Chapter 2

A Detailed Look at OSS

OSSs are traditionally categorized into specific functional areas, each representing various steps in an IICs business, service delivery and service management processes. As more integrated packages come to market, and tighter integration is achieved in IIC front and back offices, the boundaries between these functional areas break down. OSSs, though often developed and marketed as separate functional components, must be integrated to form a seamless, unified platform constructed from many smaller pieces. As we will discuss in Chapter 5, no single OSS vendor has been able to provide a complete OSS package in which every component can be considered “best of breed.” Similarly, few IICs choose to develop OSS platforms entirely from scratch. As a result, IICs seek to integrate those components best suited to their business, which they believe can provide them a competitive advantage.

To understand the entire OSS picture, it is necessary to examine each functional area separately, noting how each interacts with the others. We will take a top down approach to examining these functional areas, beginning with ordering and customer interaction processes and working our way down to the network itself.

1. OSS FUNCTIONALITY

1.1 A Little History

To understand the current OSS landscape and its strengths and weaknesses, it’s important to see how it evolved. Remember that OSSs began as machines to help people perform standard, telephone company operations jobs. They were stand-alone platforms that handled billing, orders, network inventory and workforce management. Early network management and activation systems were generally equipment- and vendor-specific.
As competition increased and network technologies changed, especially in the mid-1990s, providers needed more customer care and customer relationship management (CRM) applications. They also had to manage a more diverse set of network equipment, which created a demand for multi-vendor network activation and management software that the equipment vendors didn’t provide.

With deregulation in 1996 came increased talk of convergent service offerings, driving billing vendors to develop billing systems capable of supporting any service offering. Further, deregulation created a need for interconnect gateway software and interfaces that would allow IICs to order network services from each other. More interconnections among IICs have brought more pressure for IIC-to-IIC billing applications similar to traditional carrier access billing systems (CABS).

A more recent critical development has been a shift to making OSS applications Internet and eBusiness-capable. Most OSS applications are now developed with Web-based interfaces, hooks and APIs to Web applications and the Internet. It’s important to understand both how an OSS function originated and its place in an integrated, eBusiness environment in order to understand that function’s role in the overall OSS process.

### 1.2 Order Entry

The order entry process is relatively straightforward, though it has become more complicated in step with increasing service complexity and an increased focus on customer self-help. The steps in the order entry process include capturing and validating the order and related customer information; determining the availability of the requested product or service; reserving components of the service, such as a port on a switch or a block of IP addresses and scheduling installation times and dates.

Capturing an order means obtaining information about the customer and the service the customer is requesting. With a new customer placing an initial order for service, the IIC must determine the customer’s location and understand exactly the kind of service and added features the customer wants. If it is a new customer, not just a new kind of service being requested, this is also the point at which a new account is configured for the customer in billing and customer care systems. This is often done manually among several systems and is thus a process IICs often prioritise for integration and automation.