

**SATELLITE AND SATELLITE ANTENNA TESTING
WITH HIGH SPEED ELECTRONICS**

**Doren W. Hess
Christopher B. Brechin**

**Scientific-Atlanta, Inc.
3845 Pleasantdale Road
Atlanta, GA 30340**

Traditionally the testing of satellite antennas was characterized by an emphasis on accuracy of measurement and thoroughness of testing. This emphasis was required because of the high performance needed to accomplish the mission. As experience was gained in the construction of satellites, more emphasis was placed on achieving greater technical capability but at lower costs of testing. The net result is the requirement to test ever more efficiently without giving up accuracy.

In the meantime, test instrumentation for conducting antenna and satellite testing also was influenced by improvements in speed. Driven by the demands of near-field scanning and electronically controlled phased arrays, automatic instrumentation has afforded high speed measurement and fast data acquisition rates to the satellite industry.

This presentation offers some examples of performance in accomplishing high volume testing under the rigorous technical constraints imposed by the satellite industry. As an example of a high speed system, the Scientific-Atlanta Model 2095 will be used to illustrate the capability offered by today's technology. This system has found application in the facilities of five satellite manufacturers constructed within the past three years and is proven by its demonstrated application in satellite programs.