

DESARGUES CONFIGURATION AND ELECTRICAL NETWORKS/CIRCUITS

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ABSTRACT

An electronic network /circuit consists of components like resistors, diodes, capacitors, transistors and ICs, arranged such that the network contains maximum number of components using minimum space. When translated into geometry, this results in an arrangement of lines and points called **CONFIGURATION**. Thus, the geometrical configuration finds its natural application to circuit theory through network topology[1][network topology is the geometrical relationship between the electrical components that are to be equipped in the network]. Moreover configurations may be used to represent electrical components equipped in the network. **For instance, an n_1 configuration, is a resistor (or capacitor, inductor, diode or a battery (source)) when $n = 2$, a transistor when $n = 3$ and an IC when $n > 3$.** In this paper, we demonstrate as to how a certain configuration results in a working model called “Boot strapped emitter follower as Colpitt’s oscillator”. In this paper, we also recall the definitions of “**perspective from a point (PFP) and perspective from a line(PFL)**” and define these concepts in terms of physical facts “**Projection, reflection and refraction**” and translate these to circuits. In this paper, we also demonstrate as to how perspective from a point results in a series circuit and perspective from a line results in a parallel circuit.

KEYWORDS: Configuration, Desargues Configuration, Multi – Vertexed /Hyper Edge Grap Perspective from a line(PFL), Perspective from a Point(PFP)

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