
System Development Via Prototyping in the Analytical Laboratory

D. J. Hooley
The Standard Oil Co., Warrensville Laboratory
Warrensville, OH

ABSTRACT

In the appropriate situation, the prototyping approach to system development offers lower risks to the software development manager than the traditional structured approach because it is more likely to produce a system meeting clients' needs.¹ The iterative process of prototyping will be examined using the system for determination of intrinsic viscosity of polymers, implemented in the Analytical Laboratory at SOHIO, as an example.

The system evolved into the current form through three major prototypes. Although a number of details still need revision and enhancement, the major system features are working well. The current prototype meets the user's needs, has been in routine since August 1984, and has resulted in a doubling of the analyst's throughput on this test.

For prototyping to be practical in a real time data acquisition environment, it is necessary to have versatile development tools. FORTH provides this environment.

Reference

1. Boar, B. H., Application Prototyping, New York, John Wiley & Sons, 1984.

*This paper will be submitted for publication to the **Journal of Forth Application and Research**.

