APPLICATION NOTE:

Automatic Design: A Design Process Comparison

In a typical design sequence, the train and error process is central to error amplifier design using only a standard analyzer (see Figure 1). This process is inherently slow as it requires design, build — then redesign, rebuild, etc. The trial and error loop can delay the design sequence for days or even weeks.
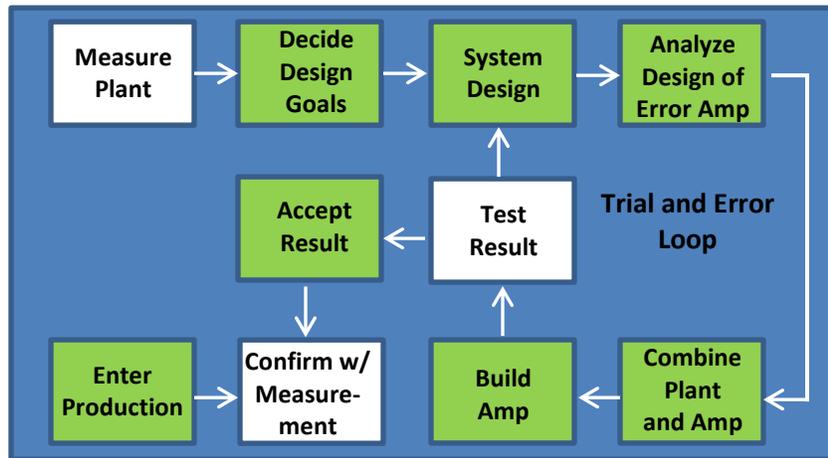

Figure 1. Error amp design utilizing a typical analyzer.

The trial and error method (above) is inefficient for even simple designs. It uses more resources, more development time, more engineering staff, and more budget— yet often results in only an "acceptable" error amp for the system. Designers often must settle for "best attainable" within a given time and budget. But now, the good news:

THE VENABLE MODEL 350c ELIMINATES THE TRIAL AND ERROR DESIGN

As Figure 2 illustrates, the trial and error loop is eliminated when utilizing the Venable Model 350c Frequency Response Analyzer. Specify the desired result, and the system automatically works backwards and synthesizes the most stable, optimum error amplifier for the job!
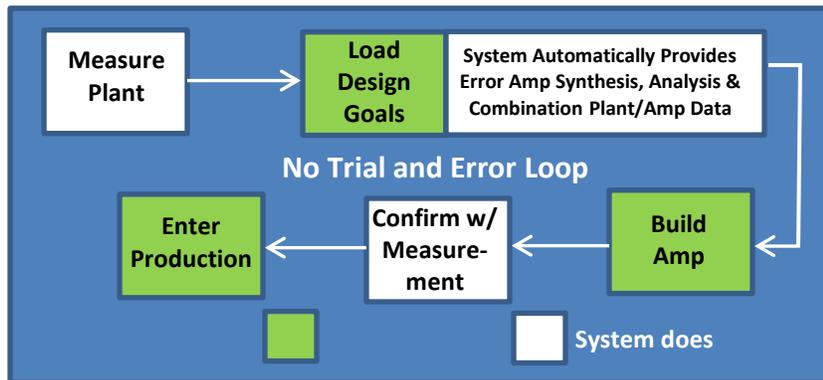

Figure 2. Error amp design sequence with the Venable Model 350c Frequency Response Analyzer

By eliminating the trial and error method and the excessive resources requirements noted, the Venable Model 350c System reduces the requirement for highly-experienced designers and speeds the design process. Specify a result, and the Model 350c always defines the compensation to meet it exactly. Venable results are optimum, not marginal, or barely acceptable.

In addition, the Venable Model 350c provides exact component values or nearest standard values using *Stability Analysis*™ Software for stabilization. It provides bode plots, tests the complete system, and compares it to the predicted Bode plots. Related design data stored by the system is displayed upon request.