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Vendor-Neutral Messaging Platforms

Helping telcos soar into a new era of messaging connectivity

Commissioned by:

HORISEN®

Contents

Summary

Telcos are a trusted provider of communications services to consumer and enterprise customers, and as such hold a privileged position in the enterprise messaging value chain. But it is a position that telcos have not typically successfully leveraged: most have left revenue on the table for SMS aggregators, communications-platform-as-a-service (CPaaS) providers, and others. This situation could be about to change. Messaging platform vendors are offering vendor-neutral messaging platforms combined with smart tools, and telcos can use these to more easily, quickly, and effectively engage with enterprise customers directly to generate revenue from app-to-person (A2P) SMS and SMS Internet of Things (IoT).

Telcos can fly high with vendor-neutral platforms

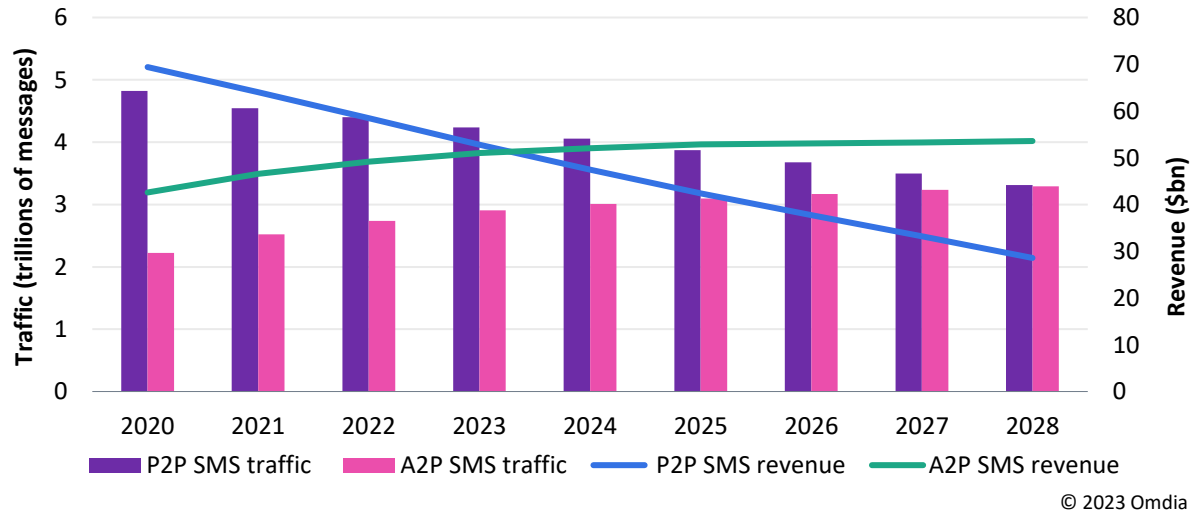
Vendor-neutral platforms are the plane-builders of telecoms

SMS is a service that telcos need to continue to offer to consumer and enterprise customers, but the challenging market landscape for person-to-person (P2P) SMS and A2P SMS is stretching their ability to do so effectively.

P2P SMS traffic and revenues are dwindling as messaging apps approach saturation in many countries: Omdia estimates that P2P SMS revenue will fall from $52.8bn in 2023 to $28.6bn by 2028 at a CAGR of -11.26%, with traffic falling from 4.2 trillion messages in 2023 to 3.3 trillion messages by 2028 (see **Figure 1**). But the role of SMS as a universally available communications service—on all networks and devices and ubiquitous geographically—means that telcos need to continue to support it within their 5G networks and likely into the next network generation as well.

The continued health of A2P SMS traffic is a far more compelling reason for telcos to continue to support SMS, however. A2P SMS revenue is expected to grow at a CAGR of 1.44% between 2023 and 2028 to $53.6bn, with traffic increasing from 2.9 trillion messages in 2023 to 3.3 trillion by 2028.

Figure 1: Global P2P and A2P SMS traffic and revenue, 2023–28



Source: Omdia

But A2P SMS is currently beset by problems that also threaten its existence; these include the encroachment of messaging apps into business messaging, exploits against businesses such as the artificial inflation of traffic (AIT) / SMS pumping, and exploits against consumers such as smishing, malware, and viruses. The increased use of messaging apps for business messaging will likely cannibalize A2P SMS to some extent, and exploits against businesses and consumers will erode trust in the SMS channel.

