t6d0s2 /cdrom
```

b) Go to directory **/cdrom/solar**.c) Copy **archive sim20sol.tar** to the installation source directory.

## d) Extract files from the archive by typing:

```
tar xvf sim20sol.tar
```

Go to step (5).

4. Copy the Contents of the Tape

The device name for the tape drive is usually **/dev/rst8**. Load the distribution from the tape by typing:

```
tar xvf /dev/rst8
```

5. Results of Tar

The installation program **siminstall** for SIMSCRIPT installation will be in the current directory as well as subdirectories such as **bin**, **lib**, **include**, and **license**.

6. Install the License Server

Obtain root privileges. Go to the **license** subdirectory and type **./INSTALL** to install the license server. Refer to paragraph IV for detailed instructions.

7. Install License Key

Go to the **..cacilm/bin** directory and execute the **installKey** script to install the license key. Refer to paragraph IV for detailed instructions. With the completion of this step you will no longer need root privileges.

8. Install SIMSCRIPT

Go to the temporary directory where you loaded the contents of the CD-ROM or tape and start the script **siminstall** by typing **./siminstall**. The installation program will ask you questions and explain what is happening. Follow the instructions. This will load SIMSCRIPT on your computer. Select defaults shown in “[ ]” by pressing **Return**. For help, type **?**. After answering all questions, you will be asked to confirm that you wish to start the actual installation. The installation will take a few minutes. See Appendix A for a sample installation dialog.

**Note:** SIMSCRIPT will be installed as being “owned” by you, i.e. the login name you used when you installed SIMSCRIPT. Use a login name that is not shared with other people; preferably use a login name that is only used to install software. Then users cannot accidentally destroy parts of SIMSCRIPT, because only the “installer” has write permission on the SIMSCRIPT files. These are the questions you will be asked before installation begins:

- a) **SIMGRAPHICS I or II?** Your platform supports both SIMGRAPHICS I and II, and you will be asked whether you want to install SIMGRAPHICS I or II, or both. SIMGRAPHICS II requires more disk space, but is functionally much more advanced. As of release 1.9 SIMGRAPHICS II is the default SIMGRAPHICS. Installing both is recommended so that you have SIMGRAPHICS I available as a reference and so that it is available to run older models.
- b) **Example Programs?** Specify whether you want the examples installed or not. It is recommended that you install the example programs. They contain useful demonstration programs for some of the new features included in this release.
- c) **Delete Files During Install?** You loaded the contents of the CD-ROM or tape into the installation source directory. You are now asked if **siminstall** is to delete each file from the installation source directory after it successfully installed. If you have enough space and answer no [**n**] to this question, you may clean up the installation source directory after successful installation.
- d) **SIMSCRIPT directory?** Enter the directory under which to install SIMSCRIPT. This directory will become the value of **SIMHOME**, the environment variable that specifies where SIMSCRIPT is located. SIMSCRIPT will be installed in the following subdirectories of **\$SIMHOME**:
- |                    |                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------|
| <b>bin</b>         | binaries                                                                                             |
| <b>lib</b>         | libraries                                                                                            |
| <b>include</b>     | compiler include files                                                                               |
| <b>simgraphics</b> | SIMGRAPHICS I system <b>icon/form/graph</b> files<br>SIMGRAPHICS II system graphics <b>lib</b> files |
| <b>help</b>        | help files/man pages for use with <b>simhelp</b>                                                     |
| <b>simexamples</b> | SIMSCRIPT examples that compile unchanged for both SIMGRAPHICS I and II                              |
- e) **Connecting SIMGRAPHICS to the system's X libraries:**  
SIMGRAPHICS on UNIX systems connects to the 'X Window System' for graphics primitives. On some UNIX systems, such as Sun and HP-UX, there are several versions of the **X** libraries (**X11R4**, **X11R5**) and several toolkits (**Motif 1.1**, **Motif 1.2**, etc.). During installation of SIMSCRIPT you must specify which of the **X** libraries should be used for linking with SIMGRAPHICS.

Currently, release 2.0 of SIMSCRIPT/SIMGRAPHICS supports **Motif** for the SunOS. The installation program will try to find the libraries (**X11, Xt, Xm**) in the standard library directories **/usr/lib** and **/usr/local/lib**. When they are not found there, you must specify the directories where these **X** libraries can be found. Once the location of the **X** libraries is established, a symbolic link is made in the SIMSCRIPT library directory so that the correct libraries will always be used with SIMSCRIPT. If you do not know the location of the libraries, you can complete the installation later by calling **linkxlibs**, separately.

9. Print the **siminstall.log**

After the installation there will be a file **siminstall.log** in the installation source directory. This file lists all the parameters for this installation and lists the directory to which each installed file was copied. Print this file and retain for safe keeping, or copy the file to a safe place.

10. Gain Access to SIMSCRIPT

**siminstall** creates two special files in the **SIMHOME** directory: **setup.csh** and **setup.sh**. These files contain the lines that you may append to your **.cshrc** or **.profile** to gain access to the just installed version of SIMSCRIPT. Alternately, you may add the following line to the **.cshrc** or **.profile** of all SIMSCRIPT users depending on the shell you are using:

```
csh:      source<simhome dir>/setup.csh
```

```
sh or ksh:   . <simhome dir>/setup.sh
```

**Note:** On most systems **libucb** is already defined, and path **/usr/dt/lib** is in **LD\_LIBRARY\_PATH**. If this is not the case on your system, the system will display a message such as:

```
ld: fatal: library -lucb not found
```

Upon receiving such a message, modify your **.cshrc** adding **/usr/ucblib** and **/usr/dt/lib** to your **LD\_LIBRARY\_PATH** and **/usr/ucb** to your path in the following manner:

```
setenv LD_LIBRARY_PATH ".....:/usr/dt/lib:/usr/ucblib"
```

```
set path=(...../usr/ucb)
```

## 11. Check Your Environment Variables

Type the following to check your environment variables:

**printenv**

## 12. Delete the Temporary Directory

Delete the temporary directory created in (1).

# IV. CACI License Manager

CACI License Manager is a floating license server that allows CACI licensed software to run on any client computer on your network. It is typically installed on one central network host machine, but in the case of a single client, the client and the server may be the same machine. The server does not restrict which machines can run software, but it does restrict the number of concurrent users of the software to the number of issued licenses.

### A. Installation Requirements

Only one CACI License Manager should be running on your network. If it is already running on another machine, there is no need to install it on a new machine.

### B. Install License Server

To install the license server go to subdirectory **license** in the “installation source” directory. Execute **.install**. This setup program will copy the server software and utilities to your hard disk and then configure and start the license server. You should execute **.install** with root privileges. This will allow the program to make links to system directories, so that man pages and command utilities can easily be found.

### C. Registration Process

#### Step ONE in the Registration Process:

- a) Note the server code for your computer which will be displayed when you execute the script **installKey** located in the **cacilm/bin** directory.
- b) Note the serial number for your software which was included in a letter accompanying your software.

**Step TWO in the Registration Process:**

Contact the CACI License Manager with your server code and serial number to obtain a license key.

How to Reach the License Manager	
PHONE	(619) 824-5200
FAX	(619) 457-1184
email	license_manager@caciasl.com

**Step THREE in the Registration Process:**

Install the license keys using the script **installKey**.

**D. Post Installation**

If for some reason you have installed more than one license server on your network, you need to set the environment variable that specifies the name of the computer that is acting as the license server. You must set the environment variable **CACILMHOST** to **@hostname** (where **hostname** is the name of the server computer) on each computer which is going to run CACI licensing software. Typically, this is unnecessary, since each client simply broadcasts a license request onto the network without having to know the name of the server computer.

If you power down the server computer, you can have the license daemon automatically restarted or you can restart it manually. To start it manually, simply execute the script **stopServer** which is also located in the **cacilm/bin** directory.

**V. Testing the New Installation**

**Simdemo** offers you a list of example programs. Once you have installed SIMSCRIPT and sourced the appropriate setup script into your shell to select SIMSCRIPT, you can run some of these programs to test the installation. To start example programs type:

**simdemo**

It will offer you a list of example programs. Selecting one will cause this example to be copied under your **\$HOME/simdemos** directory, and will be compiled, linked and executed there.

Copy one or more **simdemo** example programs into your **\$HOME/simdemos** directory. Compile and run the program(s). Experiment with the source code. You will not be affecting anyone else.

You can also copy all **sim\_examples** to *yourdirectory* by using:

**\$SIMHOME/sim\_examples/copyexamples *yourdirectory***

If you have any problems with the installation or questions about the SIMSCRIPT II.5 language, please call CACI Technical Support at (619) 824-5204.



## Appendix A. SIMSCRIPT Installation Example

