



Internet Telephony Services Providers' Association

ITSPA Response to Ofcom consultation on future of interconnection and call termination

About ITSPA

The Internet Telephony Services Providers' Association ("ITSPA") represents over 100 UK businesses involved with the supply of next generation communication services over data networks to industry and residential customers within the UK. Our traditional core members are IP networks and service providers. ITSPA pays close attention to both market and regulatory framework developments on a worldwide basis in order to ensure that the UK internet telephony industry is as competitive as it can be within both national and international markets.

Please note that certain aspects of the ITSPA response may not necessarily be supported by all ITSPA members. Individual members may respond separately to this consultation where a position differs. However, the ITSPA Council is confident that this response reflects the views of the overwhelming majority of ITSPA members.

A full list of ITSPA members can be found at <http://www.itspa.org.uk/>.

GENERAL POINTS

ITSPA would suggest that there needs to be very clear use of language when approaching the debate in this Consultation. There is often a conflation of terms, such as additional conveyance, termination, transit, interconnection and others, which can cause confusion, or worse, be exploited by better resourced entities.

INTERCONNECTION

The consultation document defines interconnection as "*...the linking (whether directly or indirectly by physical or logical means) of one network and another...*" and it was agreed in the latest Narrowband Market Review that regulation was appropriate for BT to prevent them discriminating against competing providers seeking interconnect and to facilitate fair connectivity to distributed set of terminating nodes operated by BT.

Arrangements between at least the major networks is essential for a number of reasons:

- Efficient routing of traffic;
- Competition among transit providers;
- End to End Connectivity;
- Resilience and the integrity of networks;
- Crucial for the adoption of direct routing of calls and/or CLI validation solutions.

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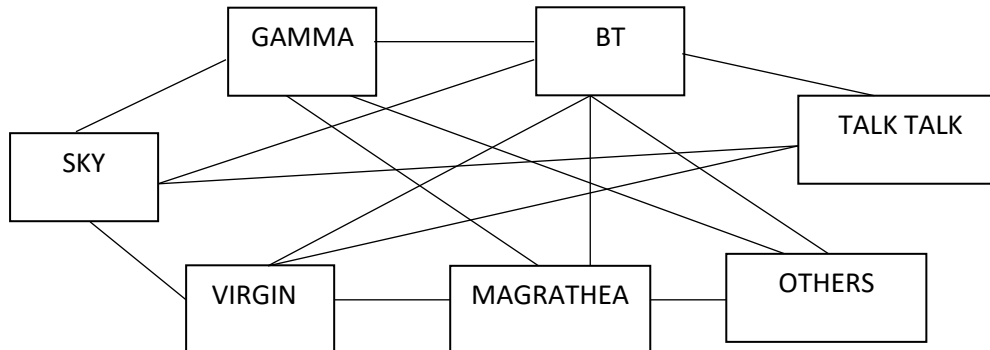


Diagram for illustrative purposes only

Interconnection (and the arrangement for the conveyance of calls over those interconnects) between networks typically have a different set of features and terms to managed service solutions provided by the same organisations, including:

- Termination notice period typically 6 to 24 months (or potentially longer);
- Settlement of payments due by netting;
- Interconnect cost share (often based on traffic balance or the parties bearing their own costs);
- Transparent access terms across interconnect partners;
- Charging principles established in a contract or references to industry benchmarks such as the Fixed Termination Rate (“FTR”), as opposed to the publication of an A-Z rate card;
- Number portability (or at least the basis upon which the infrastructure to support a separate porting agreement is established);
- The service provided is normally termination to numbers/ranges hosted on each other’s Networks and specific transit routes denominated by the identity of the Original Range Holder or specific Ofcom allocated ranges.

These distinctions are important, because the aforementioned risk of conflation and exploitation also applies to the use of the term “IP Exchange”. The version of IP Exchange that is advertised on BT’s website and promoted to ITSPA members is not an interconnection and conveyance solution that is recognised by ITSPA members as equivalent to either the TDM equivalent under the Network Charge Control Standard Interconnect Agreement or the relationships they have with each other.

The consensus is that IP Exchange is nothing more than a competitor to the managed service offerings of Magrathea, Gamma, Simwood or others.

