Pulse-width modulation

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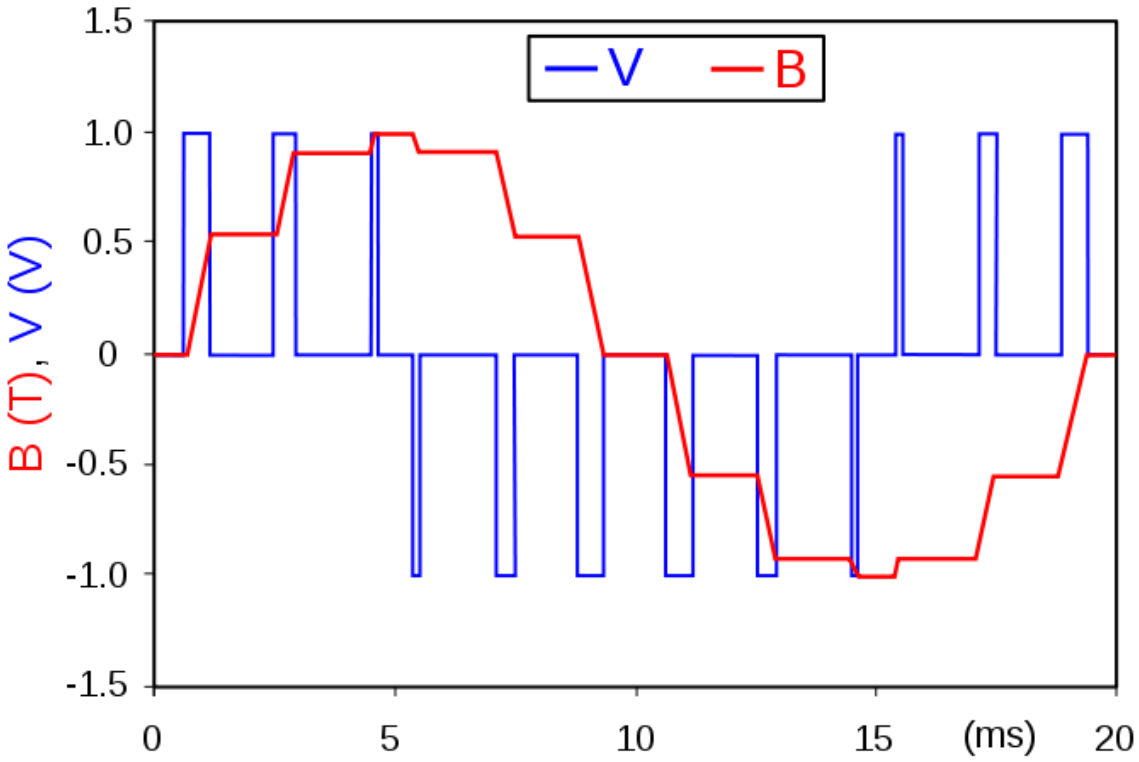
What is it?

