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Blinking Lights, getting it wrong again, again and again

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RJ45 Ethernet sockets often come with a couple of LEDs. Front panels of STB, cable modems, WiFi access points and switches have LEDs. They give some representation of what is happening in the network, link, link speed, RX or TX of frames etc.

How these LEDs are configured was until recently a big problem. Many patches have been NACKed, all repeating the same problem, again and again.

This talk will first look at the existing hacks used in device tree to describe how PHY LEDs should be configured, and at the NACKed patches trying to add more hacks. Why these are hacks will be explained.

A step back will then be taken to look at the bigger problem. Why is everybody repeating the same mistake? And how the same or similar problem happens in other parts of netdev. How can these problems be avoided when adding a new feature to the network drivers?

The last part of the talk will quickly look at the new APIs added recently for configuring PHY and MAC driven LEDs. This should give an introduction as how driver writers can add support for their devices LEDs and how users can configure these LEDs.

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