

PREPARED FOR IP VOICE?

Mitigating risk, protecting your customers
A call to installers



PREPARED FOR IP VOICE?

The way the world **communicates has changed.**

The UK telecommunications industry are upgrading their customers from analogue to IP Voice and the electronic security industry may see the effects as soon as September 2020.

Ofcom and all telecommunication stakeholders are urging alarm installers to take swift action to review their signalling estates.

Alarm signalling **will be affected.**

TAKE ACTION NOW

Contact your alarm equipment service provider today to see what IP Voice solutions are available to mitigate the impact on your customers.

The BSIA's position on the **IP Voice** transition the UK

What is happening?

The UK has embarked on a path that will see the transformation of our country's traditional telephone network – the public switched telephone network (PSTN) – to newer digital technology known as voice over internet protocol (VoIP), which carries calls over a broadband connection. This transition has already started and Openreach (the main UK access provider of telephone lines) has stated it intends to retire the PSTN service by December 2025, which will require current Wholesale Line Rental (WLR) and related products withdrawn from service. In alignment to this **Virgin Media** is also aiming to withdraw analogue voice services on its own network in favour of its IP Voice service.

To put this into perspective, Openreach has 16 million lines to migrate to its new all IP Voice digital network (it has already migrated circa 1 million lines).

In total, between all UK access providers, there are over 31 million PSTN/ISDN exchange line connections in the UK today, and although not every provider is working to the same time scales or even confirmed their intentions to move their existing customer base, it is clear the task of ensuring the transition to digital IP Voice services is significant.

Openreach, in consultation with Ofcom, have launched two trials as steps to test approaches to efficient migration and learning lessons that can then be applied more broadly across the country. The trials will provide important information about copper retirement and the withdrawal of 'analogue' services, consumer response, vulnerable customers and those with special services (alarm systems, telecare services, payment terminals etc.) The trial areas of Salisbury and Mildenhall will affect up to 30,000 customers and will result in the migration to the new digital IP Voice services by December 2022.

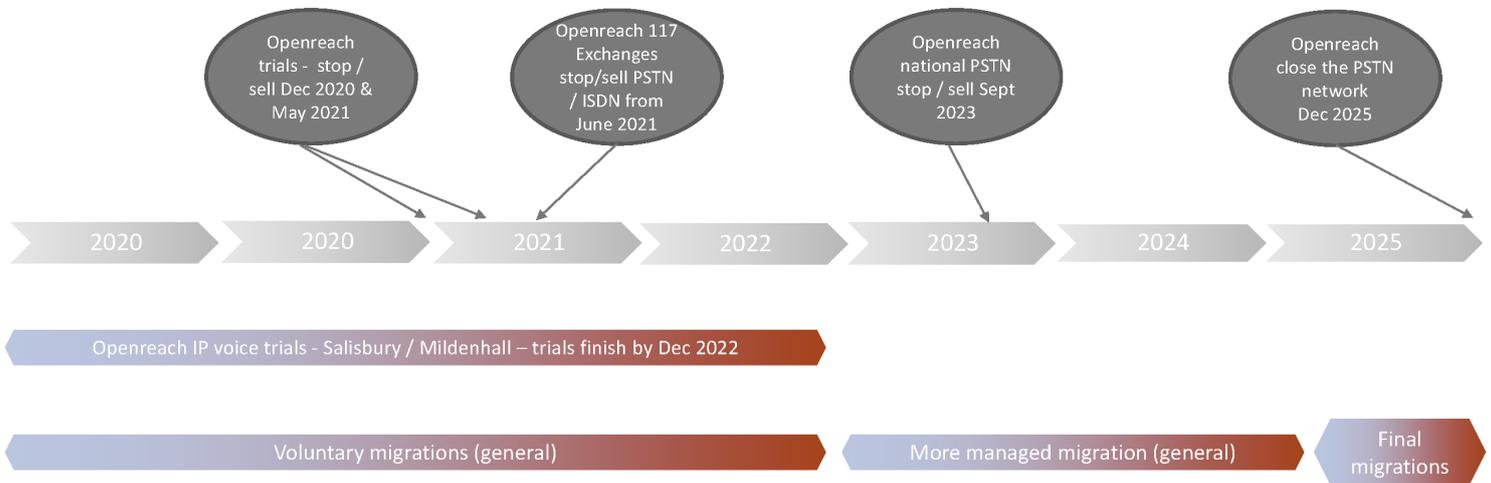
Openreach has also announced it expects to have 117 priority exchanges with over 75% fibre to the premises (FTTP) coverage by June 2021 and will therefore stop selling copper PSTN/ISDN services in those affected areas after this date. These exchanges will affect around 1.2 million customers in those areas. The list of exchanges can be found [here](#).

