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IN THE COMPETITION
APPEAL TRIBUNAL

Case Nos. 1245/3/3/16

Victoria House,
Bloomsbury Place,
London WC1A 2EB

23 May 2016

Before:

HERIOT CURRIE QC
(Chairman)
PROFESSOR GAVIN REID
BRIAN LANDERS

(Sitting as a Tribunal in England and Wales)

BETWEEN:

BRITISH TELECOMMUNICATIONS PLC

Applicant

- and -

OFFICE OF COMMUNICATIONS

Respondent

- and -

GAMMA TELECOM HOLDINGS LIMITED
CP GROUP

Interveners

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DAY FOUR - REDACTED

APPEARANCES

Mr. Robert Palmer & Ms Fiona Banks (instructed by BT Legal) appeared on behalf of the Applicant.

Mr. Josh Holmes & Mr. Tristan Jones (instructed by Ofcom Legal) appeared on behalf of the Respondent.

Mr. Tim Johnston & Sarah Love (instructed by Charles Russell Speechlys) appeared on behalf of Gamma Telcom Holdings Limited.

Mr. Alan Bates (instructed by Towerhouse LLP) appeared on behalf of CP Group.

Monday, 23rd May 2016

(10.30 am)

Housekeeping

THE CHAIRMAN: Good morning.

MR HOLMES: Before Mr Palmer resumes his cross-examination, may I update the Tribunal on two points?

THE CHAIRMAN: Yes, please.

MR HOLMES: The first is that in response to the Tribunal's question we have been beavering away over the weekend and we have produced some diagrams which we hope will be of assistance to the Tribunal and will be uncontroversial. We had not sought to agree those with the other parties but by handing them now both to the Tribunal and the parties we assume that if there are any points that need to be made there is ample time to prepare those in advance of closing submissions. So if I might hand those up now. I won't make any submissions in relation to them now. **(Handed).**

The second point concerns Ofcom's WBA market review statement, which was the subject of some questioning at the end of business on Friday. We have gone away and we have checked the position and by way of factual clarification the position is as follows. This is obviously an Ofcom document from 2014 and various questions were put to the witness on the basis of factual premises based on the contents of that document. The witness made clear that he wasn't familiar with it, so these aren't points that could be raised by means of cross-examination very easily.

But the three points are, very briefly, first, the local exchanges which are considered

1 in the WBA market review statement are not the DLEs which are under
2 consideration in this case. Before a call reaches the DLEs, of which there are 600
3 plus in the UK, it passes via concentrator units, you may have seen reference to that
4 in the witness evidence, and these are remote locations prior to the digital local
5 exchange. Access is given to those RCUs which are also, confusingly, known as
6 local exchanges for the purposes of broadband provision. So under local loop
7 unbundling, other providers can come along and they can have access to the local
8 exchanges for the purposes of providing broadband and voice services to customers
9 in a particular area. There are over 5,000 of these so there are many more than there
10 are DLEs.

11 On a related point, Professor Reid raised with Mr Perry the issue of co-location,
12 co-location is something which occurs by regulation at the level of these local
13 exchanges. To Ofcom's knowledge, there is no co-location at the DLEs. So other
14 providers cannot co-locate equipment facilities at the DLE level although they do for
15 the separate purpose of broadband provision at the level of local exchanges.

16 The second point is that access at the RCUs is for the purpose of broadband provision
17 and voice provision. It is not for the purpose of interconnection for the collection of
18 calls. So the fact that particular competing operators of BT may be co-located at
19 a given RCU to provide broadband and voice services at that RCU does not mean
20 necessarily that they will be interconnected further up the stream at the DLE to which
21 the RCU is linked. So, knowing the number of operators that provide -- that are
22 present -- at an RCU doesn't tell you which CPs interconnect for the purposes of
23 collecting traffic at the DLE stage.

24 The third point is that while the number of operators at a given RCU is specified in

1 the WBA statement, and that is one of the considerations which is relied upon to
2 assess differing competitive conditions from RCU to RCU, when deciding whether
3 there is significant market power and therefore what regulation should apply at
4 a given RCU, the specific identify of the providers of a given RCU is not anywhere
5 publicly stated in an Ofcom document and is therefore not available to CPs.

6 So that's by way of factual clarification in relation to the line of questioning which
7 was pursued. I do not know whether my learned friend Mr Palmer intends to pursue
8 it, but those are our considerations.

9 We have not reproduced the WBA market review statement although we can provide
10 it for the Tribunal if that would be helpful. It's a gargantuan document consisting of
11 over 500 pages with the annexes, but of course if the Tribunal would find it helpful,
12 we are happy to come with copies.

13 **THE CHAIRMAN:** Thank you.

14 **PROFESSOR REID:** Thank you very much and may I say that helped explain to me
15 that these several thousands of what some people call "Wendy Houses" that are
16 across the nation are different from the DLEs, thank you.

17
18 **MR PAUL ANTHONY ROSBOTHAM (continued)**

19 **Cross-examination by MR PALMER (continued)**

20 **MR PALMER:** Morning, Mr Rosbotham.

21 **A.** Good morning.

22 **Q.** When we broke off on Friday we were looking at Vodafone's ability to assess the
23 viability of collecting ported traffic at the DLE on a DLE-by-DLE basis. Do you
24 remember that?

1 A. Yes.

2 Q. I think we agreed that Vodafone knows how many ported customers it has on
3 a particular DLE?

4 A. Yes, yes that's the case.

5 Q. And it knows how many call minutes its customers have received?

6 A. I think that's the case, yes.

7 Q. So that's all specific actual information particular to each DLE?

8 A. That is correct.

9 Q. Vodafone will also know the average split of OCP calls delivered directly to the DLE
10 rather than the tandem layer from the sample traffic data which is used for the APCC,
11 but that's a national Vodafone average?

12 A. That is correct, we know it on a national level but not on an individual DLE level.

13 Q. And your point was that Vodafone's network average might not be sufficiently precise
14 for your purposes, bearing in mind local variations in places like Bracknell and
15 Wick?

16 A. That's correct, we chose those places at random.

17 Q. At random?

18 A. Yes.

19 Q. A new town and the place where BT trialled its 21st century network at Wick, you
20 chose as random?

21 A. I am sorry? Could I quibble on that?

22 Q. Is that right? Are you sure about that?

23 A. I thought BT trialled its 21st century network in Cardiff. Wick is in northern
24 Scotland, I believe.

1 **Q.** I see.

2 We explored whether Vodafone could in fact derive more specific information and
3 I suggested to you that you could use a proxy, such as from the WBA review which
4 Mr Holmes has just addressed. But in the final analysis I suggested to you that you
5 could simply ask BT for the information, that is the number of ported minutes
6 actually delivered to each individual DLE.

7 I think you accepted that that would allow you to assess whether connectivity was
8 viable at each node but you expressed some scepticism as to whether that
9 information would, in fact, be provided. Is that a fair summary?

10 **A.** That is correct. We have a history of BT not being particularly productive with this
11 material. Indeed, the average figure nationwide for this year has not been provided
12 by BT and they have refused to give us a spreadsheet.

13 **Q.** This node-by-node DLE information, you have never asked for it, have you?

14 **A.** No, we have not.

15 **Q.** No. Were you to ask for it, that would be information about your own traffic that you
16 were asking for?

17 **A.** That's correct, yes.

18 **Q.** It would not be like asking for something like BT's cost information which you would
19 appreciate would give rise to different sensitivities?

20 **A.** I absolutely agree, yes. Similarly, the working spreadsheet for this year is for
21 Vodafone's own information, but seemingly BT won't provide that to us.

22 **Q.** Can you think of any reason why BT should not provide to you volume information
23 about your own traffic?

24 **A.** I would guess that certainly at this Tribunal BT is seeking to portray this as

1 competitive market, the competition being self supply and us having that information
2 may assist us self supplying.

3 **Q.** But it is information about your own network?

4 **A.** It's not information about our own network, it's about the traffic breakdown coming
5 into our network.

6 **Q.** And you say it would not be provided, but you have not actually asked, you have not
7 got the answer, "No", have you?

8 **A.** We have not got the answer, "No", it is not a question we have asked. Every time we
9 have asked for similar-type information or information associated with number
10 portability, BT is less than forthcoming.

11 **Q.** So you are less than confident that the information would be provided were you to ask
12 for it?

13 **A.** That's exactly it. I would be delighted if BT would provide that information, it would
14 help matters.

15 **Q.** Here it is then. I will pass it up. **(Handed).**

16 This is obviously confidential to Vodafone. I will pass it down to members of the
17 confidentiality ring.

18 Vodafone only please. And Ofcom, yes.

19 **THE CHAIRMAN:** Mr Palmer, should the witness be given some time to look at this
20 before you ask him questions?

21 **MR PALMER:** I doubt he will need it. It is a list of the all the different exchanges with
22 the number of ported minutes traffic and Vodafone traffic delivered to it. Nothing
23 turns on the precise numbers for present purposes. The fact is that's the information
24 you were asking for, isn't it?

1 A. So if I understand correctly, these are minutes at the donor DLE that have been
2 delivered from the originating communications provider directly to that DLE?

3 Q. Yes?

4 A. Can I clarify that it doesn't include any minutes which are VIC-related?

5 Q. Correct.

6 A. They have been excluded. And it's a monthly figure?

7 Q. Sorry -- you said they have not been included, is that right? Has not been included,
8 yes.

9 A. And this is a monthly figure?

10 Q. Monthly figure I believe, yes. September.

11 A. Okay. So that being the case, were this information to be provided to our planners
12 that would allow us to assess DLEs, whether or not for each DLE we could justify
13 a route.

14 Q. The same would be true, would it not, at the tandem layer; if you made a similar
15 request for that information and that information was provided you could do the
16 same exercise for a specific tandem switch as well?

17 A. It would be. At the tandem switch -- verbally I have asked for that information in the
18 past and have been told it would not be possible to provide it -- but at the tandem
19 layer, yes, that would be the case.

20 Q. Thank you. Then let's come to the costs --

21 **THE CHAIRMAN:** Mr Palmer, before you move on could you just repeat that last
22 answer please, Mr Rosbotham.

23 A. In the past, I have asked for, because the DLE handover capability isn't particularly
24 usable by Vodafone, because it doesn't allow the use of VICs and depends on

1 segregated routes, it is not a piece of information which I expressed interest in
2 getting hold of at the DLE before now. The tandem, I have asked verbally in the
3 past, a long time ago I will admit, but at the time BT said it probably wouldn't be
4 available.

5 **THE CHAIRMAN:** Can you give us a feel for approximately when that was?

6 **A.** That would have been have been about 5 to 10 years, that kind of level.

7 **THE CHAIRMAN:** Four or five to ten years ago?

8 **A.** Yes, I would say so.

9 **MR PALMER:** Long before the guidance was published, for example?

10 **A.** Yes.

11 **THE CHAIRMAN:** Mr Palmer, can I just ask a question: this document hasn't been
12 submitted in evidence, we simply have your statement as to what it is. From your
13 perspective, what is its status evidentially?

14 **MR PALMER:** It is submitted to the witness to comment on and it is the information
15 that he said we would need in order to assess the viability. The point is not specific
16 numbers which appear, which have no particular relevance one way or the other, it's
17 just the principle that BT is willing to provide that information, as demonstrated by
18 the fact that it has been provided. And it has never been asked for before.

19 **THE CHAIRMAN:** Thank you.

20 **A.** Sir, can I make one final point this?

21 **THE CHAIRMAN:** Please do.

22 **A.** Obviously this is the first I have seen it.

23 **MR PALMER:** You have it in evidence within the confidentiality ring at BT bundle 6,
24 tab 12.

1 **MR HOLMES:** We would just say in relation on this evidence, for some time now, we
2 have seen Vodafone's evidence, submitted in its statement of intervention, to the
3 effect that it lacked the data that it needed. It is somewhat surprising to us that this
4 information was not provided in the reply witness evidence which BT subsequently
5 produced and which BT supplemented with a letter as recently as last week. It's
6 somewhat unsatisfactory to put this material for the first time to a witness in the box
7 at this stage when the issue between the parties about the sufficiency of data has been
8 known for some time and there has been evidence produced by BT since then.

9 **THE CHAIRMAN:** That's why I asked the question that I did.

10 **MR PALMER:** Can I clarify that my learned friend is wrong.

11 **THE CHAIRMAN:** I just wanted to ask Mr Holmes something.

12 Are you taking objection to the deployment of this document or are you saying that it
13 is of no evidential value?

14 **MR HOLMES:** I think the latter, sir.

15 **MR PALMER:** If I could correct Mr Holmes on that as matter of fact because this
16 document has been submitted.

17 **THE CHAIRMAN:** Can you show us where it is?

18 **MR PALMER:** Yes if you take bundle BT6, tab 12. You will recall -- this is page 1 of
19 tab 12 -- this is the correspondence where Ofcom asked for the information which
20 underlay the tables provided by Mr Morden in his second witness statement.

21 **THE CHAIRMAN:** This is the letter of 21st April?

22 **MR PALMER:** Exactly so, sir. Just pausing, in Mr Morden's second witness
23 statement, we can go to it if necessary, you will recall he produced figures on
24 an aggregate basis, per CP -- confidential figures between BT and each CP

1 concerned -- illustrating how and to what extent each DLE could be calculated to be
2 viable. Ofcom then asked, through this letter of 21 April, for the underlying data as
3 to how those figures had been arrived at and those calculations made. Then sir, you
4 will see at page 4, BT's reply to that.

5 **THE CHAIRMAN:** Point me to the paragraph in the letter of 21~April where Ofcom
6 asks for this please.

7 **MR PALMER:** It's page 2, paragraph 3(ii), the data used to calculate volumes of ported
8 minutes by CP per DLE. And an explanation of what is included in that.

9 **THE CHAIRMAN:** Sorry, page 2?

10 **MR PALMER:** Page 2.

11 **THE CHAIRMAN:** Yes.

12 **MR PALMER:** Paragraph 3 (ii).

13 **THE CHAIRMAN:** Yes.

14 **MR PALMER:** Ofcom requested the data used to calculate volumes of ported minutes
15 by CP per DLE and an explanation of what traffic was included in this data and
16 specifically various other questions arising under that. That was requested. Then
17 over the page at page 4 you see BT's reply to that on 26 April, and the reply to that
18 question is on page 6. You can see it finishes on page 7 where, just by the first
19 holepunch, it's:

20 "Please could you therefore provide this data."

21 The answer is:

22 "See attached worksheet 3".

23 Then over the page at page 9, all of that was provided on the enclosed CD, so by
24 agreement between the parties, including Ofcom, we didn't trouble you, the Tribunal,

1 with countless pages printed out like the ones I have just handed up. But those
2 figures are taken straight from those worksheets; that's what they are.

3 **THE CHAIRMAN:** Did you take this, the evidence that you are seeking to introduce in
4 this morning's document, did you take this in evidence from your own witnesses?

5 **MR PALMER:** Sir, we put forward this as -- in the reply bundle, as underlying
6 Mr Morden's witness statement so, yes.

7 **THE CHAIRMAN:** But he didn't speak to it?

8 **MR PALMER:** He didn't speak to it, no. Nor was there any need for him to do. So it's
9 the input into the data analysis whose product you have in Mr Morden's second
10 witness statement. So there's no evidential difficulty in that.

11 **MR HOLMES:** Sir, I do not want to make a huge song and dance about this but the
12 evidence is now being deployed for quite a different purpose for that from which it
13 was provided in correspondence after service of the reply upon request from Ofcom.
14 As we understand the point that my learned friend is making, it is being suggested
15 that this data shows that BT would have provided the data upon request in
16 commercial discussion and it clearly is not helpful in support of that proposition.
17 We would also note --

18 **THE CHAIRMAN:** If I can just pause there, there isn't any evidence at all to that effect
19 as far as the Tribunal's aware.

20 **MR HOLMES:** Indeed sir, there's no witness statement attesting to the correctness of
21 this data. Also the worksheet was omitted from the trial bundles because BT
22 indicated it would not be needed at the trial and the worksheet 3 was marked as
23 confidential to BT, there was no indication that the data could be shared with any
24 particular individuals from the CPs.

1 So we do have concerns about the value, the weight that can be attached to this
2 evidence even if it were now to be admitted by the Tribunal.

3 **THE CHAIRMAN:** I have not heard any motion that it should be admitted, so~...

4 **MR HOLMES:** No, sir.

5 **THE CHAIRMAN:** Mr Bates, do you wish to~...?

6 **MR BATES:** I echo what Mr Holmes has said and I would also like to make clear that
7 because the information on the CD was said to be confidential by BT, we did not
8 appreciate that we were able to show it to any of our witnesses and we have not done
9 so.

