Microware Supports MBX

Microware has ported its OS-9 Real-Time Operating System to the Motorola MBX family of small form factor Single Board Computers for embedded applications.
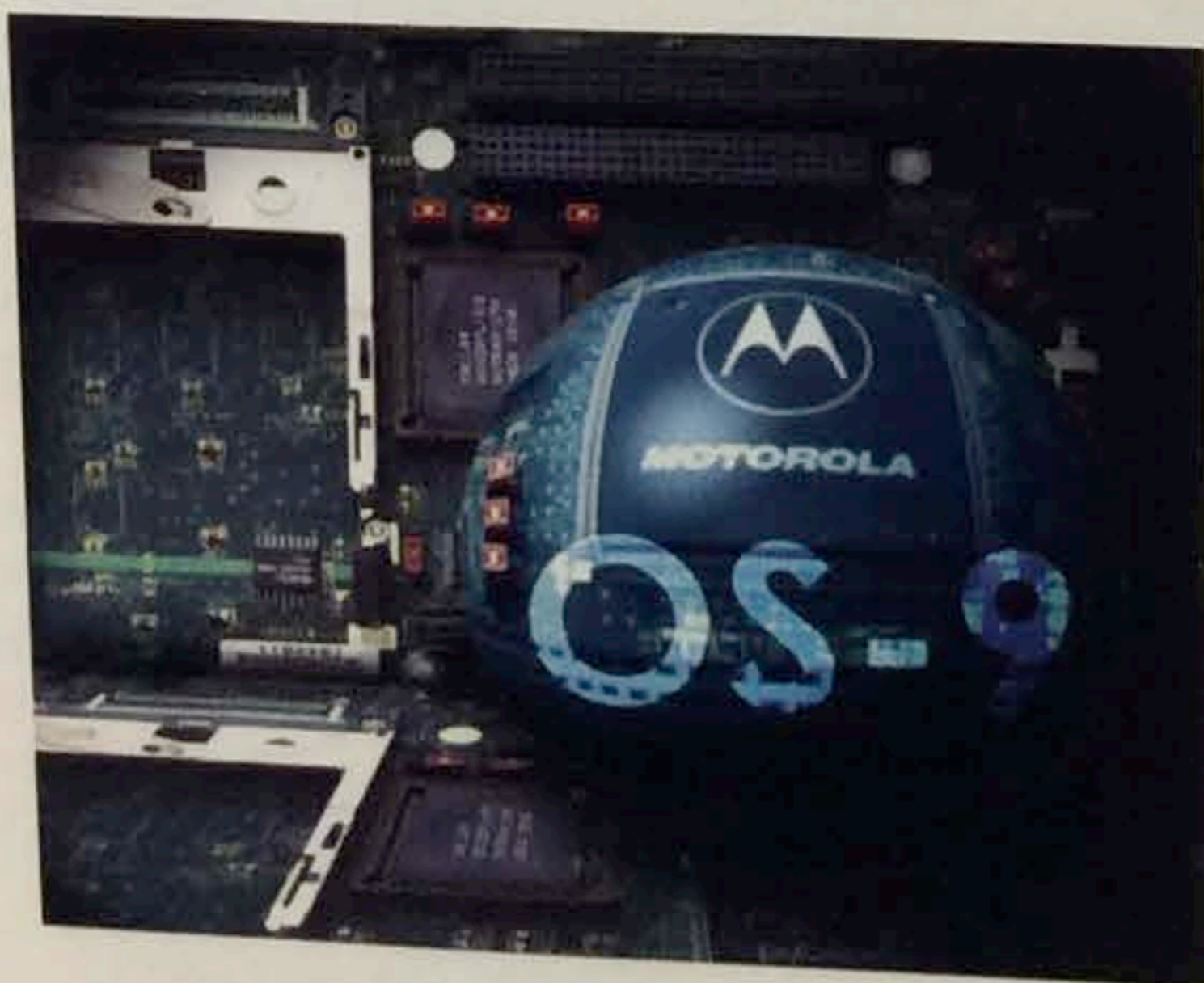
For development purposes a complete copy of OS-9, plus On-Line Documentation, is available in a Shrinked Wrapped Package. Also included is a copy of Microware's FasTrak for Windows Cross Development Environment. Customers may also purchase an optional Java for OS-9 Starter Kit.