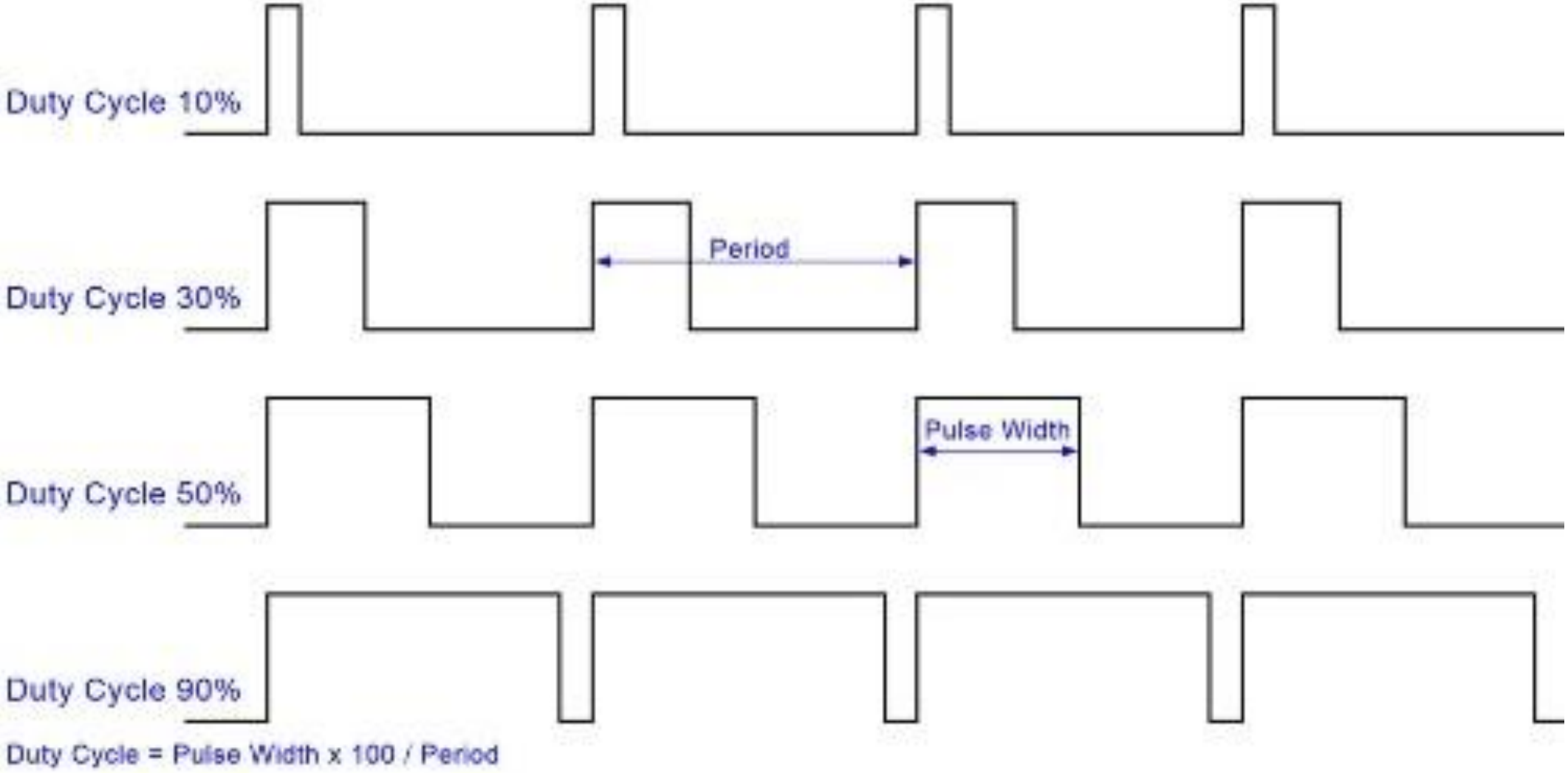
- «Широтно-импульсная модуляция».
- Encode a message into pulsing signal
- Usually used to control
  the supplied power
- Low heat losses at switching



