



**MicroProcessor
Engineering Limited**

PRESS RELEASE

Company: MPE Microprocessor Engineering

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Forth available for ARM Cortex-M and TI MSP430

Free Forth Lite Compilers give flying start to embedded designs

Southampton, UK – 15 May 2014 – MPE today announced that Forth is available for ARM Cortex-M and TI MSP430 cores. The new, free, Lite compilers are targeted at standard Development Kits, providing developers of high integrity embedded systems with a fast route to prototyping.

The Forth programming language is ideal for applications where interactive programming, fast time to prototypes and incremental code generation are needed. High integrity system requirements are increasing in Medical, Rail, Automotive and Robot applications, where the most resilient and robust development processes are called for. Forth is well suited for such applications.

The Lite compilers provide a complete integrated set of tools (unlike other languages). They include conventional cross-compilation as well as a complete Forth system resident on the target microcontroller. The Lite compiler's IDE and terminal emulator run on a PC, making remote servicing easier. Code generated is directly compiled into the microcontroller's Flash memory. A USB connection, or even an RS232, is sufficient for in-the-field changes; software can be adapted and code changed, without using any additional tools, making the compiler ideal for testing set-ups and for field service.

Despite being called a Lite compiler, it provides plenty of capability. Lite versions are just limited in code size compared to the full Forth compilers, sufficient for small to medium size applications. And if the limit of code size has been reached, there is the cost effective path to the full Forth Compiler version..

With the Lite compiler, MPE has lowered the entry cost to Forth to zero, making it easier for programmers with C or other language skills to evaluate the benefits of Forth or of a

combined C and Forth approach. As a first step it targets the widely used STM32F072B Discovery Board and MSP430G2553 Launchpad. Many of these boards are in designer's hands now, ready for them to just download the new software and try it out. Support for other boards will soon be added to the MPE website.

A Beta tester using the Lite compiler took second place at the recent inaugural IET robot triathlon competition <http://www.theiet.org/events/local/193512.cfm>.

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About MPE Microprocessor Engineering

MPE is a privately held company based in Southampton UK, founded in 1981 to develop and sell software tools such as compilers, specialising in real-time embedded systems.

Professional and Standard compilers are available for: ARM and Cortex-M0/M1/M3/M4, ARM/StrongARM/XScale, 386/486/Pentium, H8S, H8/300H and H8/Tiny, Coldfire, 9S12/68HC12, MSP430 and 8051. Custom implementations are available on request.

MPE also offers as hardware and software consultancy, with particular expertise in high-performance Forth systems and rapid compilation. Projects are staffed by both MPE employees and external consultants.

MPE products are used in application areas such as glass-grinding, payment terminals, vending machines, bomb-disposal and construction planning. They have been used in products all over the world and as far as comets and Mars.

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Picture:

2nd Prize using Lite Compiler

IET Robot- Triathlon 29 March 2014, Millenium Point, Birmingham City University