```
Script started on Thu Aug 28 13:59:52 1997

solar:/distr/simscript2.0/solar[1] siminstall
*****
*
*      SIMSCRIPT II.5  RELEASE 2.0  INSTALLATION
*
*      for Sun Sparc ( Solaris 2.5 ) with Motif
*
*****

      Welcome to the SIMSCRIPT II.5 Installation Program

      Answer the questions or accept the default (given in []) by hitting
      return.
      When you enter '?' at a prompt you will receive a help message
      explaining
      the choice/input required. You can abort the installation dialog at any
      time
      with ctrl-C.

--> Type <return> to continue (ctrl_C to abort) ...

      S I M S C R I P T   S T A N D A R D   I N S T A L L A T I O N
      =====

***** SIMGRAPHICS SELECTION *****:

SIMSCRIPT comes with two graphics systems: 'SIMGRAPHICS I' and
'SIMGRAPHICS II'. You may install either one or both. Make sure you have
enough disk space for the graphics packages (space requirements: see
installation notes).

--> Do you want to install SIMGRAPHICS I (y/n)? [y]:

>>> SIMGRAPHICS I will be installed.

--> Do you want to install SIMGRAPHICS II (y/n)? [y]:

>>> SIMGRAPHICS II will be installed.
```

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\*\*\*\*\* INSTALL DEMOS ? \*\*\*\*\*:

SIMSCRIPT comes with several example programs and demos. You may choose to have these demos installed (i.e. copied to \$SIMHOME/sim\_examples) or just leave them here (in the installation source directory where the tape was copied into). The examples need ca. 1.2 MB disk space.

--> Do you want the examples to be installed (y/n)? [y]:

>>> Examples will be installed also.

\*\*\*\*\* FILE-DELETE DURING INSTALL ? \*\*\*\*\*:

You are installing from the INSTALLATION SOURCE DIRECTORY (current dir) into several 'target' directories. Since especially the graphics libraries and editors/tools are large programs (several MB) you may choose to have each 'source' file deleted from the installation source directory after it has been installed successfully (it would exist twice then).

This saves you from the doubled space requirements during installation but when you want to redo the installation you have to re-load from the tape. You must enter the full word 'yes' or 'no' here.

--> Do you want 'source files' deleted after install (yes/no)? [no]:

>>> 'Installation sources' will NOT be deleted during install.

\*\*\*\*\* SIMSCRIPT HOME DIRECTORY \*\*\*\*\*:

SIMSCRIPT will be installed as a set of sub-directories (bin, lib, etc.) under one directory which is the SIMSCRIPT HOME DIRECTORY. Please specify this 'SIMSCRIPT home directory' below. The parent directory of the SIMSCRIPT home directory must exist and you must have write permission in that directory.

(1) Directory to install SIMSCRIPT under:

--> [ ]:

/da2\_p1/ana/test20/installed/solar

cd /da2\_p1/ana/test20/installed/solar

ok.

>>> SIMHOME = /da2\_p1/ana/test20/installed/solar

-----  
>>> You are about to install SIMSCRIPT by Standard Installation

with SIMHOME = /da2\_p1/ana/test20/installed/solar

- Installing SIMGRAPHICS I : y  
- Installing SIMGRAPHICS II : y  
- Examples copied : y  
- Delete files after install : no

--> If this is correct, press <return> to continue.  
Otherwise press <ctrl-C> to abort and restart siminstall.

Setting up installation (target) directories ...

B E G I N N I N G I N S T A L L A T I O N  
-----

Installing executables:

simc  
simtran  
simxref  
datagraph  
simedit  
simreplay  
sdraw  
simcvt

Installing libraries :

libsim.a  
libsim1.a  
libsim\_p.a  
libsimg1.a  
libSIL1.a  
libsimg2.a  
libSGCI.a  
libSG2\_S.a  
libModSim\_S.a

