

Capacitor

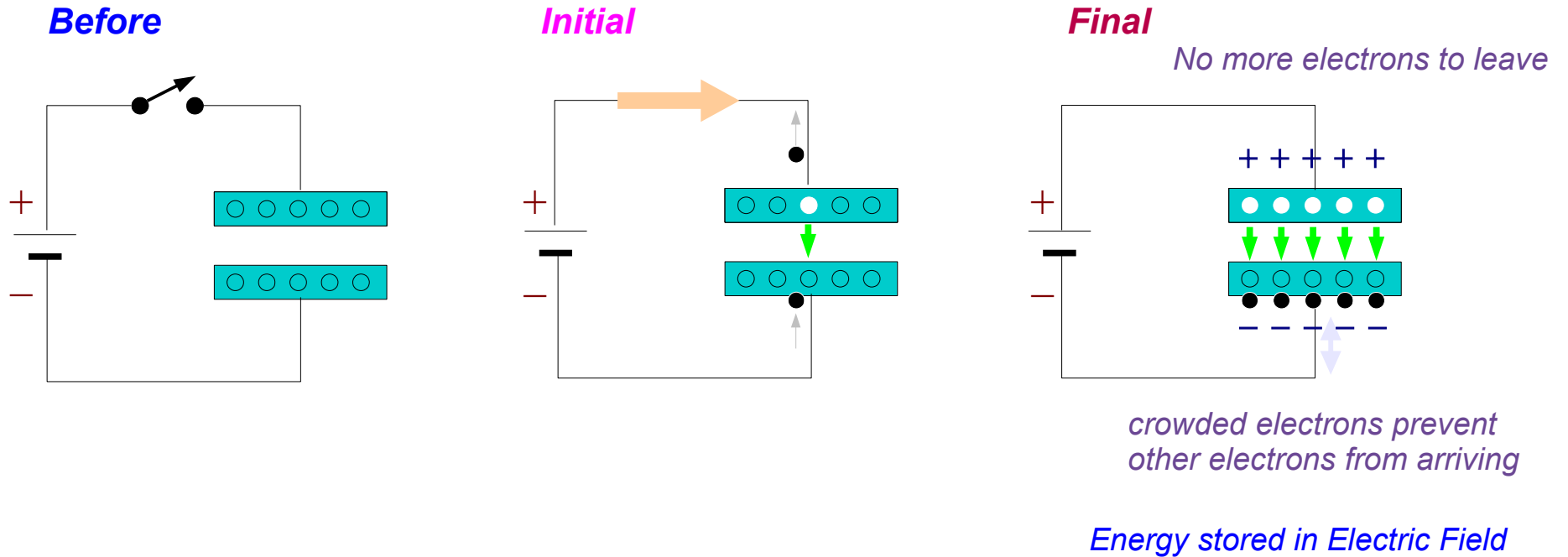
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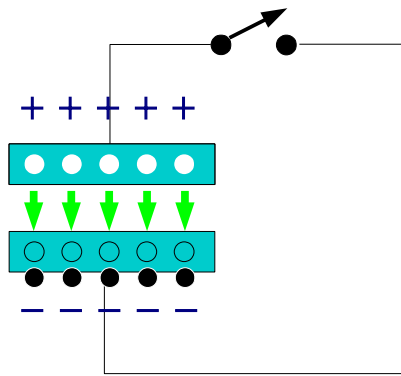
Please send corrections (or suggestions) to youngwlim@hotmail.com.

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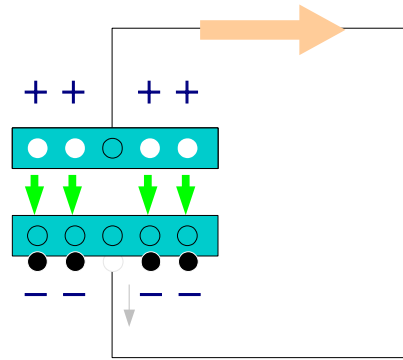
Charge