10 **MS LOVE:** Our position is the same as regards --

11 **THE CHAIRMAN:** In view of the fact that at the moment the debate appears to be about
12 the weight or value to be attached to the document rather than an objection, we
13 probably do not need to hear any more about this at this stage except to the extent
14 that cross examiners or re-examiners wish are to deal with what, if anything, it shows
15 in their cross-examination and examination. Beyond that I think it's a matter that
16 will have to be taken up in the closing submissions.

17 **MR PALMER:** I am entirely content with that.

18 **MR HOLMES:** I am grateful sir.

19 **MR PALMER:** May I make the point now in response to what Mr Holmes has said. To
20 be absolutely clear, our case has always been that each CP is able to derive this
21 information with sufficient proximity to be able to establish an order of DLEs to
22 target by viability.

23 So in response to Mr Rosbotham's evidence, he says, that, "Even that won't be good
24 enough for our purposes", I have then asked him, "Have you asked for more?" And

1 the answer is, "No, I haven't".

2 So Mr Rosbotham's evidence to you, the Tribunal, was, "But BT would then drag
3 their feet we have got no reason to think we would get this." That's his evidence and
4 it arises in that context for first time. And that is the context in which I produce it.

5 **THE CHAIRMAN:** I am not going to -- the Tribunal will need to hear submissions
6 about this and make a decision so I think there's nothing for me to say further
7 at this stage.

8 **MR PALMER:** Thank you, I am very grateful, sir.

9 Can I turn then, Mr Rosbotham, to the costs of connection. You gave evidence that
10 Vodafone would, in this instance, adopt an amortisation rate of two years. You
11 recall that Mr Morden had stress tested his figures to allow a three-year period in his
12 evidence --

13 **A.** That is right.

14 **Q.** -- and you said it would be two years within which Vodafone would expect to recover
15 the costs of interconnection assets here?

16 **A.** That's correct, yes.

17 **Q.** I am going to put it to you that that is an extreme position for a CP to take in respect of
18 the network assets?

19 **A.** I really can't comment whether it's an extreme position. You will see from my
20 working history that I have only worked for Mercury, Cable & Wireless and
21 Vodafone. Consistent with that employer it has always been two to three years
22 according to the particular business case, particular circumstances of the network.
23 I can't comment whether or not it's extreme because, not having worked for another
24 provider, I do not know what type of amortisation periods they may use. It might be

1 a question that is worth asking the subsequent witnesses, to see what that use.

2 **Q.** Your justification for that period was, you said that was necessary, in light of

3 Vodafone's forthcoming switchover to an IP based network.

4 **A.** It's a combination of Vodafone's switchover to an IP-based network and also

5 uncertainty of exactly when BT will do the same on its side of the fence.

6 **Q.** Let's take those two reasons one at a time.

7 So far as the first is concerned you anticipate moving over to an NGN within

8 five years?

9 **A.** The stated plan is five years. There are moves afoot at the moment to try to reduce

10 that rate to three to four years. The interconnect routes are the first part of the

11 migration because retail customers obviously are more complex to migrate, they

12 need to be moved across on a case-by-case basis.

13 **Q.** Those reasons are all of course specific to Vodafone's own particular circumstances?

14 **A.** In as much as I can't comment on anybody else's network plans, they must be specific

15 to Vodafone.

16 **Q.** Moving to the second of your two points, the risk of DLE closure, of course, as we

17 have seen under the SIA, the costs of alternative arrangements are recovered?

18 **A.** As I outlined on Friday, the costs of alternative arrangements in terms of any costs

19 imposed on the network are indeed covered. What isn't covered is where you

20 expected to make savings by connecting to a DLE and no longer can do so because

21 that DLE may not exist. That would be subject to a separate commercial

22 negotiation with BT.

23 **Q.** As soon as traffic reaches the level of the break even point the consequence is that the

24 minutes are effectively free, isn't it?

1 A. Free is probably stretching it, but once you are above the break even point the
2 particular deployment is profitable, yes.

3 Q. Once you exceed that point, you can become cashflow positive?

4 A. Yes, that's the basis of most business cases, yes.

5 Q. That could be every year?

6 A. It could be, indeed, yes.

7 Q. Of the DLEs which are co-located with tandems, Vodafone has physical connections
8 with many, not just VICs; that's right, isn't it?

9 A. This is a complicated matter to explain. Those DLEs were originally connected
10 using physical connections. In the scenario after the VIC product was introduced, if
11 we needed to augment the capacity on that DLE, we had the choice whether to do
12 that using an extra physical E1 2-megabit circuit or purchasing a VIC E1 2-megabit
13 circuit.

14 **THE CHAIRMAN:** Can I just ask a question, when we talk about co-located DLEs are
15 we talking about a DLE where both BT and Vodafone have a physical presence?

16 A. No, it's where the DLE is in the same building as the tandem -- as the BT tandem
17 switch. Vodafone will have a presence in there because of the breadth of our fibre
18 network; on the whole we are connected on our own fibre.

19 So returning to that point a moment ago we had the choice of whether to augment
20 using another physical E1 into that DLE -- or a 2-megabit circuit, the two terms of
21 interchangeable -- or we could connect using a VIC. If we connect using a VIC the
22 traffic would -- this would mean there would be insufficient physical capacity at the
23 DLE and the traffic would overflow to the tandem layer physically. But from
24 a charging perspective it would be treated as having been delivered at a DLE, and for

1 purposes of assessment of whether or not we have bought sufficient capacity to that
2 DLE, the physical and the VIC are added together and the VIC procedures are used
3 against it. So from our process standpoint de facto by adding that single E1 VIC
4 onto it the whole route is therefore treated as a VIC route thereafter. I appreciate
5 this is a rather complicated concept to get across.

6 **MR PALMER:** I am not sure that's an answer to my question, Mr Rosbotham. The
7 question was whether it is right that Vodafone is nonetheless physically connected
8 with physical circuits at co-located DLEs?

9 **A.** It has physical connections in there, yes.

10 **Q.** Right. So for most of those, take the ones, for example, identified in table 7 of
11 Mr Morden's second witness statement, where he identified in his figures the number
12 of co-located DLEs above break even.

13 Do you remember that? Page 13, if you want to look back at it, of Mr Morden's
14 second witness statement which is tab 2 in BT6.

15 **A.** Unfortunately this is the one --

16 **Q.** Mr Bates' piece of paper. You remember the piece of paper?

17 **A.** I can remember the gist.

18 **Q.** Do you remember the numbers which applied to Vodafone?

19 **A.** I remember the number of DLEs and I can remember the percentage of traffic --

20 **Q.** It's being handed around again, so you do not have to stretch your memory.

21 **(Handed).**

22 **A.** Okay.

23 **Q.** Those are going to be the busier DLEs, at the busier end of the spectrum, are they not?

24 **A.** I am assuming so, yes. Until you gave me this piece of paper with Vodafone spelt

1 incorrectly, a moment ago, I didn't know that for sure.

2 **Q.** Would it surprise you to learn that of those Vodafone is physically connected at all but
3 one of those DLEs?

4 **A.** I would be surprised that there's one that we're not.

5 **Q.** That is a fair answer. Apparently there is one, but --

6 **A.** Interesting to know which one it is, you can tell me later on.

7 **Q.** So for most of those it's a fair inference to say, is it not, that you would not need new
8 circuits; you would just need to rearrange traffic over existing circuits?

9 **A.** I believe the word "just" very much oversimplifies it. We would have to rearrange
10 the traffic and we would have to start using that DLE partially as a physical and
11 partially as a VIC with the consequent operational cost at our end of the link.

12 **THE CHAIRMAN:** Are we talking about, in the spreadsheet, the numbers and
13 percentages of the co-located DLEs?

14 **MR PALMER:** I believe that we are principally.

15 **A.** It is the first column of the table.

16 **MR PALMER:** It's the first column, sir.

17 **THE CHAIRMAN:** Yes, the first column.

18 **MR PALMER:** Insofar as the cost of DLE handover is concerned -- if you take to hand
19 BT bundle 1, tab 4, page 9 -- the cost would fall within group 5, wouldn't it, where it
20 says:

21 "Group 5. A single DLE switch used."

22 **A.** That's correct yes.

23 **Q.** And the point that you made in your evidence-in-chief, in response to Mr Bates'
24 questions is that when Vodafone gets its read out from BT, because you do not

1 currently use DLE handover you get a row of zeros in that row?

2 **A.** It's either zeros or blanks.

3 **Q.** I see. But of course you do use group 6; is that right?

4 **A.** Yes, we do. That's the predominant delivery mechanism, where calls -- that's the
5 predominant group we use, where calls are delivered to the DLE.

6 **Q.** We can see that the difference between groups 5 and 6 is group 5 has a single DLE
7 switch used, group 6 you have the DLE but you also have a single tandem switch and
8 a transmission link between those two switches?

9 **A.** Yes.

10 **Q.** Yes. And when you combine that tandem switch and the transmission link between
11 the switches, that is the LTC isn't it?

12 **A.** That's what's known as local tandem conveyance, LTC, yes.

13 **Q.** Local tandem conveyance. It includes the switch and includes the conveyance?

14 **A.** Correct, yes.

15 **Q.** So all you have to do is take the LTC rate away from your group 6 rate to give you the
16 group 5 rate?

17 **A.** Could you clarify where the LTC rate would be obtained from?

18 **Q.** Is it your evidence that you do not have and are unable to derive the LTC rate from the
19 other information that you have?

20 **A.** No, that he is not the case. I could make a estimate of what BT would charge for LTC
21 on this. The other figures in this spreadsheet never quite align with what's in the
22 carrier price list but are based broadly upon it. So historically I could make
23 an estimate of what the saving was, but I could not be definitive without actually
24 seeing what I would be charged for group 5.

1 **THE CHAIRMAN:** You mentioned the spreadsheet a moment ago, which spreadsheet
2 were you referring to, the one that we looked at in table 7?

3 **A.** No. Can I ask counsel, does the spreadsheet form any part of the evidence bundle at
4 all?

5 **MR PALMER:** Yes, it is the sample that gets sent.

6 **A.** Could you point us to it, it's just the panel --

7 **MR PALMER:** We have not produced the sample.

8 **A.** Okay, so if I could take you through what at that spreadsheet says, if that would be of
9 any value to you?

10 **THE CHAIRMAN:** I think we need to understand your answer, so --

11 **A.** So the spreadsheet that BT generally provides once per year.

12 **MR LANDERS:** Does it have a name?

13 **A.** The one that is sent to me is called "Vodafoneworkings.xls". This spreadsheet is
14 generally provided once a year, although we have not been provided one for 2016.

15 **THE CHAIRMAN:** Why haven't you got one for 2016, would it normally have been
16 provided by this stage in the year?

17 **A.** Yes. BT have been reticent to provide it because they consider it underlies the APCC
18 that they charge us, and because the APCC has now been set by dispute we have been
19 referred back to Ofcom on the matter.

20 So the spreadsheet takes each of the groups as set out by Mr Young in his evidence
21 statement, that's the one that we were just looking at, and tells us the total costs which
22 have been incurred for each of those groups by the minutes which were coming to the
23 Vodafone network.

24 **THE CHAIRMAN:** You have told us that for group 5 it's just a row of zeros?

1 A. Yes. Then the number of minutes which have been carried by BT to each of those
2 groups, and then there is a derivation from those two pieces of information to get the
3 APCC that they will charge us.

4 Now, by taking the total cost and dividing it by the total minutes we are able to
5 reverse engineer if you like the pence-per-minute charge that BT levies for each of
6 these groups. I have been able to satisfy myself that they are broadly but not
7 absolutely consistent with the pricing that BT uses for its services in the carrier price
8 list.

9 **MR HOLMES:** If it assists Mr Rosbotham and the Tribunal, there is an example of one
10 of these worksheets in the evidence before the Tribunal at tab 40 of defence
11 bundle 2.

12 **MR PALMER:** I was about to take the witness there, if I can do it in my own way.

13 Mr Rosbotham, I think what you have just described is what you have said in your
14 witness statement at paragraph 33.2(a).

15 A. Yes it is, yes.

16 Q. So you accept that using the total cost and total volume data you are able to reverse
17 engineer the components using the APCCs. And to be clear, that includes the LTC
18 rate?

19 A. Not the LTC rate, no. It gives us a rate for group 6, it doesn't give us the LTC rate.

20 Q. If you turn to Mr Morden's second witness statement, again this is bundle BT6.

21 **THE CHAIRMAN:** Before we go on, Mr Rosbotham had you finished your answer to
22 me, because you remember you were talking to me when Mr Holmes suggested we
23 might look at tab 40?

24 A. Insofar as I was trying to clarify your understanding; does that explain things

1 adequately to you?

2 **THE CHAIRMAN:** I think so, yes.

3 So, Mr Palmer you want to us look at Morden 2?

4 **MR PALMER:** Morden 2, tab 2 of BT6, paragraph 69. Do you have that?

5 **THE CHAIRMAN:** If I could just understand the context, Mr Palmer, we are we talking
6 about a comparison between an extracted price for LTC and ITC on the one hand and
7 the cost of an inter-switch connection for a ported call?

8 **MR PALMER:** Sir, yes. At this point in his statement what Mr Morden is doing is
9 comparing the extracted rate of LTC from APCCs with the rate which has been
10 applied to other services, there are three other services covered there: indirect access,
11 CPS and BT infographic. And he is using there the same methodology that
12 Mr Perry uses in his witness statement. What you get, arising from that evidence,
13 Mr Rosbotham, is a rate of 0.0792 for LTC for each of those services right up to
14 1 February 2014. We see an increase for those services, but not in fact in relation to
15 the APCC; that's right isn't it?

16 **A.** The rate wasn't changed on the APCC at that stage as far as I am aware because the
17 rates were only reviewed once a year, so they wouldn't have been.

18 **Q.** That's right.

19 **A.** I do note that the information in table 8 is a 24-hour blended rate where BT actually
20 charge on a day/evening/weekend basis, with different charges. Typically those
21 ratios have been the same but I also note -- in terms of the conversion of the 24-hour
22 rate to, for example, the daytime rate. I do notice however that Mr Morden
23 completes his evidence at October 2015 and doesn't take into account the changes to
24 pricing at that stage, where there were quite some dramatic changes to BT's pricing.

1 And I believe, as Mr Perry has highlighted, the prices for LTC vary dramatically
2 between different services so it couldn't be assumed that the same LTC would apply.

3 **Q.** Those changes post-date the --

4 **A.** As I was about to say, those changes did indeed post-date the dispute, but one would
5 assume that in the event that we were to return to the pre-dispute situation of BT
6 setting non-LRIC based charges, Vodafone will be in exactly the same situation of
7 having a row of zeros for the group 5, and not really knowing which LTC BT was
8 going to apply.

9 **Q.** Turning to paragraph 69 of Mr Morden, above those tables, there's a confidential
10 section there, isn't there?

11 **A.** There is, yes.

12 **Q.** Do you have visibility of that?

13 **A.** I do not, but I am pretty sure I know what that's saying.

14 **Q.** And that is a matter of which Vodafone has full knowledge?

15 **A.** Can I just check that that blacked out statement is saying what I think it's saying?

16 Can I get a confidential --

17 **THE CHAIRMAN:** Mr Palmer, am I right that we are comparing the figures from the
18 third column of the left-hand box with the numbers in the second last line of
19 paragraph 69?

20 **MR PALMER:** Yes, sir. We are comparing with the 0.0792 for LTC all the numbers in
21 table A are LTC rates, over the page we have the ITC rates, which is what you
22 compare with the second number.

23 **THE CHAIRMAN:** Okay.

24 **MR PALMER:** All those rates are derived from Mr Perry's methodology, just with a bit

1 more detail. And the short point is Mr Rosbotham, it's from using information like
2 that that you are able to get a pretty close idea of what it would cost to use a group 5
3 DLE handover.

4 **A.** We were able to derive an approximation of the handover rate prior to the changing of
5 the rates back in September/October 2015. Now, I do not believe we would be able
6 to do the equivalent.

7 **Q.** If you wanted further comfort now, you could ask what rate would be applied?

8 **A.** We could, and the reason we have been asking BT for the spreadsheet that we have
9 been referring to, of our workings, was we wanted to see a rate for -- because it was
10 our understanding that the new spreadsheet would have the defined rate, as agreed by
11 Ofcom, for the individual groups and we wished to see what the group 5 rate was,
12 predominantly in order that we could reciprocate that rate and charge BT the same
13 where it imports numbers from Vodafone, and it does import quite a significant
14 volume of numbers from Vodafone as well.

15 **Q.** If you go now to bundle DF2, tab 40, to which I think Mr Holmes referred earlier.

16 **A.** I am afraid I do not have that document.

17 **Q.** I think again that is because its confidential to Vodafone, so perhaps a copy of that can
18 be provided to the witness. I am grateful. **(Handed)**.
19 Do you have it?

20 **A.** I do, yes.

21 **Q.** You can see it's the e-mail exchange between BT and Vodafone relating to provision
22 in January 2015, with the then latest APCC calculation sheet for Vodafone.

