A Device Polling Problem

You must develop software that allows clients to periodically check for changes in the status of devices in a network. Specifically, a client must be able to create a monitor that will periodically check a particular device in the network. If the state of that device has changed since the monitor last checked the device, the monitor should write an event to a global event log.

A device is uniquely designated by its device id. When making its initial monitoring request, the client specifies the id of the device to be monitored and the monitoring period. At that point, the monitor is initialized but has not yet been started. The client makes a subsequent request to start the monitor. The client should be able to start and stop the monitor at any time.

Each device has an interface to poll its current state, although the precise interface differs from device to device. As an example, to poll a D1 device, you invoke its `poll` method, whereas to poll a D2 device, you call its `currentState` method. The various Device classes are provided by different vendors, so you are not permitted to change the interfaces of those classes.

The components that make up the states of different devices may also differ. For example, the state of a D1 device is defined by three floating point values. A D2 device's state, on the other hand, is represented by five integer values and a floating point value.

Many clients may have monitors running, and different clients may be monitoring the same device at different intervals. For example, one client may be monitoring a device every five minutes while another client monitors that same device every seven minutes. Any solution must therefore permit multiple monitors on the same device. (You need not worry about "locking" devices to guarantee that the polling operation is atomic, however.)

Assume the existence of an Event Log and an Event class. The Event Log class defines a method, `logEvent`, that takes an Event as an argument and places that Event in the Log. You should write a specific type of Event, a Device Change Event, that includes the id of the device.