"I am very pleased that Microware Systems provides software support for our MBX product family" said Paul Stevens, Marketing Manager, Motorola Computer Group, Europe. "The availability of the Java Virtual Machine will help ensure the adoption of Java in high volume applications, for which both the Motorola and Microware Systems' products are so ideally suited".

OS-9 for MBX includes the OS-9 Kernel, mwSoftStax Communications Software, Microware's mwMAUI (Multimedia Application User Interface) graphical environment for small memory footprint applications, CardSoft PCM-CIA software along with PC/104 and PC/104+ support. Also included is support for the super I/O 37C672 controller found on the standard version of the MBX.

For more information enter no. 1

http://www.microware.com

Microware's OS-9 Year 2000 Compliant

To ensure Year 2000 software compatibility to our valued customers, Microware has adopted the Year 2000 Standard prepared by British Standards Institution Committee (BDD/1/-/3).

This standard ensures compliance by providing four basic rules:

1. No value for current date will cause any interruption in operation.
2. Date-based functionality must behave consistently for dates prior to, during, and after the year 2000.
3. In all interfaces and data storage, the century in any date must be specified either explicitly or by unambiguous algorithms or inferencing rules.
4. Year 2000 must be recognised as a leap year.

The following Microware products are included in our Year 2000 accommodation efforts. For Year 2000 information on products not listed, please contact your local Microware office.

Microware OS-9 Development Tools. All currently supported Microware OS-9 development tools are Year 2000 compliant, including Microware's FasTrak.

Microware OS-9 for 68K V3.0.3 All components meet Year 2000 compliance and will remain valid until at least the Year 2038. (If you have licensed Microware DAVID products for this processor please contact your Microware Account Manger for specific information on Year 2000 compliance).

Microware OS-9 for 68K V2.4 This version of OS-9 is not a currently supported product, but remains in use by several Microware customers. The solution for these active customers pertains to the utilities and the PC File Manager module, which currently do not recognise the year 2000 as a leap year. A Year 2000 compliance product has been released, which means all components will remain valid until at least the year 2038.

microware

Microware OS-9 for PowerPC, X86, and ARM V2.1 and V2.2 Requires a modification in the utilities and the PC File Manager module, which currently do not recognise the Year 2000 as a leap year. These updates have been completed, and are the only change required for Year 2000 compliance. All components will remain valid until at least the year 2038.

Future updated versions of the above-listed products will be released under 100% compliance with Year 2000 standards. Until the release of those updates, Microware will be offering Year 2000 fixes as separate packages. Please contact your local Microware office for pricing information.

For more information enter no. 2

Nortel Licenses OS-9

Telephone users will be able to navigate through the expected onslaught of available mobile services with ease, thanks to the next generation of Nortel wireless telephones and Microware Systems' OS-9 Real-Time Operating System.

Microware will work with the telecommunications leader to provide a leading edge Java-based wireless telephone incorporating the OS-9 Operating System.

The collaboration between Nortel and Microware will result in a Java-based wireless communication product with increased flexibility and intuitiveness. Users will be able to securely access and download nearly any service that mobile telephone companies choose to offer, from on-phone faxes to personal directories.

"As a market leader in the wireless telephone infrastructure market, Nortel has made great technological and business advancements in this expanding industry," said Martin Allen, Managing Director of Microware. "We are confident that when the new wireless telephone is delivered, it will be widely accepted by mobile telephone companies and consumers alike."