23 **A.** Can I just highlight that that is the document that the panel was asking for a moment
24 ago, to know what that spreadsheet was like, it is this spreadsheet.

1 Q. It is? I am so sorry I thought we didn't have it. I am grateful for your clarification.
2 This is precisely what you get?

3 A. Yes.

4 Q. I thought it was only part of that information, but if I am wrong I am grateful for your
5 correction.
6 I shall not read it out, obviously the contents of this document are confidential. Can
7 I ask you, on the first e-mail on page 1 of tab 40, do you see where it says:
8 "Laurent, please find attached the APCC calculation sheet for
9 Vodafone."
10 Just the sentence after that.

11 A. Yes, I see the sentence, yes.

12 Q. That figure, if you turn to the last page of the tab, the bottom table on that last page
13 under, "Description"; do you see that?

14 A. Mm-hm.

15 Q. You have LTC and then the rate over to the right; that's right isn't it?

16 A. As I think I have explained earlier, we have never managed to correlate the component
17 rate table at the bottom to the rates that we get when we derive the information at the
18 top by dividing the minutes by the cost.

19 Q. Am I right that it's that which is being referred on that first e-mail, that second
20 sentence?

21 A. What is being referred to is the component rate which is used in groups I believe 6, 7,
22 8, 9.

23 Q. Yes, and that's what we see on the final page as well?

24 A. Yes, it's the groups 6, 7, 8, 9. The table at the bottom is not linked into the table at the

1 top in this particular spreadsheet and isn't used at all, as far as I can see.

2 **THE CHAIRMAN:** So we should be concerned with the spreadsheet at the top?

3 **A.** I believe so, and the sentence concerned is effectively saying that that rate has been
4 factored into groups 6, 7, 8, 9.

5 **MR PALMER:** Yes. The point that you are making to the Tribunal is you can't see how
6 that has been done; is that right?

7 **A.** We do not have the visibility of exactly where these minutes --

8 **Q.** That is what is said has been done?

9 **A.** Yes, I have absolutely no doubt that it has been done. If I could clarify, it hadn't
10 actually been done, but retrospectively BT corrected this.

11 **Q.** There was an error which was corrected?

12 **A.** Yes.

13 **Q.** If that is the position, I am happy to take that.

14 **THE CHAIRMAN:** We take the second sentence in the e-mail of 1601 on page 1 of the
15 e-mail of this tab. You are telling us that that rate has been applied to groups 6, 7, 8
16 and 9 in the last page?

17 **A.** The e-mail is saying that that is the case. In the event it hadn't been, and perhaps this
18 is illustrative that we couldn't tell that it hadn't been from that spreadsheet, but to
19 BT's credit, a number of months later it noticed that that was the case and corrected
20 the workings. But it's perhaps illustrative that there is no way we could check that it
21 had.

22 **THE CHAIRMAN:** Okay. I do not want you to tell me what the number is in case it's
23 confidential, but do we find anywhere in this production what the rate that's
24 mentioned in the second sentence of the e-mail is?

1 A. The table on the last page, which is the spreadsheet we have been referring to.

2 **THE CHAIRMAN:** Be careful not to mention anything that may be confidential.

3 A. Indeed. The table at the bottom, the second number down, has got that rate entered
4 into it. But that number -- that table is a table of BT saying to us, "This is what we
5 have used." It isn't actually -- if you were to get an electronic copy of this particular
6 document, you would see that the numbers at the bottom do not link into the numbers
7 at the top. All of the numbers on this spreadsheet are in fact just numbers, there are
8 no formulas or equations in there.

9 **THE CHAIRMAN:** So your point is that you are being provided with this information
10 but you, Vodafone, can't verify it?

11 A. That's correct, yes.

12 **MR LANDERS:** Are you saying this is not what we would normally call a spreadsheet,
13 it's a table?

14 A. Yes.

15 **MR PALMER:** If I am understanding your evidence correctly, you are saying that
16 Vodafone would like, but is not currently provided with, more transparent
17 information as to how you get from the bottom table to the top table?

18 A. That would be a useful piece of information to be provided with.

19 Q. It's not what I am actually asking you about.

20 A. We have sought to reverse engineer and there is a certain amount of consistency with
21 the carrier price list, which is where those numbers have broadly come from, but it is
22 not accurate. You will see the numbers -- the rates that we get charged are four
23 significant digits down in the pence-per-minute and the last two digits tend to be, you
24 know, we can get it correct to the first significant digits, but certainly not to four

1 significant digits. Which sounds trivial, but when you multiply it by millions of
2 minutes, obviously it starts to~...

3 Q. So your evidence at the moment is directed to the transparency of the process by
4 which the end rates are calculated?

5 A. Certainly we believe there's a lack of transparency there, yes.

6 Q. What I am putting to you is in terms of understanding what LTC rate is available, you
7 have that information?

8 A. We have been told what the -- I will have to say yes because I do not think I can go
9 into further detail without breaching confidentiality.

10 Q. We can go into a confidential session at the end so you can complete that answer.

11 Can I ask you some questions about the tandem layer. At paragraph 32(b) of your
12 witness statement you state that:

13 "Our CPs have no choice but to rely on transit between BT tandem nodes
14 for at least some traffic."

15 Is that right?

16 A. That's correct, yes.

17 Q. It gives you a sense of scale about least some traffic.

18 If we turn to Mr Morden's first witness statement in BT1. It's at tab 3, page 30.

19 Again Vodafone's information will have to be handed to you.

20 A. Mm-hm.

21 Q. For everybody else it's page 30. **(Handed)**. Mr Morden's table 2.

22 A. Somebody's going to have to --

23 Q. The whole table can't be given to Mr Rosbotham, but perhaps Mr Bates can assist
24 again.

1 Can we just remind ourselves about what we can see. The first row shows the
2 proportion of ported calls delivered to tandem switches by OCPs that could be
3 directly collected by the RCP. So that is at the tandem level.

4 **A.** Yes.

5 **Q.** And there's figure in the final column of first row for Vodafone.

6 **A.** I believe there is and I believe, yes.

7 **Q.** That is the figure. So we can see that that percentage of Vodafone's ported of calls
8 are delivered to existing interconnected switches at the tandem layer?

9 **A.** That's correct, yes.

10 **Q.** So Vodafone is capable of collecting them there, isn't it?

11 **A.** It is indeed. I am indebted to Mr Morden for providing this information. It isn't
12 something which has been provided previously. A proportion of our traffic does
13 indeed use two tandem switches in BT's network, sometimes because there is no
14 route to the switch on which the OCP -- the tandem unit to which the OCP delivered
15 its traffic, sometimes, because there is a route, but for historic reasons the
16 configuration of that switch doesn't make use of that route.

17 Until Mr Morden provided this evidence, and I saw the redacted particular row for
18 Vodafone, I could not be aware of what the breakdown was between those two.

19 **Q.** In terms of the level of information that BT does provide you with, of course if you
20 need more granular information than has so far been provided, you can ask for it?

21 **A.** I can, and as I say, historically, I have asked for that and not received it.

22 **Q.** 10 years ago?

23 **A.** I think I said 5 to 10 years ago.

24 **Q.** 5 to 10? I am grateful.

1 A. After having the equivalent information for DLEs provided this morning, perhaps
2 I am optimistic that they might do so.

3 Q. Yes.

4 A. Were they to do so, I am more than willing to change the configuration on those
5 switches. There's a cost associated with doing it, but it makes sense for me to do so,
6 I have no wish to use more than BT's network than I am doing because the cost to me
7 of getting that traffic, once I have made the configuration change and incurred the
8 costs associated with making that change, but once I have made that change, the cost
9 to me of carrying that traffic is zero, it uses less BT capacity.

10 Q. So with information of that kind you can drive that information. Even without it you
11 can go through an estimation exercise of the kind that we discussed at the DLE level;
12 it's just the other side of the same coin, isn't it?

13 A. No, it's not. On the DLE level we know that calls are being delivered to -- associated
14 with a particular DLE. At the tandem level we have no information on the minutes
15 that we receive from BT, of a given tandem, how many of those minutes arrived at
16 that tandem itself, and therefore we are paying the group 1 rate, and how many of
17 those minutes arrived at a different BT tandem therefore we are paying one of the
18 other rates. And overwhelmingly it tends to be group 10.

19 At an individual tandem level we have no idea which minutes and there's nothing in
20 the call signalling which can help us, the only thing that can help us is traffic analysis
21 telling us that a particular inbound tandem from OCPs is having to route calls via
22 a different BT tandem rather than on the direct route to Vodafone.

23 **THE CHAIRMAN:** Before we move on, I would just like to ask Mr Rosbotham this. If
24 you go back to table 2 on page 30, and again we have to respect confidentiality, but

1 you, if you now have the number in the final column.

2 **A.** Yes.

3 **THE CHAIRMAN:** Do you now have that?

4 **A.** Yes.

5 **THE CHAIRMAN:** Can you just tell the Tribunal what, without breaching
6 confidentiality, that enables you to do that you could not have done before you got
7 that number?

8 **A.** In and of itself, nothing. It tells us that we have got a problem and we need to
9 reconfigure some of our routing information on BT's tandem units. Unfortunately it
10 doesn't tell us which tandem units to do it on.

11 Now, in theory I could send my planners to check the configurations on every single
12 BT tandem unit in order to make sure that the routing is correct. The problem I have
13 there is two-fold: firstly, the process arrangements for organising the configuration
14 on switches for routing ported traffic is very different to that for non-ported traffic.
15 It uses a rather archaic scheme, where information is held on excel spreadsheets in
16 an industry-approved format and it basically has every single 1,000 or 10,000
17 number range which contains numbers that could be ported, every single donor DLE,
18 every single prefix, and the prefix is what's used to route the call through to the
19 recipient network and there could be multiple prefixes on each network, and indeed
20 sometimes you get multiple prefixes per DLE.

21 So this spreadsheet, which is called a planning data build information, PDI, is
22 an agreed format. I can only describe it as horrendous. My planners tell me that to
23 open one of these things, and there's one per area, is generally two man days. So
24 there is work involved in actually doing that side and finally, once I get BT to change

1 the configuration, in principle it is a chargeable event.

2 Now, I am grateful -- in the witness statements BT have indicated that they will
3 forebear on that charging, apart from in certain circumstances, but I can't be sure they
4 won't charge me for doing it.

5 I apologise for how long I am taking. But it means that I can't go and review all of
6 those routings and correct them speculatively, I can only do it if I know there's going
7 to be a traffic benefit of doing so, and without the traffic data I haven't got that
8 information.

9 **THE CHAIRMAN:** Forgive me if I am asking you to explain the obvious, but can you
10 explain what the problem is? You say you now know, having been given that
11 number, that you have a problem?

12 **A.** So the problem is that on that particular tandem node there would be a route -- on the
13 inbound tandem node from the originator there would be a route to Vodafone. Not
14 necessarily to the recipient switch in Vodafone, but nevertheless to Vodafone, which
15 is enough. That route is not selected by the routing configuration and instead it's
16 given to another BT tandem node in order to send the traffic to Vodafone.

17 The reason for that -- there are lots of historical reasons, but what it basically comes
18 down to is when Vodafone -- or really we are talking about Mercury here, it is so
19 long ago, I do not know if you remember those -- set up its routing back in 1996.
20 The other operators who are now sending this traffic didn't even exist and there's
21 times when basically the routing configuration hasn't kept up with new entrants to
22 the market connecting into that tandem switch.

23 **THE CHAIRMAN:** Again, I do not want to over-simplify, but in light of your
24 explanation is the problem that with that number you now know what proportion of

1 tandems Vodafone could connect to ported calls but that it does not in fact do so?

2 **A.** We know the proportion, but we do not know where -- we know the proportion of
3 traffic but we do not know the particular tandems. We know the proportion of
4 traffic, but we do not know where that traffic actually is.

5 **THE CHAIRMAN:** Sorry Mr Palmer.

6 **MR PALMER:** That's fine.

7 **MR LANDERS:** Could I just follow up on that?

8 So you are saying that with this extra information you could make changes that
9 would reduce the costs of Vodafone. Are you saying that the overall
10 British Telecoms system would become more efficient, or are you saying that there
11 are costs that you could avoid that would pass to BT, so in terms of the overall BT
12 network, it would make no different to costs?

13 **A.** The extra information that I need is the traffic information, the information here isn't
14 enough. But with that information, the overall system would become more
15 efficient. What we effectively have is traffic is going from A to B via C and I can
16 put it on a direct route from A to B. And it's in my interests to do so because it
17 would not cost -- once I had, returning to Mr Holmes' payback, it's free once you
18 have hit the payback period, the cost is doing that configuration change. Once I had
19 done that configuration change, the routes already exist so the incremental cost
20 would be zero. So therefore it cuts out a leg in BT's network.

21 **MR PALMER:** You could take the traffic off BT's network and not consume
22 inter-tandem conveyance from BT in respect of that traffic?

23 **A.** If I had the correct information to make those changes, yes.

24 **Q.** You could do that? Right.

1 I have suggested to you that that information can be provided, I just want to explore
2 what ability you have to forecast that even without it being directly provided. First
3 of all, you know which tandems are connected to which DLEs do you not, or CPs no
4 doubt?

5 **A.** Yes.

6 **Q.** And from that you can see which tandems are connected to the DLEs with the highest
7 volumes of ported traffic?

8 **A.** Yes we can. I think we will find, quickly looking at the data, that we see -- forgive
9 me it is the first time I have seen this information -- in a lot of cases it does tend to be
10 those tandems which are -- sorry, those DLEs which are connected to more than
11 three tandems. But I can't be sure without analysing this information.

12 **Q.** The point is, whatever the picture is, you can identify what it is?

13 **A.** Yes.

14 **Q.** Of the ten APCC groups, that's those set out in the ten-group charging structure, it's
15 groups 2, 3, 4 and 10 which all relate to calls being routed in and out of the tandem
16 layer; we have looked at that before?

17 **A.** That's the case, yes.

18 **Q.** So, by adding up the minutes falling within those groups Vodafone can see how many
19 ported minutes are arriving at the tandem level and can formulate a view as to how
20 many additional minutes you can pick up by further interconnecting at the tandem
21 level?

22 **A.** I think we have established that the Vodafone doesn't need to further interconnect at
23 the tandem level, it's more routing changes at the tandem level that will be needed.

24 What I can't tell, for example: if a DLE is parented onto seven tandem units I can't

1 tell which of those seven tandem units is causing the issue.

2 **Q.** Well, you can use billing data provided by BT to ascertain which tandems other CPs
3 are connected to, can't you?

4 **A.** I can tell from the BT billing data where other CPs are sending their traffic which is
5 destined for Vodafone number ranges. That doesn't provide any information about
6 where that CP is sending their traffic destined for BT's number ranges and I think, as
7 we have heard from earlier evidence, the routing decisions made by the originators
8 may be quite different for BT ranges versus other operator ranges.

9 **Q.** Mr Perry has explained, hasn't he, that based on data from BT, you can tell that you
10 pay ITC if the call is handed over at a particular BT tandem, BT tandem 1, but not if
11 it hands them over at a different tandem, say BT tandem 2; you can see that
12 information, can't you?

13 **A.** Can I clarify whether you are asking that question for ported or non-ported traffic?

14 **Q.** For ported traffic.

15 **A.** No, we can't.

16 **Q.** Can you do it for non-ported traffic?

17 **A.** Yes.

18 **Q.** In that case you can still see where the CPs are connected?

19 **A.** We can see where they are connected, but that doesn't help us know where they are
20 sending BT number ranges. It tells us where they connect to send Vodafone number
21 ranges, not where they connect to send BT number ranges.

22 **Q.** You get the detailed billing information provided by BT including element-based
23 charging files, do you not?

24 **A.** For purposes of non-ported traffic, yes.

- 1 **Q.** By looking at those files you can tell whether Vodafone was charged single tandem
2 transit or double tandem transit to reach a given particular CP?
- 3 **A.** For the non-ported number ranges, yes.
- 4 **Q.** From a BT tandem switch that they have sent the call to, you can see that information?
- 5 **A.** For their non-ported number ranges, yes.
- 6 **Q.** So you can see where they are connected on that tandem switch?
- 7 **A.** Indeed, we can see where there's a connection but we can't tell what it is used for.
- 8 **Q.** But you can still build up a picture of which CPs are connected to which tandems?
- 9 **A.** We can indeed, but that doesn't tell us where that originating CP sends the BT number
10 ranges.
- 11 **Q.** But you can build up from that information a forecast, can't you, in terms of expected
12 call volumes for the remaining tandem switches if you are not connected to one
13 already?
- 14 **A.** Not for non-ported traffic, no we can't, I am afraid.
- 15 **Q.** Not any kind of ranking of importance or forecast at that level?
- 16 **A.** No, I do not believe so.
- 17 **Q.** Nothing at all?
- 18 **A.** No, because -- obviously if a CP isn't connected to a switch I think you can glean as
19 much as they are not going to send any traffic to that switch. However, once they
20 are connected to it that doesn't tell us whether or not they are sending BT number
21 ranges to that switch.
- 22 **Q.** There's overlap between ported and non-ported at the tandem layer, isn't there?
- 23 **A.** I am not sure I understand the question.
- 24 **Q.** Well, ported and non-ported can be combined at the tandem layer, can it not?

