

## **Par.C System v 1.3 update information**

Parsec Developments proudly presents version 1.3 of the Par.C System for transputer networks. This version is available as cross system running on IBM-PC, Sun 3/4, OS-9, and as native system running on the transputer with a loader/server running under Helios or MultiTool.

### **Main improvements since version 1.22**

#### **File I/O available from all processes on all transputers**

- Every process on every transputer has direct access to all file I/O functions.
- Messages to the host machine's file system are automatically routed and multiplexed over the shortest connections to the host.
- Nothing needs to be indicated in the source code or in a configuration file: when file I/O functions are used, the file system is automatically installed.
- When the source does not contain calls to file I/O functions, the file system is not installed, i.e. it does not take up unnecessary memory space and processor time.

#### **Static and dynamic configuration of parallel programs**

- Code can be placed on specific transputers using a simple scriptfile.
- Each piece of code is a complete, separately compiled and linked, C program.
- Each processor is booted by a neighbour with an executable program which is read from disk at runtime.
- To match the hardware topology, a scriptfile outline can be generated automatically. The programmer merely has to add program names and argument strings.
- Changing the program configuration is merely a matter of editing this ASCII scriptfile and re-running the program.
- The entire range between completely static and fully dynamic placement is now available.

## **Further enhancements**

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### **Debugging parallel programs with the file I/O system**

- Each process can print status information to the host machine using the enhanced file I/O system.

### **Shared file access from multiple processes**

- Opening files in the new 'shared' mode gives multiple processes access to the same files.
- Special functions are available which combine ftell( ) and fseek( ) with fread( ) and fwrite( ) into indivisible actions, for use with shared files.
- Very useful when parallelising database processing systems.
- No need to write a master process dividing the work over the available workers (this would involve doing message routing and multiplexing in your transputer program yourself).

### **Include Par.C loader/server in your host application**

- The host processor can be used in parallel with the transputers by starting a transputer program from your host application and fetching the results later. In the meantime, why not use your host processor ?
- Host fileserver available as libraries for PC, SUN 3/4 and OS-9.
- Extra host I/O functions can be added to the system through the User( ) functions in the server.
- 65 pages description of the server library functions in the new Par.C System manual.

### **ROM-code configurer**

- RUN2ROM rewrites an executable single-transputer program to the correct input format for a variety of EPROM programmers.

## **How to obtain an update:**

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- Directly from Parsec Developments: please use the enclosed order form. For more information please contact us at +31 71 131000 (phone) or +31 71 134449 (fax).
- From your dealer.