```
libModSimS_S.a
libSIL_S.a

libsims.so
libSIL1.so
libSGCI.so
libSG2_S.so
libModSim_S.so
libSIL_S.so
```

Installing compiler include files:

```
simc.h
simcfg.h
simcom.h
simrtl.h
```

Installing SIMGRAPHICS I system components :

```
forms
graphs
etc
```

Installing SIMGRAPHICS II system components :

```
SG2 graphic libs
SG2 simdraw resources
```

Installing help pages :

```
simc
datagraph
readme
simedit
simreplay
simdraw
simcvt
```

Copying example programs :

```
Makefile
_cmr
_new_sg2
_non_graphics
_osi
_sim_tools
_tutorial_demos
```

bank  
bounce  
calship  
copyexamples  
dynhist  
eject  
food  
goldmine  
image  
newport  
newshape  
taxi  
tv

Installing scripts:

simcomp  
simhelp  
simdemo  
simcsl  
simlds1  
simdraw  
simld  
tsimld  
simgld1  
tsimgld1  
simgld2  
tsimgld2  
simgld  
tsimgld

-----  
Installation of SIMSCRIPT files complete. The specified installation parameters (directories) and installed files were recorded in the file '/distr/simscript2.0/solar/siminstall.log' in the current directory.

END OF STANDARD INSTALLATION. SIMHOME =  
/da2\_p1/ana/test20/installed/solar

Each user who wants to use this version of SIMSCRIPT has to 'activate' this version of SIMSCRIPT by 'sourcing' the appropriate setup script created in the SIMHOME directory /da2\_p1/ana/test20/installed/solar . Depending on the shell you are using you must type:

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For 'csh' type: source /da2\_p1/ana/test20/installed/solar/setup.csh  
For 'sh/ksh' type: . /da2\_p1/ana/test20/installed/solar/setup.sh

For csh/ksh you can define aliases to select a SIMSCRIPT version.

After SIMHOME is defined, you may call simdemo to get some demos of SIMSCRIPT and SIMGRAPHICS.

Please install your LICENSE KEY before you start using this installation!

```
*****  
***** Connecting to the system's graphics libraries *****  
*****
```

Programs that use SIMGRAPHICS must be linked with your system's graphics libraries (the so-called 'X libraries'). These may be located in different directories. In order for SIMSCRIPT to find and use the correct X libraries, we will now look for these libraries and make symbolic links into the SIMSCRIPT library directory so that the correct libraries will be used with SIMSCRIPT/SIMGRAPHICS.

This version of SIMSCRIPT / SIMGRAPHICS requires the X-libraries of

X11R4 with Motif1.1

--> Type 'i' to get more information in this issue or just return to continue :

We will now search for the X libraries in some standard places. If a library is found there you will be asked if this is the right one. If you answer 'n' (no), we will continue searching. When the library wasn't found anywhere, you will be asked to enter a path to where the library is on your system. When an X library is found and confirmed we will make a symbolic link to it in the SIMSCRIPT library directory so that the proper library will always be used for SIMSCRIPT.

At any time you can enter 'q' as input which will terminate this process. You can call 'linkxlibs' later to complete the installation.

Searching for X libraries in standard places ...

----- checking for: libX11 -----

```
Found these `libXl1.*' in directory `/usr/lib':
/usr/lib/libXl1.so.4
--> Is this the correct version (y/n) [n] ?
y

*** X Library libXl1 found in directory /usr/lib.

Making symbolic links ...

----- checking for: libXt -----

Found these `libXt.*' in directory `/usr/lib':
/usr/lib/libXt.so.4
--> Is this the correct version (y/n) [n] ?
y

*** X Library libXt found in directory /usr/lib.

Making symbolic links ...

----- checking for: libXm -----

Found these `libXm.*' in directory `/usr/dt/lib':
/usr/dt/lib/libXm.so
/usr/dt/lib/libXm.so.3
--> Is this the correct version (y/n) [n] ?
y

*** X Library libXm found in directory /usr/dt/lib.

Making symbolic links ...