1 A. It can, yes.

2 Q. So looking at that it may not be a perfect prediction, but it's perfectly sufficient for you
3 to plan, isn't it?

4 A. I do not believe it is, no. However, the traffic information, traffic that's generated
5 from each tandem switch that we were discussing moment ago, that BT holds, would
6 be the perfect information for us to plan.

7 Q. Sorry, I missed that last bit?

8 A. I was just commenting that the information we were talking about a moment ago, in
9 terms of the amount of traffic that Vodafone is receiving ported from each individual
10 tandem unit, were that to be provided by BT that would be perfect information to
11 plan and would avoid this game of trying to find the needle in the haystack.

12 Q. That would be spot on information which would avoid the need for any forecasting
13 exercise at all?

14 A. Indeed.

15 Q. It's historic --

16 A. It's historic, but I take your point, yes.

17 Q. In view of that we need to read what you say in your witness statement at paragraph 50
18 as subject to that caveat. It's your witness statement, 50.1(b). You say in the final
19 sentence there:

20 "The RCP, therefore, has no data on which to make a properly informed
21 choice to connect to that node and amend its routing to use that
22 connection."

23 So we should read that subject to the questions and answers --

24 A. Yes, but I would particularly draw your attention to the words, "A properly informed

1 choice". Because we do not know where the originating network is sending the BT
2 traffic, we can't make a properly informed choice.

3 **Q.** Without the information that we have discussed?

4 **A.** Without the information which we have discussed, which BT historically said they
5 wouldn't provide me.

6 **Q.** We have been around that one, I shall not repeat the evidence on that.

7 To the extent that that per-CP picture of ported traffic at the tandem layer can be built
8 up, those forecasts can, in principle, be handed to a transit provider who is assessing
9 the viability of offering a transit service for more than one CP?

10 **A.** If there were such a transit provider and they were contractually allowed to offer such
11 a service, so with changes as necessary to the standard internet agreement, yes, you
12 could provide that information if you had that traffic information to build up that
13 profile.

14 **Q.** And on that caveat that you just identified, that comes down to the construction, does
15 it not, of schedule 4 of the SIA? Mr Morden has given evidence about that, I am not
16 going to debate with you the correct construction of that term. I think you fairly
17 accept at least at your paragraph 43 that if there's any doubt on the matter the SIA
18 could be amended?

19 **A.** The SIA contract could be amended. There are regular reviews of the SIA. We have
20 found the ability to make changes to the SIA extremely difficult and BT particularly
21 reticent to do it where it is not in their commercial interests. I would highlight that
22 introducing a competitor to their inter-tandem conveyance wouldn't exactly be in
23 BT's interests. So I wouldn't expect rapid progress on that point.

24 **Q.** In this particular context, Mr Rosbotham, you have seen Mr Morden's evidence that

1 he believes, on behalf of BT he is putting forward the position, that there is already
2 the contractual ability for a transit provider to receive traffic at the tandem layer.
3 You may disagree with that view, but do you understand that that view of the
4 contract is being put forward on behalf of BT?

5 **A.** I understand he has put that point forward, but I believe he is mistaken. The terms, as
6 they are at the moment, would only allow a recipient's CP prefixes to be totally
7 hosted by a transit network when quite clearly what we would need would be the
8 situation where traffic from particular BT nodes was carried by the transit network.

9 **Q.** So if you were right about that, if you were right about that, and you disagree with
10 BT's view of its own SIA --

11 **A.** It's an industry contract, but yes, carry on.

12 **Q.** -- one can anticipate that BT would be willing to amend the SIA to make that clear?

13 **A.** If that was the case, I am sure they would, yes. If the matter does arise I will be more
14 than happy to take the transcript of this hearing to that particular negotiation meeting.

15 **THE CHAIRMAN:** Would this be a convenient moment?

16 **MR PALMER:** We are nearly there, but there's a couple of topics to cover.

17 **(11.50 am)**

18 **(A short break)**

19 **(12.00 pm)**

20 **THE CHAIRMAN:** Before Mr Palmer resumes his cross-examination can I just ask
21 counsel generally whether we are making progress in line with your expectations that
22 we should finish the factual witnesses today?

23 **MR PALMER:** I believe so, subject to any additional evidence-in-chief from the other
24 witnesses. I expect to be shorter with the other witnesses. As Mr Holmes

1 indicated in his opening statement, I do not intend to take the position that every
2 single point must be put to every witness, if the Tribunal are content with that
3 approach, then I won't do so.

4 **THE CHAIRMAN:** Thank you.

5 **MR PALMER:** Mr Rosbotham, if you turn to your witness statement in paragraph 54,
6 please, tab 2 of the CP bundle, paragraph 54. You say there that:

7 "The provision of wholesale transit services is, on the whole, carried out
8 by CPs who build networks to support their own retail customers' needs
9 and then sell on any excess capacity on a wholesale basis."

10 Are you aware and able to give evidence as to whether or not that is true of Gamma's
11 business model?

12 **A.** I cannot speak for Gamma's business model. I would stress that there are two layers
13 of wholesale service. There is wholesale service whereby the customer is a fully
14 fledged communications provider with their own network and the wholesale service
15 is simply a transit network capability, which is the subject of what we are discussing
16 today. And there is wholesale service insofar as a network provides wholesale
17 services to a retailer who then retails those network services onto their own
18 customers.

19 I am sure Mr Farmer will go into details about his services later on, but my
20 perception is that his probably fall more into the latter than the former, but it is
21 a question that you need to ask Mr Farmer.

22 **MR PALMER:** Yes, an operator who wishes to provide wholesale services though, and
23 who is as deeply interconnected with the BT network as Mr Farmer explains Gamma
24 is, would be able to provide wholesale transit services if it chose to?

1 A. I think every single element of that question is one that should be directed to
2 Mr Farmer.

3 Q. I am just asking you about your 54. So you are only there addressing Vodafone's
4 perspective at your 54?

5 A. Indeed, it is my perspective, yes.

6 Q. Okay. Can I ask you -- the last topic, if you turn back to your paragraph 50.2 which
7 is on page 22.

8 You are there indicating that:

9 "RCPs may be reluctant to alter routings with BT to make use of
10 additional or new handover routes due to contractual concerns that BT
11 may charge for any amendments under the SIA."

12 What you are saying, as I understand it, is that data management amendment
13 charges, as they are referred to under the SIA, are in principle chargeable whenever
14 there's a subsequent change to routing; is that right?

15 A. That is the case, yes.

16 Q. And a change to routing may occur where a CP is relying upon inter-switch
17 connection; is that right?

18 A. Sorry, could you rephrase that?

19 Q. Where a CP is using inter-switch connection in order to connect ported calls, it may,
20 from time to time, change routes?

21 A. I am still not sure I understand your question.

22 Q. All right, not to worry. I will leave it.

23 You accept at (b) that BT has tended to forebear on these charges for data
24 management amendments. It's right, isn't it, that it rarely imposes them at all?

1 A. It is true that BT has tended to forebear on these charges. I note in -- I believe in
2 Morden 2, he makes that point but also goes on to say that the one scenario where BT
3 would be likely to levy such charges is where there would be significant changes
4 made in its network.

5 I certainly would worry that the conversation that we were having before the recess
6 about doing a root and branch review of all of the routings at the tandem level is
7 exactly the type of scenario which would cause these charges to kick in.

8 Q. If you were genuinely concerned with about those charges if that scenario that you
9 have just described, you can ask BT before implementing any change whether
10 a charge would be levied?

11 A. The contractual approach, as far as I am aware, is that we put the required routing
12 change into BT and they tell us what charge would be payable.
13 What that omits is that in order to get to that stage there is a significant amount of
14 work within Vodafone's own organisation to prepare that routing change, and
15 without the details of what that routing change is going to be I do not think it would
16 be fair for BT to make a commitment one way or other.

17 Q. I see.

18 **PROFESSOR REID:** May I ask a brief question on this. It concerns the contractual
19 relation. BT may charge any amendments under the SIA, this is 50.2. Under
20 50.2(b):

21 "BT has tended to forebear on these charges ... however, the contractual
22 risk remains."

23 Could you say a little bit more about that?

24 A. The historic situation on data management amendments, DMAs, these are changes in

1 configuration to BT's network. The historic situation on this was that they were
2 chargeable in all cases whether it was ported or non-ported traffic involved. There
3 was a change some years ago, you will have to forgive me if the timing isn't quite
4 right, but I think sometime around the turn of the century there was a regulatory
5 change which said that in general, DMAs should be carried out on a "costs lie where
6 they fall" basis. So if I requested BT to make some changes to its network it was
7 BT's responsibility to do that and the costs were recovered from general conveyance
8 charges.

9 That didn't apply to number portability and therefore the SIA has got this specific
10 clause in there saying it will be waived for everything but number portability. If you
11 actually go into the SIA and work through it all, actually you end up with a dead link
12 in terms of what the pricing of these DMAs would be for number portability, it
13 comes up, "Error 404", ultimately. Were they to be --

14 **PROFESSOR REID:** Is that dead link a part of the risk here?

15 **A.** It is. I have it in my mind what the numbers were last time I saw the pricing but we
16 are talking a decade ago so memories do fail. The risk is that whenever I, or my
17 planning team, submit a DMA request into BT we do not know -- the request would
18 go ahead, we can't be sure that at some point down the line -- and I guess legally it's
19 anything up to six years down the line -- we could get an invoice from BT saying,
20 "You owe us for these DMAs that we have done for you".

21 So there is that contractual risk that we have been running. We are grateful that so
22 far BT appears to have been forbearing on these DMA charges for portability.

23 I can't remember the last time when I actually received one, but nevertheless the risk
24 is still there, that at some point we might get an invoice saying, "You owe us for

1 making these DMAs over the years".

2 **MR PALMER:** In practice Mr Rosbotham, you refer to what Mr Morden says in his
3 witness statement, it's not about essential changes to the network, is it, what he says,
4 this is paragraph 25, second witness statement, the final sentence:

5 "My colleagues in the product line inform me that the charge is only
6 raised where the alteration will incur exceptional costs such as a request
7 to make a change during the night or at weekends".

8 **A.** There is nothing in any of the contractual or procedural documentation between BT
9 and Vodafone to indicate that that is the case. I can't say that I have ever received
10 a communication from BT saying that it would forebear apart from under those
11 circumstances. I am quite grateful for the statement made in this witness statement
12 because it is something that I have now got and it should give me a certain amount of
13 protection for anything which could have been levied historically.

14 **Q.** But as you say, you can't remember the last time that you received a charge under this
15 contractual provision?

16 **A.** Exactly. But that therefore means whenever we make any changes I am frequently
17 approached by my planning teams to ask, "Have we still got that risk that we may be
18 charged for making these changes?"

19 **Q.** But the extent of that contractual risk, as you put it, is very, very low?

20 **A.** We can't be sure.

21 **PROFESSOR REID:** Sorry to press the point here, but am I right that invoicing can
22 occur as late as six years after a service was provided?

23 **A.** I used the six years because of the statute of limitations. There may be something in
24 the SIA which restricts the number of years, I honestly couldn't give you that number

1 off the top of my head. I am sure there are people in the room who know that, but
2 I do not know that.

3 **MR PALMER:** If you ask and the answer is, "No, no charge", then you have that
4 assurance.

5 **A.** Yes, but the way that the process works is that you submit the DMA, the DMA is
6 actioned and the invoice may come significantly afterwards. The people who
7 submit the DMA do not get involved in invoicing, they are a completely different
8 department on both sides of the organisation.

9 **MR PALMER:** Mr Rosbotham, thank you very much for your assistance.

10 **A.** Thank you.

11 **Re-examination by MR BATES**

12 **MR BATES:** Mr Rosbotham, you were asked questions about the collection of ported
13 calls at parent tandems and you were shown charts with various percentages in and
14 identified that there was a problem revealed.

15 Can I just ask you to have look at paragraph 50.3 of your witness statement.

16 **A.** Yes.

17 **Q.** You will see two percentage figures there in the first three lines, both of which are
18 confidential.

19 **A.** Mm-hm.

20 **Q.** So, without stating out loud what those percentage figures are, can you explain the
21 significance of those figures in terms of the problem that you identified?

22 **A.** Of course. So the number which is in the third line is the proportion of calls where
23 the call is delivered into the tandem unit and Vodafone manages to get that call
24 directly from the tandem unit back to its own network and therefore the charge

1 payable is group 1, which falls within the level of what BT says doesn't include ISC
2 and therefore is subject to regulation.

3 The number which is in the first line of that paragraph is the volume of calls which in
4 principle Vodafone could achieve that for, given the connections that we have got, so
5 the difference between the two are where we have connections but the configuration
6 on the switches, on the tandem units, is such that it sends it onto another tandem unit
7 to get the call across to us.

8 So we could raise the first figure to the second figure if we knew the location of
9 where that is actually happening. Unfortunately, none of the data we have been
10 provided today tells us which of the tandem units this is happening on and Vodafone
11 doesn't really have a practical way of finding that out.

12 **Q.** And if BT did provide you with that information, would you still have an incentive to
13 bring that second figure up to the first figure, even with APCCs at LRIC?

14 **A.** Yes, absolutely. There are two scenarios -- I apologise, nothing is ever easy -- there
15 are two scenarios here. In one scenario the route from that tandem which received
16 the call into the Vodafone network hits the correct switch in our network, the
17 recipient switch, immediately now in our network, therefore the marginal cost to us
18 carrying that call is zero. So we take out a LRIC, whether it be pure LRIC or
19 LRIC+, cost from the APCC and replace it with a zero cost.

20 The other situation is where the route from that tandem unit comes into our network
21 but not to the correct switch, so we have to tandem it in our own network, we have to
22 transit it in our own network to get it to the right switch.

23 Now, under the APCC we are paying LRIC to consume the BT switch. On our
24 network, of course, we already have the switches in our network, they are already

1 deployed, therefore what really matters is the marginal cost of getting it across
2 because we are not having to deploy any new switches to do that, they are already
3 there.

4 So when you are comparing the marginal cost, strict marginal cost in our network,
5 with a LRIC cost in BT's network, the marginal cost will always be lower than LRIC.
6 Even if it wasn't, it is in Vodafone's interest to have the call on our network as much
7 as possible because if you consider the scenario where the second of those tandem
8 units, the one that we are consuming because of ISC if BT's network fails, you can
9 imagine -- and these things happen, that you have switch outages -- you can imagine
10 the conversation that we would have to have with our customer that we had a direct
11 route from BT on the switch at which it received the call, but we choose to send it via
12 another of BT's switches, that switch failed therefore the customer has lost their
13 inbound service. You can understand that the customer will be extremely irate with
14 us, so we want to get the call into our network as soon as possible.

15 We might at the extreme have it such that there is a second choice routing to go via
16 the tandem layer in case there's problem, but we certainly wouldn't want that as our
17 primary routing.

18 **Q.** Just while we are in paragraph 50.3, for the Tribunal's note I think the reference to
19 Mr Young in the first line should in fact be to Mr Morden?

20 **THE CHAIRMAN:** Mr Bates, would you mind if I asked a question at this stage?

21 **MR BATES:** Of course.

22 **THE CHAIRMAN:** Again, I have to be careful about not directly or indirectly
23 disclosing confidential information, but if you were to assume that the information
24 that is provided in paragraph 50.3 is correct, would that enable Vodafone to visit the

1 tandem nodes where it does not have direct connection to ported calls and do the
2 reconfiguration you mentioned when I asked you a question earlier on?

3 **A.** So the problem is clearly there are tandems in BT's network where there is a direct
4 route and our configuration is not using it. What we do not know -- my data
5 builders, my planners can troll through all of our information on how BT are routing
6 calls and pick out where that routing scenario applies.

7 What they can't know is for a given tandem unit where that is applying, whether there
8 is any material traffic actually affected, any minutes flowing through that tandem
9 unit, versus it's a null piece of data which is never invoked.

10 In principle you would say let's correct everything even if there's no traffic involved
11 but that negates the fact that it costs an awful lot of operational resource to make
12 those routing changes. As I say, to open the PDI, the planning data build
13 information, it's so archaic my planners tell me they need two days to do the simplest
14 of changes on it.

15 **THE CHAIRMAN:** So, if one were to deduct the number in line 3 from the number in
16 line 1, that gives you a certain percentage. It would not be realistic, according to
17 your evidence, if I understand you correctly, for Vodafone to tackle the nodes falling
18 within the number that we arrived at by deducting one from the other and put in the
19 necessary physical arrangements?

