

Interdigitated State Machine Programming

In order for this to work, consider that each Flow Chart Diagram is a State Machine.

Each Node in the Flow Chart Diagram has an Index value assigned to it.

Each Flow Chart Diagram has it's own Index Counter.

The Index Counter represents the next Node that should be executed.

Each Node is capable of changing the Index Counter but ALL Nodes must always return to the Dispatch State Machine Sequencer rather than directly to the next Node of execution.

The Dispatch State Machine Sequencer does exactly what it says. It sequences State Machine A followed by State Machine B, etc. and recycles back to State Machine A. Similar to an indexed goto.

Each State Machine Node Dispatcher jumps to the proper Node based on the Index Counter value for each corresponding Flow Chart Diagram.

Note: In Assembly language, the use of the BRW command makes for an elegant solution for indexed goto's without using a series of IF/THEN's. If the BRW command is not available, there are ways to minimize the IF/THEN by way of a binary tree to greatly reduce the amount of IF/THEN's used.

