Chapter 1

Introduction

C* is an extension of the C programming language designed for the Connection Machine data parallel computing system. This chapter presents an overview of the process of developing, executing, and debugging a C* program on a CM-5 system. The rest of this manual goes into the process in more detail.

1.1 Developing a C* Program

Develop C* source code in one or more files. Use the suffix **`.cs`** if the file contains parallel code or any other features that C* adds to Standard C (for example, the new **`<?=`** and **`>?=`** operators). Chapter 2 describes facilities for developing a C* program. It also describes how to call functions in CM libraries, as well as CM Fortran subroutines.

1.2 Compiling a C* Program

Compile the files by issuing the command **`cs`**. The command can take various options, some of which are identical to options for the C compiler **`cc`**. Chapter 3 describes the compiler options and the compiling process in detail.

1.3 Executing a C* Program

You execute a C* program on a CM-5 partition manager, just as you would any UNIX program or command. You can also submit the program as a batch request to NQS, the CM's batch system.

Executing a C* program is discussed in more detail in Chapter 4.

1.4 Debugging a C* Program

You can debug and analyze the performance of your C* program using Prism, the CM programming environment. Prism is described briefly in Chapter 5.