20 **A.** That's exactly it, yes.

21 **MR BATES:** I do not have any further questions. If there's nothing further arising from
22 the questions please can Mr Rosbotham be released?

23 **THE CHAIRMAN:** Yes. Thank you for your evidence Mr Rosbotham.

24 **A.** Am I allowed to keep this?

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(The witness withdrew)

MR BATES: If I could call Ruth Kennedy.

MS RUTH ANN KENNEDY (sworn)

Examination-in-chief by MR BATES

MR BATES: Please take a seat. If the witness could be provided with a confidential copy of your witness statement which is at tab 8 of this CP's bundle.

(Handed).

A. Yes.

Q. Are you Ruth Ann Kennedy?

A. Yes I am.

Q. Do you remember making a witness statement in these proceedings?

A. Yes, I do.

Q. Do you have a copy of that witness statement in front of you?

A. Yes, I do.

Q. Could you turn to the end of that witness statement, you will see a signature there.

Can you confirm that that's your signature?

A. Yes, it is.

Q. Are the contents of this witness statement true to the best of your knowledge and belief?

A. Yes they are.

Q. In paragraph 1 of your witness statement it says that you are Head of Voice and Interconnect at TalkTalk Telecom Group. Can you confirm if that's a commercial role or a technical role?

1 A. A purely commercial role.

2 Q. Do you have any expertise in telecoms routing?

3 A. No, I do not.

4 Q. You will recall, it is of course quite a while ago now, but there was discussion of the
5 dispute involving Opal Telecom, a dispute with BT. What's the relationship
6 between Opal and TalkTalk?

7 A. So, back in the early 2000s Carphone Warehouse acquired quite a few telecoms
8 companies. In 2010 we had emerged from Carphone Warehouse and we became
9 one entity under TalkTalk, part which of was Opal.

10 Q. And the network infrastructures of these various companies that were incorporated,
11 they have been purchased by Carphone Warehouse and then brought in by TalkTalk;
12 what's the current situation regarding those networks, are they still operational?

13 A. Yes they are, yes.

14 Q. We know that TalkTalk is the one communications provider that uses the DLE
15 handover product. You have seen paragraph 20 of Mr Morden's second witness
16 statement where he relies on the national statistics that are split between ported calls
17 handed off at DLEs versus parent handlers and the applicability of this at the level of
18 local DLEs he uses.

19 Given TalkTalk's special position of being the one communications provider that
20 uses DLE handover, have you looked to see whether TalkTalk is able to provide any
21 useful statistical information to help the Tribunal in relation to that question?

22 A. We have looked at some information which our billing team was able to derive, versus
23 our -- the traffic which is handed over our DLEs, versus the ported traffic which is
24 handed over our DLEs. We took, I think, between 10 and 15 different DLEs and

1 analysed it and we found there to be no logic, so we could have some DLEs in
2 a certain area such as Liverpool, Manchester and Warrington and the amount of
3 ported traffic between those three DLEs did vary significantly.

4 **Q.** I understand that you are happy for me to hand up to the Tribunal a sample of the data
5 that you have on the understanding that it be treated confidentially. We have
6 already provided non-confidential versions. **(Handed).**

7 So have these DLEs been specifically collected or have you taken --

8 **MR PALMER:** Can I just clarify, can this go to BT?

9 **A.** It can go to BT.

10 **MR BATES:** The non-confidential version we have provided is the same except that the
11 names of the individual DLEs have been blacked out.

12 Can you confirm how you selected these particular DLEs?

13 **A.** We just took some samples out from the billing system. There were hundreds of
14 different DLEs and we took the top ten from the billing system, there was no logic.

15 **Q.** These numbers that rundown the left-hand side that start with BTX, they are
16 effectively consecutive numbers of DLEs?

17 **A.** Correct.

18 **Q.** Could you please talk the Tribunal through this document and what you draw from it?

19 **A.** So it's -- in the non-ported element, in the first column, "Non-ported versus ported",
20 that's all the traffic which is handed over which we collect from BT at the DLEs,
21 which is traffic just transited into TalkTalk.

22 The second element, the ported side, is the traffic which we collect from the DLE
23 product which we purchased back in 2010. Then the percentage of ported traffic is
24 the difference between the values of the ported traffic, what we have on -- over this

1 time period, which was over 15 days in April -- and it was trying to find if there was
2 any similarities in the traffic, but there doesn't seem to be any.

3 **Q.** The other issue that TalkTalk is perhaps well-placed to assist us on is perhaps the
4 provision of DLE handover as a third-party service. You have now seen
5 Mr Morden's second witness statement. Has anything in Mr Morden's second
6 witness statement led you to have any further views or thoughts as to whether it
7 would be something of interest to TalkTalk to provide DLE handover as a third-party
8 service?

9 **A.** So back in -- two to three years ago I think it was, when I first took over carrier
10 services -- we did look at the possibility of using DLE Handover as a third party
11 transit. However, we never took this to be productised because it wasn't technically
12 or commercially viable.

13 **Q.** Why wasn't it commercially viable and is there anything in Mr Morden's second
14 witness statement which would lead you to think you might come to a different
15 answer based on the statistical data he has provided about individual DLEs?

16 **A.** Commercially it didn't work for multiple reasons. We would have required
17 investment into our legacy TDM network which our technology department weren't
18 willing to invest in. We didn't have sufficient data to analyse our DLE routes at that
19 time. We would have required investment in our billing systems, which again
20 wasn't viable at the time, and further to that, the deal what we were trying to
21 construct didn't have the revenue and the margin thresholds which we required
22 internally to be able to productise such a product.

23 **Q.** In relation to the issues which Mr Rosbotham raised in his evidence about the
24 provision of information to CPs, about the distribution in traffic between the transit

1 DLE, would that be relevant to TalkTalk's consideration of whether or not to offer
2 the third-party service?

3 **A.** Yes, we would not be able to analyse the capacity on the DLEs if we didn't have the
4 correct information. For the purpose of carrier services the primary purpose is to
5 carry our retail traffic and we have to make sure that our retail traffic does not suffer
6 the effects of a wholesale service.

7 **MR BATES:** If you would like to stay there, there will be some further questions for you.

8 **Cross-examination by MR PALMER**

9 **MR PALMER:** I have some questions I can ask straight away and then I might ask for
10 further 5 minutes to understand the data that has just been provided.

11 **THE CHAIRMAN:** Yes.

12 **MR PALMER:** Can I take you to paragraph 9(b) of your witness statement first of all.

13 It starts at 9(a) to provide the context. The first observation that you make here at
14 9(a) is that you do not believe BT has any commercial incentive to route calls to
15 ported numbers in an efficient manner because it receives payment no matter where
16 the call enters its network and where it exits the network.

17 First of all, as you do say at 9(b), in a porting context the OCP decides where to hand
18 the call over to BT, doesn't it?

19 **A.** Correct.

20 **Q.** And the RCP tells BT where to route the call from that switch, correct?

21 **A.** Correct.

22 **Q.** So BT itself doesn't determine how ported calls were routed, does it, as to what the
23 entry point is and what exit point is?

24 **A.** Correct, yes.

1 Q. And the RCP is only charged as if the lowest cost route between those two points has
2 been taken, isn't it?

3 A. That is what I believe, yes.

4 Q. So therefore BT has every incentive to route the call as efficiently as possible from the
5 point of entry to the point of egress, doesn't it?

6 A. Correct.

7 Q. Next point, I am going to ask about incentives to develop a wholesale transit product
8 for ported calls. We have touched on that just now. In your witness statement you
9 deal with it at paragraph 16 and 17.

10 You say at paragraph 17 that:

11 "TalkTalk considered the commercial viability of offering a wholesale
12 transit service after BT raised the point in these proceedings."

13 Is that right?

14 A. Sorry, I do not understand.

15 Q. Look at your paragraph 17.

16 A. Mm-hm.

17 Q. Discussing the ability of TalkTalk to implement a transit product and you say, four
18 lines down:

19 "While TalkTalk never considered it as an option until BT raised it in
20 these proceedings, on review it doesn't appear to be commercially
21 viable."

22 And then you give your reasons for that.

23 My question to you is just to confirm whether that is right, that you had considered
24 the viability of offering a wholesale transit service only after BT raised the point in

1 these proceedings?

2 **A.** We investigated a product based on the cost base back about two to three years ago,

3 we did do that, yes.

4 **Q.** So before BT raised it, you investigated it?

5 **A.** Yes.

6 **Q.** So we need to amend 17 to that extent; is that right?

7 **A.** Correct.

8 **Q.** You considered it two to three years ago so that was not at BT's prompting, I take it?

9 **A.** No.

10 **Q.** That was your own commercial strategy being explored?

11 **A.** Correct.

12 **Q.** That was in the context, was it, of APCCs being set at LRIC+?

13 **A.** At the time, yes.

14 **Q.** What you say in paragraph 17 relates to a separate review, as I understand it, and you

15 do say that after BT raised it you reviewed the position at that time; is that right?

16 **A.** No, we had not considered raising it again. We have not internally looked again at

17 the third-party transit product.

18 **Q.** So to clarify, you have only looked at it once and that was two to three years ago and

19 that is the only time you have looked at it?

20 **A.** Correct.

21 **Q.** At that time -- you said I think just now that -- it was hard to hear, but you will tell me

22 if I have missed anything -- there were three main reasons why you decided on

23 a commercial basis not to pursue that option. The first thing was that it would

24 require investment in the TDM network?

1 A. No, we didn't have the correct information to understand whether it would require
2 investment in the legacy TDM network.

3 Q. I am grateful for that, I misheard that.

4 So you didn't have information to decide whether it would require investment to
5 TDM network. The position on that, as matters stand at the moment, is you have the
6 DLE handover product already in existence?

7 A. Correct.

8 Q. That DLE handover product is capable of taking other CP ported traffic?

9 A. It is capable, if allowed to do so.

10 Q. And you are capable of aggregating it?

11 A. We are. We would have to develop investment in our billing system to be able to bill
12 it.

13 Q. You would need a billing solution to do that?

14 A. Yes.

15 Q. The second point you made was at that time you didn't have sufficient data. Did
16 I hear that right?

17 A. We didn't believe we would be able to get sufficient data to analyse our routes
18 correctly.

19 Q. And the specific data that you were -- you didn't then believe that you would be able to
20 get was presumably connected with the volume of ported calls which would in fact
21 be handed over at the DLE by other CPs?

22 A. Correct.

23 Q. You heard the evidence in relation to Mr Perry, the ability of CPs to derive that
24 information and, if they wanted to, to pass it to a transit provider?

1 A. Correct.

2 Q. And the last point I heard you make was you didn't believe at the time that there were
3 incentives from a margin perspective; is that right?

4 A. We have internal thresholds which we have to meet to be able to productise
5 something. The product, sorry the investigations, what we looked at, didn't meet
6 these thresholds.

7 Q. Do you have anything more specific you can say about that or would you need to be in
8 a confidential session?

9 A. That would have to be confidential.

10 Q. If there were any margin available under LRIC+ system, with the move to LRIC we
11 can take it that those margins would effectively disappear?

12 A. Effectively, but at that time when we investigated it and, even if looking at it now, it
13 would not meet the margin what we would need or the revenue what we would need
14 to productise it.

15 Q. At LRIC+?

16 A. At LRIC+.

17 Q. Confidential on that, I understand.

18 Can I ask you next about the requirement at the DLE handover product, that traffic
19 be segregated. Are you familiar with the reasons why TalkTalk agreed to accept
20 a DLE handover product including the requirement that ported traffic only be passed
21 along it?

22 A. No, I am not. I was not employed by TalkTalk in 2010 or involved in the dispute in
23 2010 and the majority of the people involved in the dispute for me to call upon are no
24 longer with TalkTalk, so I cannot comment.

1 Q. Did you hear me the other day give effective notice that I wanted to ask you about
2 that?

3 A. Yes.

4 Q. Did you conduct any enquiries as to why it was that TalkTalk accepted that
5 requirement?

6 A. I have asked my regulation person Ricard, however they are anywhere of the reasons
7 why that was.

8 Q. Nobody could tell you?

9 A. I couldn't find any information regarding the reasons for this.

10 Q. Can I hand you up a document in that case. **(Handed)**.

11 There's a cover e-mail dated 2nd July which you can see is an internal BT e-mail. It
12 says he, "Spoke with Chris Stocks and Richard Arrowsmith this morning"; they are
13 Opal personnel?

14 A. Yes, Richard Arrowsmith is no longer with TalkTalk and Chris Stocks has
15 unfortunately died since 2010.

16 Q. But at the time they were working for Opal?

17 A. That is correct.

18 Q. I'm grateful for that. It says here:

19 "They accept for this statements we made in the letter of 24th attached
20 following a conference call on the 16th we can now go ahead with the
21 following rationale."

22 The design is then set out. Shortly after this, in July I think it was, a couple of
23 weeks later, the deal was effectively signed off and the product was offered. Can
24 you just look at what the concerns are in the attached response? You will see it's

1 headed Chris Stocks, Richard Arrowsmith, at the top, reflecting a fact that it's
2 a record of what was said in the conference call, which this was in reference to. The
3 first point is:

4 "Respond to Opal regarding the usage of existing circuits at the DLE that
5 Opal can utilise in the CP originator GNP ported calls offload."

6 To translate that into English, Opal was wanting, as it had said to Ofcom, to use its
7 existing circuits for the DLE handover which would carry both ported and
8 non-ported traffic, but BT was saying, no, it would have to be separate, weren't they,
9 and they wanted to know the reasons why.

10 The first point was:

11 "Within the submissions to Ofcom throughout the determination Opal
12 has previously provided a number of arguments clearly identifying that
13 the GNP traffic into Opal is BT owned traffic."

14 Examples of this information are direct in the determination. I went to those
15 paragraphs of the determination of Mr Perry, you can look it up if you like. What
16 we draw from that is that it was Opal's position that the traffic was BT owned; do you
17 follow that?

18 **A.** I follow what you're saying, yes.

19 **Q.** Are you familiar with the concept of traffic being owned and what that means?

20 **A.** No, from my perspective I look at the commercial elements of client services, I don't
21 get involved in the technical side of it.

22 **Q.** Did you hear Mr Perry agree that it was effectively a term used to describe who is
23 responsible for the delivery of that traffic?

24 **A.** Yes.

1 Q. That makes sense to you?

2 A. That makes sense to me.

3 Q. From a commercial point of view. I am grateful. If we turn the page the first bullet
4 point on page 2:

5 "There's a clear principle in the SIA that establishes separate routes for
6 BT and CP owned traffic where ISI is used. One of the reasons being to
7 ensure that traffic owned by one party cannot adversely affect the traffic
8 owned by the other party."

9 Do you see that?

10 A. I can read that, yes.

11 Q. Does that make sense to you?

12 A. That makes sense to me.

13 Q. Then:

14 "Opal do not want to have to provide dedicated circuits at this time,
15 preferring instead to use existing infrastructure to offload calls out of the
16 DLE [the DLE handover traffic] does not mean that this fundamental
17 principle above should be undermined."

18 That was the BT position as it was put to Opal. The third bullet point:

19 "BT do not accept that BT-owned traffic should be put at risk of overflow
20 through sharing ISI's circuits with Opal-owned traffic, particularly
21 egress traffic from Opal which BT has no control over and IAS indirect
22 access and CPS carry a pre-selection into Opal that if overflowed out of
23 the DLE to the tandem layer will no attract any overflow charge."

24 Do you see that?

1 A. I can read that, yes.

2 Q. We can see that various practical problems along those lines were being identified and
3 discussed. The simple point is that these points were ultimately accepted by Opal
4 and it accepted a segregated route. Might not have liked it but they accepted it?

5 A. If that's what Chris and Richard Arrowsmith agreed at the time.

6 Q. I wonder if you help me with this. Traffic can flow in different directions along any
7 connection; you are familiar with that principle?

8 A. I am.

9 Q. Same connection being used for traffic coming in different ways. That's nothing to
10 do with who owns the traffic, is it? Who's responsible for its safe delivery?

11 A. Not as far as I'm aware, no.

12 Q. I shan't read out the rest of the note but those were the reasons at the time. I am very
13 grateful for your assistance so far. May I take 5 minutes now. There may be
14 further questions on the data sheet which was handed up, there may not be. There's
15 something confidential which will need to be explored as well.

16 **THE CHAIRMAN:** That's fine.

17 **MR PALMER:** I don't think I need more than 5 minutes.

18 **(12.45 pm)**

19 **(A short break)**

20 **(12.56 pm)**

21 **MR PALMER:** I am very grateful for that slightly longer opportunity. I do have some
22 questions on the table and then I will have some questions for the confidential
23 session. Ms Kennedy, on the table, first of all, as I understand it, you were
24 explaining to Mr Bates that these figures relate to effectively a randomly selected

1 selection of DLEs.

2 **A.** Correct.

