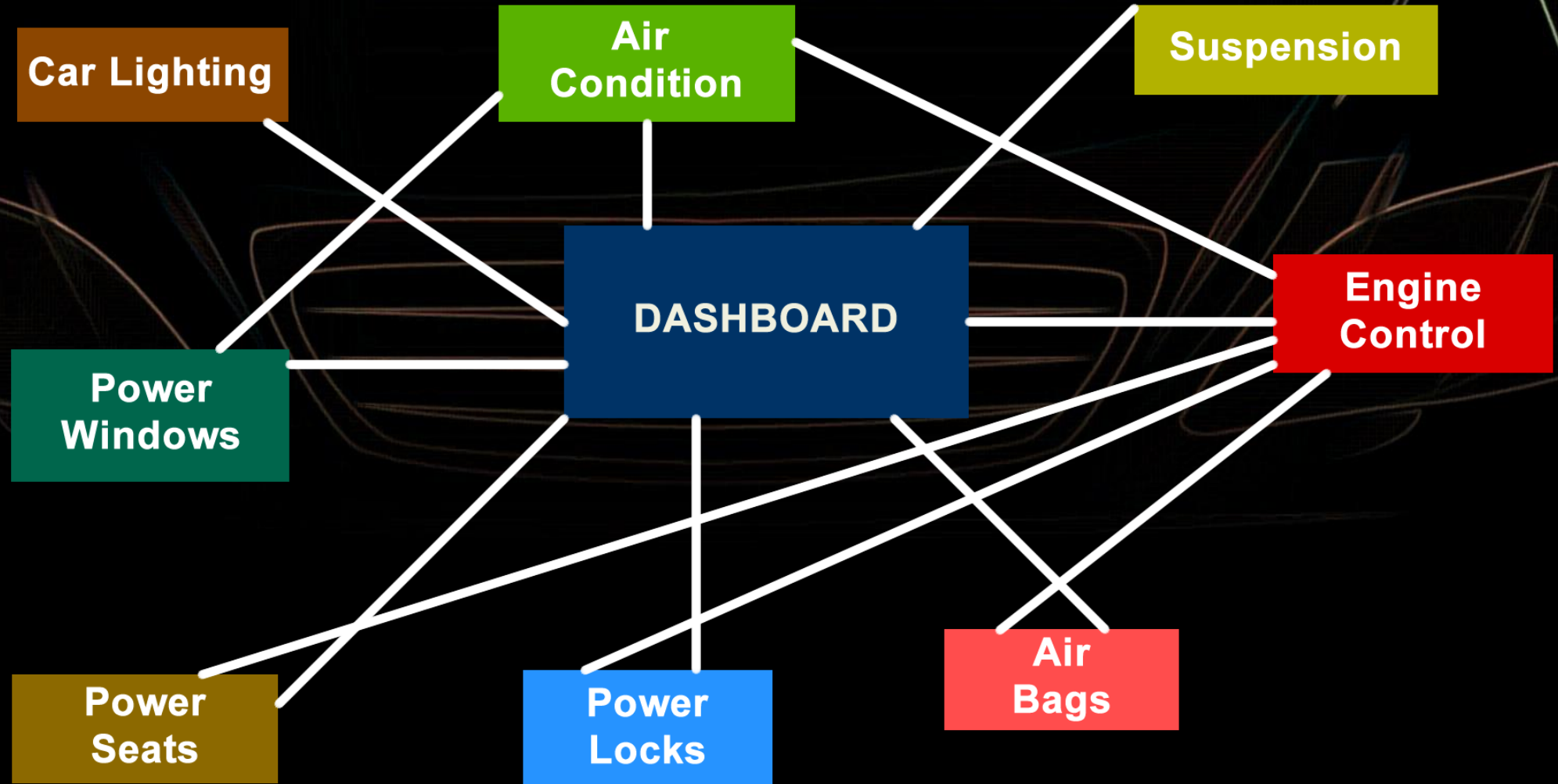# Automobile Hacking and Security

Find vulnerabilities loopholes and security threats in your own vehicle

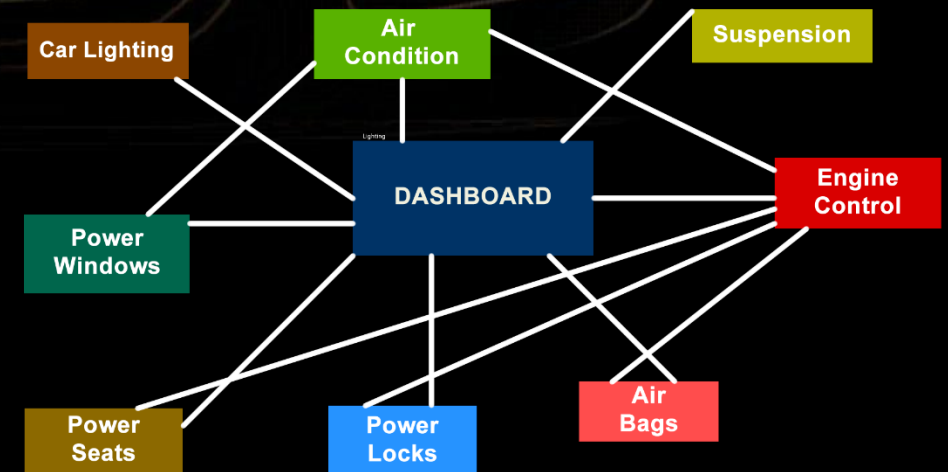**2.0v**

Overview of CAN Protocol

Why we need CAN Protocol ?

