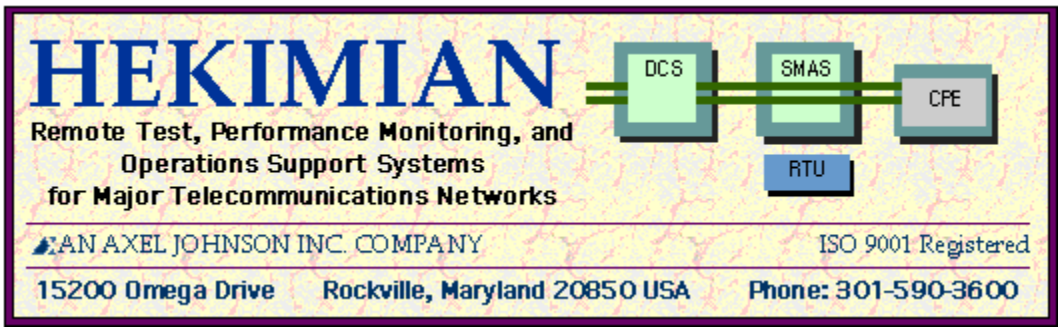
Hekimian Labs
Case History



Customer Information:

Hekimian is the industry's leading independent supplier of automated test systems for telecommunications networks and is committed to providing ongoing quality and innovation in telecommunications network maintenance solutions.

Industry:	Telecommunications
Application Domain:	Network Mgt
Platform:	Windows NT, HP-UX, and Solaris
Languages:	C++, Java
Compiler:	Bundled C++ Compilers, Visual C++, and Java Builder
Other Tools:	Visigenic v2.0
Status:	Under development, scheduled for 1999 release

Company Background:

Hekimian Laboratories, Inc., was founded in 1968 by Dr. Norris C. Hekimian to develop specialized telecommunications test equipment. Early products included telephone security products and portable telecommunications test equipment. Hekimian entered the test systems business in 1981 with its introduction of the REACT remote access and test system. The company continues to develop both remote testing system hardware and operations support systems. In 1993 Hekimian's quality-assurance processes were certified to ISO 9001.

In 1983 Hekimian was acquired by Axel Johnson Inc., a privately held corporation involved in a wide range of businesses including energy, telecommunications, environmental, and industrial products.

Hekimian produces a complete line of access, test, and performance monitoring systems and equipment for data/voice, channelized, DDS, DS1, E1, DS3, and SONET networks.

In July 1999 Hekimian released its CenterOp product. CenterOP is a suite of management tools of telecommunications networks.

MARKETS:

Hekimian's target market includes providers and users of digital and analog telecommunications services such as:

- Local exchange carriers
- Interexchange carriers
- International carriers
- Private enterprise networks

Project Descriptions: Objectivity was chosen as the database for the CenterOp product line, and the AWM 2001 product.

CenterOp:
The goal of the new CenterOp Systems is to simplify the management of advanced network services. The systems are designed to give the user comprehensive control over services ranging from DS0 through DS3, E1 and E3, SONET, SDH, and fast packet services including frame relay, internet protocol (IP), and asynchronous transfer mode (ATM). The CenterOp Systems family is composed of four distinct but interconnected operations support systems: CenterOp Sentry™, CenterOp CNM™, CenterOp Activate™, and CenterOp Design™.

> **CenterOp Sentry** provides real-time alarm surveillance and fault management. The fault management operations include alarm and event management, fault isolation, and a distinctive user interface that enables a technician to rapidly correlate network incidents.
> **CenterOp CNM** (Customer Network Management) provides secure access to CenterOp Systems' functionality, enabling the service provider to place CenterOp Systems functions at a customer's location. Customers can manage aspects of their own service without compromising security for the service provider's other users.
> **CenterOp Activate** provides configuration management of network elements (NEs) and circuits. It automatically inventories and maintains a database of known NEs, and interfaces with each, to control the setup, release, and modification of network connections.
> **CenterOp Design** provides automated routing for circuit and facility provisioning. It allows the user to specify the type of service required and the end points. It then extracts NE information from CenterOp Activate, maps the service, and presents it to the user for approval.

Initial CenterOp Systems modules will be available to customers worldwide in July 1999.

AWM 2001 (Automated Work Mgt) :
The Automated Workflow Manager for REACT 2001 (AWM 2001) provides flowthrough testing of analog and digital test requests from workforce management systems such as Bellcore's Work And Force Administration/Control (WFA/C). With no operator intervention, AWM 2001 can accept a test request, open a REACT 2001 test session on the circuit ID, and perform an intricate series of tests as defined by REACT 2001 testing dialogs. When testing is complete, AWM 2001 hands the ticket back to the workforce management system with test results, analysis, and comments.

Buying Criteria:
Hekimian has traditionally been a hardware manufacturer. With the introduction of the CenterOp network management application Hekimian is moving into the software arena. CenterOp was designed from the ground up as an object oriented system. To avoid the impedance mismatch problem the development team elected to use an ODBMS. Scalability, flexibility and company support were important considerations.

Why Objectivity ?
Of the ODBMS products evaluated, Objectivity provided several capabilities that met Hekimian’s needs.

Clustering:
The Objectivity ODBMS is built on a page based server architecture. An Objectivity application’s object model, schema and data access can be designed to take advantage of the high performance inherent in a page server. Related objects can be physically clustered together on disk to optimize disk access, typically the most critical bottleneck in a database application.

Cross Platform Support:
Because CenterOp is sold to customers who may have any of a variety of hardware configurations cross platform compatibility was a critical issue. Objectivity allows for seamless deployment on all supported platforms.

Heterogeneous Language Support:
Objectivity provides seamless interoperation between its supported languages (C++, Java and Smalltalk). A Java application written today can access data created years ago with a C++ application, before a Java binding was even envisioned.

Distribution:
An Objectivity ODBMS is represented at the top level as a federation. A federation is a logical overview of all of the assets in an Objectivity deployment. A federation consists of a set of databases, these databases can be distributed anywhere in the target network. This makes it possible to install the modules of a CenterOp installation anywhere in the network.