Telcos need to make SMS infrastructure investment decisions against a backdrop of falling P2P SMS traffic and revenue and the need to mitigate against a similar potential negative impact on A2P SMS traffic and revenue with threats coming from different market vectors.

When it comes to replacing or upgrading its messaging platform, often a telco's choice is between building its own or buying off the shelf. Building can be expensive, time-consuming, and complex, and adding features after the initial build even more so. But buying off the shelf means the telco may not end up with capabilities that it needs or, conversely, with capabilities that are not required.

A vendor-neutral platform helps telcos solve the "build versus buy" dilemma, because it straddles the two dynamics. A telco can purchase a vendor-neutral platform and then, if it wishes, plug its own backend systems (such as billing systems from third parties) into it using APIs.

Neutrality in the context of messaging platforms also means not competing in an adjacent business with telcos and other connectivity service providers, such as a messaging platform provider that also enables CPaaS. A vendor-neutral messaging platform provider simply allows any of these players to run its own SMS trading business—whether that is targeting the wholesale or the retail (enterprise) market—and facilitates connectivity for message delivery among them. For example, a telco could use a vendor-neutral messaging platform to connect with other telcos, SMS aggregators, and CPaaS providers to provide a wholesale SMS service to these parties or a retail SMS service to its own enterprise customers.

There are now only a few messaging vendors that purely focus on providing the platforms that enable telcos and other connectivity service providers to provide messaging services to consumers and enterprises (retail) and connectivity service providers (wholesale) without competing with them. In this sense the vendors have become, to use HORISEN's analogy, the plane-builders that enable telcos and others to fly: they provide the platforms (the planes) that successfully support, build, and grow the messaging businesses of the telcos. By purely focusing on the underlying technology, messaging vendors offer platforms that are continually tweaked to meet the constantly evolving needs of telcos and other types of connectivity service providers.

Cloud-based messaging platforms and managed services increase scalability and reduce cost

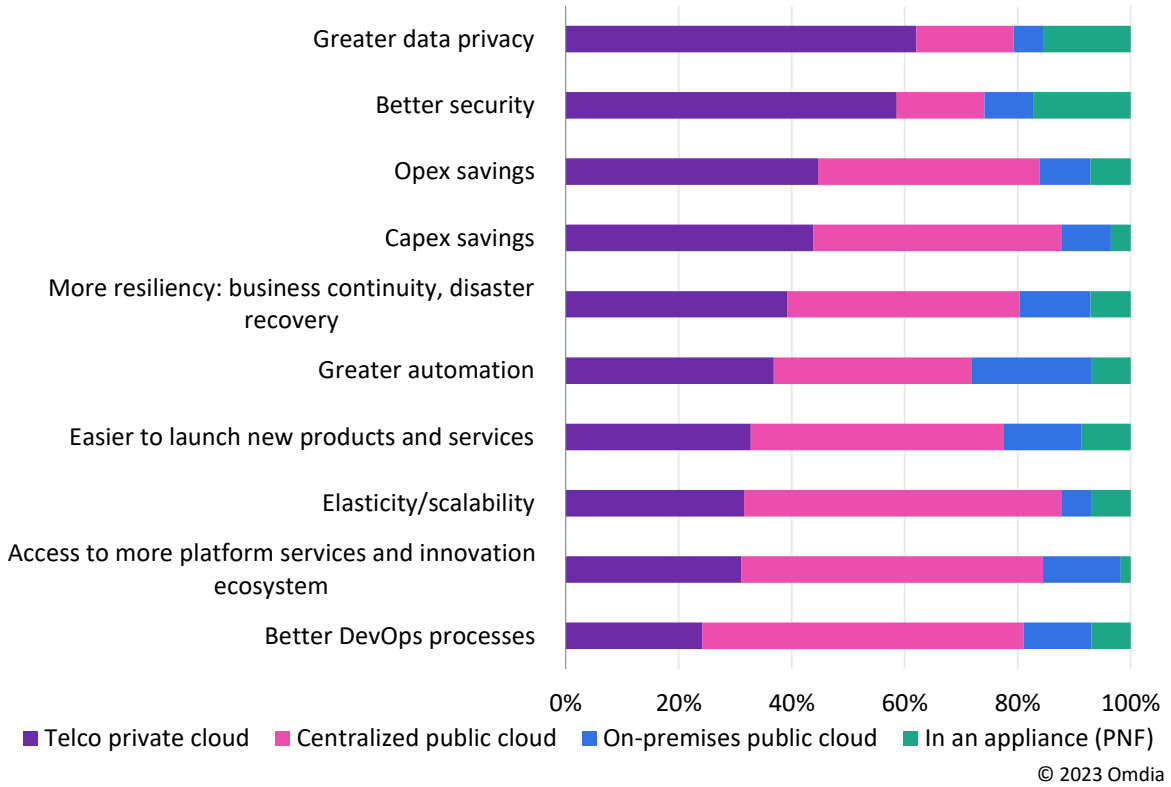
As P2P SMS traffic and revenue decline, and bad actors increasingly threaten the A2P SMS channel, telcos are also challenged with securing internal budget to upgrade their messaging platforms as they come to end-of-life, maintain their existing messaging platforms, and ensure their messaging platforms are able to add new features when available or as the telco needs them.

