Oct 24, 2018

This week TSA published Digital Shift Update a video interview with Steve Sadler, TSA Technology Strategist, a former Tunstall CTO and someone who has a broad experience of the switch to IP from around the world. The interview highlighted both the opportunities and the challenges arising from the transition by 2025 to an All IP network. This interview built on the information provided at the 2017 ITEC conference, usefully raised awareness of the work underway and flagged that there was much to be defined that would be discussed in more detail at ITEC 2018.

One issue not discussed during the interview was the assertion by one national monitoring centre provider that the current phone network was experiencing increasing issues leading to an upward trend in the numbers of alarm calls not connecting first time to their monitoring centre.

Although 2025 is 8 years away, that doesn't mean that analogue will work well until that date. The current level of analogue Telecare alarm failure rises each quarter and is already at a level that means every month, across all the UK providers, tens of thousands of telecare alarm calls fail before they reach a monitoring centre……. The % of initial failures will continue to worsen QoQ and YoY as more of the networks the calls travel across are geared for IP. [1]

It's important to note that alarm failure does not mean that the alarm failed outright. Signalling protocols that have developed over many years to deal with factors affecting telephony delivery are very robust and if a call is not successfully received the first time then the outfield equipment will redial and try to connect again. However, it does mean that a few seconds will be used for a redial before an alarm call can connect to an operator.

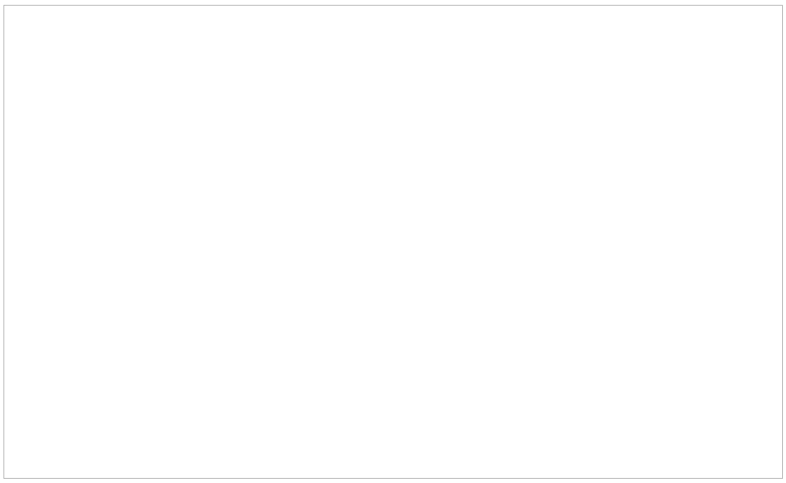
Here are the performance figures that have been published from Centre A [2,3]

Year	June 15	Jan 16	June 16	Jan 17	Jun 17	Jan 18
Percentage of call failures	1%	3%	5%	7%	8%	9.6%

These figures seemed surprisingly high and we initiated a study of the findings and an investigation using anonymised data from a similar sized national provider of monitoring services. We used anonymised data from a similar sized national provider of monitoring services. The table below shows the performance figures. (Centre B)

Year	June 15	Jan 16	June 16	Jan 17	Jun 17	Jan 18
Percentage of call failures	1%	0.8%	0.8%	0.5%	0.6%	0.6%

A more visual way to look at the data is to consider it as percentage call success rate.



We concluded, for Centre B call failures were typically running at 1% or less over the period from June 2015 with no increasing trend.

What could explain the difference?

The reason given for the increasing trend was suggested to be due to greater use of Next Generation Networks (NGN). In NGN analogue signals originating in the home are converted to digital for at least some of their journey across the network and then back into analogue by the time it reaches the destination (e.g. monitoring centre).

While the use of NGN networks has grown in the last few years this cannot account for the increasing trend seen in one centre versus level trend seen in another. The same is also true for increasing numbers of people who don't have a fixed landline and rely of SIM based products. One variable which is centre specific is the quality of the incoming phone lines, but this alone would not account for an increasing trend.

Both monitoring centres will have a similar mix of equipment types from different manufacturers although the relative proportions may differ.

While is also true that the use of the Tunstall STMF protocol, designed for NGN environments, will have contributed to some of the

difference there are many connections at Centre B from older Tunstall equipment and non-Tunstall equipment that are not able to use this protocol.

So what reasons does this leave?

For a telecare alarm system to be robust end to end it needs both the sending and receiving equipment to be equally robust and so far, our exploration has solely focussed on the sending and network elements. To suggest why one monitoring centre might be less robust than another would be speculation on my part, however, there is evidence of a significant difference in the number and trends in call failures from centres A and B.

To conclude, while network changes may cause issues between now and 2025, to date the evidence does not appear to support this. We will of course continue to monitor the situation. While there are many excellent reasons to upgrade equipment to new IP signalling equipment decreasing network reliability should not be the primary one, although it may be a reason to review your monitoring centre robustness!

For more information on the transition to All IP visit our digital journey web page for the latest digital news here (https://uk.tunstall.com/digital-journey/)

References

1. Telecare Aware
2. Presentation at ITEC2017
3. Blog article https://consortiumprocurement.org.uk/supplier-spotlight-appello-housing-providers-need-switch-potential-digital-today/