**Divide by 60 Counter**

In the course of designing a sixty second counter, you have elected to design a cascadable divide by six counter.

**Part A** Design a toggle cell using basic gates and transparent latch devices (do not implement the transparent latches). Inputs should be *CountEnable* and *Clear*. The output is *Out*.

**Part B** Now use this device (in icon form) to build a divide by six counter that does not cause problems at 50 seconds. Inputs should be *CountEnable* and *External Clear*. Outputs should be *Out_0*, *Out_1*, *Out_2* and *MaxCount* which goes high when the output is at its maximum count.