

THE 21ST CENTURY CARRIER

The 20th century was highly successful for the telecommunications industry, which went from telegram to telephone to mobile phone all in the space of 100 years. However, now in the 21st century the growth of the industry is slowing. The existing business model is under attack from other converging industries, such as Internet, entertainment and content businesses. In fact in recent years, telecommunications has been one of the worst performing sectors in stock markets around the world, and price-earnings ratios suggest there is little investor belief in the situation improving soon.

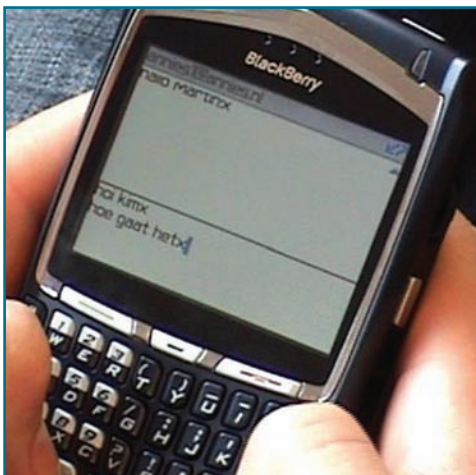
Some carriers are adopting a 'bit pipe' model, monetising something as simple as mobile phone ring-tones – for example, the Crazy Frog ring-tone alone reputedly earned more than \$2m for Jamster and a similar amount for the carriers who simply facilitated the download. At the same time, other telecom carriers are adopting a different perspective. They accept the inevitable emergence of a new value chain, but they have no intention of surrendering their lucrative position as a provider of communications services to settle for the role of a bit pipe utility. Instead, they are looking at how to reproduce the innovation and dramatic growth they have seen in Internet businesses and applications over the last decade. Indeed, SMS service has been the most recent run-away success in the telecoms market and it came about more as a result of user inventiveness than carrier innovation.

But which way should the 21st century operator turn? Can they be more than just a bit pipe?

Trouble on the Horizon?

Carriers believe that they do have what it takes to succeed. However, the missing ingredient for them is agility in the new competitive landscape. They are hampered by networks that were conceived and built in an era that had a different view of the future of communications. It has left them with a legacy of disparate proprietary systems and vertically-oriented silos serving different access technologies.

JONATHAN BELL, VP OF MARKETING AT OPENCLOUD, SAYS THAT THE ROUTE TO BECOMING A 21ST CENTURY CARRIER LIES IN AN OPEN STANDARDS APPROACH, WHICH WILL ENABLE OPERATORS TO MOVE AWAY FROM PROPRIETARY SERVICES AND VENDOR LOCK-IN, USING THIS 'OPENNESS' TO ACHIEVE BOTH INNOVATION AND COST LEADERSHIP



Real-time talk by text solution which runs on the OpenCloud server

Carriers now recognise that the real threat to their business is no longer from competitors or new entrants, but from disruptive substitution. With comparatively minimal investment, Skype and similar

businesses have decimated telecoms revenue projections by delivering substitute call services at ultra-low costs, using disruptive communications technologies including broadband Wi-Fi and VoIP, which carriers no longer control.

There are learnings from comparable infrastructure-based industries, such as air travel, gas or electricity supply that different rules of competition will apply in the emerging telecoms value chain. Similar to the investment in aircraft or laying pipelines, the prohibitive costs of buying communications cables and building a core network mean carriers don't face losing their core transport business any time soon, although technologies like Wi-Fi and WiMAX mean that their monopoly is less secure. However, operators are not satisfied with being limited to bit pipe transport and access networks that form the commodity business. They recognise that the key to profit and growth lies in developing the value-add Next Generation Network services that generate new opportunities for revenue and customer loyalty.

Cost Leadership

Despite the services layer of the Next Generation Network delivering the greatest potential for value creation and revenue growth, it is also the area of greatest competition. The carrier is just one of the players competing for a piece of this lucrative action. The factors that will give players a distinct competitive advantage in this arena are low costs, agility, brand marketing and product innovation.

All-IP networks promise savings in the transport network infrastructure but other measures are required to drive down service provision costs where competition will be toughest. The only alternative will be to surrender that market to more agile competitors who are not burdened with legacy infrastructure, entrenched organisational and technological silos and the associated cost-base.

Many carriers are used to competing by segmentation and differentiation. Continuing this course will bring them into head-on competition with Internet businesses in the services layer that they

want to dominate. Arguably, cost leadership will become a popular competitive strategy because it leverages carriers' strengths, notably scale economies (many carriers are global and tend to be sizeable organisations); experience of curve effects (many carriers have over 100 years' experience in the communications business); high volume business; and a large customer base.