Problems without **CAN**!

- multiple wires relate to different ECU units

- Wiring structure is very complicated

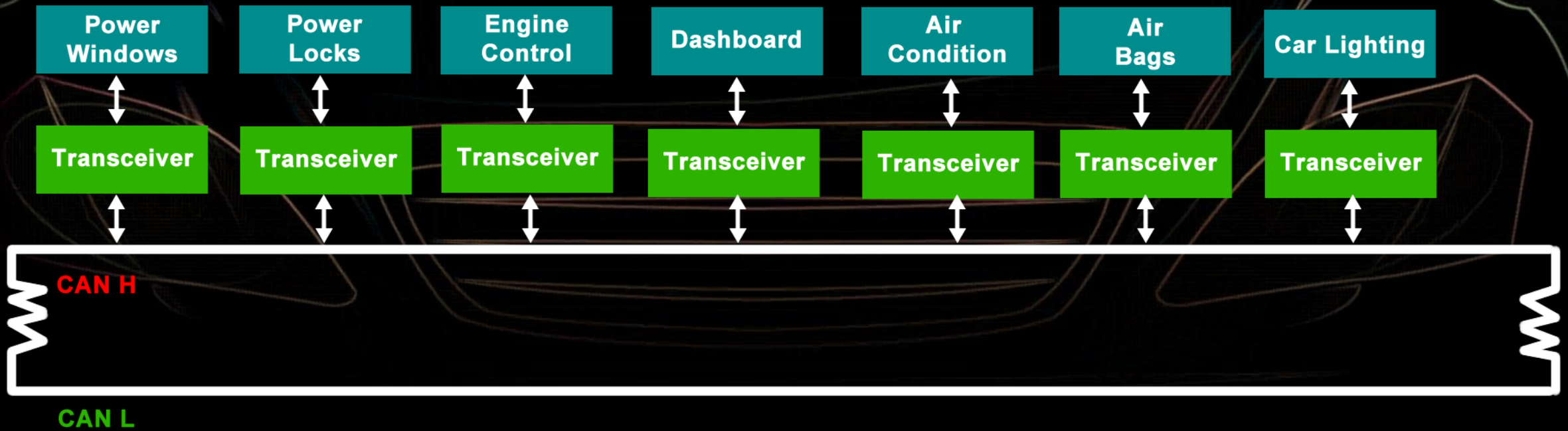- Removing or adding new component is very difficult

Why we need CAN Protocol ?