Under these circumstances, it may be less expensive and more effective for telcos and others to deploy a cloud-based messaging platform. Cloud-based messaging platforms can help telcos reduce their cost base and at the same time provide the flexibility to quickly add new functionality or remove redundant capabilities as needed. Operating in the cloud also allows telcos to easily scale the capacity of their messaging platforms to better manage fluctuating traffic volumes and to more effectively secure their A2P SMS channel by being able to add features such as filters and firewalls.

According to Omdia's *Telco Cloud Adoption and Vendor Perception Survey – 2023*, a survey of 59 telcos conducted in July 2023, the migration from using physical appliances to run network functions toward using virtualized or containerized functions (VNFs or CNFs) (i.e., cloud) has accelerated over the past 12 months. The 2023 survey found that about 45% of respondents' network functions are physical, while 39% run as VNFs and 16% as CNFs. In the 2022 survey, the comparable proportions were 60%, 26%, and 14% respectively, and in five years' time the proportion of physical appliances will drop to 28%, VNFs will remain at 40%, and CNFs will grow to 34%.

Further, at least 50% of cloud respondents asked about which type of cloud (telco private cloud, centralized public cloud, on-premises public cloud, or in an appliance) they prefer to use for network functions say they expect to deploy most of their network functions in the telco private cloud.

Figure 2: Telcos' preferred cloud option for delivering selected benefits



Source: Omdia Telco Cloud Adoption and Vendor Perception Survey – 2023

Telco private cloud was identified as being best suited for security and data privacy by about 60% of respondents (see **Figure 2**), which relates not only to control over the cloud infrastructure but also to the need to comply with telecommunications security frameworks and the security/regulatory practices of the countries within which they operate. Security and regulatory compliance is something that equipment vendors, including vendor-neutral messaging platform providers, are very experienced in dealing with.

However, a higher proportion of survey respondents also acknowledged that centralized public cloud delivers benefits such as savings in opex and capex, scalability, access to more platform services and an innovation ecosystem, and better DevOps processes. The proportion of VNF/CNF functions hosted in a centralized public cloud is expected to grow to 30% in five years (up from 21%).

Though cloud-based messaging platforms are typically managed at a network level by the platform provider, meaning there is no requirement to invest at an engineering level, telcos would still have to manage the services that they run over these platforms. They can typically do so with online management tools, accessed via an intuitive user interface, that allow them to carry out tasks including defining rules for routing SMS traffic, creating routing scenarios, monitoring and controlling SMS traffic flows, inputting SMS rates from suppliers, managing pricing to customers, and ensuring security.

Some telcos prefer to deploy their messaging platforms within their own network (i.e., on-premises), so this is an option that messaging platform vendors continue to offer. It does mean that the telco needs to make an ongoing investment in infrastructure, floor space, personnel, and so on, which means it is probably more affordable for larger telcos. But it also means that the telco retains a higher level of management and control over its messaging platform.