These managed service solutions typically offer;

- an A-Z rate card that doesn’t differentiate between the identity of the Terminating Communications Provider,
- hosting of ranges and managing the PSTN interface on behalf of a third party network;
- managed number portability (i.e. the lead network such as Magrathea performs import and export functions on behalf of the subscriber),



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- outsourcing Telephone Directory and Emergency Services location information obligations and more.
- clauses for termination of convenience,
- charges for channels or interconnect to be borne by the customer.

Even a cursory review of the published material on IP Exchange will clearly demonstrate to the reader that IP Exchange is not an SIA equivalent.

ITSPA members especially fear that BT will attempt to position the existing IP Exchange product as an SIA equivalent, when it is demonstrably not a fit for purpose network to network arrangement; or more specifically, that BT will attempt to force ITSPA members that currently enjoy a regulated arrangement under the SIA to consume their managed service solution, effectively forcing them lower in the value chain and creating a glass-ceiling to the detriment of consumers and competition.

If it were a viable alternative, then operators currently operating under the SIA would have migrated already; this has not occurred to any scale that ITSPA is aware of.

Whatever the arrangement that replaces the TDM interconnection currently enjoyed under the SIA (which demonstrably is not IP Exchange), there are a number of features that it must have in order to be equivalent and to provide the certainty for a migration to take place; we would suggest these are, as a minimum:

1. Regulation over the form of physical linkage (i.e. interconnection) of the networks. It would make a mockery of the intent of regulation if the FTR were available at nominated IP POIs only for BT to abuse its position through excessive channel charges or nominating esoteric and proprietary data centres for that purpose, for example;
2. Certainty and transparency over which call scenarios are subject to which additional conveyance charges (or media conversion or other ancillary charges) and a clear and transparent mechanism by which the counter party can avoid them;
3. A clear obligation on BT to enter into dialogue with any interested and capable interconnect party and to conclude an interconnect agreement (which of course would be greatly assisted by a fair reference offer) within a reasonable timescale;
4. No termination for convenience;
5. Equivalence between BT's downstream divisions and third-party networks.

Given the disparity between where BT has positioned its IP product and what is required for an IP migration, it is clear that Ofcom should require BT to start again from the ground up and build a fit for purpose TDM replacement interconnect and conveyance solution.

POINTS OF INTERCONNECT

Today it is possible to interconnect with BT at the DLE to receive a termination rate capped at the FTR, or as is the case with the majority of other networks, they can choose to interconnect at the tandem layer (fewer points of interconnect) and pay additional conveyance or transit fees to move calls across the BT network to the target DLE or another operator respectively

Ofcom have determined that the FTR should be made available at a minimum of one IP point of interconnect ("POI") and as BT treat their IP Nodes as equivalent to the DLE for billing purposes it



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would be logical to continue to allow TDM interconnect to the tandem layer where other networks can pay transit (effectively call conversion costs).

However, there is opportunity here for BT to over inflate costs such as conversion or additional conveyance during a migration period, therefore we would urge Ofcom to consider regulating this charge element for the period of the next Narrowband Market Review (“**NMR**”) in an effort to provide certainty during the migration period.

Alongside this, if networks who already have IP capability have the option to interconnect at the one (or more) IP nodes then the migration to All-IP can begin in a planned and managed way. With Ofcom’s other proposals to require BT to publish a plan and timeline alongside these two regulatory steps we should see a fair and level playing field maintained for the duration of the bulk of migration to an all-IP core.

In addition, if only TDM is to be regulated we are concerned that there will be no real incentive for legacy TDM networks to start a migration plan as they will at least retain certainty while remaining with their TDM infrastructure and have no motivation to invest in an IP alternative, thus causing delays and obstructions to the plans set out in the Future Telecoms Infrastructure Review¹.

Additionally, ITSPA members note that the same elements of BT’s network are often consumed in transit call scenarios as those involving additional conveyance from the tandem layer to the DLE, and many of the same risks of BT exploiting the situation regarding charging exist. However, the ability to mitigate the impact of an abuse in that respect is far more limited. There is choice in the provision of conveyance to DLEs, and ITSPA members believe that a number of major carriers, such as Vodafone and TalkTalk will enter into commercial negotiations regarding their excess capacity.