*****
***** completed X library linkage *****
*****

-----
Installation of SIMSCRIPT completed successfully.

*****
The help subdirectory contains a file `readme' that contains
last minute information about this release. Read it carefully.
The file will also be copied to your installation and can be read
with `simhelp readme'.
*****
script done on Thu Aug 28 14:08:00 1997
```



## Windows NT and Windows 95 Getting Started Instructions

### I. Introduction

This guide describes the installation of SIMSCRIPT II.5 release 2.0 for Windows NT and Windows 95. This release is fully 32-bit. Models built using it will conform to the Win32 API (Windows 32-bit Application Programming Interface) taking full advantage of your machine's existing 32-bit architecture. This release is distributed on CD. It can also be downloaded from CACI's ftp or web sites. The CD distribution also contains the SIMSCRIPT II.5 online documentation viewable with the provided Acrobat Reader 3.0.

### II. System Requirements

#### A. Processor Requirements

You must have a 80386 or later processor installed in your computer. If it is a 80386 processor, a math coprocessor (80387) is recommended.

#### B. Disk Requirements

You must have a minimum of 24 MB available on your disk to install SIMSCRIPT. You will also need 7 MB to install the C compiler. Additional space will be required on the SIMSCRIPT drive to build the sample programs.

The release contains SIMSCRIPT II.5 online documentation in **.pdf** format. These online documents require an additional 30 MB of disk space.

During SIMSCRIPT installation you will be provided the installation options of **typical**, **compact** or **custom**. Choose an option based on your needs and disk space availability.

#### C. Operating System Requirements

Windows 95 or Microsoft Windows NT Version 4.0 or later are required.

#### D. C/C++ Requirements

To run SIMSCRIPT II.5 release 2.0, you must have Microsoft Visual C/C++ Version 5.0, the professional version, installed on your computer. SIMSCRIPT II.5 Release

2.0 for Windows NT and Windows 95 requires the typical configuration of the C compiler. When you want to use the C compiler directly, e.g. to write C programs that you want to call from SIMSCRIPT II.5, you should do a full installation of Visual C/C++.

### III. Installation

#### A. Characteristics of the SIMSCRIPT Installation

##### 1. Software License Protection

The release has built-in software license protection. The CACI license server and license key must be installed before SIMSCRIPT II.5 can be used.

##### 2. Automatic Installation

The SIMSCRIPT standard installation procedure is automatic.

#### B. SIMSCRIPT Installation — Step-by-Step

##### 1. Remove Older Version

Skip this step if you do not have an older version of SIMSCRIPT II.5 installed.

If you have an older version of SIMSCRIPT II.5 for Windows installed, remove it to avoid conflicts. Delete or rename the **\SIMSCRIPT** directory structure. **SETUP** will try to install the new version of SIMSCRIPT into **\SIMSCRIPT**, again.

Make sure that your environment variables point to your new installation and not a previous one. See step D, Edit Environment Settings, below.

##### 2. Start the Install

To install SIMSCRIPT II.5, insert the SIMSCRIPT CD-ROM into your CD drive. The **Setup** program will start by itself after 30 seconds.

### 3. Set SIMSCRIPT II.5 Installation Parameters:

The SIMSCRIPT II.5 for Windows **Setup** installation program will show a dialog box. You will be able to specify:

- a) The drive and directory where SIMSCRIPT should be installed. Click on the **Change** button if you want to change the default.
- b) Choose the configuration you want to install: **typical, compact** or **custom**. Installation of the online documentation, example programs and tutorial demonstration programs depends on the chosen SIMSCRIPT installation configuration. These items will not be installed if **compact** is chosen. Choosing **custom** allows you to specify which of these items you want installed. In any case, installation will include all of SIMSCRIPT II.5, i.e. the compiler, all the tools and SimLab.

