ORACLE COMMUNICATIONS NUMBER SERVICES MANAGER

The boundaries among fixed, mobile, and internet communication platforms are vanishing. As fixed operators address the substitution threat of mobile service and low-cost Voice over IP (VoIP), mobile operators are working to overcome slowing growth rates as developed markets begin to saturate. For both, IP infrastructure introduces an opportunity for efficiency and revenue growth, but only if they can properly integrate their existing infrastructures to deliver seamless services to subscribers. Oracle Communications Number Services Manager enables operators to deliver revenue enhancing services that help exploit new market opportunities.

Multi-Network Number Routing Services to Generate Revenue

Oracle Communications Number Services Manager provides originating and terminating network services to mobile, wireline, and NGN service providers. The solution provides a reliable capability that extends well-beyond just meeting the basic regulatory requirements of NP. Through a comprehensive footprint (See Figure 1), Oracle Communications Number Services Manager offers the opportunity to include additional revenue-generating value-added services, such as a virtual private network (VPN), least cost routing, service numbers, carrier preselect, and presence and availability—all with a minimal additional capital expenditure.

Number portability (NP) enables a user’s number to move geographically within a network, as well as between different operator networks—in most markets it is a regulatory requirement. With the introduction of IP telephony, NP must be extended to facilitate number movement between network technologies. Known as electronic number mapping (ENUM), this interchange capability, along with NP, becomes an important enabler for IP telephony by allowing for the smooth transfer of subscribers to next-generation networks (NGN) and IP Multimedia Subsystem (IMS) networks.

Figure 1. Oracle Communications Number Services Manager provides the capability to support NP as well as other value-added services.
Key Features

The solution provides comprehensive capabilities required by today’s NGN services.

Number Portability
The application provides robust NP functionality for call, message, and session routing to the correct recipient operator (subscription holder). The solution addresses the needs of fixed, mobile, and next-generation networks and can support combined solutions depending on the regulatory and operator requirements.

NP routing is implemented using two methods—a trigger-based approach using Intelligent Network Application Part (INAP) and a trigger-less method utilizing a Mobile Application Protocol (MAP) signaling relay function. All standard NP trigger methods are supported, such as All Call Query, Query on Digit, Query on Release, and call forwarding. Additionally, operators can choose to offer their NP capabilities to other operators, who might still be reluctant to make their own investment, thus turning a cost center application into a potential revenue generator.

Electronic Number Mapping
ENUM enables the mapping between time-division multiplexing (TDM) networks (using the universally successful E.164 numbering scheme) and packet networks (using uniform resource identifiers familiar to the IP world). Oracle Communications’ multi-network and real-time service control expertise may be leveraged to integrate operator systems, and help maximize investments in past and current technologies.

Centralized Multi-network Routing from Legacy to Next-Generation Services
As operators migrate to NGN and IMS, there is an increasing requirement for a centralized routing function. Oracle Communications Number Services Manager can perform a centralized routing function that provides routing information to network elements involved in call set up. This is a cost-effective means to ensuring the integrity of the routing information without having to check consistency across all network elements.

Oracle Communications Number Services Manager can be connected to a wide variety of networks using control agents for each protocol. Current control agents support Customized Applications for Mobile Enhanced Logic Application Protocol (CAP), INAP, ISDN User Part, MAP, Wireless Intelligent Networking, IS41, and Session Initiation Protocol, among others. Additionally, short message service (SMS) porting can also be supported using CAP or MAP. Within the Oracle Communications Network Charging and Control suite, multiple protocols can be supported simultaneously, for example, Code Division Multiple Access and Global System for Mobile Communications, or a mixture of softswitches and TDM switches.

Value-Added Services
Oracle Communication Number Services Manager helps operators deploy value added services to increase revenue generation across convergent networks. Some examples include:

- **VPN.** A VPN is an application for both fixed and mobile networks, including voice and messaging services. Additionally, some virtual Private Branch Exchange (PBX) functions, such as short code dialing, are supported, allowing subject matter experts in particular to benefit from a network-based PBX.

- **Complex Routing.** Freephone (in the U.K.), premium rate, and split charge services route callers to a destination number determined by their location or calling identification, the day/date, a call destination balance, or any customer interactive voice response instructions. Number owners can apply complex routing or simple number translation from the dialed number into a destination. Call detail records are created to facilitate accurate charging.
• **Carrier Preselect.** Carrier preselect is a service that determines the carrier to be charged as selected by the calling subscriber. Further, it enables the treatment of short codes, in some cases overriding the predefined prefix, and screening for allowed and barred destinations.

Service Creation and Session Control
Oracle Communications Number Services Manager uses an icon-based service creation environment to define service logic and subscriber data. This information is utilized to deliver and control the call, message, or session to the final destination.

**Oracle Communications Network Charging & Control**
Oracle Communications Number Services Manager, and Oracle Communications Messaging Manager, are separate licensed components of Oracle Communications Prepaid Charging, a core product within Oracle Communications Network Charging and Control portfolio.

• **Oracle Communications Prepaid Charging** provides cutting edge charging control across all types of wireless and wire line networks, supporting multimedia voice, video, messaging, and data content services. Providing a foundation and an evolution path for convergent charging, it can be deployed as a standalone application or in conjunction with other Oracle Communications products such as Oracle Communications Billing and Revenue Management.

• **Oracle Communications Messaging Manager** is a centralized, next-generation messaging platform that provides interoperability with other media, such as instant messaging and e-mail. The solution provides a broad range of message processing capabilities at both the network and service layers through an extensive portfolio of routing capabilities.

Contact Us
For more information about Oracle Communications Number Services Manager, visit oracle.com or call +1.800.ORACLE1.

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