

MasterClaw™

Delivering Intelligence & Enriching Visibility



Service Assurance Solutions

Anritsu Service Assurance solutions deliver Actionable Intelligence to many groups within network Operators - from Marketing and C-level through Planning, Engineering, Technical Support and Customer Care. Integrated solutions deliver the right information at the right time and enable superior customer quality of experience whilst helping reduce costs.

MasterClaw™ platform is the underlying framework of our OSS portfolio enriching the experience of 800+ million subscribers across the world. Anritsu is the trusted partner of over 60 CSPs rolling out next generation technologies resolving the challenges of fixed/mobile convergence and managing the transition to a consumer-led environment.



Our leading edge customer service performance monitoring solutions enable high value end to end visualization through reports, dashboards and maps delivering business and operational intelligence from legacy to evolved next generation networks.

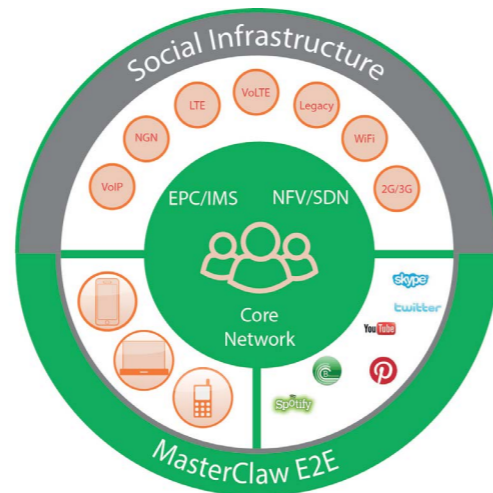


Figure 1: MasterClaw™ global Customer base - more than 60 installations

MasterClaw™ Solution Overview

MasterClaw provides unrivalled visibility of subscribers' perception of their favourite apps and services by monitoring all key network interfaces and capturing both control and application data for analysis.

MasterClaw is a massively scalable solution that utilises latest generation big data architecture and high performance passive probes to provide unrivalled visibility of subscriber experience across multiple technologies, from voice to mobile applications. MasterClaw integrates the market leading eoLive real time dashboard, Insight Business Intelligence reports and seamless integrated troubleshooting to provide value to multiple groups from Network Operations to C-level, via Customer Care and Marketing.

True Customer Experience Management

Anritsu's MasterClaw CEM capabilities address the evolving needs of Operators by delivering both real-time actionable intelligence on Customer experience, from individual to corporate, and long term analysis of experience. This intelligence seamlessly provides visibility of subscribers, network, devices and location in the right way at the right time. The analysis of application performance via eoAppTrace combined with information on each subscriber and advanced analytics for segmentation, enable MasterClaw CEM to provide unrivalled intelligence to Marketing, Corporate, Sales, C-level, Operations, Customer Care and Engineering departments.

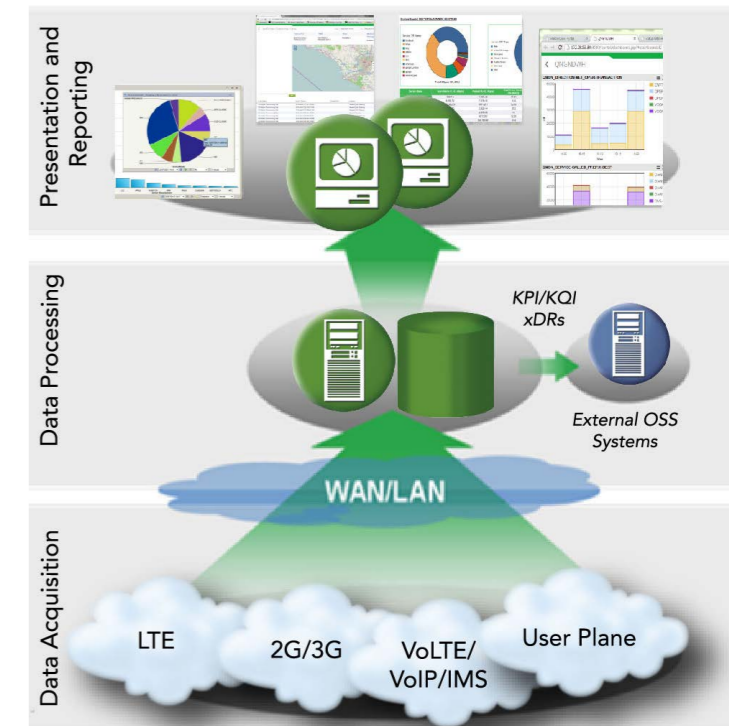
The key components of MasterClaw CEM Solutions are:

eoLive: Real-Time Performance Dashboard

eoLive is a state of the art dashboard solution that provides actionable information for Network and Service Operations for service, network and subscriber performance.

The KPIs and alerts provided by eoLive enable proactive monitoring of subscriber experience along with network performance. eoLive's features contribute to improved efficiency and better E2E QoS to improve

Figure 2: MasterClaw™ Solution architecture



customer perceived QoE. eoLive's ability to show service performance and customer experience by location and cell, as well as its ability to track devices, HVAs and VIPs help operators reduce MTTR of customer experience impacting issues.

Strong workflow support and ability to drill down into error causes and individual xDR's help detailed analysis and streamline the trouble-shooting process, even between departments

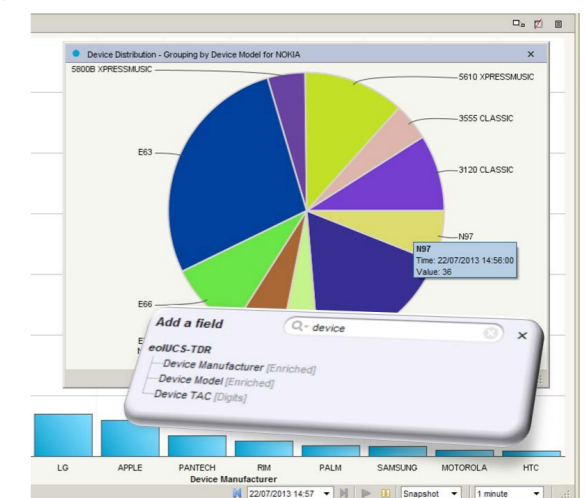
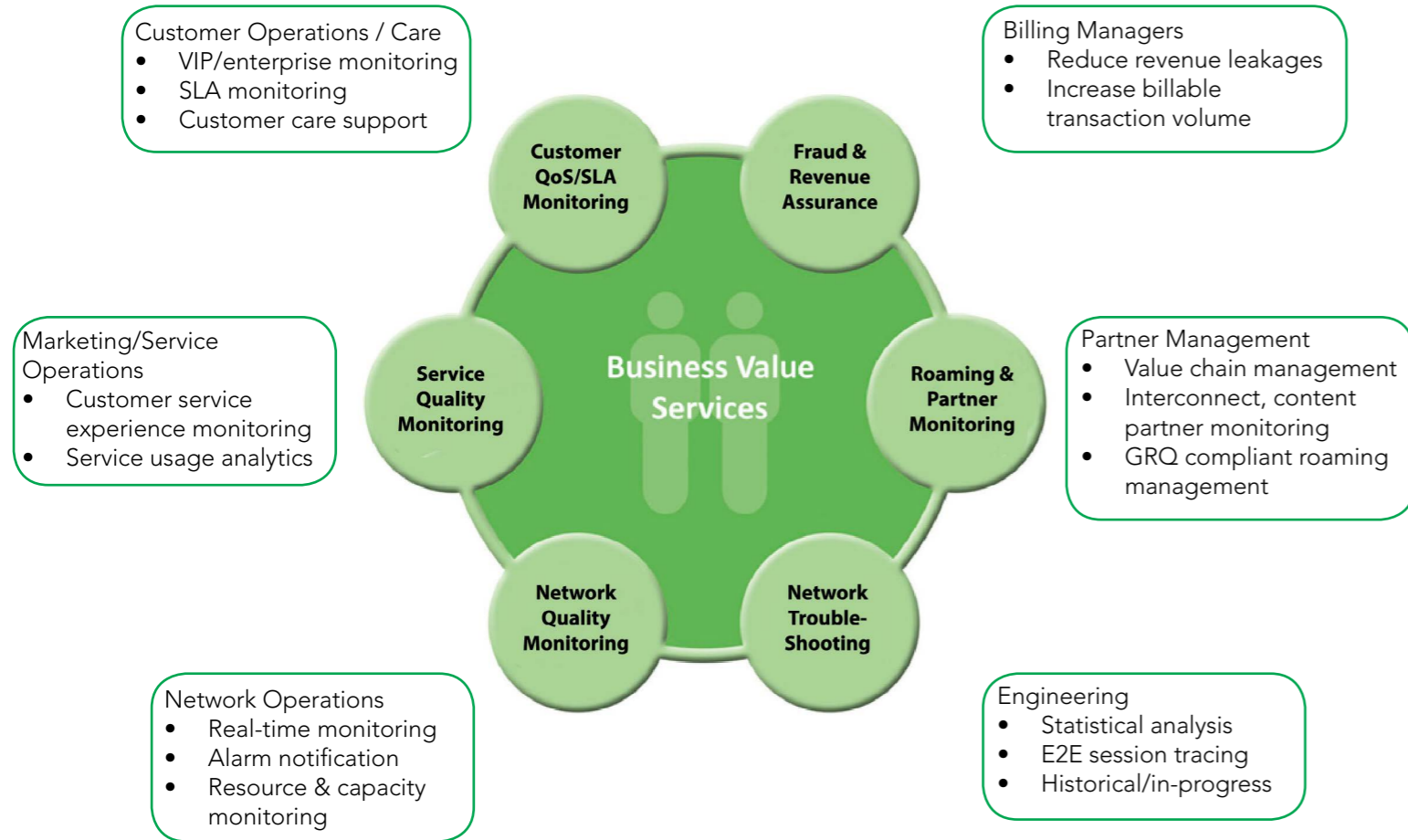