"As one of the first embedded systems companies to license Java from Sun Microsystems, Inc., Microware has demonstrated that they are far ahead of others in their development of embeddable Java," said Phil Teret, Global Product Manager of Advanced Wireless Terminals, Nortel. "As such, their OS-9 system optimises all that Java can offer, making it an excellent fit for our next generation of wireless phones."

For more information enter no. 3

microware

Microware Announces Hawk

Microware Hawk is a completely open environment designed to support the embedded industry's popular third-party development tools such as compliers, in-circuit emulators, debuggers, and testing tools. Hawk's well-documented, open environment makes it easy to target OS-9.
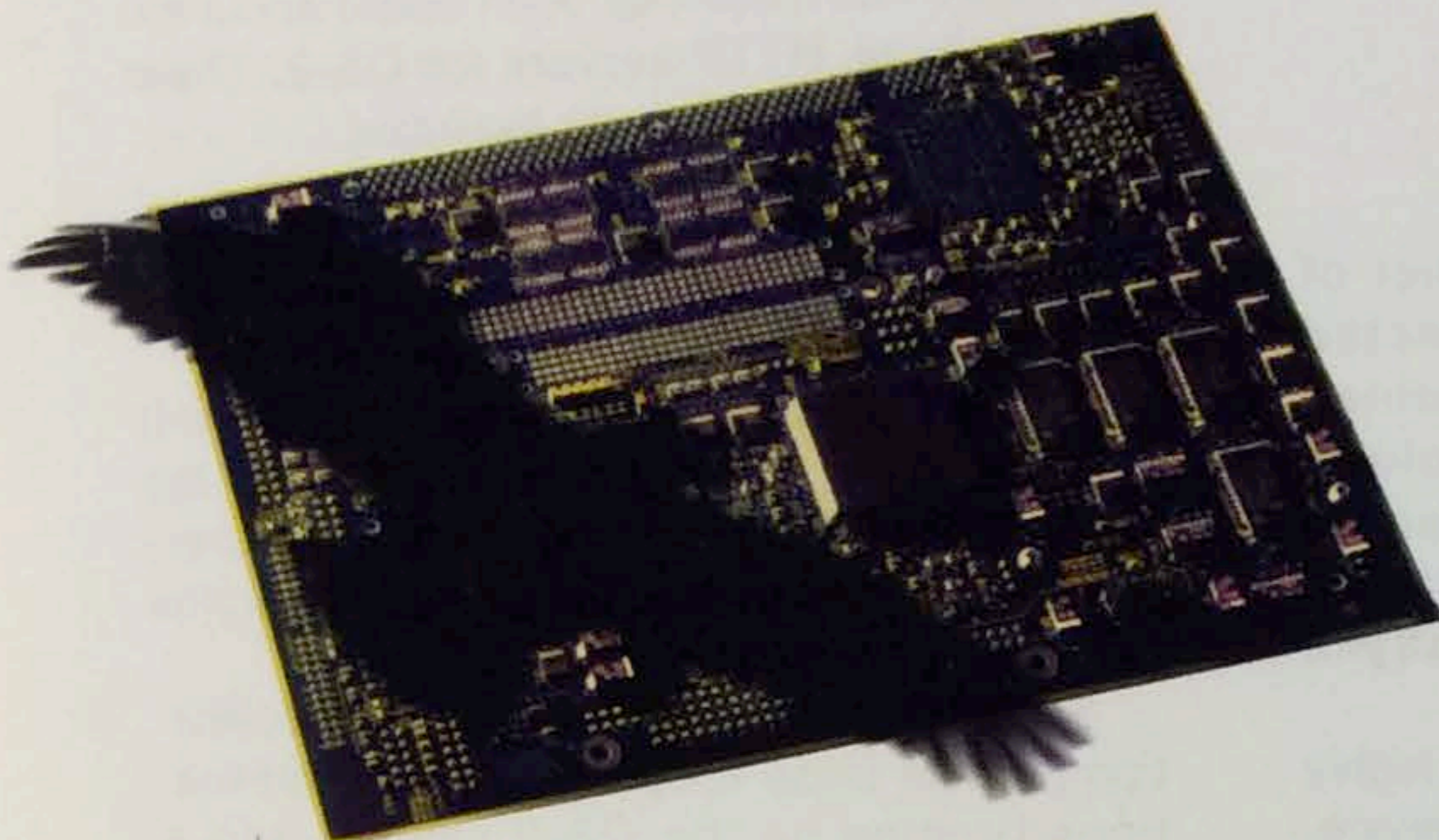
"We want software developers to get to market with their products as fast as possible," said Trefor Hooker, European Marketing Manager. "By creating an open interface to our development environment, we are enabling the industry's manufacturers to build support for OS-9. Hawk's extensive third-party support consists of hundreds of APIs for extending the user interface, enabling host-target communication, adding in-circuit emulator support to the debugger, and other developer-friendly features. In addition, Hawk users can easily customise windows, toolbars, menus, and more to create a unique and productive environment for each developer."

