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## Pipeline's Top Ten: Emerging OSS technologies and the ten most innovative companies behind them

By Dan Blacharski

### Sidebar:

*The Top Ten:*

Amdocs

IP Value Technologies

Redknee Inc.

Telcordia

MetaSolv Software

NetCracker Technology

ILOG

Formula Telecom Solutions

BEA Systems Inc.

Wisor Telecom Corp.

The OSS business is on the move with new technology and innovations, and telecom companies are being quick to take up the new offers. This month, Pipeline looks at the ten most innovative OSS companies that are bringing that technology to the table. The biggest OSS providers, while we must acknowledge their market force and their ability to pour research dollars into new products, aren't always the most innovative. According to Analysys, the 12 largest OSS vendors account for 41 percent of all system sales, but as has always been the tradition of the technology business, sometimes the little guy comes out of left field with something that changes the world.

Telcos are looking for greater efficiency from their OSS systems, and a report from Dittberner Associates predicts that the five biggest areas for provisioning and inventory investment are going to be telecom discovery, network order management, transport network provisioning, access network provisioning, and network inventory. The research goes a step further to note that telcos are also asking OS vendors to provide "a more service-enabling OSS to help them exploit next generation IP services." This demand will drive additional innovation in the areas of service management, wireless terminal management, and content management.

**Amdocs** earns a space on our "top ten" for its strong acquisition strategy, which positions them as one of only a handful of companies with an end-to-end solution for both OSS and BSS (business support systems) functionality. The company's recent acquisition of Cramer Systems Group gives Amdocs some key OSS tools for network resource management, activation, and auto discovery. The company's intent, says

Amdocs CEO Dov Baharav, is to “deliver a complete automated service fulfillment solution across all lines of business--for any service, on any network--linking order management at the customer layer with activation at the network layer.” Their end-to-end solution will encompass not only OSS systems, but also customer-facing BSS systems including CRM. The integration of OSS and BSS will be in demand by more telcos as they look to squeeze more efficiency out of their systems in the future, and Amdocs' proposition will give telcos a complete view of the network, service, and customer. Traditionally, OSS and BSS have been completely separate. Establishing this connection will deliver key efficiencies, and will help telcos improve the overall customer experience.

Sun Microsystems' OS through Java Initiative (OSS/J), an open system that provides a set of Java-based APIs for OSS services, serves as a strong complement to the Telemanagement Forum's Next Generation OSS (NGOSS) standards, and the two entities have launched the Prosspero program, the goal of which is to provide prepackaged OSS solutions for telcos. Taking full advantage of the OSS/J program is a small German company called **IP Value Technologies**, whose premioss suite uses the OSS/J open APIs to deliver a range of applications, including OSS Inventory, OSS Service Activation, OSS Trouble Ticket, OSS Quality of Service Fault Management, and OSS Quality of Service Performance Management. Through use of the open Java APIs, IP Value delivers a number of advantages that come as part of the Java proposition, not the least of which is reduced operations costs, easy customization and integration, and an extensible system architecture.



Success in the competitive mobile market depends to a great degree on personalization, and wireless operators who are able to provide a highly personalized experience to customers will be the ones who stay in the game, and who are able to increase ARPU and enhance the bottom line. **Redknee Inc.** earns a top ten nod for its software that lets mobile providers monetize and personalize services and content for mobile users. In a recent seminar, Redknee CTO Bohdan Zabawskyj described how one of their customers was able to deliver personalized, single-number service for voice, messaging, and data services spanning up to six devices. The serve was able to increase voice ARPU for the client by 50 percent, and messaging ARPU by 100 percent.

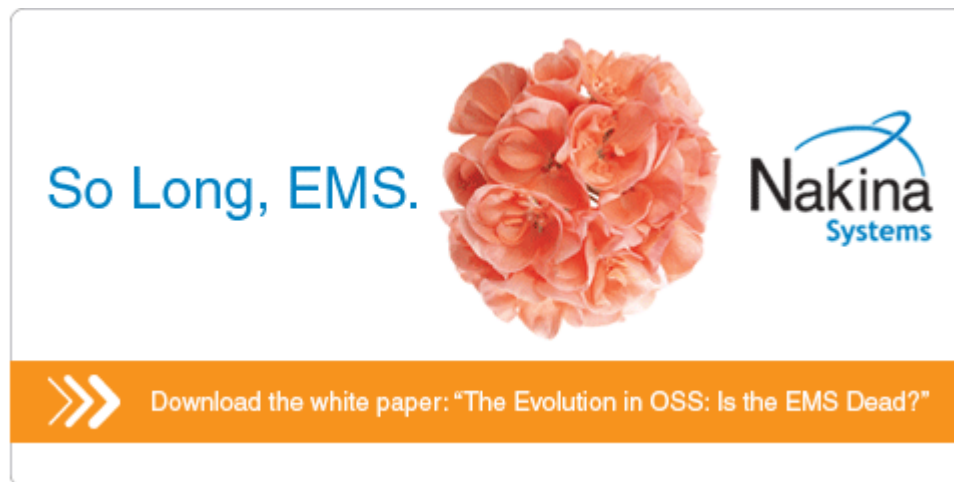
In terms of sheer power, market share, and just good software, **Telcordia** is no stranger to industry awards and top-ten lists. The company handily won the 2006 Frost & Sullivan Award for Product Innovation this year, primarily for its outstanding contributions to IP Multimedia Subsystem (IMS) and VoIP technology. Currently, VoIP is not really 100 percent Internet traffic. A VoIP call may have two or three hops on the Internet, making up the bulk of the distance, but then is often routed over the PSTN for the final destination. Naturally, the VoIP provider has to pay the phone company for use of their lines, and this increases the bottom-line cost of VoIP for both the VoIP provider and the VoIP customer. Telcordia's VoIP Routing Registry takes the first step toward establishing a fully IP-based call system by creating an inter-carrier VoIP calling system. The technology is already being beta-tested by several carriers and cable operators. And if anybody is able to make this happen, it will be Telcordia, which was recently highlighted in an OSS Observer research report as having significant market share across several different areas. The company has an 18 percent share of the service fulfillment sector, making it the number one provider in that area. They also have 11 percent of the Service Assurance market, 26 percent of the Inventory market, and 22 percent of the Order Management sector.

