CHAPTER 1

The title is centered in all capital letters one keyboard return below the top one-inch text margin.

CHARACTERIZING THE RESPONSE OF A GPR

Calibrating the response of a GPR system is essential for making measurements of subsurface materials properties. Duke (1990) calibrated the overall response of a GPR system by making measurements of the . . .

Background and Previous Work

A-level section headings are flush with the left margin.

This chapter describes the methodology that has been used to determine the response of an impulse GPR. The characterization includes a response function for the receiving electronics, simulations . . .

Signal Processing Tools

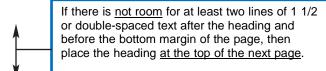Subsection headings are flush with the left margin.

There are many techniques for making high frequency electrical measurements in electrical networks and antenna systems, and there are also many methods for manipulating the data from these measurements . . .

Convolution and Deconvolution Methods

Convolution is a mathematical operation that can be used to describe how a linear network element modifies a signal as the signal passes . . .

Scattering Parameters Scattering parameters (S parameters) are often used to discuss the scattering of guided waves traveling in electrical networks (Smith, 1995) . . .

C-level subsection headings are indented incrementally from the B-level indentation margin. The text begins on the same line as the subheading.

If there is not room for at least two lines of 1 1/2 or double-spaced text after the heading and before the bottom margin of the page, then place the heading at the top of the next page.

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