There is no such choice in transit to small operators, with BT often being (and likely only being) the only network (by virtue of its privileged position as the former state-owned monopoly;

1. BT was a monopolist in numbering until the entrance of Mercury in the 1980s.
2. BT is still the Original Range Holder of the majority of numbers, therefore new entrants naturally gravitate to service establishment of number portability with BT;
3. BT use the SIA for establishing portability, which gives it, by definition, an interconnect upon which to sell transit to;
4. Small entrants are unlikely to want to manage multiple interconnects with carriers, thus automatically limiting the potential of a competitive market for transit.

Whilst an all-IP world provides a simpler basis upon which for networks to interconnect, it does not, in our view, mean that there will be a radical shift in the competitiveness of transit to smaller operators in the period of the next NMR.

TECHNOLOGY CONVERSION

The consultation refers to a number of scenarios that require conversion of traffic between TDM and IP, however it fails to consider that many networks are already converted to IP and therefore if given access to BT’s IP Nodes there would be no conversion required (although there may still be a need for

¹ [Future Telecoms Review](#), Department for Digital, Culture, Media and Sport, July 2018



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transcoding and we would anticipate the work on interoperability standards will assist in that uncertainty). Either party may of course do additional conversion within their own network – for example if they still have TDM nodes handling traffic in some areas – but we would consider this the burden of the network to carry the cost of their own conversion as is the case for most other interconnect arrangements today. With an All-IP network being the end goal and that model being considered as the most efficient for call routing purposes it is prudent to encourage utilisation and investment to that end by way of pricing and regulatory certainty.

At paragraph 17.21 of the 2017 Narrowband Market Review Statement Ofcom stated *“IP technology allows the equipment that is used to provide voice services to end customers to be at a different location to the POI. A telecoms provider using IP technology would need to identify the particular POI at which IP interconnect is available for providing termination services to its customers.”*

To this end we believe BT should be required to provide access to their nominated POI on similar terms to how they are required to provide access to their DLEs.

It is evident from industry feedback that the pace of migration is being slowed by the lack of alternative options, specifically to interconnect to the BT network. We do not feel it is in anybody's interests to unduly penalise those using TDM, particularly as there has been no alternative and there is still a considerable volume of traffic flowing this way. Any effort to encourage transition by increasing costs overall is likely to lead to problems and therefore we welcome Ofcom's view that TDM interconnects should continue to be regulated throughout the transition period.

IP EXCHANGE CUSTOMERS

It is also worth highlighting at this point that BT currently make additional transit charges to deliver/collect traffic to customers of their IP Exchange product. This supports our analysis above that demonstrates IP Exchange is not an SIA replacement product but is providing a traffic exchange service for its customer base. With some large networks that would ordinarily manage their traffic via an interconnect solution being forced to use IP Exchange it is clear that there is now a distortion in the volume of traffic being handled with these extra costs to the detriment of other networks who cannot consume IP Exchange as it is not fit for purpose.

It is our view that if there is not a regulated requirement for BT to offer interconnect to their IP network they will have insufficient motivation to make this product available to other networks

RESPONSE TO CONSULTATION QUESTIONS

Question 4.1: Do you agree that if BT's migration to an IP network is unpredictable, it could result in increased charges for providers routing calls to its network? Are there any other issues that might arise as a result of its migration?

Yes we do agree that this is a risk and is already evident. With no visibility of what traffic will originate or terminate on the IP Exchange product networks are unable to make sensible routing decisions.



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Question 4.2: Please state which of these measures you consider would be appropriate for securing efficient migration and why?

ITSPA are very supportive of the suggested measures and believe all are appropriate.

Question 4.3: Would the regulation of charges for media conversion, switching and conveyance for calls routed via IP networks be an effective means of preventing excessive charges and promoting an efficient migration to IP?

We believe this would be a good starting point to help encourage migration, but it requires an IP interconnect option to be available in order to be effective.

Question 4.4: Do you agree that it remains appropriate that telecoms providers maintain their discretion to designate a single POI at which the FTR will apply?

