

## ***Bit Banging Method For SPI/I2C Communication***

1. Bit Banging is technique for serial communication using software instead of dedicated hardware(MC inbuilt HW).
2. Software directly sets and samples the state of pins on the microcontroller, and is responsible for all parameters of the signal: timing, levels, synchronization, etc.
3. In Normal (Without bit banging) Micro-controller already have the peripheral pins for thr SPI/I2c. But if i go for the 8051 MC then its not have this facility.
4. Then we have to move from dedicated hardware to software SPI/I2C.
5. Dedicated Hardware means MC itselve having the facility(Inbuild Hardware)to generate the CLOCK signal when data is TX/RX. So while a dedicated SPI controller takes care of all the pulses, data shifting and timing.
6. But in Software SPI/I2C(Bit Banging Method) Developer need to take care of generating a clock, Timing,pulses, Bus is busy or not etc. when bit-banging Developer have to take every action therself.
7. Bit-banging refers to the concept of having the signals which go out of or come into a device be generated/sampled by software rather than hardware(MC inbuilt HW).

Thanks  
Anil D.