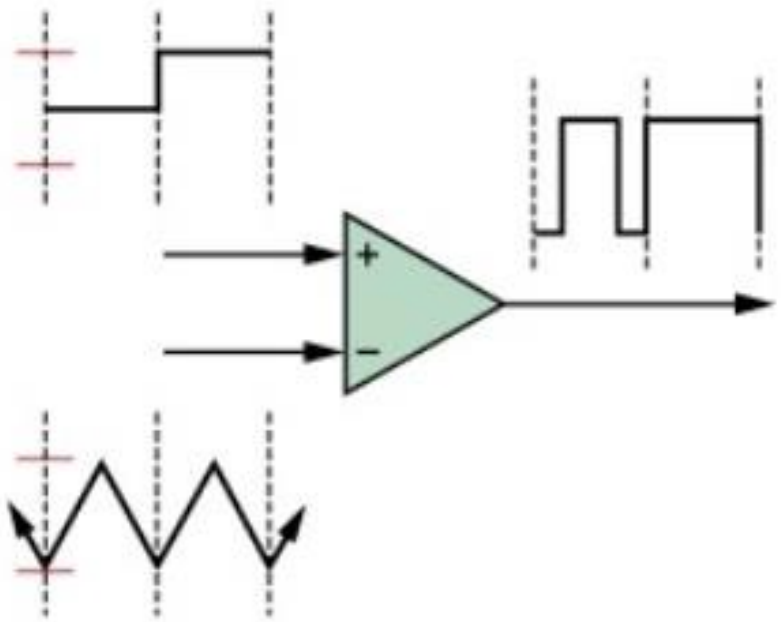
History

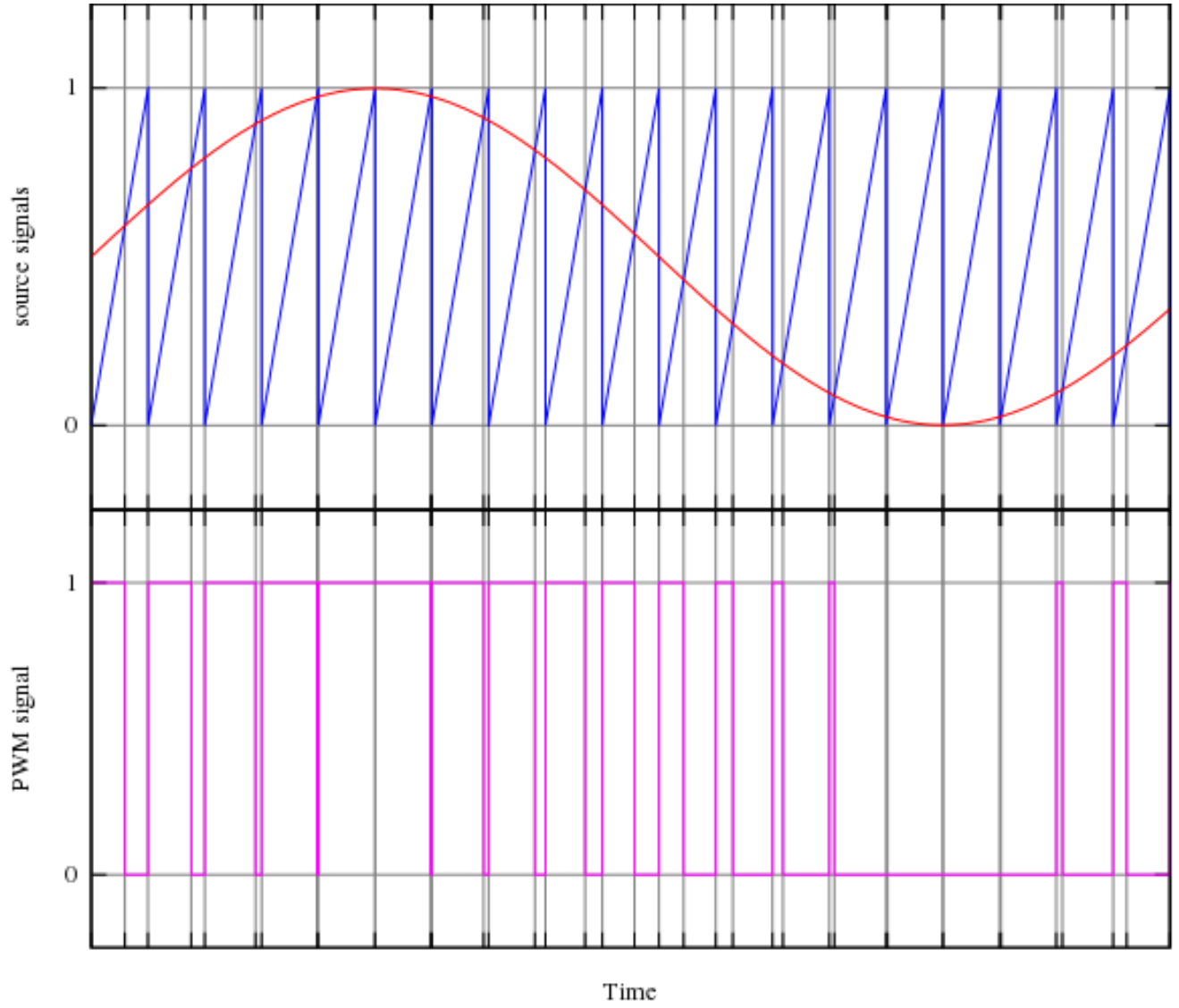
- Previously a rheostat was used to control partial or variable power
- This solution emits a lot of heat
- Needed an efficient power switching/adjustment method
- One of the earliest application is Sincliar X10 as audio amplifier.
- Nowadays it is used to drive motors for fans, pumps and robotic servos.

