

NETWORK ANALYSIS AND SYNTHESIS

2.1 – Introduction

- ⌘ This chapter introduces important fundamental theorems of network analysis. They are the
 - ⌘ **Superposition theorem**
 - ⌘ **Thévenin's theorem**
 - ⌘ **Norton's theorem**
 - ⌘ **Maximum power transfer theorem**
 - ⌘ **Substitution Theorem**
 - ⌘ **Millman's theorem**
 - ⌘ **Reciprocity theorem**

2.2 – Superposition Theorem

- Used to find the solution to networks with two or more sources that are not in series or parallel.
- The current through, or voltage across, an element in a network is equal to the algebraic sum of the currents or voltages produced independently by each source.
- Since the effect of each source will be determined independently, the number of networks to be analyzed will equal the number of sources.

Superposition Theorem

- ⚡ The total power delivered to a resistive element must be determined using the total current through or the total voltage across the element and cannot be determined by a simple sum of the power levels established by each source.

THANKS....

Queries Please...