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Summary of Three's response to Ofcom's First consultation on Future Interconnection and call termination

1. Please see below for Three's response to Ofcom's First consultation on Future of interconnection and call termination, published on 11 April 2019. Please note that the information contained in this response is commercially confidential to Three.
2. Our response is focused on those specific consultation questions which are most relevant to Three UK as a mobile network operator and purchaser of fixed interconnection and termination services. Around [X] of voice traffic minutes on Three's network terminate on fixed networks in the UK.
3. At this initial stage (before seeing Ofcom's detailed proposals), we would like to highlight that:
 - a. It is not clear a priori that the move to IP (without other structural market changes) will automatically mean a decrease in BT's market power. BT may continue to have SMP in interconnection and hence a need to regulate BT's IPEX service during the migration to IP (2021-2025) and potentially after the industry migration to IP (expected around 2025).
 - b. As Ofcom notes in its consultation, call conveyance costs are generally considered not to be strongly distance dependent on an IP network and these networks have a small number of points of interconnect located at core nodes remote from most end users' fixed lines. This should mean that 03 call conveyance and switching costs fall further and 03 termination costs should be similar to those of 01 and 02 calls. Ofcom should consider requiring BT to decrease its 03 call termination charges and/or regulate 03 call termination charges at the same level as 01 and 02 calls.
 - c. Finally, given the increasing use of OTT services, especially for international calls/communications, Ofcom should consider deregulating non-EEA MTRs to

allow UK MCPs the freedom to negotiate lower rates for calls terminating outside the EEA and use these lower rates to compete with OTT service providers.

4. We look forward to engaging with Ofcom on its detailed proposals on the future regulation of interconnection and termination in the context of migration to IP and related market developments such as the increasing use of OTT services.

Response to Ofcom's detailed 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?*

5. Three currently operates a Media Gateway function in its network and converts traffic to TDM for interconnection. We also use transit providers, some of which may also provide Media Gateway functions. In this context certainty about BT's migration timetable to IP will allow Three to better plan the decommissioning of the IP to TDM conversion function of its media gateway.
6. For non-geographic numbers (other than 03), there are fewer transit options and Three interconnects directly with BT for most of this traffic. Only a small proportion (around [X]) of Three's fixed voice traffic terminates on non-geographic numbers (excluding 03 traffic). However, these unregulated charges account for over [X] of our interconnection payments. Ofcom should consider the implications of BT's transition to IP on call service charges for non-geographic numbers.

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

7. As suggested by Ofcom in its consultation, requiring BT to set out a timetable which identifies when each number block will be migrated to IP for interconnection purposes and when the FTR will be available at an IP POI for each number block would be appropriate. In addition as suggested by Ofcom in its consultation, BT should be required to offer the regulated FTR for each number block at both the DLE and on its IP network simultaneously for a specified time period following the re-designation of that number block to its IP network, for the purposes of interconnection.
8. [X]
9. [X]. In order to ensure the competitive availability of interconnection services Ofcom should require BT to offer the regulated FTR for each number block at both the DLE and on its IP network.
10. [X]. We understand that BT's 03 UK wide DLE has not changed, however BT have changed where they host their 03 ranges and moved these to their IPEX platform and are now charging at the higher Double Tandem Short rates. We understand that transit providers have re-routed this traffic to the BT IPEX platform to avoid the higher Double Tandem Short rates but as a result are still incurring higher BT IPEX rates.

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?*

11. Three's ability to use its own media gateway should constrain the media conversion, switching and conveyance for call costs routed via our IP networks. This will continue to be the case as long as we operate our own media gateway or if competing transit providers offer media gateway services.

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?*

12. No comment.

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?*

13. We partially agree with Ofcom's assessment. We agree that once migration to IP is complete, providers will be able to originate fixed voice calls using IP technology over broadband which could reduce BT's SMP in WCO, and that providers will have to interconnect at fewer interconnection points which should mean lower interconnection costs to BT's IP network compared to those on TDM.
14. However, it is not clear a priori that the move to IP (without other structural market changes) will automatically lead to a decrease in BT's market power. Even with fewer interconnection points BT is still likely to have the largest market share (customer base) and, if current trends continue, it may increase its share of call volumes. We note that BT's call volume market share is over 40% and has increased to 44% of total call volumes and 46% of UK geographic call volumes in 2018.¹
15. We also note that BT recently unilaterally increased its mobile call handling charges for 999 calls [X]. And as mentioned above we understand that BT is proposing to charge higher Double Tandem Short rate where they move their 03 ranges to their IPEX platform even though we would expect these costs to decrease with the move to IP, not increase.
16. All this suggests that BT may continue to have SMP in interconnection and hence a need to regulate IP interconnection during the migration to IP (2021-2025) and potentially after the industry migration to IP (i.e. after 2025 when Openreach is expected to withdraw its Wholesale Line Rental product and other CPs are also expected to migrate to IP).
17. Moreover, as mentioned above market rates are benchmarked to BT's fixed interconnection and termination rates and any increase by BT's charges is reflected in increased market rates.

