The competition between the telecom carriers continues to grow fiercely as they strive to deliver their services through evolving technologies of various forms. The growing competition is due to the fact that the players within the industry are trying to provide sustainable and efficient services while meeting the increasing demands of their customers and the growth of new technologies like IoT.

Over the past few years, the telecom industry has suffered through heavy revenue declines in core areas like text messaging and voice. Due to emergence of new technologies like 5G and IoT, the telecom sector is all set to undergo massive changes both in services and architecture. The new services are expected to drive growth and higher margins for the carriers, while delivering on the promise of faster speeds and more internet-based services.

The developments are possible only with new technologies and NetNumber delivers platforms that power global telecom and enterprise networks. NetNumber was founded in 1999, and is based in Lowell, Massachusetts. Its software-based signaling-control, security, and subscriber database management solutions accelerate delivery of new services like 5G, Private Networks and IoT/M2M solutions across multi-gen networks, dramatically simplifying the core and reducing opex. These solutions span a range of network types from 2G-3G-4G-5G to future G delivered on the industry’s most-robust signaling platforms—TITAN.
Meet the leader behind the success of NetNumber

Kevin Peters joined NetNumber, Inc. as Chief Executive Officer and President on February 1, 2018. He had been a member of the company’s board of directors since June 2016. He has a wealth of leadership experience gained over the course of a 28-year career with AT&T, as well as broad industry and executive advisory experience across the global technology and telecom industries.

In conversation with Kevin Peters, CEO and President of NetNumber

Explain your services in brief.
For more than twenty years, NetNumber has been helping carriers lower the cost structure of legacy networks while keeping them operating effectively and easing the migration to next generation services while ensuring intergenerational networks can operate together successfully.

NetNumber delivers critical and advanced network software services such as subscriber data management and security deep into the carrier’s network via our two platforms—TITAN and TITAN.IUM. Our platforms are unique because they allow multiple generations of networks to coexist and interoperate.

The NetNumber TITAN platform, hardened for the carrier network over many years, is an integrated, fully NFV-compliant solution for 2G through 4G. It enables carriers to roll out multiple network solutions on a single platform and combine industry data such as number portability, toll free, CNAM, and much more. Carriers can deploy TITAN in a wide range of methods, including: virtualized, cloud-hosted (i.e., AWS), NFV-compliant, and commercial off-the-shelf (COTS) hardware, providing optimal flexibility. It is an ideal solution for carriers to fit any stage of network modernization or transformation.

The newly introduced NetNumber TITAN.IUM™ InterGENerational™ platform is designed to reach the next evolution in performance and scale, making it ideal for 5G and mobile edge compute (MEC) architectures. Both the TITAN and TITAN.IUM platforms leverage NetNumber’s twenty-year focus on building advanced networking software and its distinctive signaling expertise. TITAN.IUM provides a streamlined, container-based design that is ideal for carriers that are ready to transition to a cloud-native platform. The platform supports a “deploy anywhere” implementation that facilitates the use of native containers and containers running on virtual machines (VMs) or a turnkey hardware/software solution.

With a unique view of data distribution to the edge, and access to real-time analytics, TITAN.IUM enables carriers to develop and capitalize on future services and use cases promised by emerging industry trends.

NetNumber is uniquely able to also deliver products that ensure the accurate routing and delivery of voice and messaging services. Through our Global Data Services (GDS) portfolio, we provide carriers with access to real-time, authentic data, which are the critical elements for global inter-carrier routing, roaming, voice, and messaging services. This data often varies by carrier, country of origin, country of destination, data type, and third-party sources. Without such data, carriers are left with large gaps in routing information and it can affect reliability, accuracy and performance. GDS closes these gaps to ensure complete, accurate, up-to-the-minute data and coverage, all delivered through highly-reliable, low-latency platforms that deliver impressive throughput.

NetNumber GDS provides a single, cost-effective source for authoritative global data, covering telecom, enterprise and security markets. This data covers 195+ countries, 6,000+ service providers and 450,000 code-ranges. Some of the services that support the high-volume, accurate delivery of messages includes:

- Carrier ID Service – Provides up-to-date number portability data, which is critical to accurate routing of SMS messages
- Override Services Registry (OSR) Service – NetNumber operates the OSR, which enables the exchange of override routing instructions for messaging services on over 140 million subscriber numbers served by OTT and MVNO providers
- Mobile Number Information Service – Provides real-time number information to ensure subscriber data accuracy for SMS message delivery
- North American Toll-Free Routing – Enables CSPs to reduce the cost and complexity of toll-free routing
• North American Calling Name (CNAM) – Enables ultra low latency delivery with in-network data on the TITAN platform, eliminating the need to do CNAM referral queries for 80% of the traffic that is resolved locally.

These services provide the foundation for global inter-carrier routing, roaming, voice, and messaging, as well as enable fraud detection and prevention solutions for banks, financial services providers, and retailers.

_Apart from efficiency, connection safety and cyber security have also become key concerns for many in the virtual world, especially regarding protection of personal privacy and rights._

**How does NetNumber help carriers solve security challenges?**

Fraud and security are a growing opportunity for NetNumber as threats continue to be a significant challenge for carriers. Signaling security is a critical concern as today’s SS7, Diameter and SIP networks can be manipulated for illegal activities such as banking fraud, identity theft, location tracking, CLI Spoofing, eavesdropping, and DOS attacks. NetNumber provides unprecedented protection with the industry’s most comprehensive Fraud and Security solutions on the TITAN platform, including the first multi-protocol signaling firewall application. GDS real-time data feeds enhance NetNumber’s Signaling Firewall, improving the overall level of security. Due to NetNumber’s active work in the industry standards bodies, the Signaling Firewall protects against all known GSMA threats, provides a fully configurable environment to address future attack vectors, and can be deployed on-premise inside the network or in public or private cloud architecture.

NetNumber complements its Signaling Firewall with an array of other security solutions and services that are deployed in carriers across the globe.

- Real-Time Data Analytics enable services such as automated provisioning of GSMA-defined filtering and real-time call blocking data
- CLI Spoofing prevention including core network solutions that help prevent invasion and manipulation of messages by hackers

For the newest LTE and 5G mobile networks, _‘security by design’_ solutions will be introduced for network-wide signaling security. This includes the newly architected 5G SEPP application, which supports broadening security enhancements for Diameter in the GSMA standards process and involves digital signatures, data encryption, and key management solutions. NetNumber solutions for Fraud and Security are based on extensive participation and contribution to the standardization work in GSMA and other groups like 3GPP and i3Forum. These contributions include GSMA leadership positions underlining NetNumber’s tough stance on security and fraud. NetNumber also continues to gain industry recognition, including as a Gold winner in the 2020 Cybersecurity Excellence Awards in the SDN / NFV Security category and a Network Transformation Award for “Best Network Security Solution” at SDN NFV World Congress.

_Do you have any new services ready for the market?_

In August, we announced the availability of our new Guaranteed Caller™ family of standards-compliant STIR/SHAKEN solutions, the most comprehensive in the industry. STIR/SHAKEN (Secure Telephone Identity Revisited/Secure Handling of Asserted Information Using Tokens) allows communication service providers (CSPs) to digitally sign calls from known trusted callers in a way that cannot be tampered with as the call flows through the network. Guaranteed Caller extends the company’s previous STIR/SHAKEN solutions to addresses all commonly known, trusted- call scenarios, enabling most legitimate callers to participate in the STIR/SHAKEN trust network while locking out fraudsters.

‘‘Our industry-first platform brings together domain services, applications, security, and global data services.’’