A GOOD METHOD TO TURN OFF BACKLIGHT AND LOCK WINDOWS BY TOUCHING LIGHT SENSOR

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A good method to turn off backlight and lock windows by touching light sensor.

Abstract

When we leave laptop or desktop, we need to use keyboard or touch panel to lock screen and system will wait power option setting to turn off display backlight.

We propose good method to use finger to touch light sensor twice quickly to lock your PC and turn off backlight to reduce system power and keep laptop with security before you leave laptop.

Method

We propose to implement service for this feature by using windows SDK and check the high and low difference of light sensor LUX data for double touching function.

Then we can send out windows hotkey ( win + L ) to lock windows and send power API to turn off display backlight to reduce power consumption and keep device with security lock.

We use finger to touch laptop light sensor for this method.

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Disclosed by Eric Lin, JH Wang, Louis Lee and David Ke, HP Inc.
// Sample Code to implement this method

//Get light sensor device
_sensor = LightSensor.GetDefault();

// Add handler to read lux

private void ScenarioEnable(object sender, RoutedEventArgs e)
{
    if (_sensor != null)
    {
        // Establish the report interval
        _sensor.ReportInterval = _desiredReportInterval;

        Window.Current.VisibilityChanged += new 
        WindowVisibilityChangedEventHandler(VisibilityChanged);

        _sensor.ReadingChanged += new 
        TypedEventHandler<LightSensor, 
        LightSensorReadingChangedEventArgs>(ReadingChanged);

        ScenarioEnableButton.IsEnabled = false;
        ScenarioDisableButton.IsEnabled = true;
    }
}

// Read LUX data

async private void ReadingChanged(object sender, 
LightSensorReadingChangedEventArgs e)
{

    await Dispatcher.RunAsync(CoreDispatcherPriority.Normal, () =>
    {
        LightSensorReading reading = e.Reading;
        ScenarioOutput_LUX.Text = String.Format("{0,5:0.00}", 
        reading.IlluminanceInLux);
    });

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The flow chart to show this method

Light sensor receive LUX change data to adjust backlight

Detect light sensor large difference of LUX value within few seconds

Send Hotkey to lock screen and turn off display backlight

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