The remaining Openreach exchanges (circa 5482) across the UK will also be subject to ongoing announcements of when they will be upgraded to fibre. Openreach has already stated a national stop/sell date for analogue PSTN/ISDN services from September 2023.

To achieve the transition to IP Voice services, significant investment is needed to upgrade the broadband infrastructure to fibre and as part of this, the withdrawal of the copper-based services is central to avoiding the inefficient and costly parallel running of the two access networks.

Current transition timeline changes

IP VOICE – UK TELEPHONY SERVICE TRANSITION - OPENREACH



Aug 2020v.2

BT Consumer launched its Digital Voice service back in January this year and has recently announced its intention to step up its programme of migrating its customers onto the new digital voice service and whilst it currently excludes 'special service' customers (those with alarm systems connected to their lines), it is about to announce a change to include these customers in the transition to meet its obligation to complete the digital transition before the 2025 deadline. The full article can be [found here](#).

Why is it important to us?

The BSIA, as the voice of the professional security industry, has a duty to ensure it is a key stakeholder in the UK's transformation of its telephone services. Given the learning experiences obtained in the early days of the 21CN roll out, it is vital that we are able to input at every stage and influence the views and understanding of the regulator (Ofcom), access providers (Openreach, Virgin Media, Kingston Com), Communication Providers (BT Consumer, Sky, Talk Talk etc.) and other key players in this huge UK undertaking.



Given the investment and direction by government and significant demand by users of new digital services, it is of no surprise that the transformation to IP Voice is now starting to gather pace. More recently, the challenges of COVID-19 have seen a significant growth interest in using digital technology as the world works from home and makes more use of video and audio conferencing.

Our original plea to Ofcom and others to have clarity on when and how the transition(s) will take place, are still being answered, but some key dates such as the PSTN switch-off are now well versed (December 2025), as are the Openreach trials as mentioned earlier in this paper.

What are we doing about it? **Our engagement**

We have built and maintained some excellent relationships with many of the organisations involved in this transition, many mentioned in this paper. As a result of this we have been able to collaborate closely to learn from the incoming changes; we have also been at the forefront of discussions on how the change will impact on our industry sector. In terms of Customer Premises Equipment (CPE), in our case, alarm equipment, we have led the industry drive in testing at the key Communication Providers (CP's) various test facilities and most importantly we have been able to share the whole learning experiences with our member companies and the wider community.

Its impact on our services



Our learning experience to date has allowed us to take stock of what equipment we currently have in service in our industry sector – better known as legacy equipment – and how this will be impacted by the transition to the IP Voice service networks as they come on line. Testing on the new IP Voice services has also given manufacturers an insight into the operational parameters (the boundaries and limitations) of these new digital networks, so current development and future CPE are designed to operate effectively.

A couple of key observations of value here will be the following:

- Most legacy equipment that uses the PSTN service operates on a voice line, so given the new IP Voice service will operate predominantly over broadband, there is a significantly different mode of operation, which is likely to negatively impact legacy equipment at some point going forward.
- In the earlier days of discussion with the regulator and other key players, a new phrase of 'voice is for voice and data is for data' came to the forefront. This meaning that the voice band of the service should be for voice calls only and equipment that transmits and receives data should be used on the broadband part of the service.