Microware Hawk features a powerful set of core development tools for OS-9. Hawk takes the best of Microware's well known FasTrak IDE and adds compelling new features such as:

• **Project Manager** - Controls complex projects containing dozens of source files with detailed build options.

• **Programmer's Editor** - Saves time and enhances productivity through Syntax Colouring, Selective Display, Difference Editing, Version Control, customisable toolbar and menu, and API Assistance for point-and-click ease of use.

• **Ultra C/C++ Complier** - Highly-optimising complier uses state-of-the-art techniques to extract maximum performance from modern 16- and 32-bit RISC and CISC microprocessors.

• **Source Level Debugger** - Easy debugging of C and C++ code using powerful features like source and assembly level breakpoints, display/change registers, view locals, watchpoints, directly view/change memory, stack back-tracing, easy-to-use interface, system or process level debugging.

• **Open architecture** - The Microware Hawk environment is open in nature, allowing use of preferred version control software.

A new Hawk Partners Program is being launched to recruit and support new embedded industry development solutions. This new network of strong partnerships and industry-leading tools support will increase customer productivity and decrease OS-9 users' time-to-market.

Microware Hawk has general availability targeted for the third quarter calender 1998. For more information about availability and pricing, please contact your local Microware office.

For more information enter no. 4

The Essential Real-Time Software Seminar

Microware are currently staging a series of one day seminars to enhance your knowledge of recent and future developments in Real-Time systems solutions.

These seminars will increase your understanding of the alternatives available and enable you to handle complex Real-Time software projects more effectively.

- 28th April '98 - Burnham, UK
- 19th May '98 - Manchester, UK

Should you require further information or would like to register for the seminar please contact the seminar organiser Lynne Mottram.
For more information enter no. 5

German Office Seminar Programme

Microware Germany are also staging a number of seminars. These seminars focus on individual products/solutions provided by Microware. Should you require any further information please contact the German office.

- 23rd April '98 - Communication using *mw*SoftStax
- 7th May '98 - Java
- 28th May '98 - Wireless OS-9
- 25th June '98 - Digital Media

For more information enter no. 6

Are You Up To Date?

The latest versions of our products are:

FasTrak for Windows C&C++	2.2.1
FasTrak for Unix	2.0.4
OS-9 Toolkit	1.3.2
ISP/NFSC	2.1
CPU-32, 16 and 32 Bit License	3.0.3
PowerPC	2.1
ARM	2.2
*mw*SoftStax	2.2

Come And See Us

2nd April '98
Real-Time Computer Show - Paris

12th May '98
Real-Time Computer Show - Frankfurt

13th-14th May '98
Embedded Systems Show - London

14th May '98
Real-Time Computer Show - Munich

18th-20th May '98
Cable & Satellite Show - London

Training Schedules

Microware UK: The 4-day course is split into three modules, which can be booked individually as follows:- Day 1 Starter; Day 2 Intermediate; Days 3 & 4 Advanced. The four-day sessions start on the following dates held at Burnham:-