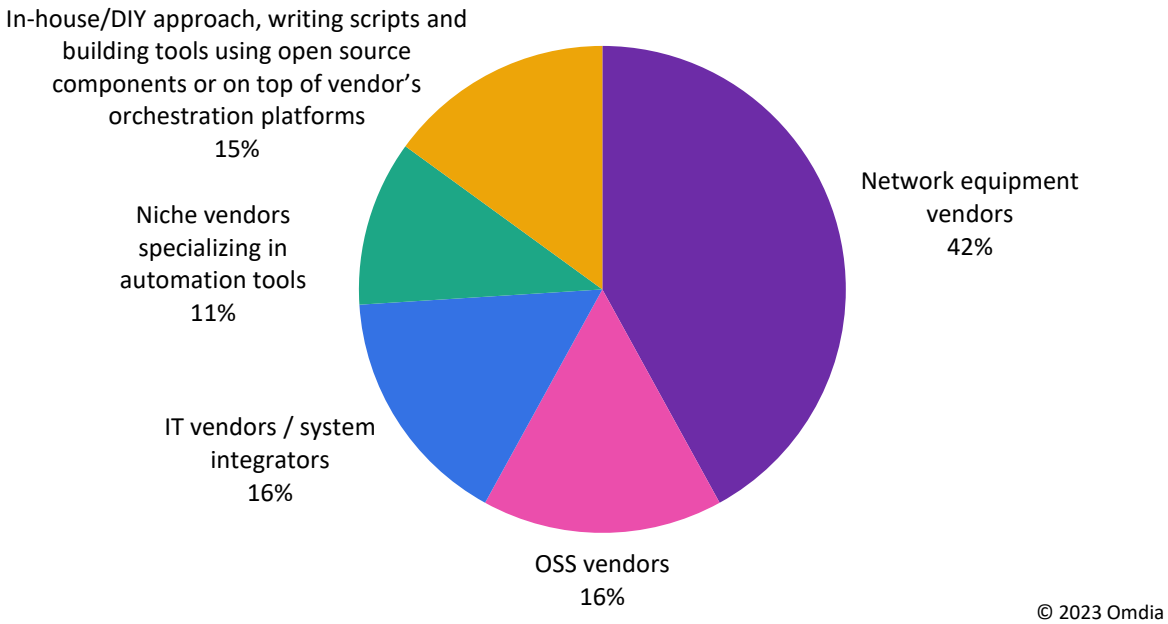
Network-based smart tools enhance quality of service, prevent fraud, and automate functions for ease of use

The network-based smart tools provided by vendor-neutral messaging platform providers can help telcos compete more effectively to gain a share of the enterprise messaging market that is currently dominated by CPaaS providers and SMS aggregators.

The high level of automation held within these tools makes them less complex to use and therefore more accessible to telcos that may no longer have a dedicated messaging team; it also means that telcos can focus more on the business of selling their messaging services and less on administrative tasks.

According to Omdia's *Telco Network Automation Survey – 2023*, 42% of respondents primarily obtain network automation tools from their network equipment vendors (see **Figure 3**), underlining the key role that vendors, including vendor-neutral messaging platform providers, play in providing such tools.

Figure 3: Where telcos source their network automation tools



Source: Omdia Telco Network Automation Survey – 2023

The top four drivers for implementing network automation as indicated by survey respondents are to improve the customer experience (47% of respondents), to reduce time to provision services (42%), to introduce new services / revenue streams (38%), and to simplify management (27%).

The key operational outcomes that survey respondents are seeking to achieve with network automation broadly map to the top four drivers, with 60% of respondents seeking to reduce provisioning time and cost, 42% to increase the success rate of service provisioning, 38% to improve fault handling, and 36% to improve resource utilization. All these operational outcomes will also ultimately contribute to improving the customer experience and quality of service.

That is significant, because telcos in particular are held to a very high standard of quality, reliability, and trust by consumers, enterprises, and other connectivity service providers. The key metrics by which they are judged for quality of service relating to message delivery include reliability, speed, reach, cost, and security (e.g., the detection and blocking of spam, smishing attacks, and fraud).

The comprehensive monitoring and reporting tools that vendor-neutral platform providers can provide to telcos will allow them to monitor, analyze, and report on message delivery metrics and to download messaging logs so they can quickly troubleshoot problems.

Telcos can also use these tools to oversee and manage connections, sessions, and queues for their suppliers and customers; to ensure that messaging traffic flows smoothly across their networks with minimal disruption; and to take remedial action when needed.