3 **Q.** At which you have compared the percentage of ported traffic going over those DLEs
4 to the non-ported traffic; is that right? As a proportion of the total traffic?

5 **A.** That's correct, yes.

6 **Q.** First point, these 19 switches that you've identified, none of them are DLEs Ms
7 Kennedy, they are all tandem switches.

8 **A.** This is information given to me by my billing system and from my billing team which
9 took the dedicated DLE circuits versus the actual traffic on the DLE handover.

10 **Q.** Did you know that all of BT's tandem switches, not all, but a very great number of
11 them, are named after semiprecious stones?

12 **A.** No I didn't.

13 **Q.** Whereas none of the DLEs are, they are named by their location. If you look at this
14 list, can you see in the names, before the letters A and Y at the end of each one,
15 gypsum, selenium, heliodor, azurite, jade, silver, etc; do you see that?

16 **A.** Yes, I can see it.

17 **Q.** They are tandem switches and not DLEs.

18 **A.** As I said, this is information given to me by the billing team.

19 **Q.** I see. Secondly, even if they were DLEs, which they're not, this is, as I understand it,
20 total traffic going through those switches so this doesn't identify or separate BT
21 traffic from non-BT traffic; is that right?

22 **A.** That's correct, it was merely a comparison against traffic which was handed up at the
23 same point and whether there was anything we could derive from that, whether from
24 a ported perspective or from a time-of-day perspective.

1 Q. And it can include traffic such as non-geographic calls as well, can't it?

2 A. It can do but I am unsure whether non-geographic calls are in there.

3 Q. Sorry, you are not sure?

4 A. I am unsure whether non-geographic calls will be included in the billing data.

5 Q. They will go through a tandem switch, won't they?

6 A. They will go through a tandem switch, yes.

7 Q. So will indirect access calls and CPS calls?

8 A. Yes.

9 Q. Those calls will all be included in this total traffic, won't it?

10 A. I would imagine so, yes.

11 Q. BT has never said that the ratio of non-ported calls to ported calls is the relevant factor,
12 has it, in any DLE; that's not been BT's case?

13 A. No, that's true. However, the information was to derive if there is any logic behind
14 the differences at those locations.

15 Q. The logic would be first to look at the DLEs and not tandem switches, but having
16 looked at DLEs the logic would be to look at the volume of ported traffic at
17 a particular DLE to a particular RCP, wouldn't it?

18 A. If that information was available, yes.

19 Q. And to look at the BT traffic, to a particular CP as an RCP?

20 A. Yes.

21 Q. This information has got nothing to do with that, has it?

22 A. This information was to compare the traffic at handover point between the difference
23 between DLE traffic or, as it transpires, not DLE traffic, at the same location on the
24 DLE handover product.

1 Q. Ms Kennedy, this information tells us nothing, does it?

2 A. It tells us that there was no trends at this location, at these locations.

3 Q. At these tandem switches, one wouldn't expect to find one, would one?

4 A. There are no trends there.

5 Q. No. The remaining questions are confidential.

6 **THE CHAIRMAN:** I think what we should do is have those after lunch, it will save
7 people leaving. Those who are not entitled to hear the confidential information
8 should not enter the court until that's concluded.

9 **MR PALMER:** I think it will be a short session only, similar in length to what we have
10 just had.

11 **(1.03 pm)**

12 **(The luncheon adjournment)**

13 **(2.00 pm)**

14 **Confidential session (separate transcript)**

15 **(2.10 pm)**

16 (Court returned to open session)

17 **Re-examination by MR BATES**

18 **MR BATES:** Ms Kennedy, you mentioned in your oral evidence a few moments ago that
19 in relation to TalkTalk providing a third party service dealing with ported traffic, that
20 it would be profitable for TalkTalk to make use of its spare capacity at the DLE level
21 for the DLE handover product if TalkTalk could estimate the ported traffic volumes
22 correctly and there would be no overflow.

23 What would the commercial consequences be for TalkTalk if providing the
24 third-party service did lead to overflow?

1 A. We would have a higher APCC rate, eventually.

2 Q. You accepted that there were a number of limitations to the chart that was handed up
3 in the evidence-in-chief in terms of the division between ported and non-ported
4 minutes and what components might go into those. Based on your knowledge of
5 BT's billing arrangements for APCCs, would BT be able to provide data on
6 a DLE-by-DLE basis as to the number of calls being delivered, the number of ported
7 calls being delivered to them by the OPC at the DLE, and at each of the associated
8 tandem switches?

9 A. I believe BT would be able to if required.

10 Q. And has that information, to the best of your knowledge, ever been provided, whether
11 to TalkTalk prior to these proceedings or in the course of these proceedings?

12 A. I do not know I have never requested that data.

13 MR BATES: I do not have any further questions.

14 THE CHAIRMAN: Thank you very much for your evidence.

15 (The witness withdrew)

16 MR BATES: I will now call Mr Moore please.

17

18 MR LEONARD JOSEPH COLLINS MOORE (sworn)

19 Examination-in-chief by MR BATES

20 MR BATES: Can Mr Moore be provided with a confidential version of his witness
21 statement, which is at tab 4 of the CP bundle. Are you Leonard Joseph Collins
22 Moore?

23 A. Yes.

24 Q. And did you make a witness statement in connection with these proceedings?

1 A. Yes, I did.

2 Q. Do you have a copy of this in front of you?

3 A. Yes.

4 Q. If you turn to the back of that witness statement you will see a signature. Is that your
5 signature?

6 A. Yes.

7 Q. Can you confirm the contents of this witness statement are true to the best of your
8 knowledge and belief?

9 A. Yes.

10 Q. The Tribunal has heard explanation from Vodafone as to the network infrastructure of
11 its network and how that affects its ability to collect ported calls. Are you able on
12 explain to the Tribunal how Sky's network infrastructure differs from Vodafone's
13 insofar as it's relevant to collecting ported traffic?

14 A. Yes indeed. Sky's network is relatively new on the scale of things. I joined Sky in
15 April 2006 before we rolled the network out, which was around 2007/2008. Before
16 we had done that and put subscribers on it, our network was a next generation
17 network made up of IP-based switches. In that network we have these gateways
18 that we have heard spoken about, where we convert IP to TDM for interconnection to
19 BT's network. We also have session border controllers where we could connect, IP
20 to IP, to another network if that network provider wants to do that. We also have,
21 distributed around the country, our subscriber line access equipment within those
22 co-location areas not co-located with a BT DLE, but those ones to where we provide
23 the actual service to our subscribers off our switch.

24 We are interconnected to BT at the tandem layer and tandem layer only, so we collect

1 100 per cent of our traffic that comes in from BT at the tandem layer, and equally we
2 deliver -- traffic that goes into the BT network that we choose to send to BT out to the
3 tandem layer. I think that this the big difference between ourselves and other
4 operators that are here today, where they have DLE interconnect in their network,
5 their networks have evolved over many years and some through acquisition of other
6 telcos and so on, ours have been built from scratch and we are connected at the
7 tandem layer.

8 **THE CHAIRMAN:** Yes.

9 **MR BATES:** In Morden 2, Mr Morden set out some analysis as to how it would be
10 economically viable for CPs to buy the DLE handover product in order to pick up
11 ported calls at the DLE layer. Do you have any comment on that analysis from
12 Sky's perspective?

13 **A.** I certainly do. I think it may be economically viable for other CPs that are already in
14 the local exchange to purchase this DLE handover product. In the case of Sky the
15 first thing that is a prerequisite to consume this DLE handover product would be to
16 be connected at the DLE. We are not connected to the DLE so our analysis -- the
17 first step would have to be to do an analysis of the whole of the country to see where
18 it makes sense to make DLE connections and then, subsequent to that analysis, we
19 could take a look and see does it make sense, yes or no, to consume a DLE handover
20 product and purchase more of those IECs and IBCs and the things in Mr Morden's
21 analysis, where he said all you need to do is basically convert existing capacity with
22 regards to the other CPs. In our case it wouldn't necessarily hold true that they
23 would be the same thing, we need to get to the DLE before we can actually think
24 about consuming a DLE handover product.

1 **Q.** And why do not you connect at the DLEs?

2 **A.** We do not connect to the DLEs because at the time we were building our network it's
3 against a backdrop of 21CN and potentially BT moving to an IP network, it is against
4 a backdrop of knowing that DLEs are going to be decommissioned over time, it's
5 against a backdrop of if we did connect to the DLE the only way of doing that is
6 through the products that BT has presented, the IECs and the IBCs and the CSIs, all
7 of these different types of links. All are TDM, which we consider older technology,
8 not something that we really want to invest in. So that's the reason that we didn't go
9 to the DLE to start with.

10 **Q.** You have talked about Sky being connected with BT at the tandem layer.

11 **A.** Yes.

12 **Q.** You also heard Mr Rosbotham's evidence earlier today about the provision of
13 information by BT in order to optimise those connections and pick up as much traffic
14 at least at the tandem as possible. What has been your experience of BT's
15 willingness to provide Sky with information about the tandems at which ported
16 traffic is being delivered by a host CP so you can do an optimisation exercise?

17 **A.** The experience has been one of difficulty, I should say that, because over years we
18 have tried to gain sufficient information that we can optimise our network. When
19 I say optimise it, go further into the tandem layer where we are not connected so that
20 we can minimise the number of hops on a call and reduce our APCCs. We have had
21 meetings in that regard and especially with the introduction of a new category, a few
22 years ago, this is category 10 of how calls were categorised, and within that
23 particular category we have no visibility of where the traffic is entering BT's network
24 and where we are incurring a double tandem charge to bring that traffic into Sky, the

1 ported traffic.

2 So we are connected sufficiently, we are connected at 46 of BT's tandem exchanges.

3 With those connections that gives us enough spread into local exchange area that we
4 should be able to collect traffic from all of those local exchanges into those 46
5 tandems and have a pretty good call space to work from, with the exception of the
6 traffic which is coming in double tandem and we have no visibility of where that's
7 coming in.

8 So we can't -- as BT have pointed out, and others, we do own the ingress routing
9 plan, it's our responsibility to say how that traffic routes into us. Without sufficient
10 granular information, it's then physically impossible for to us really hone that routing
11 plan in and reduce the amount of traffic that's in that category 10 area.

12 **Q.** So being as specific as possible, so stretching your memory as far as you rightly can,
13 can you be specific about the time when these discussions took place with BT, where
14 Sky asked to be provided with information about where ported calls were being
15 delivered in terms of which particular tandems?

16 **A.** It's pretty tough, but it's pretty -- as well -- ingrained because we have had more than
17 a few meetings on this exact topic because we weren't always connected this
18 footprint of 46 tandems, that's grown over time and we have sat in a room with BT
19 trying to understand, because they are the ones that have full visibility of all the
20 traffic on their network, we sat there and tried to work through -- we asked for
21 a bespoke report to be produced, they could show us perhaps where the Sky traffic is
22 traversing their network so we could make better heads-up decisions around our
23 particular traffic streams. And a one off report a few years ago was produced, it was
24 insufficient, it was lacking -- I can't remember exactly what was lacking because

1 I wasn't the engineer that received that report, but I know it was lacking sufficient
2 information for us to improve that particular category of traffic. And there would
3 have been, they did offer to produce it at a cost more frequently -- I think there was
4 a monthly fee, but it never matured, it never went any further, and so we are still
5 sitting here today with no additional information over and above what we were
6 talking about years ago, actually.

7 **MR BATES:** Thank you. I think Mr Palmer has some questions.

8 **A.** Thank you.

9 **Cross-examination by MR PALMER**

10 **MR PALMER:** Good afternoon Mr Moore.

11 **A.** Good afternoon.

12 **Q.** Notwithstanding the picture that you have just drawn about the level of
13 interconnection at the tandem layer only, you do fairly accept at paragraph 18 of your
14 witness statement that Sky could into connect to some DLEs where the volumes of
15 ported traffic are sufficiently high to justify the investment?

16 **A.** That's a true statement. We could do that, but I think I have also gone on further to
17 say that that's not justifiable because we feel we do not have sufficient information to
18 make that judgment call, and if we had sufficient information, I went on further to
19 say that the cost associated with consuming these TDM products would make it
20 cost-prohibitive to do so, even if we did have that information.

21 **Q.** Let's just have a little look at that, take that in stages. First of all, what matters to Sky
22 is whether the volumes of ported traffic at a particular DLE are sufficiently high that
23 the cost of installing the link will be cheaper than consuming an inter-switch
24 conveyance, we can agree that?

1 A. No, I didn't say that, because we would never look at it on a switch-by-switch basis.

2 We are a volume player, when we do an analysis we do analysis based on the entirety
3 of the UK. We look at what it would take to roll that out nationwide and what we do
4 not do is look and see, well, maybe on that exchange we should look to consume
5 a DLE handover product because we have to do work on our side to position
6 ourselves to do that as if we were rolling out all over the country.

7 As soon as we consume the first product, we have to have the ability to mediate the
8 calls that come off of that product and our mediation and our interconnect billing
9 must be able to rectify a BT invoice whenever it comes in, so it's not as easy as you
10 would think. Because we are not DLE interconnected it's not as easy as you would
11 think where we could say okay, if it makes sense on that particular DLE, we should
12 put capacity in there for this traffic.

13 Q. If you look at your paragraph 18 with me, Mr Moore.

14 A. Yes.

15 Q. Do you have it open?

16 A. Yes, I do.

17 Q. First sentence:

18 "It is worth noting that Sky could interconnect to some DLEs where the
19 volumes of ported traffic are sufficiently high to justify the investment."

20 And you go on to say:

21 "This is not possible, however, because BT does not currently provide
22 the necessary information to identify the DLEs with high volumes of
23 ported traffic. Sky would need to know the volume of ported minutes
24 and the DLE where OCPs deliver ported traffic into BT's network to

1 identify the DLEs with high volumes of ported traffic. Currently, BT
2 does not make this information available and, as a result, Sky cannot
3 carry out adequate analysis to identify the DLEs where it can add
4 interconnection circuits to pick up traffic destined for its network."

5 **A.** Yes.

6 **Q.** What follows from that is if you were provided with that information, that is
7 something which you could do?

8 **A.** No, that is not something I am saying that we would do. I am being as honest and
9 factual as I can here. I would say that we could -- I am not saying we would
10 --necessarily go out to a particular DLE because we have to look at it in its entirety,
11 as I have said. The truth is in terms of a DLE handover product we, at Sky, we have
12 never done the analysis across the UK to see if a DLE handover product would make
13 sense for us because we are not connected to the DLE. And for the same reasons
14 that Mr Rosbotham has put forward about understanding and knowing the traffic at
15 the DLE and what's delivered there from third parties, versus what was coming in
16 from BT on their own, the same things hold true for us if -- because we are no
17 different in terms of how we all analyse traffic in this room, all of us are CPs so we
18 are not unique if that regard --

19 **Q.** No?

20 **A.** -- but we have never done the UK analysis to see if it would make sense for us.

21 **Q.** Because that, you are explaining, doesn't fit with Sky's overall strategic objectives; is
22 that right?

23 **A.** I wouldn't say it doesn't fit with Sky's overall strategic objective, we have never felt
24 that we have had sufficient information to see if that would make sense for us. We

1 have looked at rolling out to DLEs before, not consuming a DLE handover product
2 for ported traffic, but we have looked to see where, connected at the tandem layer,
3 would it make sense to us, given our volumes of traffic into and out of the network,
4 make sense to roll out to the DLEs? And that answer was, no.

5 **Q.** Just take it in stages. As a matter of practical possibility, if you had that information
6 on a per-DLE basis, you could, as a matter of practicality, decide to interconnect
7 with the DLE and consume a DLE handover product there. That would be open to
8 you as a possibility?

9 **A.** Yes, that's a possibility, yes.

10 **Q.** And commercially, you would only do that in any circumstances if you were going to
11 pass the break even point for that DLE. But what you are saying, I think, to the
12 Tribunal is even if you did that analysis, and even if you identified that the DLE
13 handover product would work on that basic viability equation for you, still, Sky
14 would not choose to exercise that option for other more strategic reasons.

15 Have I understood that correctly?

16 **A.** Perhaps not. I think what you are talking about, and correct me if I'm wrong, I think
17 you are looking at a DLE and whether or not a DLE makes sense. And what I have
18 said is: Sky would never look at a DLE, they would just never do that. We would
19 look at the country and say: does it make sense? Because it's going to be
20 a multimillion pound investment when we say, "Pull the starting trigger", does this
21 makes sense?

22 But what we do not do and what we would not do is look at a DLE, even in London,
23 if it's fully loaded, heavily loaded, it's not an edge case where there's no ported
24 traffic, even the ones on the front end of the curve, we would not look at those in

1 isolation and say, "We think it makes good sense to go these four DLEs", we would
2 not do it.

3 **Q.** You would look at the whole curve?

4 **A.** We would look at the whole curve, the whole country, because of everything we need
5 to do in the back to make that happen.