When you click on the **Install!** button, the installation will begin. After the installation is complete, a program group named **CACI SIMSCRIPT II.5 Rel 2.0** will have been created in the Windows **START Programs** group pointing to SimLab. All the SIMSCRIPT II.5 integrated tools including the compiler, the SIMGRAPHICS II graphical editor SimDraw, the SIMGRAPHICS I graphical editor SimEdit, and Datagraph can be activated through SimLab.

### 4. Edit Environment Settings

After installation you must modify your environment to add **simscript\_dir \BIN** to the **PATH** environment variable, **simscript\_dir\LIB** to the **LIB** variable and **simscript\_dir\INCLUDE** to the **INCLUDE** environment variable. **Simscript\_dir** is the directory where the new SIMSCRIPT II.5 Release 2.0 was installed.

If you are a Windows NT user use the **Control Panel** application to modify your environment. **Control Panel** can usually be found in the **My Computer** program group. Select the **System** icon from within the **Control Panel**. Under **System Environment Variables** there should be entries for **Include, Lib,** and **Path**. If these entries do not exist, simply use the **Variable** and **Value** boxes at the bottom of the dialog to create them. For example, to create the **LIB** environment variable,

**Variable: LIB**  
**Value: c:\simscript\_dir\lib**

Press the **Set** button to the right. Then, repeat the process for **PATH** and **INCLUDE**. If the environment variables already exist, simply select the one you want to edit in **System Environment Variables**, and then move to the **Value** box and edit the contents of the box. Changes to the environment variables take place immediately in Windows NT. However, if SimLab was running during the time you made these changes, you will need to close SimLab and start it up again.

The **PATH**, **LIB** and **INCLUDE** environment variables must be modified to include entries which point to the C++ compiler.

For Microsoft Visual C++ version 5.0 (assuming the installation directory for C++ is **c:\devstudio**):

<b>PATH</b>	<b>c:\devstudio\vc\bin</b> <b>c:\devstudio\sharedIDE\bin</b>
<b>INCLUDE</b>	<b>c:\devstudio\vc\include</b>
<b>LIB</b>	<b>c:\devstudio\vc\lib</b>

For Microsoft Visual C++ 4.2 (assuming the installation directory for C++ is **c:\msdev**):

<b>PATH</b>	<b>c:\msdev\bin</b>
<b>LIB</b>	<b>c:\msdev\lib</b>
<b>INCLUDE</b>	<b>c:\msdev\include</b>

If you are a Windows 95 user edit the **AUTOEXEC.BAT** file located in the root directory of the boot drive in order to modify the environmental variables. Restart Windows 95 so that the changes in the **AUTOEXEC.BAT** can take effect. Refer to Appendix B for **AUTOEXEC.BAT** additions.

## 5. Verify Environment Variables

Use the MS-DOS icon to open a window in DOS. Type **SET** at the command line and press **Return**. This will give you a listing of all the environment variables.

Using the window into DOS, type **CL** at the command line to verify that the C++ compiler environment is correctly set. This should give you the name and release of the Microsoft Visual C++ compiler. If it does not, then you may have a typographical error in the **PATH**.

Using the window into DOS, verify that the correct linker is being found by typing **LINK** at the command line. This should give you a Microsoft 32 bit linker. If it does not, then you may have an identically named linker in one of the directories which appears before the C++ directory in your **PATH**.

## IV. CACI License Manager

The SIMSCRIPT II.5 product is protected through the use of the CACI License Manager.

### A. Mode of Operation

The License Manager can operate in three modes:

- Single Machine License where the license is tied to a particular machine.
- Floating License where a License Server resides on a machine on the network.
- Hardware License where a dongle is attached to the computer's parallel port.

If you have purchased a Single Machine License, perform the instructions in paragraph B, Configuration of a Single Machine License. If you have purchased a Floating License, perform the instructions in paragraph C, Configuration of a Floating License. If you have purchased a Hardware License, perform the instructions in paragraph D.

### B. Configuration a Single Machine License

Open SimLab and:

1. Select **Options - License Manager**.



2. Select **Single Machine License**.
3. Press the **Register Now** button.



4. Note the **HOSTCODE**.
