FCS Response to Ofcom's Consultation on Promoting Trust in Telephone Numbers

Introduction

The Federation of Communication Services represents companies which provide professional communications solutions to business and residential users. Our members deliver telecommunications services via mobile and fixed line telephony networks, broadband, satellite, wi-fi and business radio. Our members' customers range from SMEs, consumers, home-workers and micro-businesses up to the very largest national and international private enterprises and public-sector users. FCS is the largest trade organisation in the professional communications arena, representing the interests of around 300 businesses who supply mainly B2B services nationwide.

Overview

The FCS welcomes Ofcom's initiative to strengthen the rules around number verification and believes that tying this work into the development of a Common Number Database is a sensible route to take. We think that it is important to start populating any new common database with number information as soon as possible, even if number allocation arrangements cannot be made until post 2025. The amount of time taken to upload and verify information should not be underestimated.

We strongly believe that this work should be tied in with existing all IP projects and Programme Managed by Ofcom to ensure proper coordination.

Answers to specific questions

Question 3.1: Do you have further views about the implementation of STIR?

We support the implementation of a common technology that will help to eliminate the issue of spoofed numbers and improve user trust.

Question 3.2: Are there any other approaches we should consider for addressing CLI authentication?

We believe as detailed in our FCS White Paper (http://bit.ly/2GKnRSf) that the starting point for both a future Number Porting System and a robust CLI authentication method/process must start with a Common Numbering Data Base. We are encouraged by the suggestions in the consultation around creating working groups to further scope the specifications and outcomes of a Common Numbering Database and would certainly be interested as FCS to be involved

Question 3.3: Do you agree a common database would be required to support the implementation of STIR?

Yes, a common database would be necessary

Question 3.4: What are your views on using blockchain technology as the basis for a common numbering database to support CLI authentication? What other solutions do you think should be considered and why?

We are generally agnostic about the technology required provided the industry need is fulfilled. However, it appears from the work Ofcom has already carried out on developing a blockchain solutions for number porting and number management that this will be the preferred solution for a common database. This leads to the conclusion that this would also be the preferred solution for CLI authentication. The very nature of the solution means that attempts to manipulate data incorrectly are spotted and prevented, thus maintaining the overall security of the system. Testing of blockchain at this stage should help to ensure confidence in the technology before a decision is made to go out to tender on a large scale.

Question 3.5: What are your views on timeframes?

As touched on in the overview, we believe that populating the agreed database should begin as soon as possible. We understand that in Ireland it took about 12 months for CPs to populate and verify the information in the new common database and the UK set-up is far more complex. Again, this needs to be closely matched to the move to all IP programme. We are aware from the work being undertaken with regard to possible new Number Porting solutions being built around Blockchain that there may be methods available to speed up the validation of all UK number blocks as, currently, there are large gaps in data sets including around Sub-Hosted Number ranges for which there is seemingly no centralised data set that details, for example the "current provider"

Question 4.1: What are your views on the current implementation of number portability in the fixed and mobile sectors?

For fixed line services, the porting process as originally devised when there were a handful of operators is clearly no longer fit for purpose. Gaining Provider led is the right approach, but the existence of two different systems for geo and non-geo adds confusion and, for the business market, multiline ports add a further level of complication. There is too much scope for providers in the losing chain to hold up and prevent legitimate port requests.

FCS would like to see a level playing field created in the new IP Number Porting world; the current commercial models around fixed number porting give larger players a competitive advantage in the marketplace and means smaller players are reliant on them for porting numbers and can be charged whatever fees the larger providers dictate. We would like to see, as part of the development of the new system, equal access opportunities for all Service Providers to place their own port request directly into the centralised system if they chose assuming they meet agreed technical and commercial requirements.

The current system of Inbound Number routing is not by default redundant is that in the event of a fault of any type the potential to reroute inbound number traffic to another carrier is almost impossible. With a new Common Number System and Direct routing, it would be much easier to re-route inbound

traffic where required and we also remove one of the common problems seen today of "dropped Prefixes" which means service providers having to contact the Range Holder to get customer numbers back up and working.

Regardless of what systems or processes are put in place for number routing we would like to see an end to a Service Provider having to get permission from the Customer when deciding to port a block of numbers from one Wholesale Provider to another as we believe this is anti-competitive and is not in either the Customer or Service Provider's interest.

Mobile porting, as handled on the Syniverse system, on the other hand shows the benefits of automation and a common database for numbers. Convergence of mobile and fixed products will lead to a need to converged porting systems. The FCS Paper on Number Porting deals with the issues of moving to all IP in more detail.