6 **Q.** Yes. You would be able to, if you choose, assess which of the whole curve would
7 cost out for you, which would be viable for you?

8 **A.** Yes, and we have done that not on the DLE handover product, but we have done that
9 looking at rolling out to DLEs.

10 **Q.** So you have done it with regard to roll out to DLE generally, but not specifically with
11 regard to ported traffic. But you could do so?

12 **A.** Correct.

13 **Q.** If you look at paragraph 16 you refer to the DLEs which were housed in
14 approximately 270 buildings. You said:

15 "The connection and rental costs to purchase such a high volume of
16 circuits are substantial. In order to justify incurring these costs, the
17 amount of traffic carried over these circuits must be such that the circuits
18 are optimally utilised. Sky has not been able to justify this investment
19 thus far."

20 I think what you are saying is that you would have to be satisfied, at least, that the
21 costs of connecting were outweighed by the savings that you could make?

22 **A.** Yes, that's a fair statement. But in all respects, not down to Mr Morden's analysis
23 about how quickly a link can pay for itself based on how many minutes go over it,
24 because that analysis absolutely ignores the investment on behalf of a CP to even get

1 there. That just says, here's a link, surely if you put 288,000 minutes over it, that's
2 what will cover it but if you put this many over the link's paid for.

3 I absolutely disagree with that analysis because it takes on board none of my costs
4 whatsoever and my costs, in all the analysis Sky's ever done, have been substantial.
5 That DLE roll out I am talking about, where we have looked at it in very great detail,
6 that is why I allude to it here and I say the cost of these TDM circuits, these old
7 fashioned TDM, IECs, ISIs, CSIs, these particular connections are very expensive
8 for a network like ours, which is a next generation network, and in an environment
9 where we are not sure what the future looks like for TDM. But nonetheless I have
10 made it clear here that we could just not justify it.

11 **Q.** Which is why you would not roll out those connections to individual DLEs which
12 would be more expensive to connect to than savings you would make from those
13 individual DLEs?

14 **A.** I wouldn't roll out the individual DLEs because I would never analyse nor go down the
15 track of --

16 **Q.** You are saying it has to be all the nothing?

17 **A.** Of course. You have got to look at the entirety. When you are a player the size of
18 Sky and you have a number of customers that we have and the engineering effort that
19 goes on within our organisation, like I say, to turn up the first route, to consume the
20 first DLE handover product at the first exchange means that in our back office we
21 have got to incur analysis, design, or mediation, on interconnect billing, on
22 operational finance; we have got to put in place everything necessary to consume that
23 product from BT and we would never do that amount of analysis to consume it to
24 a DLE.

- 1 **Q.** But the point -- not a single DLE, no, but the point is Mr Moore that just because you
2 decided to go to one DLE doesn't mean you would have to go to every DLE, does it?
- 3 **A.** No, as I have said before, whenever we analysed rolling out to DLEs, even in that
4 analysis it wouldn't make sense for us to go to every DLE, even in absence of looking
5 at the DLE handover product, you are right. It must cost in, it must make sense
6 before you do it.
- 7 **Q.** On an individual basis?
- 8 **A.** Yes.
- 9 **Q.** What you are saying is that because of the way you have set up your network, even to
10 go to one would incur a lot of backroom administrative costs to make that work?
- 11 **A.** Substantial.
- 12 **Q.** So you would have to factor in those costs when assessing overall however many
13 DLEs there were that would cost out for you, that would become viable?
- 14 **A.** That's correct.
- 15 **Q.** Once the links are in place it doesn't matter to you whether or not that particular link is
16 then under-utilised. What would matter, once you have made that investment, is
17 whether the costs of installing and running that link are cheaper than consuming the
18 inter-switch conveyance which you have substituted for it?
- 19 **A.** Say that again please.
- 20 **Q.** At the moment, when traffic, ported traffic, to Sky customers, directed to the number
21 which was originally BT's number which was ported over to Sky, that traffic is often
22 delivered to DLEs. In order to get to your network it has to be conveyed from the
23 DLE to a tandem where you do collect it?
- 24 **A.** Correct.

1 Q. So there's that inter-switch conveyance; whenever, at the moment, a call is delivered
2 by the OCP to a DLE, you incur inter-switch conveyance costs?

3 A. Yes.

4 Q. Were you to roll out to DLEs to collect ported traffic from DLEs, you would avoid
5 that inter-switch conveyance cost?

6 A. Correct.

7 Q. Were you to roll out, you would not then be concerned whether the links that you had
8 rolled out to DLEs were, in themselves, under-utilised. What you would be
9 concerned about is whether the amount of money you were saving overall continued
10 to be greater than the amount of money you had invested in making those links?

11 A. As pertains to the DLE handover product set, that would be true.

12 Q. Looking at paragraph 17 of your statement, one point of fact you may want to correct,
13 you say that Sky would need to purchase two interconnection links of 2-megabit
14 capacity each for every DLE. So far as ported traffic is concerned, that's incorrect
15 isn't it; you are talking about non-ported traffic there?

16 A. Yes, I was talking about interconnected DLE more generally, and that was highlighted
17 by Mr Morden as well in his comments about my witness statement.

18 Q. So if it were ported traffic only you just need one --

19 A. Yes, that's correct, yes.

20 Q. Yes. Sky of course knows how many customers it has on a particular DLE, ported
21 customers?

22 A. Yes.

23 Q. You state at paragraph 19 of your witness statement that there is uncertainty about
24 whether BT may decommission, what you describe as these "old-fashioned DLEs" in

1 the future. BT of course engages with CPs affected before does close DLEs, doesn't
2 it?

3 **A.** Yes.

4 **Q.** And if a DLE closure is proposed, BT will discuss with you alternative
5 interconnection options; that's right isn't it?

6 **A.** Yes.

7 **Q.** And we have heard about the arrangements for moving circuits and so forth which
8 have been described by Mr Morden.

9 **A.** That's true, but you know, what I am trying to say here as well, and I explained it in my
10 opening, is the backdrop -- and the backdrop against which we built our network was
11 one where 21CN was being -- the hot topic was one where DLE closures were being
12 talked about, even at that stage, back in the 2008 timeframe.

13 So where I am referencing it here, I am just stating what would probably be
14 otherwise obvious, that if you start consuming these ISIs, IECs, CSIs, these TDM
15 connections, then you are almost a brave person now to do that on this scale across
16 the country, having done the analysis.

17 **Q.** At paragraphs 20 to 28 I think you build on that, where essentially what you are saying
18 is that you have concerns over the adequacy of BT's products for interconnecting?

19 **A.** That's correct.

20 **Q.** All those points that you raise are not specific to ported traffic, are they? They are as
21 much relevant to non-ported traffic?

22 **A.** That's correct. It was not specifically with reference to the ported traffic.

23 **Q.** You also discuss, in the final section of your witness statement -- forgive me, section
24 C of your witness statement, from paragraph 29, the possibilities for direct routing of

1 ported traffic.

2 The skeleton argument which has been filed on the CDP group's behalf recognises at
3 paragraph 11 that the higher the APCC charge, the greater the incentive for CPs to
4 look to direct route. I think you accept in paragraph 31 of your witness statement
5 that the commercial benefit of direct routing to use your words, is reduced APCCs.

6 **A.** That's correct.

7 **Q.** So the key commercial question for Sky is whether it's cost effective to incur the costs
8 of direct routing as compared to compares APCCs; that's right, isn't it?

9 **A.** As a commerce question is concerned, sure, yes.

10 **Q.** It therefore follows, doesn't it, that the lower the APCC charge, the fewer situations in
11 which a move to direct routing there would be for that to be cost effective?

12 **A.** It depends on the operator. I do not think that's necessarily the case. I have stated
13 the other reasons, the other strategic reasons why it makes sense to move to
14 geographic routing. Mr Rosbotham has spent a lot of time talking about that in
15 terms of the quality of calls and what it means, conversion from TDM to IP and
16 various codecs involved and this and that.

17 Well, if you can direct route traffic, then by all means strategically, technically,
18 engineering-wise, it's the correct thing to do. And in terms of the commercial
19 incentive, we have built a next generation network -- I am not saying that there's no
20 investment that we need to be able to do this, but we do have a next generation
21 network and we do have IP connectivity and, even if APCCs were to go even lower
22 they would still not disincentivise Sky, we would still be absolutely 100 per cent for
23 direct routing of this ported traffic.

24 **Q.** Just looking at it again with me, Mr Moore, you accept, in your witness statement, that

1 the commercial benefit of direct routing is reduced APCCs.

2 A. It is.

3 Q. So the lower the reduction in APCCs, the less the commercial incentive?

4 A. That would be true, yes, for anyone. That's a statement that can't be -- that's a fact.

5 **MR PALMER:** I am very grateful to you, Mr Moore.

6 A. Thank you.

7 **MR BATES:** No questions from me, sir.

8 **THE CHAIRMAN:** Thank you very much.

9 A. Thank you.

10 **(The witness withdrew)**

11

12 **MR PETER JAMES FARMER (sworn)**

13 **Examination-in chief by MS LOVE**

14 **MS LOVE:** Could the witness have a confidential version of his witness statement?

15 **(Handed).**

16 Mr Farmer, you should have a document in front of you, a witness statement. Can

17 I confirm that you are the same Peter James Farmer who wrote this statement?

18 A. Yes, I am.

19 Q. Could you go to the last page please, where there is a signature below the statement of
20 truth. Whose is it?

21 A. This version is unsigned, but it is my witness statement.

22 Q. Mr Farmer, I understand that there is a point in relation to paragraph 16 of the
23 statement that you wish to clarify, that's the one on page 5.

24 A. It became apparent for me in questioning last week that I should clarify that, whilst

1 Gamma is connected with every BT tandem switch, it does not do so through in-span
2 interconnect within building connection in every case and purchases either
3 interconnect extension circuits from BT or from third parties in order to reach that
4 tandem switch.

5 **Q.** Subject to that clarification, is this statement true to the best of your knowledge and
6 belief?

7 **A.** It is, yes.

8 **Q.** Mr Farmer, before Mr Palmer asks you a question, there are two questions I would
9 like to give you the opportunity to comment on.

10 Firstly, by way of introduction I understand you are Gamma's Head of Regulatory
11 Affairs and therefore have familiarity with its network. Would you explain to the
12 Tribunal the nature of Gamma's network and infrastructure in broad terms?

13 **A.** Okay. So Gamma was a network formed around 2001/2002 from the distressed
14 assets of Atlantic Telecom, which went spectacularly bankrupt around the time of
15 dotcom bubble. It was a venture capital acquisition of the fibre network, switches
16 and switching centres, which were all TDM. Over time that has evolved into a next
17 generation network. Some of those TDM switches still exist in the network, but in
18 a very limited capacity.

19 In 2006 Gamma was the first communications provider -- we would say of note -- to
20 deploy a next generation network, which is borne out by, I believe I refer to it in my
21 witness statement, we are leading providers of next generation services.

22 We are currently deploying our third generation IP network, the third iteration and
23 that should be live fully by the middle of next year. We are considerably smaller
24 than BT and the other interveners. In terms of how looks in scale, I would say we

1 have five primary switching centres, which would probably be analogous to a BT
2 tandem.

3 **Q.** Now, in BT's opening submissions, Mr Palmer made various references to Gamma's
4 third-party hosting services. Would you please describe what third-party hosting
5 is?

6 **A.** I have to admit in answering this that there could be several things that could be
7 alluded to here. But if I give my understanding of what is meant by number hosting.
8 There are a number of small operators in the market, 30-something in Gamma's case,
9 which have been allocated ranges from the national telephone numbering plan by
10 Ofcom. And they have come to Gamma and said, essentially, "Could you host these
11 numbers on your network for us?" That may be because we have certain products
12 and services that they would rather purchase from us instead of from BT or another
13 operator. It could be because we offer a service where we will deal with Ofcom
14 their behalf. There are several possible reasons for that.
15 To the rest of the world those numbers look at if they were Gamma's own numbers.
16 Gamma has millions of numbers allocated from Ofcom in every area in the country.
17 They are advertised for termination on our network in all the same way and they are
18 made available for portability from Gamma in the same way.
19 Conceptually to us there is no difference from me allocating a number from a range
20 that has been allocated by Ofcom to Gamma. Placing that on one of our products,
21 our hosted PBX product, it is a box of tricks that we host, instead of it being on
22 an customer's premises, to drive extensions, essentially, to taking a range allocated to
23 any one of the 30-something entities and taking a number from that and allocating it
24 to one of those products. To all intents and purposes the name on the Ofcom

1 certificate, that number range, just happens to be different for Gamma; that is how
2 I would characterise number range hosting.

3 **Q.** More specifically I think Mr Palmer referred to third-party hosting as:

4 "Effectively a transit product from BT tandems."

5 The suggestion being, I think, that it's an alternative to buying inter-switch
6 conveyance. Could you comment on that, please?

7 **A.** The entities to which I refer may well win customers that wish to retain their phone
8 number. At which point, they will ask us to import those numbers on their behalf.
9 That means essentially we appear to BT as the network that is importing the number,
10 so Gamma appears as the recipient communications provider in that scenario. It is
11 then allocated to a product or service in the same way as their own numbers or our
12 own numbers. Conceptually in that case I would position it as we are buying
13 interswitch conveyance on their behalf. And it's wrapped up in the cost and charges
14 that we individually negotiate with the products and services in question.

15 **Q.** I understand that Gamma is built out sometimes by interconnect extension circuits, or
16 by other means, to BT's tandem exchanges. When Gamma is purchasing porting
17 services, whether for its own number or a hosted one, does it ever have to pay
18 inter-tandem conveyance to BT for a ported call?

19 **A.** We do, yes.

20 **Q.** Why would that be the case?

21 **A.** There is -- I believe there are some DLEs which are parented to BT -- to BT Tower
22 tandem exchange, where our planning department made an error in our routing plan.
23 There's a smattering of a few hundred thousand minutes a month, but there is still
24 inter-tandem conveyance as a result of that routing plan error that we incur.

1 Q. Moving on to Mr Morden's cross-examination, can I ask you to take up Mr Morden's
2 first witness statement, please. Can I ask you to turn within that to paragraph 82.
3 You may recall, Mr Farmer, that I put to Mr Morden that his comments about the net
4 effect being to leave the financial position unchanged applied only when there was
5 a balance of calls, as it were, between incoming and outgoing. Can you comment
6 on whether that balance applies in relation to Gamma?

7 A. It is absolutely true at a global level that you can only terminate as many calls as you
8 originate, it's a zero sum game. But there are variances, once you drill into that.
9 There are services on our network which are very termination heavy, so they receive
10 a lot more calls than they make. And equally there are services that make a lot more
11 calls than they receive.
12 By way of example, this morning at 8.30, there would have been an alarm going off
13 in our network operations centre because at 8.30 everybody calls their doctor, and
14 doctors' surgeries come under a lot of pressure at that time because they have a lot of
15 inbound calls at that time. They generally make a lot less calls than they receive,
16 which is a truism of a doctor's surgery, just one example.
17 Another example is the Samaritans, which are hosted on a Gamma network. They
18 receive an awful lot more calls to their branch numbers than they make. It is the
19 nature of the service.
20 Equally there are services that generate a lot more calls than they receive: call
21 centres, and PPI nuisance calls being in the headlines.
22 Just to clarify, not the general class of Gamma customer.
23 So, whilst it is true at a global level that it is a zero sum game, there are very much
24 discrepancies in certain areas, businesses as well, it is my experience may be lop

1 sided more than residential consumers.

2 **Q.** Turning now to Mr Morden's second witness statement, you have yourself, in your
3 witness statement, performed a cost-benefit analysis of whether it would make
4 commercial sense for Gamma to consume BT's DLE handover product.

5 Mr Morden has performed his own arithmetic.

6 **Can we go to page 27 of the witness statement, you will see starting there are**
7 **various tables. I imagine the version of table 7 you have is blacked the whole**
8 **way through. Sorry, I am seeing the one that you have got has got yellow in it.**
9 **Avert your eyes. (Handed).**

10 Do you have any comment that you would like to make on Mr Morden's tables?

11 **A.** I would suggest it is a very rose-tinted view of the cost-benefit analysis of attempting
12 to consume the DLE handover product. As I believe Mr Morden clarified in his
13 evidence, he has assumed an in-building link is consumed in every case, which we
14 know is not the case in Gamma. In around a quarter to a third of tandem switches,
15 even if they are co-located with the DLE, it would be a more expensive interconnect
16 extension circuit.

17 Also I am not comfortable with using a 1.5 per cent figure for capital in investment
18 appraisal. My team would use a higher figure, without breaching confidentiality,
19 considerably higher in appraising an investment over that period.

20 I would disagree with Mr Morden that it is a risk free investment. I believe
21 Mr Rosbotham in his evidence pointed out that if you cut a DLE circuit in its first
22 year, you only achieve a 40/50 per cent rebate, and then sliding down over 10 years.
23 And I believe in evidence already in this appeal it was suggested that BT's network
24 for the DLEs may be closed in less than 10 years.