Platform performance tools provide a macro view of the performance of the messaging network in real-time, including Short Message Peer-to-Peer (SMPP) connections, queues, sessions, traffic volumes, and message-originating traffic. Again, these tools help telcos keep track of how their network is performing, so they can add or drop capacity or redistribute traffic to ensure an evenly balanced load, for example.

Messaging-specific financial reporting tools can feed relevant data back into the telco's accounting and finance systems, including details such as SMS termination rates, wholesale and retail SMS pricing, and SMS revenue. In addition to just being good financial practice, providing detailed financial information to the accounting department is useful in situations where a telco or its customer is affected, for example, by SMS-based fraud.

Testing tools can test and report on functions such as delivery reporting (DLR), home location register, and mobile number portability (MNP). Mobile phone numbers can be tested almost instantaneously to detect anomalies and resolve them quickly to minimize service disruption.

To ensure the integrity of SMS traffic flowing over their networks, telcos can also deploy network-based tools such as SMS filters or firewalls to detect, filter, and block unsolicited or potentially anomalous SMS messages. These tools can aid telcos and others to help protect themselves and their customers from smishing attacks and other SMS-based exploits and to militate against the use of gray routes into their networks.

As a complement to SMS filters, network-based campaign detection and monitoring tools can help telcos to detect, monitor, and manage SMS campaigns flowing over their networks. Often, telcos do not have good visibility into the campaign-based traffic that comes onto their networks, so these kinds of tools will allow them to detect campaigns (including spam) and set classifications, priorities, or routing rules accordingly. Telcos can also use these tools to determine the origins of the campaign and filter campaigns to analyze the traffic associated with them; the resulting data can then be used to fine-tune how they manage campaign-based traffic.

The advantages of a one-stop shop

The decision to purchase a vendor-neutral messaging platform means that telcos and other connectivity service providers can use APIs to connect some of their existing backend systems into it. There are very good reasons why telcos may wish to do this, including to maximize their return on investment in their existing platforms, to retain consistency of approach with other parts of their business in terms of their IT infrastructure, and to avoid the potential cost and complexity of having to integrate a new system or systems into their IT infrastructure.

However, there are also scenarios under which telcos and connectivity service providers may wish to use vendor-neutral messaging platforms for backend functions associated with their messaging business, such as routing, billing, and customer relationship management (CRM) among others. This is as opposed to integrating into their existing routing, billing, or CRM platforms or purchasing new ones.

Vendor-neutral messaging platforms can act as a one-stop shop for telcos and connectivity service providers in that the vendors can provide the routing, billing, or CRM function themselves, which means they add intelligence, usability, and consequently, value to the messaging platform for telcos.

The benefits of messaging vendors being a one-stop shop for telcos are clear. The messaging vendors can tailor the capabilities of their add-on systems for routing, billing, or CRM to meet the specific needs of telcos and, in turn, use APIs to connect these systems into a telco's other existing IT infrastructure as needed. As a result, telcos do not need to expend time and resources shopping around for suitable technology platforms, integrating the platforms into their existing infrastructure (including the messaging platform), and then, potentially, troubleshooting issues with multiple vendors if something goes wrong.