Speed is something near and dear to our hearts, whether it's a brand-new Mustang, or an OSS system that lets us configure and deliver services to customers in a more timely manner. A major trend in the OSS industry, according to OSS Observer's research, is the rapid introduction of new services. These new services call for real-time mediation. In fact, many telcos suffer from systems that limit their ability to rapidly roll out new services. OSS systems must be able to provide broader customer visibility, and a full and unified view of all services the customer has purchased--and how those services are being used. **MetaSolv Software** takes a solid top ten position with Pipeline this month because of their service agility, reflected in their new Time-to-Market OSS, a product that delivers telcos with the flexibility they need to accommodate shorter delivery cycles. The TTM system has a set of prepackaged processes for next-generation services, and can also leverage existing systems to extract data in real time.

Taking a holistic view of the OSS is at the heart of **NetCracker Technologies'** Service Level Transformation approach. NetCracker's position on our top ten list is given due to their innovative philosophy, which holds that the service layer must be a provider's key focus--and that the service layer can be transformed from a problem into a driver of innovation and revenue growth. The service layer and OSS systems is not just a back office function. It is critical to a telco's success. NetCracker's system, and their holistic approach, addresses three business goals: to increase revenue by introducing converged services, to reduce operational costs, and to build more profitable customer relationships by understanding the customer experience, and through increased levels of personalization.

Also deserving of a top ten spot is **ILOG**, whose business rule-based approach to OSS and BSS is used by several high-profile telcos, including AT&T, France Telecom, Swisscom, and Verizon. Also a member of the OSS/J initiative, ILOG has created the Java-based JRules offering, part of its Business Rule Management System (BRMS), a system used successfully by Verizon to automate order validation. A rules-based approach is particularly useful in areas such as fulfillment automation. Intelligent, rule-based automation helps to minimize abandonment--something that happens all too frequently because a provider's online system is too complicated, inflexible, or cannot be understood by the client.

Reducing customer churn is a concern for all telcos in this fickle business, in which the customer is loyal only until the next guy comes out with something a dollar cheaper. But as more carriers roll out triple play offerings, and prices for service all gravitate toward a bottom level, telco services will become more commoditized. With prices and services all being approximately the same, telcos will be forced to differentiate themselves through customer service and increased satisfaction levels. That's the logic behind Leap Billing, a product of Israel-based **Formula Telecom Solutions**, which takes a business perspective to OSS that lets providers focus more on subscriber retention and customer satisfaction. The system captures events in real time, and responds to events based on a pre-configured set of business policies or actions, such as provisioning, balance management, rating, or sending the client a message. The commonsense idea behind Leap Billing is to look at the actual business behind each event, and to create a personalized environment where customers achieve what they want to achieve.



The advertisement features a white background with a large, vibrant orange rose in the center. To the left of the rose, the text "So Long, EMS." is written in a blue, sans-serif font. To the right of the rose is the Nakina Systems logo, which consists of a blue stylized wave icon above the text "Nakina Systems" in a blue, sans-serif font. At the bottom of the advertisement is an orange horizontal bar containing a white double arrow icon on the left and the text "Download the white paper: 'The Evolution in OSS: Is the EMS Dead?'" in a white, sans-serif font.

The Asian market represents an enormous upside to telcos and OSS providers alike, and that fact has not been lost on **BEA Systems**, which has recently established a telecommunications technology center in Beijing. BEA Systems lands on our top ten not only because of their excellent OSS technology, but also because of their global perspective and their ability to meet the specific requirements of Chinese telcos. The company has adapted their BEA WebLogic Communications Platform to include custom adapters, protocols and other technologies to service the Chinese market.

Pyramid Research estimates that outsourcing can cut costs for a mobile operator by as much as 25 percent. In looking at how telcos approach their OSS functions, we would be remiss if we left outsourcing out of the discussion, and so we also include **Wisor Telecom Corp.** in our top ten for their catalog of both software solutions and service bureau offerings. Their Outsourced Provisioning Service helps telcos keep costs down and errors to a minimum. The advantage of outsourcing lets carriers add new services or move into new markets quickly. Their outsourcing model is quite flexible and includes either a full, end-to-end process, or partial process outsourcing.

Telecom companies are embracing OSS with a renewed fervor as they seek out a competitive edge. In the past, a tactical approach has led telcos to amass a complicated infrastructure that is often inefficient and too complicated, and unable to support next-generation services. A move to a more strategic OSS investment strategy has yielded benefits in terms of better service and lower costs. Those telecom companies that don't embrace a coherent OSS strategy will be the ones left behind in a dust storm of competition.