5. Assemble the following information in preparation for contacting CACI Products Company for a license:
  - **HOSTCODE**
  - MODSIM III serial number
  - Your name and organization
  - Contact information: email, telephone, and FAX.
6. Contact the CACI Products Company License Manager and request a license.

How to Reach the License Manager	
PHONE:	(619) 824-5200
FAX:	(619) 457-1184
email	license_manager@caciasl.com

7. When you have received a License Key, open SimLab and:
  - a) Select **Options - License Manager**.
  - b) Push the **Register Now** button.
  - c) Enter the license key and press **OK**.

### C. Configuration of a Floating License

You must install the license server software on the machine you wish to designate as the license server. The license server software is located on your CD in the subdirectory:

**win32/license**

To install the license server, read the **README.TXT** file and then execute the install program by running **setup.exe**.

On client machines you must configure Simlab to use the floating license. To do this:

1. Open SimLab and select **Options - License Manager**.
2. Select **Floating License** and press **OK**.



#### D. Configuration of a Hardware License

Open SimLab and:

1. Select **Options - License Manager**.
2. Select **Hardware License (Dongle)**.



3. Press the **Install Driver** button.
4. Add the dongle to your computer's parallel port.

#### IV. Testing the New Installation

Once the installation is complete and you have registered the license, you can test the installation.

1. Verify online documents are available by starting SimLab, and choosing **Help** from the main menu. Select one of the listed manuals and observe that the document opens.
2. Run some sample programs to try out your new SIMSCRIPT II.5 for Windows release 2.0. The example models shipped with release 2.0 are:

<b>Bank</b>	A bank with one waiting queue and multiple tellers.
<b>Bounce</b>	Demo of bitmaps and continuous simulation.
<b>CalShip</b>	New port model that demonstrates multiple graphics windows.
<b>DynHist</b>	Demo of the automatic graphical display of internal simulation variables (dynamic histogram feature).

<b>Eject</b>	Pilot ejection model (continuous simulation).
<b>Food</b>	A fast food restaurant simulation containing abundant graphics.
<b>Goldmine</b>	A goldmine with two shafts and one lift.
<b>Port</b>	A simple port model.
<b>Shape</b>	Demo of the animation/ 'velocity' construct.
<b>Bounce</b>	Demo of bitmaps and continuous simulation and palettes.
<b>Taxi</b>	Demo of resources, graphic entities and graphs.
<b>TV</b>	Resources and queues in a TV test station.

All example programs can be linked with SIMGRAPHICS I or SIMGRAPHICS II, except for **CalShip**, **Food** and **Bounce** which need SIMGRAPHICS II.

To try the **Bank** example program:

1. Start SimLab and select **Project new ....** Go to the **examples/bank** directory.
2. Write **bank** as the **Project Name** and the **File Name**.
3. Select **Project Import**. Click on **bank.src** to import the source code.
4. Select **Options..., Project, - Simgraphics II Application**. Select **Project.Rebuild All** to build the program. After the build is complete, select **Project.Execute** to run the model.
5. Repeat the procedure for other example programs.

For more information on using SimLab, refer to the *Windows SIMSCRIPT User's Guide*. For information on using the SIMGRAPHICS II graphical editor, refer to the *SIMGRAPHICS II for SIMSCRIPT II.5 User's Guide*.

If you have any problems with the installation or questions about the SIMSCRIPT II.5 language, please call CACI Technical Support at (619) 824-5204.



## Appendix B. Example of the AUTOEXEC .BAT Additions for Windows 95

If you are using MS C/C++ 4.2 installed in the default directory **c:\msdev**, you must add:

```
PATH %PATH%C:\MSDEV\BIN;  
SET INCLUDE=C:\MSDEV\INCLUDE;  
SET LIB=C:\MSDEV\LIB;
```

If you are using MS C/C++ 5.0 installed in the default directory **c:\devstudio\vc**, you must add:

```
PATH %PATH%C:\DEVSTUDIO\VC\BIN;C:\DEVSTUDIO\SharedIDE\bin;  
SET INCLUDE=C:\DEVSTUDIO\VC\INCLUDE;  
SET LIB=C:\DEVSTUDIO\VC\LIB;
```

If you installed SIMSCRIPT in the default directory **c:\SIMSCRIPT**, you must add:

```
PATH %PATH%C:\SIMSCRIPT\BIN;  
SET INCLUDE=%INCLUDE%C:\SIMSCRIPT\INCLUDE;  
SET LIB=%LIB%C:\SIMSCRIPT\LIB;
```