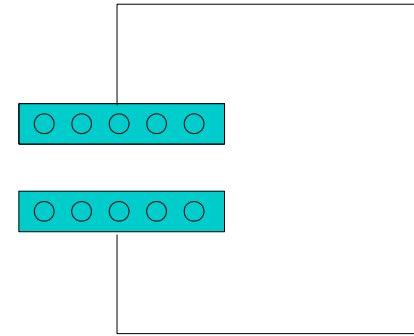
Discharge



Initial

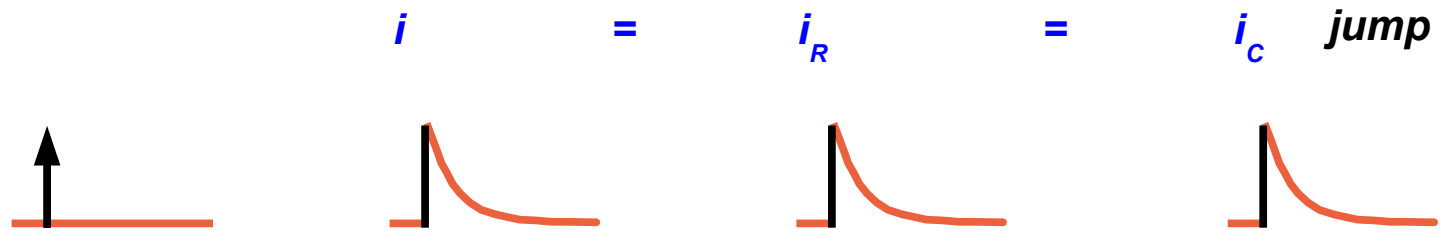
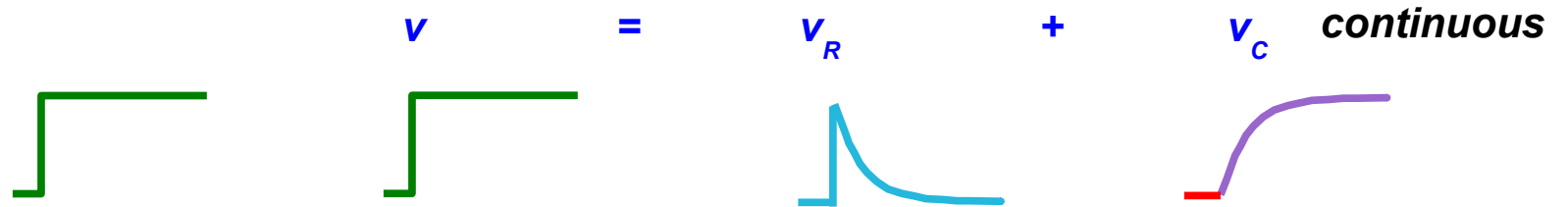