20th April '98
11th May '98
15th June '98
27th July '98

Microware France: Training is available on the following dates:-

11th-15th May '98 - Basic OS-9
8th-12th June '98 - Basic OS-9
15th-19th June '98 - Advanced OS-9
6th-10th July '98 - Basic OS-9

Microware Germany: Training is available on the following dates:-

20th-24th April '98 - OS-9 Internet
12th-15th May '98 - OS-9 Embedded
25th-29th May '98 - OS-9 Wireless

For more information enter no. 7

microware

Third Party Products

Starfish

Starfish Software, the leading supplier of wearable technology for the Connected Information Device Industry have joined forces with Microware in a technology alliance. As a result of this alliance, Microware's OS-9 Real-Time Operating System is supporting Starfish's TrueSync Technology Platform.

The TrueSync Technology Platform is highly portable and includes tightly coupled device, server and desktop software components. These components include the TrueSync MicroFramework, TrueSync Micro Applications, TrueSync Synchronisation Software and TrueSync Desktop Software. Other components of the TrueSync Technology will be announced as new TrueSync devices come to market.

Microware's OS-9 Real-Time Operating System complements the TrueSync Technology Platform and allows both Starfish and Microware to provide complete solutions to their customers. Microware and Starfish are currently working with a major consumer products manufacturer to implement their technologies in a wireless consumer product. The name of this customer and details of the project have not yet been publicly announced.

"Microware and Starfish are providing pioneering technology for an emerging generation of wearable devices that are compact, affordable, low-powered and automatically synchronise with popular existing software," said Philippe Kahn, Chairman and co-founder of Starfish Software. "We are pleased to partner Microware because of their proven leadership in embedded system software for next generation devices."

"Since Microware were founded twenty years ago, we have strived to initiate and maintain partnerships with companies on the cutting edge of technology," said Martin Allen, Managing Director of Microware. "I can truly say that the Starfish TrueSync Technology is revolutionary. As a leader in providing system software solutions for smart consumer products, we recognise the potential for the Starfish TrueSync Technology in this emerging wireless communications market."

For more information enter no. 8

HTTP Servers

Microware has frequently been asked about the availability of HTTP servers for OS-9. There are two third party products available;

1) **Avex Building Computers** have developed a web server for the OS-9/68K platform and Microware's ISP stack.

The HTTP demon is designed to permit easy extraction of live process data from the OS-9 system while keeping the TCP/IP overhead to a minimum and the server programme size as small as possible.

Support for the HTTP/1.1 protocol specification permits close coupling between applications running on the OS-9 system and a browser on a local Intranet or on the Internet.

The Common Gateway Interface (CGI) support permits the use of memory loaded modules to produce the fastest possible response times and a system which has the potential to be embedded on ROM.

Persistent connections reduce response time and the network traffic. By collecting all the data over one socket connection, processor and network, load is reduced and the freshness of viewed data is assured.

Contact Avex Building Computers on +44 (0)1435 86 99 00 or email sales@avex.co.uk for more details.

2) The **Apache HTTP Server** is a public Domain HTTP Server that is a powerful, flexible, HTTP/1.1 compliant web server that implements the latest protocols. It is highly configurable and extensible with third party modules and can be customised by writing 'modules' using the Apache module API.

Full source code is available which comes with an un-restrictive license (but please note the terms and conditions which are included in the distribution package).

As of July 1997, Apache was running on over 500,00 Internet Servers. For more details on the Apache HTTP Server, please see their Web Site at http://www.apache.org.

Microware's Munich Office has ported the Apache HTTP Server to OS-9 for the 68K and PowerPC families of processors. Please email info@microware.de for more details.

Note: Since this port is provided on a "no charge, as is" basis, no Technical Support is available from Microware. However, on request, Microware Germany will consider providing consultancy on a "Time and Materials" basis.

For more information enter no. 9

http://www.microware.com