The changes impacting security and fire CPE moving forward are not just about the technical parameters of the equipment, it is a wider subject including the physical aspects and customer expectations. In summary the key impacts we see are:

- Legacy CPE is not designed to operate on IP Voice services. The specifications/standards used to design legacy CPE rely on some attributes of the PSTN that may not be fully replicated in the new IP Voice services.
- CPE that has dependency on DTMF frequencies and timings to communicate to an ARC are not fully compatible with Internet Protocols (IP) and the intended operation of the networks by the various CPs.
- Testing of CPE at the various test facilities offered by the CPs is not always conclusive in the results of the test and can sometimes differ between different CPs networks.
- New IP Voice services will ultimately be fibre based and the reliance of power from the telephone exchange will not be available, meaning power will need to be locally provided, which in most cases will not be backed up in the event of a local power failure at the premises.
- Installing new IP Voice services will likely result in the existing wiring in the premise being re-routed (extension wiring may be left disconnected) and therefore connected alarm equipment is likely to require intervention to re-enable the signalling device, if not replaced for an alternative solution.
- Migrating the customer's existing telephone services to a new IP Voice service is likely to result in a temporary loss of communication as the service is 'upgraded' leaving some customers without protection.

Solutions to mitigate the risks we have identified are available now. Choosing a suitable signalling solution is not a one size fits all but is part of the risk mitigation process that all companies undertake when designing and maintaining alarm systems. As technology evolves, more resilient and robust solutions become available and our sector is no different. There are choices of single or dual path security solutions, as well as those that operate using the landline or radio, or a combination of these technologies.

Our position and message to the industry



The BSIA has been proactive throughout this notified change with its engagement with all key stake holders and has spent many hours consulting with our members, testing CPE at the various facilities on offer, attending conferences, workshops and also disseminating our 'messages' at targeted events hosted either by ourselves or other key parties such as Openreach.

We have updated our members and the wider security and fire community on the changes as they are being announced. We are mindful that whilst so much has been learned from the testing, workshops and forums, there is still much to understand and prepare for; given the transition has already started and the deadline for PSTN retirement set at December 2025.

At today's reckoning, Openreach migrations are happening at around 6,000 per week (circa 300,000 per annum) which, if extrapolated would require a monthly migration of 234,000 lines until December 2025 to achieve full transition to IP Voice services by the end of 2025. It has already been suggested, forced (managed) migrations are a reality and this would happen in the later years of the transition to meet the target deadline.

To date, our message has been one of preparing for the transition by asking installers/maintainers to take stock of their signalling portfolio and speak with their control/signalling equipment manufacturers to find out if they have tested their products on the new IP Voice services and seek their recommendations on action to take. Our manufacturer members have taken the call to action to test their products at the various test facilities and we now have a list of those that have done this on our web site. Those who have tested their products can be [found here](#).

However, with so many unanswered questions that remain, our message has changed to one urging installers to take positive action to mitigate the risks to your customers. Given the serious nature of our industry protecting people and property, be it the general public, high profile celebrities, residential or critical infrastructure, the impact of alarm systems failing to operate has major consequences. Quite often alarm systems form the basis of an insured risk, one which customers have confidence that being installed, maintained and monitored by professional security companies, gives an assurance that when it is most needed, the alarm will bring about a prompt response from the ARC and where appropriate the blue light responders.

Having uncertainty in the operation and successful transmission of an alarm message to the responding service undermines the value of the safety and/or security service that is being provided and also introduces additional risk, liability and reputational damage to the company and the wider professional security and fire industry.

The BSIA therefore asks the professional security and fire industry to act now to embark upon a transition to equipment and solutions that meet the needs of the IP Voice transition and to take positive action to replace older legacy signalling equipment now, before it is too late.

About the **BSIA**



The British Security Industry Association (BSIA) is the trade association representing over 70% of the UK's private security industry. Its membership includes companies specialising in all sectors of security.

For security buyers, BSIA membership is an assurance of quality, with all member companies required to adhere to strict quality standards.

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