Final



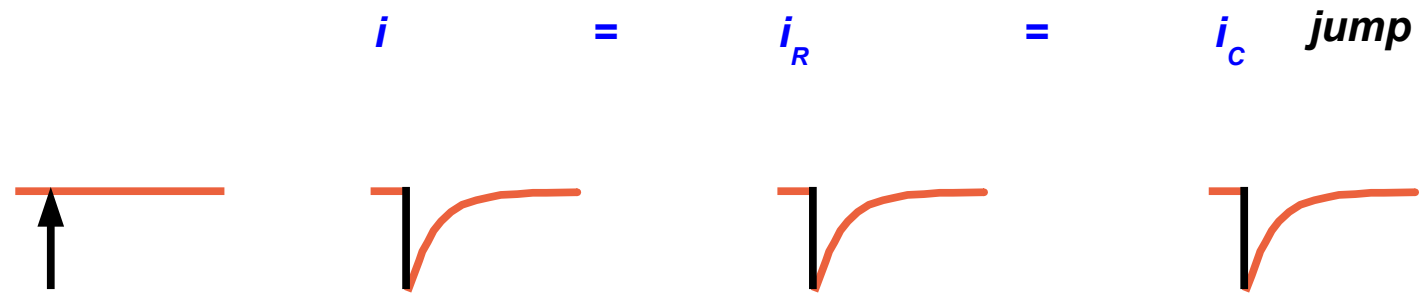
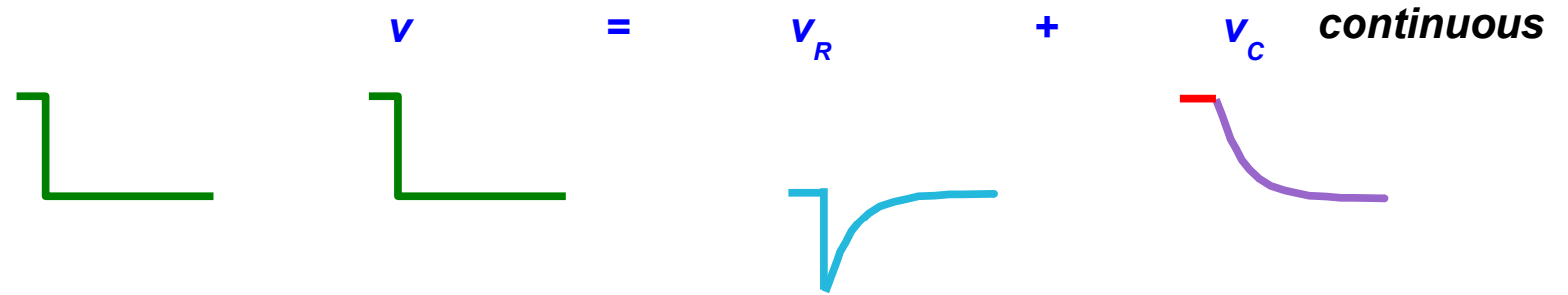
No more electrons moving