Figure 3: eoLive data enrichment & segmentation

MasterClaw™ - Cross Department Business Value



Insight Reports - Flexible Business Intelligence

MasterClaw™ Insight Applications

Supported by MasterClaw's rich data warehouse infrastructure across different generations of networks, Insight provides advanced analytical reporting capabilities delivering engineering and operational intelligence (Location, Device, Roaming, Services, Network Elements, etc.) in the form of drilling competences and predefined workflows that guide users and optimizes the root-cause analysis process.

Advanced report scheduling and distribution features simplify information access by pushing to relevant users, rather than single users manually requesting a report.

Customer Care Interface (CCI)

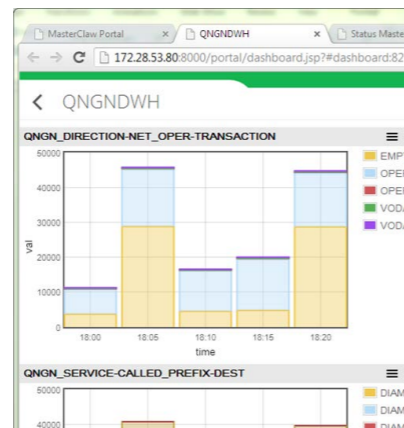


Figure 4: MasterClaw Insight's intuitive user interface with interactive clickable reports

CCI is aimed at non-technical Customer Care agents or level 1 Support in customer care. It provides a simple to use summary that shows a single user's experience of all services in a non-technical way - so no training is required.

Customer Care agents are able to view all customer experience

during the call, identifying issues instantly, and drill into details for each service based on customer feedback - having all this information embedded into their existing customer care IT systems. This enables reduced call hold times during technical support calls and increases first call resolution rates that directly impact on the bottom line and improve customer satisfaction.

Figure 5: CCI - User activity displayed on a map

The location of the user at the time of the problem can easily be pinpointed, allowing agents to relate the specific incident with general network issues. Finally, if the agent can't resolve the problem, a more technical version of the issue can efficiently be passed to engineering for resolution, using the same data as the agent to simplify communication.