We need a Protocol

- Simple wiring structure

- Easily add or remove components

- All systems should be connected with each other

CAN Protocol

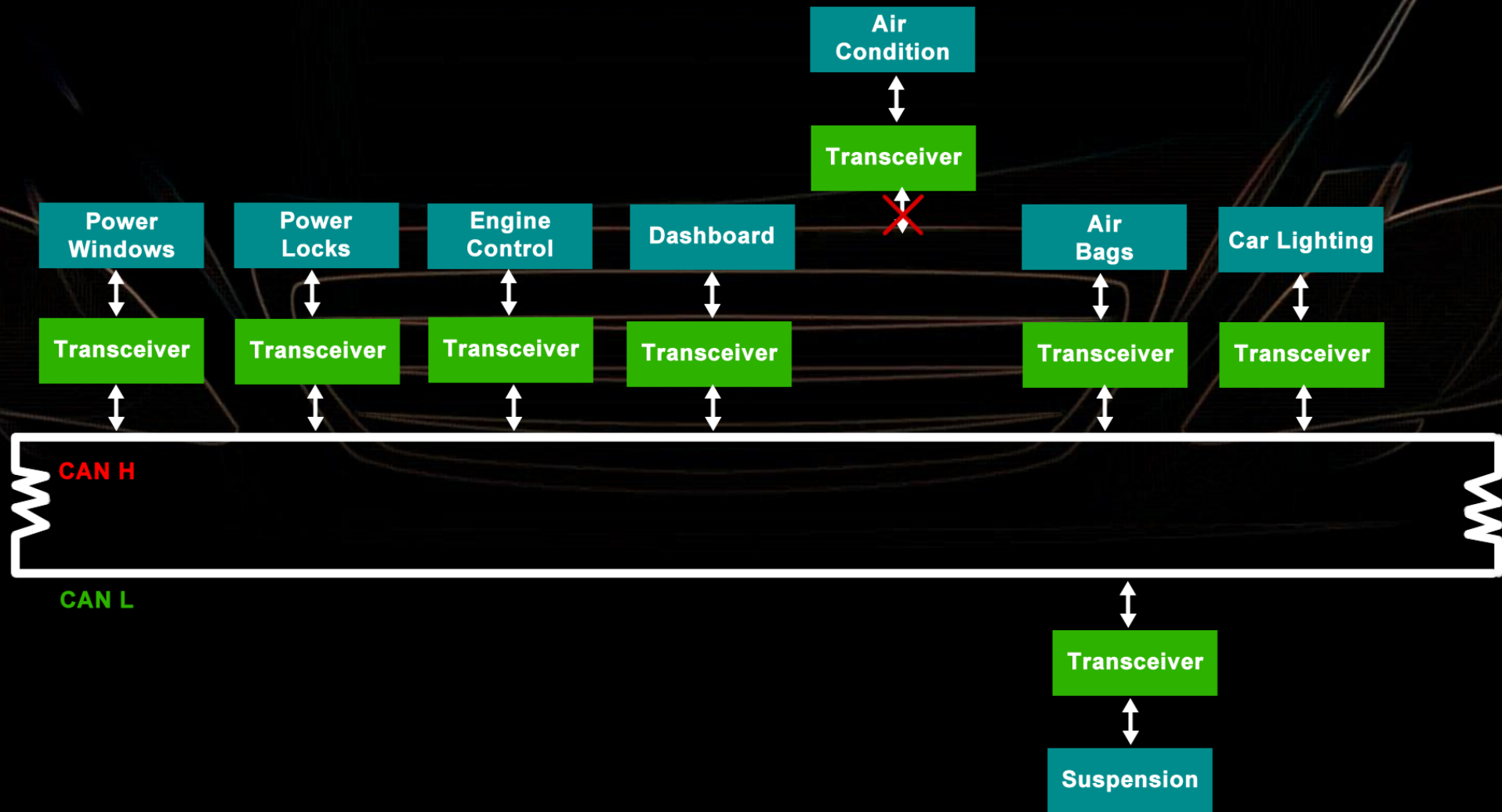| Power Windows	Power Locks	Engine Control	Dashboard	Air Condition	Air Bags	Car Lighting
Transceiver	Transceiver	Transceiver	Transceiver	Transceiver	Transceiver	Transceiver

CAN H

CAN L

ECU

An electronic control unit (ECU) is a microcontroller or microprocessor in vehicle that is responsible for controlling a specific function

CAN Protocol

CAN Protocol

Features of **CAN** Protocol

- It operates without any host system

- Broadcast type protocol

- Message based protocol

- Serial asynchronous protocol