Charge



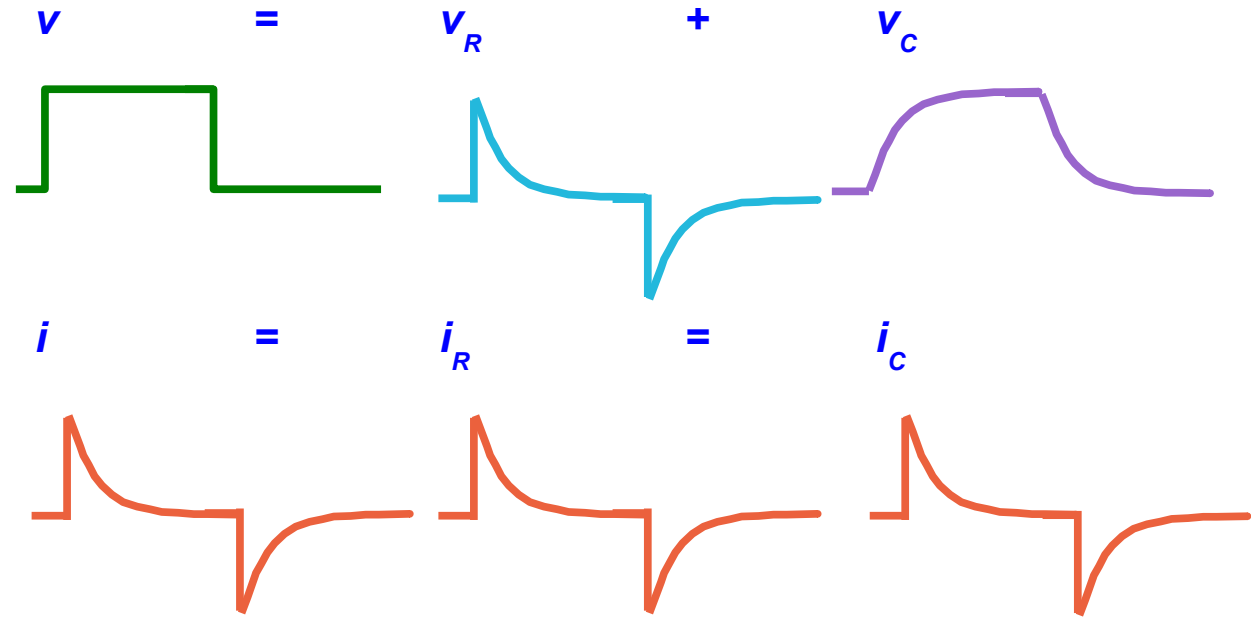
$$i_c = C \cdot \frac{dv_c}{dt}$$

Discharge

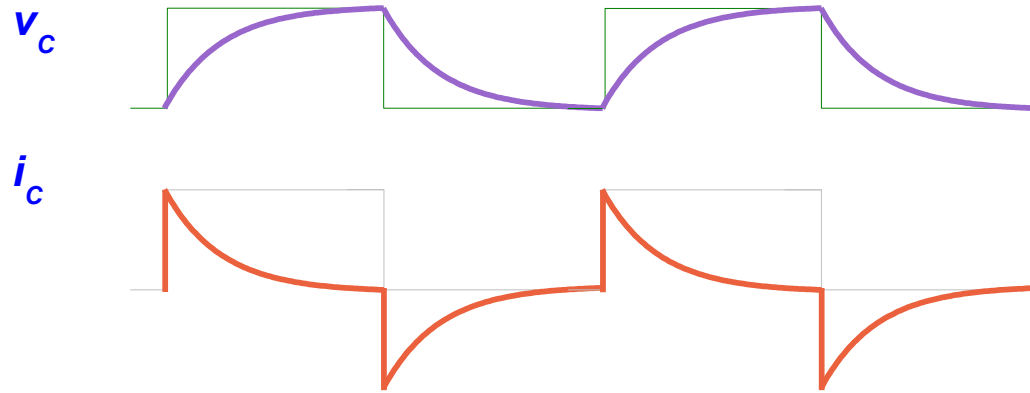


$$i_c = C \cdot \frac{dv_c}{dt}$$

Pulse

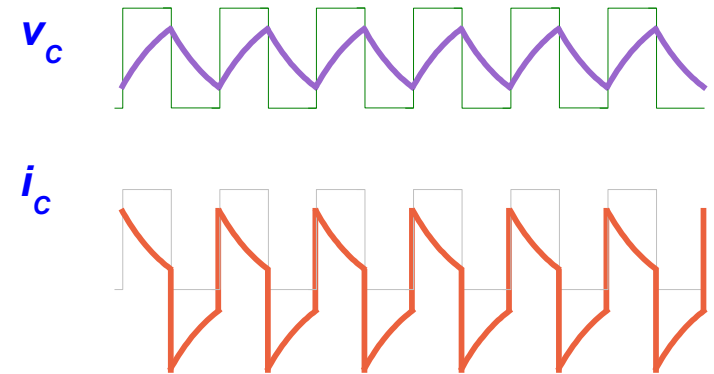
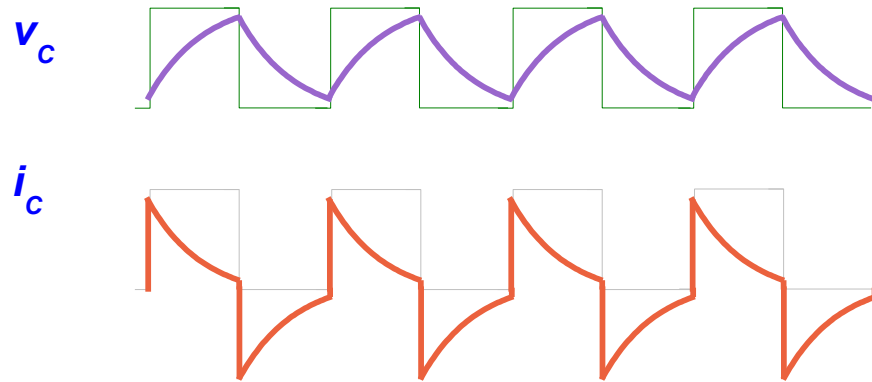


Pulse



$$i_c = C \frac{dv_c}{dt}$$

ω ↑ i_c ↑ X_c ↓



Phase Lags and Leads

References

[1] <http://en.wikipedia.org/>

[2] J.H. McClellan, et al., Signal Processing First, Pearson Prentice Hall, 2003