Application Analysis - eoAppTrace

eoAppTrace enhances identification and analysis of OTT apps used by subscribers. By seamlessly integrating this DPI technology with all MasterClaw Applications, users can now identify detailed performance on a huge number of apps including Instant Messaging, Social Media, Web Browsing, File Sharing, Gaming etc. eoAppTrace enables insight into how your network is being used, and identify any problems within Customer Experience of their favourite apps, enabling you to boost usage pattern analysis, problems with app performance, network usage and load amongst many other possibilities.



Figure 6: Service usage reports

Advanced Call Trace Applications

MasterClaw has the most comprehensive information capture, storage and processing capability on the market today. MasterClaw's sophisticated search and filtering

capabilities enable end to end multi dimensional views of network performance.

By identifying all signalling events across multiple interfaces and protocols, Tier 2 and 3 support can rapidly identify and diagnose subscriber affecting problems in reduced time, reducing MTTR and reducing cost to resolve each issue.

Signaling flows are displayed graphically, making the call trace functions simple to use and display relevant information quickly with minimal training.

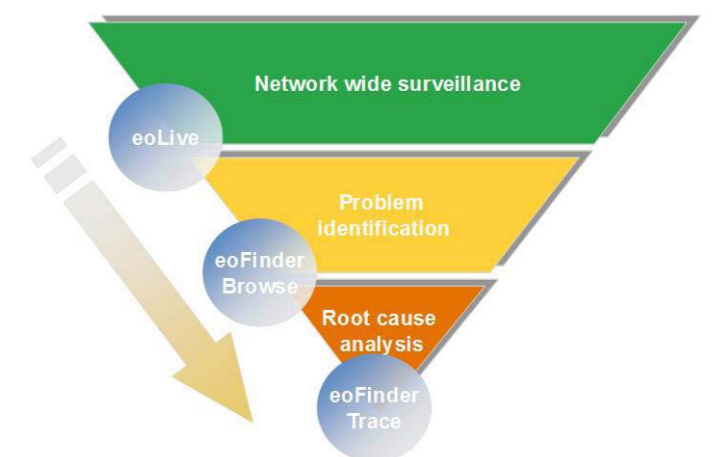
When new network technology is deployed, users only need to be trained on the technology, reducing the time, cost and complications related to new deployments.

eoFinder Browse

eoFinder Browse is an extremely powerful, simple to use, tool that enables users to identify all events for a single subscriber across different interfaces over a long period of time.

eoFinder Browse supports all services (Voice, Data, SMS, Applications, etc.) with fast access to all records in near real-time.

For Support staff (Tier 1-3), eoFinder Browse enables root-cause analysis by enabling the jump from eoLive dashboard into detailed records. This means users can start identifying problems in the eoLive dashboard and end up in detailed records in a few clicks, making rapid identification of subscriber impacting issues simple and quick.



eoFinder Trace

eoFinder offers the visualization of entire correlated call sequence flow diagrams across different interfaces and the ability to drill down to each signalling message.

The tool provides extensive filtering capabilities along with a high degree of customizability to modify the solution to meet the needs of each user to simplify and enhance the troubleshooting procedure.

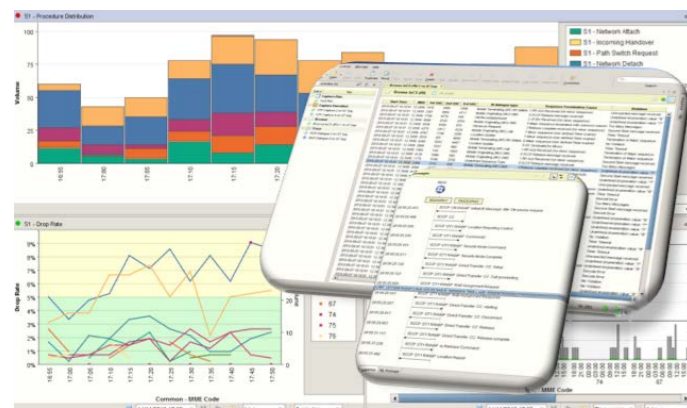


Figure 7: eoFinder Browse & Trace drill-down capabilities

MasterClaw™ Value Delivered

Enhance Customer Satisfaction

In many operators, the 80/20 rule is apparent with 20% of customers providing 80% of revenue, often high value corporate accounts (HVA). Anritsu Advanced CEM enables measurement and reporting of the performance of groups of subscribers, down to each individual subscriber in that group. Groups can be wide, such as “post-pay”, “pre-pay”, “iPhone5 Users”, Users in a single company, “users who spend more than \$100 per month” or any combination. In this way, analysis and performance can be based on experience and importance of each individual user, enabling instant prioritisation and resolution of issues that impact the most, or most important, subscribers first.

