Inductance can be given by this equation;

$$L = \frac{vt}{i}$$

So differentiating with respect to t,

$$\frac{\Delta L}{\Delta t} = \frac{v}{i} = R$$

So our result for a positive change in inductance gives way to a positive resistance. A negative change results in a negative resistance;

$$-\frac{\Delta L}{\Delta t} = -\frac{v}{i} = -R$$

Next is capacitance which can be given by the following;

$$C = \frac{it}{v}$$

Again taking the time derivative gives;

$$\frac{\Delta C}{\Delta t} = \frac{i}{v} = \frac{1}{R} = G$$

A conductance, so a negative change results in;

$$-\frac{\Delta C}{\Delta t} = -\frac{i}{v} = -G$$

A negative conductance.

Is this the mechanism behind it or is this just a coincidence?

Raui