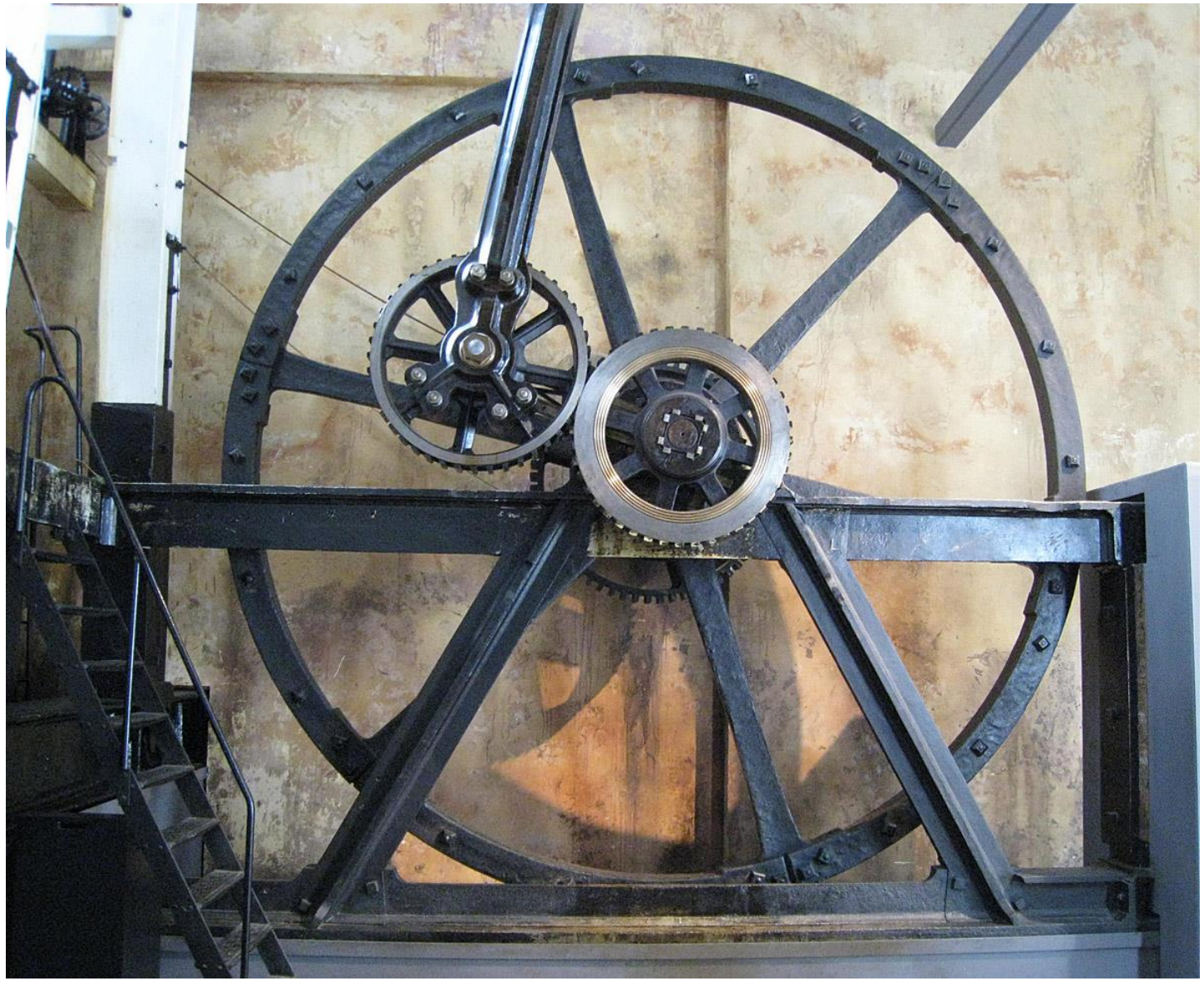
Definitions



Principle of work





Application

- Servomechanisms
- Telecommunications (signal modulation)
- Power delivery
- Voltage regulation
- Signal amplification