Network Monetization

As the demand for bandwidth continues to grow, surpassing the ability to invest for a sustainable ROI, business models have to change. By providing visibility of

usage patterns, location aware analysis, cell monetization, bandwidth restrictions and per-subscriber quality of experience, MasterClaw provides the right data in the right form at the right time to support smarter bandwidth investments, analysis of gated “smart-pipe” service delivery and personalized bandwidth control.

Reconnect with your Subscribers

As the market fragments further and subscribers quite rightly focus on apps, the need to understand how users experience their apps - and ultimately how your network supports that experience - becomes even more important. MasterClaw provides that visibility by seamlessly linking subscribers experience of apps (2000+ supported by eoAppTrace) with network performance at all levels, enabling all teams from C-level to Customer Care agent see things from the subscriber perspective, improving satisfaction and experience, therefore loyalty and churn rates.

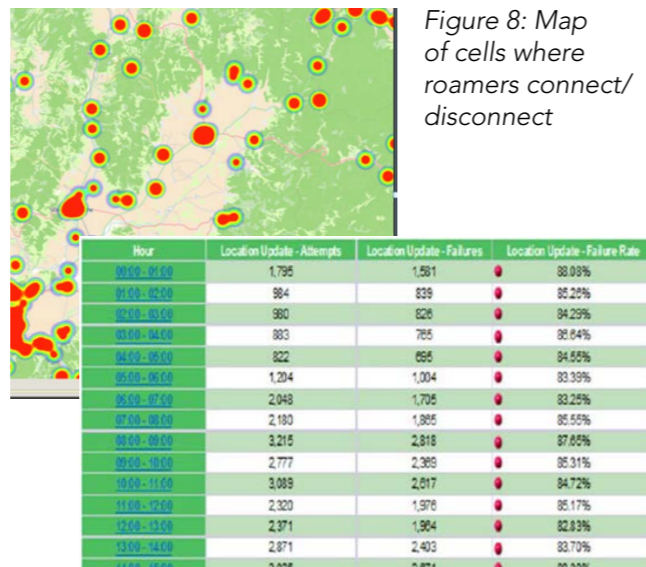


Figure 9: Drill down to specific location performance for each roaming partner

MasterClaw™ Business Value Services

Our Business Value Services (BVS) enable operators solve business critical issues that can be hidden within the rich data obtained from their networks, helping them understand critical factors such as customer satisfaction and network monetization, as well as helping them prioritize investments in capacity. Operators can focus in realizing new revenue streams while Anritsu ensures high system availability and extends the value of the system in solving more business issues.

We offer a variety of services from consulting to proactive monitoring for improved network efficiency. CSPs who use BVS increase revenue and achieve improved service quality to the delight of end customers.



BVS employ best practices in the establishment of streamlined processes to optimize operational processes and workflows in order to enable the reduction in turn around resolution times. Professionals and subject matter experts combine their experience to realize the best value proposition of CSP CAPEX and OPEX investments.

About Anritsu

Anritsu Corporation (www.anritsu.com) has been a provider of innovative communications solutions for more than 110 years. The company’s test and measurement solutions include wireless, optical, microwave/RF and digital instruments, operations support systems and solutions that can be used during R&D, manufacturing, installation, and maintenance. Anritsu also provides precision microwave/RF components, optical devices, and high-speed devices for design into communication products and systems. With the addition of OSS monitoring solutions it has expanded its offering to provide complete solutions for existing and next-generation wireline and wireless communication systems and service providers. Anritsu sells in over 90 countries worldwide with approximately 4,000 employees.

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