W3OP: Web Optimized Processor

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The W3OP processor is a world wide web optimized soft core processor, that execute the High 5 (HI5) instruction set compiled from JavaScript.

The architecture is centered around a 36-bit instruction set fed by fast dedicated SRAM. The processor itself has a matrix like registry file of 16 rows by 16 columns of 8-byte cells allowing for experimentation both with different processor architectures and (distributed) operating system paradigms.

1 Instruction Set

The instruction is 36 bits or 4.5 bytes or 5 *nibbles*.

The figure above shows a 32-bit immediate being possible with by using the 5th nibble as the opcode. For example it is possible to use