

Special Session—Smith Chart

This session is devoted to the Smith chart; the chart and its inventor, Phillip H. Smith.

Phillip Smith worked in the truly formative years of microwave engineering technology. His associates and co-workers included numerous other notable contributors to the art.

The Smith chart has been an indispensable tool in microwave analysis and design for more than 40 years. The basic chart is used extensively for the presentation of complex impedance data. The chart is also intended to be used as a complete design tool for many microwave circuits. The advent of the digital computer has relieved some of the necessity for final design with a Smith chart; however, familiarity with the mechanics of impedance manipulation on the chart can greatly enhance the ability of the microwave engineer to closely approach a final design topology through largely intuitive techniques.

The Smith chart is a circular impedance diagram containing all resistances greater than zero and reactances from negative to positive infinity. It is used for the analysis and design of lumped and transmission line circuits as well as the display of complex impedance data; however, this clinical description only scratches the surface in describing the usage of this versatile tool.

This session will attempt to not only provide insight into the man but also to act as a refresher on basic uses in addition to pointing out less used techniques possible with Phillip Smith's creation.

Organizer: Ron Ham

Speakers: Ted Saad

Steve Adam