Yes we agree this remains an appropriate means of ensuring that FTR is available on IP as it is on TDM.

Question 4.5: Do you agree with our assessment about how BT's market position in relation to interconnection might change during migration to IP?

We consider it far too early in the migration to determine the impact on BT's position as a dominant provider of Wholesale Call Origination and/or Wholesale Call Termination. Until new products and services are in place for consumers the impact will not be seen fully and it is likely to be a number of years before a true assessment can be made.

Question 4.6: Do you agree that there is unlikely to be a need to impose regulation on BT's interconnection circuits once migration to IP is complete?

No we do not agree, based on current behaviours we believe regulation is imperative for at least the period of the next NMR.

Question 4.7: Do you agree that we should continue to regulate BT's TDM interconnection circuits as the industry migrates from TDM to IP based networks?

Yes, for the reasons explained in our introduction. We believe that stability is required during this migration.

Question 4.8: Do you agree that it would not be necessary to impose regulation on interconnection circuits at BT's IP network during migration?

No we do not agree for the reasons set out above.

Question 5.1: Do you agree that BT's role is less central to the provision of end-to-end connectivity and that telecoms providers now have a choice of transit providers with whom they can interconnect?

We can see that in theory this should be true, however it is the view of our members that in practice we are still heavily reliant on BT to provide transit solutions as they are the first choice of many smaller



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networks when deciding which parties to interconnect with. The large alternative transit networks also often have little motivation to enter into transit agreements and with many utilising the IP Exchange product there is even more traffic that has to be transited from/to BT.

Question 5.2: How might the transition to IP networks change the pattern of interconnection and how might this affect how E2E connectivity is achieved?

With the right regulatory support at this stage we would anticipate a set of much more effective transit solutions becoming available in an All-IP world.

Question 5.3: Do you agree that General Condition A1 is sufficient to ensure that telecoms providers can obtain interconnection and that additional access obligations may no longer be required to ensure end-to-end connectivity? If not, please explain why and what obligations you think are necessary.

We do not agree that General Condition of Entitlement (“GC”) A1 alone is sufficient. Our members are able to provide examples where interconnection and transit are not simple to obtain, particularly where there is no apparent commercial advantage to the parties involved. It is our opinion that the access obligations should remain for at least the period of the migration. That said, we don’t see why, for the sake of simplicity, that the 2006 End to End Connectivity Obligation on BT, couldn’t be transposed into a new Significant Market Power Condition, or GC A1 strengthened to the same effect.

New entrants are less likely to have an awareness of such old regulation and often don’t look past the GCs; it would address some of the exploitative behaviour we witness in BT that we consider may be as a result of information asymmetry between the parties if the obligations were more obvious.

Question 6.1: Do you agree with our initial view that a lack of standardisation of IP interconnection may give rise to a risk of consumer harm?

Yes, we agree.

Question 6.2: To what extent is there divergence among telecom providers in respect of the IP standards they are using? Do you consider a lack of standardisation of IP interconnection to be (or likely to be) an isolated issue or more widespread, which may require an industry-wide solution?

Over the years many networks have modified SIP standards to some degree and there is the potential to impact the quality of calls, the signalling information associated with the calls and to cause problems adhering to CLI and other security guidance. An industry-wide solution would seem reasonable.

Question 6.3: What measures, if any, do you consider may be appropriate to address risks arising from a lack of standardisation of IP interconnection?



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It is our view that forming industry consensus could be troublesome and therefore adopting existing standards (e.g. NICC) as 'UK Standards' would appear to be a sensible approach. However as NICC is only available to its membership we would wish to encourage a more open forum to set and maintain any adopted standards; there is a risk that smaller operators have the will of larger operators forced upon them by Ofcom relying heavily on a closed group.

Question 7.1: What are your views on the factors that we have highlighted as having a bearing on the setting of termination rates? What other developments should we consider?

Question 7.2: What are your views on the options we present for regulating the fixed and mobile call termination markets? Which appears to be the most appropriate regulatory option?

ITSPA are of the view that the basis upon which the FTR is calculated is a low priority matter in context of all the other topics being covered in the consultation and therefore have not gathered a wide range of views on this matter.