Chapter  6

Integrating the OSS Platform

Building an integrated architecture that allows processes and data to flow seamlessly from one system to another is perhaps the greatest challenge IICs face when constructing an OSS platform. Beyond seamless processes and data exchange, an ideal architecture should also allow for systems to be altered, added and removed without requiring massive rewrites and conversions. A company’s integration technology and strategy decisions will ultimately determine the success of its OSS implementation, and thus its ability to compete effectively. There are many different approaches to systems integration, as well as a range of technologies designed to aid in the process. Technology can be an enabler, but as we will see in this chapter, integration presents as significant an analysis and testing challenge as it does a development tour-de-force.

1. COMMON INTEGRATION OBJECTIVES

Many organizational goals, such as achieving operational efficiency via process flow-through, or improving customer intimacy — knowing what a customer has ordered, what problems he has — require application integration. Without application integration, customer information might well be scattered across three or more applications. This scattering places a burden on users by requiring them to access multiple applications individually when trying to derive a composite view of the customer’s status and history. Further, without application integration, service provisioning might require manual re-keying of information among multiple applications.

In many cases, application integration follows an initial round of package or application implementation. In other cases, integration is factored into the first phase of package implementation. This is typical of emerging IICs whose first priority is to establish a core set of application packages that allow them to do business. These core applications, the “long poles in the
tent,” generally provide the ability to take orders, bill for services and monitor and activate network services. In this initial phase, integration is achieved via manual processes, i.e. re-keying data among multiple applications. This situation is tenable for only a short period of time. As the customer base increases, increasing the staff that performs the manual integration is the only way to scale systems and processes.

In other cases, integration becomes necessary to resolve the addition of new product lines or to manage the migration from a legacy base to a new OSS. Regardless of the starting point, integration is required to achieve a set of specific business objectives, the most common of which are described below.

1.1 Order Flow-Through

IICs pursue flow-through ordering capabilities to manage the interactions among applications for order-processing workflow. This requires sequential and parallel activities to be coordinated across multiple systems, including sales force automation, order entry, order management, provisioning, service activation, interconnect gateway and billing. The overall goal is to originate an order as a result of the sales process, and to flow that order through the tasks and applications required to provision and activate the services requested. Ultimately, the integration flow will notify the billing system of order completion so that the appropriate billing will occur.

1.2 Service Assurance Flow-Through

This objective can be divided into two parts. First, the objective is to detect a network fault and correlate the fault to those customers affected by the problem. For these customers, trouble tickets are automatically generated to notify them pro-actively and to track the resolution. In our example, it is also necessary to calculate and apply credits to the impacted customers’ bills because the network fault caused service level agreement (SLA) violations.

In the second scenario, a customer initiates the trouble ticket either via the call center or via a self-care Web portal. The ticket is then “flown” to the appropriate applications for resolution. Again SLA credits may have to be calculated and applied to the bill.