

# Wyreless.NET Solutions Case Study

## The Next Generation Financial Control System

### The Original Assignment:

A major financial firm was experiencing significant growth in its capital markets business. Coincident with that growth, there was an increased regulatory focus and, in particular, an increased demand on capital market firms' compliance functions. There was significant change in securities regulation: the SEC had begun to place increased attention to the internal compliance and control operations of regulated firms. The company had various tools to assist the Compliance and Surveillance groups in the detection and prevention of suspicious and illegal trading activity. But they required significant expansion and with our experience in financial industries we were asked to propose a solution.

### What We Discovered:

After interviewing the Compliance and Surveillance groups about their current methodology and future demands, it became apparent that the tools they were using were not extensible. They were based on arcane scripts that were difficult to modify. Additionally, exception handling was not automatic and this required tedious manual inspection to actually detect SEC violations. It was clear that the current toolset would be incapable of responding to the known and inevitable changing regulatory and business environments.

### What We Did:

We developed and prototyped an architecture for violation detection that was based on a data-flow filtering paradigm. A graphical user interface would allow analysts to define business rules using "drag-and-drop" of rules components into a filter graph. These components would perform relational, arithmetic, statistical, and other operations on the stream of trading activity in real-time. Exceptions were detected and reports were generated with alarms for suspicious trading activity. In addition to a comprehensive filter component library, a workbench for developing new components was included in the architecture.

### The Results:

This adaptive approach to the industry dynamics was well received by the analysts and their programming staff. Third party frameworks for the GUI were acquired and the architecture was successfully implemented.