Laboratoire de Microinformatique
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www.didel.com/calm/Calm4Pics.pdf

CALM for PIC microcontrollers

What is CALM ?

CALM is the abbreviation for Common Assembly Language for Microprocessors. CALM is not a new programming language, but a consistent, processor independant notation of assembly instructions. Each manufacturer defines a specific assembly language for its microprocessor. The used terminology depends on the designer education and taste, and the syntax on the hardware architecture.

With CALM, the mnemonics are standard and the operands, the addressing modes explicits. For the majority of instructions, you read it and you know what the processor is doing. If not, the processor has specific architectural features and learning about the processor is understanding these instuctions, not getting familiar if you need to write MOV of LD to move data around.

CALM was defined at the EPFL (Swiss Federal Institute of Technology) in 1975 and was redesigned in 1983 to support the 68000. When the 68020 came, CALM had all the primitives to express all its addressing modes.

CALM defines a consistent and processor independant syntax for instructions and pseudo-instructions. See www.didel.com/calm/
Over 20 microprocessors families have been supported, but the need for writing applications in assembly language has desappeared except for the Microchip small processors.
A new PIC assembler is being developed, see http://sourceforge.net/projects/calm/

CALM on PICs

Microchip case is interesting because the designer made a wonderfull hardware, but wrote the instruction set notations for himself, not for newcomers. Putting a ,0 or ,1 in an instruction to show the value of a bit in the binary instruction that moves an internal switch is really amazing.

We have updated our documentation with many new documents that links together and with former documents in a better way. Most are in french, easy to translate the day we see enough interest. http://www.didel.com/pic/ will drive you in our world.
We are hardware persons, concerned about doing robotic applications that use miniature processors and compact realtime software. We are not interested to C compilers, but we document a compiled Basic for educational purposes.
Contact us if any interest.

PIC tutorial

The most recent is on www.didel.com/pic/Programmer.pdf (in French) and suggest other path depending on your interests.

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