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?*

18. It is not clear a priori whether this will be the case. Please see answers to Questions 4.2 and 4.5.

¹ Tables 3 and Table 5 Fixed, Ofcom Telecommunications Market Data Update, Q4 2018.

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?

19. Yes we agree. Please see answers to Questions 4.2 and 4.5.

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?

20. No, we do not agree. Please see answers to Questions 4.2 and 4.5.

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?

21. We agree that telecom providers now have a choice of transit providers providing competitive rates for geographic numbers though less so for non-geographic numbers (excluding 03).

22. Three currently uses transit providers for over [30] of its interconnection requirements for fixed geographic numbers (01, 02) and 03 numbers. For non-geographic numbers (other than 03), there are fewer transit options and Three interconnects directly with BT for [30] of this traffic. We do not expect this traffic pattern to change in the next couple of years.

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?

23. Please see response to Question 5.1.

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.

24. No comment.

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?

25. Please see response to Question 6.2.

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?

26. Our understanding is that the NICC standards for IP interconnection are already widely adopted by the industry and it is in the interest of all operators to ensure that calls are established with good quality and all call scenarios are working properly. When interconnecting with different operators, Three achieves this through careful design, testing and operational monitoring.

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?*

27. Please see response to Question 6.2.

Question 6.4: *Would it be useful to consider the case for intervention in relation to technical standards for interconnection ahead of our next market review?*

28. Please see response to Question 6.2.

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?*

29. As Ofcom notes in its consultation call conveyance costs are generally considered not to be strongly distance dependent on an IP network and these networks have a small number of points of interconnect located at core nodes remote from most end users' fixed lines. This should mean that 03 call conveyance and switching costs fall further and 03 termination costs should be similar to those of 01 and 02 calls.

30. Following this Ofcom should consider requiring BT to decrease its 03 call termination charges and/or regulating 03 call termination charges at the same level as 01 and 02 calls. Currently transit costs for 03 numbers (the majority which is BT's termination charges for 03) are around [3x] times the transit costs for 01 and 02. We note that at the retail level 03 numbers must be charged at the same rate as geographic numbers (01 and 02) and be included in bundles offered to customers by CPs where 01 and 02 numbers are included in those bundles.

31. Ofcom should also consider the implications of the increasing use of OTT services (including services offering the capability to terminate calls on landlines or mobiles as noted by Ofcom in its consultation) for international calls/communications on non-EEA MTRs. Ofcom should consider deregulating non-EEA MTRs to allow UK MCPs the freedom to negotiate lower rates for calls terminating outside the EEA and use these lower rates to compete with OTT service providers.

32. We note that competition and substitution from OTT services has meant that UK mobile originated international call volumes have fallen consistently over the last five years – from 7.93 billion minutes in 2013 to 3.97 billion minutes 2018.² This is also reflected in international call patterns, with Telegeography estimating that cross-border OTT traffic overtook international carrier traffic in 2016, and would reach nearly 952 billion minutes, far exceeding the 450 billion minutes of carrier traffic.³

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?*

² Tables 2 Mobile, Ofcom Telecommunications Market Data Update, Q4 2018.

³ <https://blog.telegeography.com/voice-traffics-slump-continued-in-a-big-way-last-year>

33. We look forward to engaging more fully with Ofcom on these questions once it publishes its detailed proposals and once the outcome of the setting of the EU-wide maximum FTRs and MTRs under Article 75 of the EEC is known.
34. At this time we note that stability and certainty with regard to the levels of both fixed and mobile UK (EU) termination rates is paramount for Three as any drastic changes in absolute rates and/or the relative rates between fixed and mobile services could result in substantial and unforeseen additional costs for the business.