SMS still has an important role to play in IoT

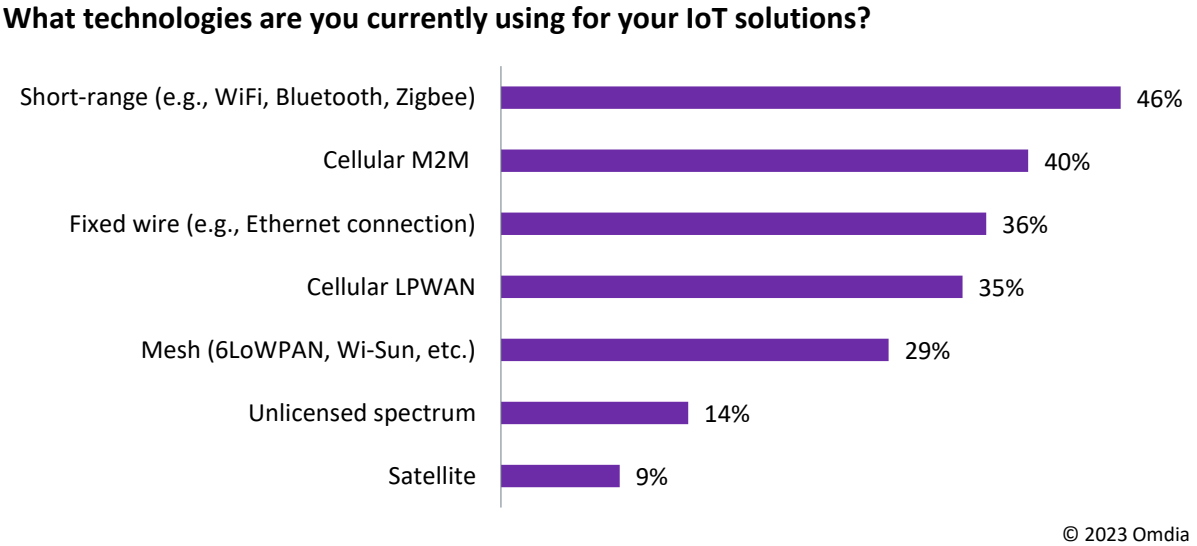
While the hype around the IoT appears to have faded, the reality is that enterprises continue to deploy IoT within their organizations, and those that are doing so are deploying it widely.

Omdia's IoT Enterprise Survey 2023, which surveyed 506 enterprises in nine countries and eight industry verticals that were deploying or were in the process of deploying IoT, found that 88% of respondents said IoT was core to their digital transformation or was being deployed across multiple areas in their organization.

Meanwhile, 42% of respondents said that their organization expected to deploy more than 10,000 IoT devices within the next 12 months, and 15% will deploy more than 50,000. Thirty-three percent of respondents said that by 2023 their organization would spend between $1m and $5m on IoT projects, and 22% of respondents said their organization would spend over $5m.

Though survey respondents indicated that they were using multiple connectivity technologies for IoT, cellular M2M (which includes SMS) is still the second most preferred, with almost 40% of respondents using it, behind short-range (e.g., Wi-Fi, Bluetooth, Zigbee), but ahead of fixed wire (e.g., Ethernet); see **Figure 4**.

Figure 4: Connectivity technologies used for IoT solutions



Source: Omdia IoT Enterprise Survey 2023

SMS is still used for many IoT functions. For example, in deployments where a company manages thousands of remote devices, SMS can be used to help simplify the process of device reconfiguration in the scenario where the company decides to change its wireless provider, should the device be designed to receive SMS parameters. In addition, using SMS for remote configuration means that it can be used to modify configurations or to activate a firmware over-the-air (OTA) update; it can also be used to reboot devices that have lost their mobile data connection.

Using SMS instead of a mobile data connection to transmit information between a device (such as an asset tracker) and a server can help prolong the battery life of the device. In addition, SMS can be used as a machine-to-human command interface to provide a range of alerts, such as notifying when a device is offline or telling a patient that their blood glucose levels are low and need adjusting.

SMS as a whole has widespread support in the telecoms industry, including via APIs for connectivity management platforms and for cloud-based hyperscalers such as AWS and Microsoft Azure. This means it is easily incorporated as a component in IoT networks.

The survey findings suggest that enterprise IoT deployments are growing and expanding and that SMS will play a key role in enabling IoT connectivity, which in turn represents an opportunity for telcos. Again, vendor-neutral messaging platforms can play a key role in helping telcos tap into this opportunity.

Appendix

Methodology

This white paper draws on data and analysis from the following Omdia research and databases: *Mobile Messaging Traffic and Revenue Forecast – 2023–28*, *Telco Cloud Adoption and Vendor Perception Survey – 2023*, *Telco Network Automation Survey – 2023*, and *IoT Enterprise Survey Summary Report – 2023*.

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We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help your company identify future trends and opportunities.

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HORISEN is a technology software house with more than two decades of hands-on experience in messaging technology. Dedicated to developing state-of-the-art solutions for clients – HORISEN technology covers the whole messaging value chain, both for wholesale and retail messaging business. With its feature-rich, vendor-neutral SMS Platform, Business Messenger, SS7 Platform, SCCP Signalling Service, MNP Lookup Service and SMS Long Number Service, HORISEN provides a powerful variety of messaging technology solutions as a one-stop shop for managing wholesale and retail messaging business from a single spot.
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