The Challenge
For NGN, IMS, and LTE networks, traditional VoIP quality tools are not enough. Traditional solutions may provide data about the media plane, but this data is by far not detailed enough to be actionable. Today, communications service providers (CSPs) need next-generation tools that provide pervasive visibility inside the network and enable live traffic voice-quality monitoring to understand—and improve—user experience.

Integrated Solution
Voipfuture Qrystal—combined with the Gigamon Visibility Fabric™—gives CSPs the visibility they need to gain control over voice service performance. With the joint solution, they can:
• Monitor voice quality
• Troubleshoot VoIP services
• Optimize network performance
• Provide and verify voice quality SLAs
• Support customer care agents

Joint Solution Benefits
• Gigamon’s Subscriber-Aware Visibility capabilities (Flow Mapping®, GTP correlation, FlowVUE®, and Application Session Filtering) enable Voipfuture’s next-generation passive monitoring solution—Qrystal—to transform voice quality assurance.
• Broad and deep visibility across physical and virtual network traffic gives Voipfuture Qrystal wide access to data to measure, troubleshoot, and resolve VoIP quality service issues
• Filtering and distribution of relevant traffic to Voipfuture Qrystal accelerates processing throughput and time to resolution

Introduction
In the competitive communications service provider (CSP) market, the customer is king. And the king wants quality—especially when it comes to VoIP services. If voice quality declines, the king can hastily choose to cut ties and form a new alliance with another CSP. For this reason, the need to measure quality of service (QoS) for VoIP traffic continues to grow.

For CSPs who want to remain in the customer’s good graces, Voipfuture and Gigamon have teamed to provide an intelligent, highly scalable network monitoring solution that can deliver a clear understanding of VoIP service quality for every change to: user and call.

The Gigamon and Voipfuture Joint Solution
Voipfuture develops next-generation technology (NGT) that enables communication service providers (CSPs) to monitor, analyse, diagnose, and optimize voice quality in all standard VoIP services, including NGN, IMS, and LTE networks. Its passive mid-point monitoring solution, Qrystal, combines unique real-time transport protocol (RTP) analytics with state-of-the-art signaling monitoring capabilities. Comprised of distributed probes (Qrystal Probes) and a central application manager platform (Qrystal Manager), Qrystal is a carrier-grade solution that easily integrates and scales with a wide range of existing IT infrastructures—from enterprise branch sites to major interconnection points to complete carrier networks.

Qrystal covers the entire spectrum of voice quality assurance—including IP interconnection monitoring, network performance optimization, and VoIP troubleshooting—to give CSPs complete control over the quality of their voice service. Qrystal provides deep insights into media and control plane traffic as well as powerful analytics and reporting capabilities, making it an essential tool for any voice service provider.

Integrated with the Gigamon Visibility Fabric, the Voipfuture Qrystal solution gives CSPs the visibility they need to better monitor and control the user experience while also improving network performance to better accommodate voice services. Key Visibility Fabric features that augment the value of Voipfuture technology deployments include:

• **Subscriber-aware visibility:** Gigamon’s Flow Mapping, GTP correlation, FlowVUE and Application Session Filtering capabilities enable the Voipfuture Qrystal monitoring solution to transform voice quality assurance.

• **Easy access to traffic from physical and virtual networks:** Gigamon facilitates efficient management and delivery of traffic to Voipfuture Qrystal from across the network and in the format required. Also, east-west data center traffic is growing increasingly fast. Gigamon is able to tap virtual traffic and incorporate it into the Gigamon Unified Visibility Fabric for delivery to Voipfuture Qrystal, so that all traffic can be monitored and analyzed together.
Traffic filtering: The Gigamon Visibility Fabric sends specific traffic or sessions to connected Voipfuture Qrystal so it does not become overloaded with irrelevant traffic that would only be dropped at a later point.

De-duplication: Pervasive visibility requires tapping or copying traffic from multiple points in the network, which, in turn, means tools may see the same packet more than once. To avoid the unnecessary packet processing overhead on Voipfuture tools, the Gigamon Visibility Fabric has a highly effective de-duplication engine that removes duplicates before they consume resources.

Aggregation to minimize tool port use: Where links have low traffic volumes, the Gigamon Visibility Fabric can aggregate these together before sending them to the tool in order to minimize the number of ports needed. By tagging the traffic, the Visibility Fabric also ensures the traffic source can be identified.

SSL decryption: Real-time SSL decryption integration increases traffic visibility for Voipfuture Qrystal.

For more information on Gigamon and Voipfuture, visit gigamon.com and www.voipfuture.com