Question 4.2: What are your views on sharing the functionality of a common numbering database for CLI authentication to also support improvements in UK porting processes?

The starting point is absolutely a Common Numbering Database (CND): without this in place any new Number Porting process will be at a massive disadvantage to start with. A well thought through CND would also open other opportunities around Number Ownership, funding and management of the new systems going forward including, for example, the opportunity ultimately for the End Customer to own their own number, so potentially even doing away with the current concept of the "Range Holder". One option in an all IP world would be for number porting to be free of charge to both the wholesale players and end customer with the system being funded by charges for individual numbers that all could be manged via the CND which itself is either manged by Ofcom or an independent industry/regulatory body.

Developing a database of numbers that can be used for various purposes seems entirely sensible and we fully support it, if it fulfils all customer, industry and regulatory requirements

Question 4.3: We are currently supporting a blockchain pilot. Do you have any views on using this technology for port transactions and a routing database? Are there other alternatives that should be considered?

Block chain does look to be a potential viable option for managing the Number Porting process in an IP world. Once the proof of concept becomes available in March 2020 we would hope that it can be quickly established that this method is viable and a decision taken as time is certainly not on anyone's side at the moment.

As already established The Common Numbering Database is a key component in the successful development and roll out of a new Number Porting process. But just as important is the current consultation on the future of the IP Interconnect, which we are pleased to see Ofcom are also consulting on. We believe all three elements (CND, NP, IP Interconnect) are fundamentally linked and need to be reviewed and agreed even if the development timescales of the three are different and may/will be

stepped. One additional benefit for the consumer of all these elements being considered and potentially built will be industry's ability to offer a very robust CLI Authentication process to negate call spoofing in an IP world.

Question 4.4: What are your views on implementation timeframes and the importance of a common database solution being available to support the migration of telephony services to IP?

We agree with the likely timescales set out by Ofcom which will require tight programme management. We believe that a common database should be available and given the number of CPs and telephone numbers involved, early population of the final CND should begin as soon as is practicable.

Question 5.1: What are your views on the potential for a common database solution to also provide shared functionality to support number management?

As already detailed in an earlier question we are in total agreement that there is a strong interdependence between the Common Number Database, IP Number Porting and IP Interconnects. Some of today's problems around multiple data sets for what is effectively the same data causes problems; with an integrated plan the ability to remove duplication of data and also orphaned data that is only ever updated manually can be resolved.

Question 5.2: What do you see as the benefits or disbenefits of changes to number management post PSTN retirement?

Once all services have moved to IP and TDM is no longer required, all numbers can essentially be viewed singly, as with mobile numbers. We believe that this will give Ofcom more flexibility in the way that it manages numbers, but it is important to remember that businesses will still want concurrent blocks of numbers for DDIs, so provision should be made to keep this availability.

We agree that the principle of the range holder becomes less important or even irrelevant and for management purposes CPs and Ofcom only need to know the current provider. Porting needs to be an end to end, gaining provider led process without the delays currently caused by the "middle man".

Question 6.1: Do you agree, in principle, with the need to develop and adopt a common numbering database? If not, why not?

The FCS has long been a supporter of a central or common database for numbering in the porting world, and we therefore support it for all the purposes set out by Ofcom in its consultation. We would also suggest that Mobile should be part of this vision.

Question 6.2: If you do not agree with the need to develop and adopt a common numbering database, do you have any suggestions on how the issues we have set out in this consultation could be addressed?

NA

Question 6.3: Do you agree that in the first instance industry should lead the implementation of a common numbering database, with Ofcom providing support to convene and coordinate key activities? If not, what are your views on how implementation should be taken forward?

As Ofcom is driving the work on the blockchain solution it is likely that, if approved, Industry will see this as Ofcom's database – especially if it closely linked to the NMS. Ofcom will need lead and direct and then hand it over to industry with an encouragement to create a legal entity to own the database. This body would then create governance standards, plan the way forward and choose the appropriate solution and supplier. Would prefer that Ofcom set timeframes for this process and population of data and kept oversight that this was happening.

Conclusion

The FCS hopes that Ofcom finds these comments useful. We believe this a one-off opportunity to resolve all the know issues with regard UK Phone Numbers and management and at the same time taking advantage of the All IP world to ensure UK Phone Numbers are a valued resource to customer both now and into the future.

We are happy to discuss any aspects in more depth and would be keen to be included in any Industry working groups as they are convened to take this forward.