But if carriers have such potential cost advantages, why are new entrants today able to undercut them with disruptive offerings?

<i>Narrow market Scope</i>	Segmentation	
<i>Broad Market Scope</i>	Differentiation	Cost Leadership
	<i>Uniqueness Competency</i>	<i>Low Cost Competency</i>

Figure 1: Cost leadership strategy

Need for 'Openness'

The main obstacles to carriers achieving a cost leadership position in the market are the technical, commercial and contractual constraints of their current network infrastructure. Proprietary, vertically-oriented, monolithic network architectures are not enabling them to be flexible enough. Furthermore, these network architectures are both tremendously expensive to modify or enhance with new services and, also, expensive to operate, support and maintain across the various network silos. Finally, any modifications are slow to progress.

To achieve the required flexibility, carriers have spent a decade demanding open platforms from their suppliers. Against a series of open standards initiatives including Parlay and JAIN, founded by operators to drive this agenda, infrastructure vendors managed to rest on their proprietary technologies and associated high replacement costs to protect their domain. The carriers' own inertia and risk aversion also contributed to the status quo. In the past, carriers could afford to suffer the burden of being locked-in to a high-cost infrastructure because their competitors were in the same situation.

However, this is no longer the case. What is holding back innovation in telecoms today is not lack of foresight or creativity, but the prohibitive costs of developing new services or combining existing ones in new ways.

New Lease of Life

Market analyst house Gartner recently stated that: "Adoption of a low-cost infrastructure for telecommunications will likely open opportunities for new services that are forbiddingly expensive today. The impact of the new services in a standards-based converged network will be broader and faster than it can be today."

What is needed is an open platform, and JAIN SLEE is the open Java standard for event-driven application servers that address this challenge. It is tailored to the large-scale execution of communications services across existing and Next Generation Networks, enabling JAIN SLEE-compliant application servers to provide the open, flexible service execution platform that is essential to achieve agility in service development and deployment, and to

also capitalise on cost leadership.

Parallel to the rise of the JAIN SLEE standard, a number of advances have combined to bring the proprietary infrastructure lock-in to an end. Commercial pressure, the introduction of disruptive technologies and the growing adoption of open standards are all generating exciting opportunities for application and service development by operators, as well as by third party developers.

Commercial pressure – Telecoms is seeing a new round of infrastructure investment after the lean years following the dotcom downturn. In looking to leverage existing investment and integrate new and legacy equipment, carriers are using the procurement of new equipment to apply pressure on suppliers for openness and access to proprietary protocol specifications.

Disruptive technologies – New open application servers now easily match proprietary intelligent network (IN) equipment in high-end transaction processing and carrier-grade reliability. This means that carriers benefit from continuous availability, telco-grade latencies and superior scalability, all on commodity hardware and operating systems.

Open standards – The mainstream adoption of JAIN SLEE has resulted in the compliant platforms becoming more readily available. By opening up the world of telecoms to millions of Java programmers worldwide, including carriers' own in house developers, JAIN SLEE-compliant platforms have created a vibrant and competitive market for off-the-shelf telecoms applications with the added benefit of service portability. With open portability across JAIN SLEE-compliant platforms, even a custom service developed specifically for a particular carrier can contribute to savings elsewhere by being re-deployed in other countries or networks that the carrier owns.

Business Value

In contrast to the optimistic and exuberant investments in the past, carriers today expect a positive return on investment (ROI) within a period as short as 12 to 18 months. Given these criteria, investments in JAIN SLEE open platforms are easy to justify because costs of modifying and maintaining existing proprietary systems tend to be noticeably higher. However, the real value of the JAIN SLEE platform is experienced when innovative services are deployed.

The cost of developing and deploying services on an open platform is a fraction of that faced by carriers using proprietary alternatives, with the added bonus of a wider choice of suppliers. As the platform is already integrated with network switches and operational support systems (OSS), developers can focus solely on the development of the service logic, which drastically reduces in-house development from years to weeks. Carriers can experience even further cost benefits by licensing an off-the-shelf JAIN SLEE-compliant service from a third-party application vendor.

As a result, the successful 21st century Next Generation carrier will be a completely different beast to its 20th century predecessor. It will either be an efficient utility business providing transport, or it will leverage its cost leadership advantages to compete effectively as a provider of compelling communications services. Forward thinking service providers are already using open JAIN SLEE platforms across their infrastructure to achieve lower costs for deploying new and innovative services. The future of the industry lies in establishing a clear and sustainable competitive advantage. ■