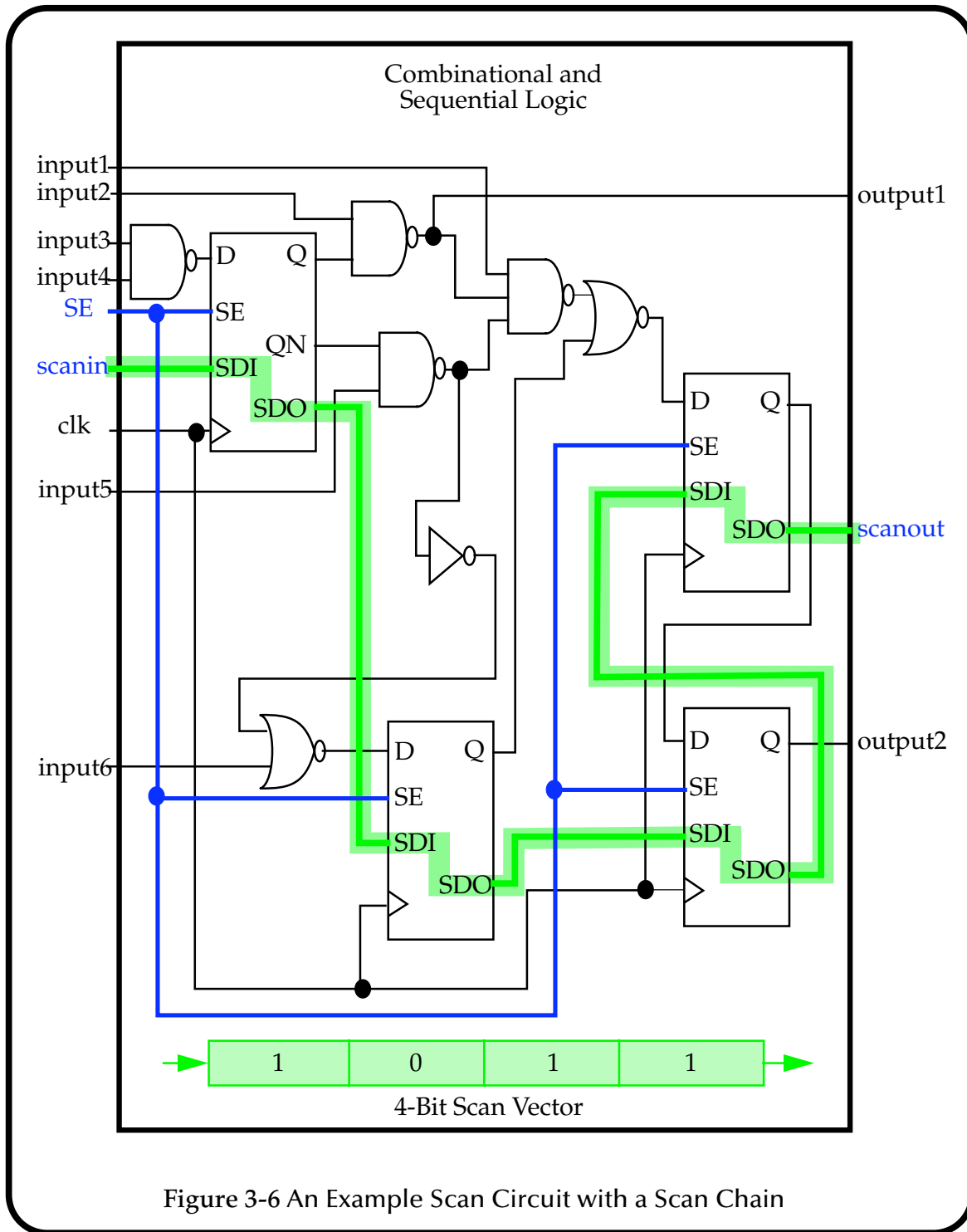
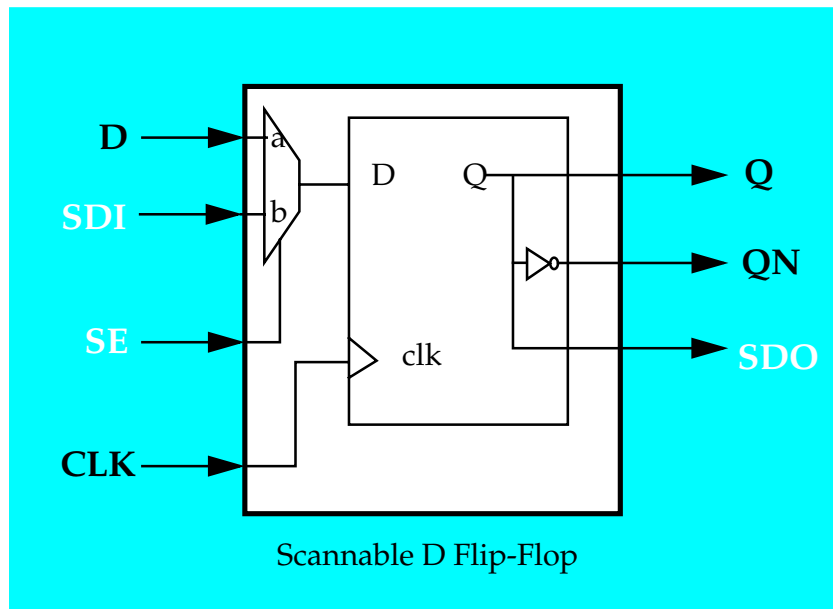


Figure 3-4 Flip-Flop versus Scan Flip-Flop





The scan cell provides observability and controllability of the signal path by conducting the four transfer functions of a scan element.

Operate: D to Q through port a of the input multiplexer:
allows normal transparent operation of the element.

Scan Sample: D to SDO through port a of the input multiplexer:
gives observability of logic that fans into the scan element.

Scan Load/Shift: SDI to SDO through the b port of the multiplexer:
used to serially load/shift data into the scan chain while simultaneously unloading the last sample.

Scan Data Apply: SDI to Q through the b port of the multiplexer:
allows the scan element to control the value of the output, thereby controlling the logic driven by Q.

Figure 3-7 Scan Element Operations

