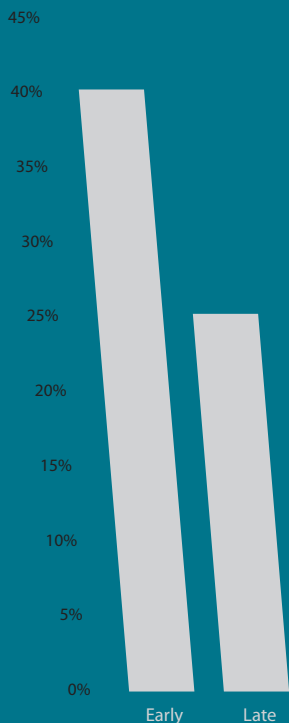




How mobile wireless CTOs are automating the job of assuring network performance and customer experience using new Network Status Management technologies



Figure 1. Percentage of customer experience issues caused by poor radio network status



Every day, in every mobile network worldwide, hundreds of engineers labour to solve thousands of radio access network status problems that lie at the heart of a large proportion of customer experience issues.

**But some mobile networks CTOs are now adopting breakthrough new technologies that automate the process of managing network status, using network intelligence and automated business logic to get to the heart of the issues and reduce the need for costly manual intervention.**

### What is the scale of the problem?

Simply put, enormous. Many operators, focusing on high level KPIs such as overall dropped call rates, miss the underlying chaos that exists in their networks today. Studies have shown that on average **a mobile network performance engineer manually handles around 4,000 network issues every single month - but has time to investigate and solve only 150 (4%) of them.** One major mobile network stated that around 1,000,000 category 1 faults were registered every single day; smaller networks have revealed figures of around 600,000 a month.

Just keeping up with this workload is almost impossible in the current environment, which consists of multiple disconnected silos of activity, dozens of desktop tools, incompatible ad hoc databases, inconsistent rules and processes, and informal prioritization criteria. **Engineering departments, already under significant operational cost pressure, are barely treading water in a rapidly rising tide.**

On top of this huge volume of network issues lies a secondary problem: without insight into the correlation of one technical issue to another, or one customer complaint to another, it's not clear if the meagre 150 problems that are being resolved are actually those issues that have the strongest positive impact on network status and customer experience. The only thing connecting one problem with another is the overloaded intuition of the performance engineer drowning in a sea of conflicting and discordant data.

### What is the impact of poor mobile network status?

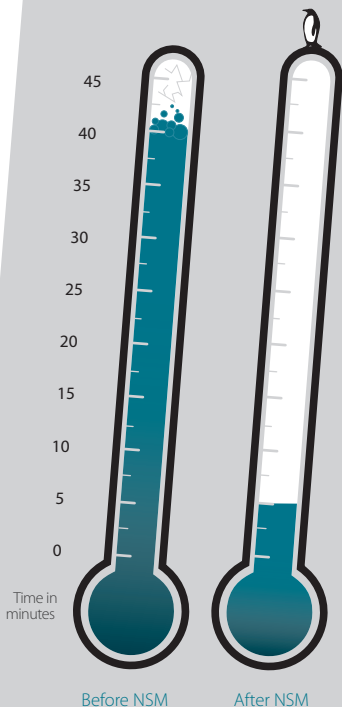
A very large proportion of customer experience concerns have their root cause in the poor performance of the radio access network. According to two large operators in Europe and the USA in different stages of the network life cycle maturity, **between 25% (late stage) and 40% (early stage) of customer experience complaints are directly related to radio network status issues.**

The impact of addressing this at the root cause has considerable consequences for the mobile carrier's business. A huge amount of resource - around 10% of the typical cost of running an operator - is allocated to handling customer service issues, and a large amount of revenue leaks out of the business when calls are not completed. One major network, with what is considered a good dropped call KPI (less than 2%), still loses more than 7,000,000 calls every single month. In less mature networks, around 1 call in every 30 will fail, meaning that the average subscriber will experience this aspect of poor service at least once every week.

And this is just the very visible tip of the iceberg; other network issues such as echo, poor speech quality, reduced data rates, broken speech, lack of continuous coverage and low capacity all add to the mound of potential issues that cause customers to make a call to the helpdesk, even knowing that they will typically sit in a queue for several minutes before reaching someone to listen to their complaint.



Figure 2. Time to solve a typical network issue



### Is this insurmountable?

Thankfully, no. More mature network operators are now realizing the enormous business impact of fixing the root cause of these issues, and looking for partners to help them improve their ability to manage the root causes of poor customer experience more effectively.

Actix, already a specialist in the network performance engineering field, has been working with some of the world's largest and most advanced carriers for more than 2 years, developing a new category of solutions: called Network Status Management (NSM) systems.

NSM systems are highly sophisticated, standards based, fully automated solutions that combine the ability to gather network intelligence with the capability to correlate and prioritize that intelligence using business logic engines.

The result is a modern, highly efficient and very effective approach to managing radio network status issues. NSM not only cuts the time to carry out typical daily tasks by as much as 90%, and the cost of the performance engineering function by more than 40%, but also directs resources towards those issues that maximize the impact of taking corrective action.

As one example, a major operator used NSM technology to find previously undiscovered underlying issues that were creating enormous numbers of symptoms each day. By treating the root cause of the symptoms - equivalent to curing the disease - hundreds of smaller downstream issues simply ceased to exist automatically.

In another example, an early-adopting US-based carrier saw an annual reduction of almost \$9,000,000 in labour costs in just one region by implementing NSM.

### Actix

Actix can help mobile network CTOs achieve a double benefit, firstly by helping to automate today's broken, expensive, manual processes to achieve enormous direct cost reductions, and secondly by fixing the root causes that drive customer dissatisfaction and additional customer service costs. As the recognized leader in NSM, Actix has the technology and experience to both reduce the total cost of network ownership and deliver improved customer experience in a single shot.

For a short discussion on how Actix could implement NSM solutions for your network, please contact your nearest Actix office.

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Actix can help mobile network CEOs tackle a range of margin-enhancing cost issues in the radio access network including NSM and network assurance process streamlining. With dozens of projects carried out across the globe for hundreds of Tier 1 operators, Actix has the experience and reach to help deliver real business results through application of patented technologies to large-scale situations. Contact Actix today for a short discussion on what Actix can do to re-energize your network's performance.

#### **UK**

T +44 20 8735 6300

F +44 20 8735 6301

#### **Germany**

T +49 351 40429 0

F +49 351 4042950

#### **Americas**

T +1 703 707 4777

F +1 703 707 4778

#### **China**

T +86 21 5396 0670

F +86 21 5396 0676

#### **Japan**

T +81 422 45 4720

F +81 422 45 4720

#### **India**

T +91 11 41683064

F +91 11 41683080

#### **Singapore**

T +65 6333 7428

F +65 6333 5540

[www.actix.com](http://www.actix.com)

## **Proven** on a global scale

**The value of Actix performance engineering solutions is proven on a global scale, with over 200 carriers and the industry's major infrastructure systems companies using Actix software and solutions across all major wireless technologies every day.**

Established in 1991, Actix has offices in China, Germany, India, Japan, Singapore, United Kingdom and the United States.

With one of the largest independent wireless solution development teams in the world, coupled with a global engineering and support organization, Actix works with its customers to deliver significant measurable business benefits.

