A motor can be evaluated in terms of its maximum speed (RPM), its torque (N-m), and the efficiency in which it translates electrical power into mechanical power. Sometimes however, we wish to use a motor to control the rotational position (θ=motor shaft angle) rather than to control the rotational speed ($\omega=d\theta/dt$). **Stepper motors** are used in applications where precise positioning is more important than high RPM, high torque, or high efficiency. Stepper motors are very popular for microcontroller-based embedded systems because of their inherent digital interface. This next video shows a stepper motor controlled by a FSM. The first button makes it spin one way, the second button makes it spin the other way, and the third button makes it step just once. If both the first two buttons are pressed it wiggles back and forth.

VIDEO 10.6. A SIMPLE STEPPER MOTOR