1 In terms of back office costs, there are some. I wouldn't necessarily characterise
2 everything as making some record changes via a keyboard. Mr Moore clarified the
3 resource in planning, there was an opportunity cost in making errors, as we
4 experienced with our connection at BT Tower, I mentioned that smattering of
5 inter-tandem conveyance. So there is a assumption that the analysis is executed
6 perfectly in every case, as well.

7 Our own analysis does not equate to the same cost-benefit analysis break even point
8 as Mr Morden.

9 **Q.** You have said in paragraph 49 of your first witness statement that Gamma in fact
10 entered into a dialogue with BT to evaluate the handover. You recall that
11 Mr Morden was unable to assist the Tribunal any further because he did not
12 participate in that dialogue.

13 To the extent you are able is there anything further you can add from your statement
14 at this point?

15 **A.** Having had the opportunity to review e-mails and correspondence since that line of
16 questioning was put to Mr Morden, there was an engagement with BT between the
17 second draft determination published by Ofcom on what DLE handover could mean,
18 on which there was some correspondence. And there was another call after the
19 publication of the final determination which led to us rejecting DLE handover as
20 suitable. In terms of the date of that call and who it was with, I am unable to recall
21 who it was with and the precise date, but I can find internal correspondence between
22 myself, one of our interconnect planners and our CFO about the content of that call
23 at the time.

24 **Q.** A couple more points arising out of Mr Morden's cross-examination. Firstly,

1 Mr Morden commented in relation to the ability of next generation networks to
2 support onward routing that he did not believe out-of-the-box switches came with
3 onward routing. Would you like to comment on that?

4 **A.** Since that line of questioning I have had a correspondence -- I have been in
5 correspondence with our chief architect who oversaw the implementation of our first
6 and second generation IP core networks, NGNs and he states that they were capable
7 of supporting onward routing out of the box, as Mr Morden phrased it.
8 Our third generation is theoretically capable of supporting it, but we have chosen to
9 integrate it with a proprietary routing engine for our own purposes. So in theory in
10 practice we know the first and second generation was capable, in theory we know the
11 third, but I can't attest to the practice because we haven't implemented it that way.

12 **Q.** Mr Morden was asked to comment on the move to direct routing and he commented
13 that the negotiations between various communications providers including Gamma
14 had taken a long time and said:

15 "… if it was a strong incentive they have been negotiating since 2008 and
16 very little has actually happened."

17 Is there any comment you would like to make in relation to that, without breaching
18 confidentiality?

19 **A.** I would say that negotiation may be the wrong word to describe where we are at the
20 moment. I have no issue, non-confidentially to describe where Gamma is in
21 relation to it, but having not spoken to the other parties to that direct routing I shall
22 anonymise them, if that is okay.

23 A specification to perform multiple bilateral direct routing has been agreed. That
24 means there is a way of sending files between networks to say which number should

1 be routed where or essentially, me advertising to another network, please route me
2 this number. The format of that file and what its contents would be have been
3 agreed. Gamma has implemented software to send and receive those files to that
4 specification in its core network. The method of transmission had been agreed and
5 then a CP, who shall remain anonymous, had a serious cyber attack incident over the
6 last 12 months. That meant that the entire basis of the security of that transfer had to
7 be reviewed so there was a delay there.

8 I would say Gamma is ready with any CP that has also built that to do
9 interoperability testing, which means to send each other some test files and to
10 perform a little bit of a traffic test. And then that would move onto soak testing and
11 full implementation. There is a very important reason why a network would
12 proceed very carefully with direct routing because hypothetically, if I say to Sky,
13 "Route me this number, it's on my network", and TalkTalk say, "Route me this
14 number, it's on my network", and Sky have said, "Route me this number, it's on my
15 network", one call to that number can crash the entire network because it would go
16 from Sky, TalkTalk and Gamma, to Sky, TalkTalk and Gamma and in a matter of
17 milliseconds the entire network resource is consumed with the same call. We refer
18 to it as a call looper, if that makes sense.

19 So there also have to be safeguards implemented to make sure that that doesn't had
20 happen, and if it does happen what we do about it, obviously very quickly. The
21 commercials, as I understand it, with the other parties involved, the paperwork may
22 not signed but there is definitely an agreement in principle how to proceed
23 commercially. In all cases Gamma's only thing that is still holding us back is for our
24 own technical and engineering reasons we want to rearrange our own interconnect

1 with one of the major parties because we do not think they have sufficient capacity,
2 or the capacity use that we forecast would exceed our planning assumptions for
3 them.

4 So I think negotiation would be an understatement of the progress we have made.

5 **Q.** My final point, your comment arising from Mr Morden's examination, Mr Morden
6 said that voice was a declining market and expressed some scepticism about the
7 likelihood of entry to scale on that market. Is there anything you would like to say
8 on that?

9 **A.** There are two things I would like it say on this. Firstly Gamma is still a growing
10 company, we see increases in voice traffic and voice services on our market. We
11 have essentially entered the market and we are carving a niche for ourselves and
12 expanding that niche. I would agree with Mr Morden that voice is a declining
13 market in the residential area. Ofcom's published a number of documents that
14 support that position. However, businesses generally place a far greater weight and
15 importance on voice services than residential customers and we do not recognise
16 quite the same reduction there; the sort of avoidance strategies such as texting and
17 SMS that some domestic users might do instead of making a phone call do not apply
18 in business. And I believe Ofcom made reference to the importance that business
19 customers place on voice in the 2013 Narrowband Market Review, which was the
20 market review that led to the reduction in FTRs, fixed termination rates, that then
21 exposed the issue of APCCs.

22 **Q.** A couple of points arising from Mr Perry's cross-examination. Firstly, the
23 proposition that Mr Palmer was put to him that how CPs interconnect is driven by
24 a simple cost-benefit analysis. Speaking for Gamma, do you have a view on

1 whether that is an accurate description?

2 **A.** It is obviously a very important part, the analysis. I would like to think we are
3 a rational profit making entity, but it's not the only consideration. As a network that
4 services almost exclusively businesses, call quality -- we would place a lot more
5 weight on call quality potentially than just pure financial considerations. There can
6 be other softer efficiency metrics, more simplification, a lower risk profile, which are
7 hard to quantify in a cost-benefit analysis but it's a financial figure such as I went
8 through in my own witness statement with DLE handover as an example, table 7.
9 As Mr Morden is saying, it is not the beginning and end of any analysis that we
10 perform.

11 **Q.** Mr Palmer suggested in a relation to transit services and the potential transit provider
12 that RCPs might be able to share information to help a potential -- such a provider,
13 the sort information that they would need to make forecasts. And I think a similar
14 possibility of deriving information and passing it onto a transit provider was raised
15 with Ms Kennedy this morning.

16 What would Gamma's response be, in general terms, to the possibility of that sort of
17 information request?

18 **A.** Whilst I enjoy a very cordial working relationship with BT, Sky, TalkTalk and others,
19 when it comes to exchanging the potentially sensitive information with whom are
20 ultimately my competitors, I become very uneasy. It would be have to be reviewed
21 on the merits, it's a highly contextual question as to what could and could not be
22 shared, but it's not just as simple as sitting down round the table potentially and
23 answering questions.

24 **Q.** What comment, if any, do you have on the suggestion that was raised to

1 Mr Rosbotham this morning about requesting information from BT about traffic and
2 charges to be able to optimise your network or think about DLEs?

3 **A.** We have never asked BT for more detailed information breaking down the volumes in
4 the ten-group spreadsheet that they provide us ever year. However, my general
5 experience of the relationship with BT when it comes to these things is I would
6 characterise it as wading through treacle. It can be very difficult to get quickly to
7 answers that are required. This is not something that I would -- it's not a phrase
8 I would use to characterise my relationship with my customers or other interconnect
9 partners.

10 **Q.** Finally, you referred to the spreadsheet. Is that the Gamma's workings equivalent of
11 the one that Mr Rosbotham's mentioned earlier?

12 **A.** Yes, the split -- the blending together of the ten groups to arrive at an APCC.

13 **Q.** Do you normally receive that every year?

14 **A.** Yes, beginning of the year. I believe that BT does the sample measurement in
15 January and the spreadsheet is then issued. Normally on request, when the pricing
16 is changed.

17 **Q.** What month would that request normally be made?

18 **A.** I would have to check, but March, time, broadly.

19 **Q.** Have you received the Gamma workings sheet for 2016?

20 **A.** Not to my knowledge, no.

21 **MS LOVE:** I do not have any further questions at this stage but Mr Palmer will have
22 some for you.

23 **THE CHAIRMAN:** Mr Palmer, I think we will take our short break now, if that's
24 convenient to you?

1 (3.10 pm)

2 (A short break)

3 (3.30 pm)

4 **Cross-examination by MR PALMER**

5 **MR PALMER:** Mr Farmer, good afternoon. You explain at paragraph 23 of your
6 witness statement, and explained further a little earlier to Ms Love, that Gamma
7 hosts number ranges for various entities.

8 **A.** Yes.

9 **Q.** If I give you an example of CP X, winning a retail customer from BT?

10 **A.** Yes.

11 **Q.** And let's assume in this example the customer wishes to keep his number, wishes to
12 port. CP X would ask you to host that number if it was on your hosting services;
13 that's right, isn't it?

14 **A.** Yes.

15 **Q.** With the result that the ported calls to that customer would be routed to Gamma, as
16 you explained, as the RCP --

17 **A.** Yes.

18 **Q.** -- even though it's CP X which has the relationship with the ported customer?

19 **A.** Correct.

20 **Q.** That's what Gamma is able to do at the moment under the terms of the SIA?

21 **A.** Yes.

22 **Q.** No conflict?

23 **A.** No, not that I am aware of.

24 **Q.** That presumably is what is meant in the skeleton argument filed on behalf of Gamma

1 at paragraph 9, when it is said in the second sentence:

2 "Gamma's own wholesale customers, many of whom are market
3 participants in their own right, in effect purchase IFC through Gamma"?

4 **A.** Yes.

5 **Q.** It's those words, "Market participants in their own right", which I want to focus on
6 next. You explained to the Tribunal earlier that you have the hosting service
7 product and you have those customers. I take it that some of these customers at
8 least have their own networks too?

9 **A.** They do, yes.

10 **Q.** That's what's referred to as, "Market participants in their own right", I assume?

11 **A.** That's one part of it.

12 **Q.** One part of it, yes, they have their own networks?

13 **A.** Yes.

14 **Q.** So in that case, what you are purely and simple doing for them, in the context of ported
15 numbers is providing a transit product for them?

16 **A.** Providing potentially a transit product purely to my own network; there's no guarantee
17 that that number would be routed onto CP X for any purpose. They may choose
18 to -- their customer may be purchasing a white label product from Gamma --

19 **Q.** Yes?

20 **A.** -- and that would be hosted on our network and that number may -- calls to at that
21 number may enter our network and essentially stay on our network only.

22 **Q.** Yes. I am not sure that that makes the any difference, does it? The essential point is
23 an industry player, a network, is being hosted by you, you act as RCP on their behalf,
24 so it is in effect a transit service for that network in this particular instance of a ported

1 call?

2 **A.** That description does sound like transit, that's correct. However, I would argue there
3 are subtle differences between that characterisation and what I would consider to be
4 an outright portability transit product.

5 **Q.** You will have to expand on your subtle differences. They must be very subtle,
6 Mr Farmer?

7 **A.** We sell a bundle of products and services to our end users or to resellers of those
8 products and services. They may take numbers from our own allocation of
9 numbers, they may use their own numbers, we may port in numbers to link to those
10 products and services. We do not go to the market and say, "Here is a product called
11 portability transit, host your porting prefix code, which is the routing code which
12 denotes which network a number is routed to." And we do not have any pricing or
13 anything purely on that basis.

14 **Q.** I understand. It's not marketed or offered to the market as a whole as a porting transit
15 service?

16 **A.** No.

17 **Q.** But within the bundle of services which you provide to those customers is the transit
18 of those ported calls?

19 **A.** We will port in numbers for our customers and we will arrange for their conveyance to
20 our network, yes.

21 **Q.** That sounds like another way of saying yes?

22 **A.** Okay.

23 **Q.** Yes. Paragraph 28 of your witness statement please, this is the on subject of APCCs
24 and their level, you make the point that APCCs paid by other smaller -- you say

1 OLOs, we just refer to them as CPs, to BT are higher on a per-minute basis than
2 Gamma's. You make the point that smaller CPs lack your level of interconnection
3 to the BT network so a higher proportion of their calls to ported numbers have to be
4 routed via a greater number of BT's network components. That makes perfect sense
5 to everyone. You give an example according to the CPL: Inclarity had an APCC
6 rate of 0.3962, compared with your considerably lower APCC rate of 0.0811 pence
7 per minute at the same time.

8 This reflects, does it not, the fact that Gamma is connected to all of BT's tandems
9 where as Inclarity, as you have described, have very limited connections; it's just
10 a function of that equation, is it not?

11 **A.** I would assume so not knowing the details of Inclarity's interconnection, but that
12 would be a logical explanation.

13 **Q.** It's where you illustrate -- you are using Inclarity, whatever the specifics are of their
14 case, to illustrate your point that in principle it depends on level of interconnection?

15 **A.** Yes.

16 **Q.** There would be a similar difference between the BT termination rate paid by Gamma
17 and Inclarity?

18 **A.** Potentially, yes.

19 **Q.** It's just a function of the level of interconnection?

20 **A.** Yes.

21 **Q.** And indeed it's that difference that drives Gamma's wholesale business?

22 **A.** That more historically has been one of the reasons we have participated in the market,
23 yes. More latterly, perhaps less so.

24 **Q.** But part of your business offering to your customers -- I am sure there's more

1 besides -- but part of your offering is you can take advantage of your economies of
2 scale and the fact that you are widely interconnected with BT and pass on some of the
3 savings to your smaller CP customers?

4 **A.** Correct.

5 **Q.** Yes. Let's look now at the subject of interconnection at the DLE layer, your
6 paragraph 21. You explain, do you not, how Gamma decides whether to
7 interconnect at a particular BT DLE?

8 **A.** Yes.

9 **Q.** We see that the first element -- you have helpfully enumerated them -- the first one is
10 that Gamma takes the potential cost saving of the LPC and ITC avoided in light of
11 expected call volumes.

12 **A.** Yes.

13 **Q.** The second element is that Gamma compares that with the amortised cost of installing
14 and renting the circuit?

15 **A.** Yes.

16 **Q.** And Gamma then uses that cost-benefit analysis to decide which DLEs to interconnect
17 to, depending on the commercial viability of connecting to each DLE; correct?

18 **A.** Yes.

19 **Q.** Where Gamma could save money at a particular DLE by interconnecting, that would
20 obviously be in Gamma's commercial interests, wouldn't it?

21 **A.** It would, yes.

22 **Q.** On that basis the extent to which a particular link is under-utilised is not a particular
23 concern for Gamma provided that the link is sufficiently utilised to make the cost of
24 having that link cheaper than purchasing inter-switch conveyance?

1 A. At the time that we built out to DLEs, yes; however, now as we are shutting down
2 more and more TDM interconnect, ensuring that we do not have to purchase
3 gateways that would have very limited life, yes, it might be more economical to
4 make an irrational decision to close a circuit to avoid that capital expenditure. But
5 when the investment case was done for DLE build out, that was correct.

6 Q. That doesn't sound irrational, it sounds like you are just having regard to capital
7 expenditure as well?

8 A. Yes.

9 Q. But essentially you are looking at that cost-benefit analysis and including the need for
10 further capital expenditure in certain cases?

11 A. Yes.

12 Q. Given the need for a segregated route for ported traffic at the DLE, Gamma would
13 need to assess whether the cost saving from the inter-switch conveyance avoided in
14 light of expected ported call volumes exceeded the internet costs of a dedicated link
15 to collect that ported traffic?

16 A. Correct.

17 Q. And in the skeleton argument filed on behalf of Gamma it's accepted that it may be
18 commercially viable for Gamma to avoid IFC at some DLEs?

19 A. Correct.

20 Q. From paragraph 50 to 52 of your witness statement you in effect provide with us
21 a cost-benefit analysis?

22 A. Yes.

23 Q. And that includes all the factors which you would have regard to in undertaking such
24 a cost-benefit analysis?

- 1 A. Yes.
- 2 Q. At paragraph 50 you make clear that at March 2014 you considered the average costs,
3 as of that date, of installing a new link and the average rental costs?
- 4 A. Correct.
- 5 Q. The sums are confidential, I won't mention those. But you do mention Gamma's
6 modelling for a single dedicated E1 is it can carry up to 250,000 minutes of voice
7 traffic a month, so to break even it would need to save a certain amount.
8 So you have modelled those costs?
- 9 A. Yes.
- 10 Q. So you have analysed the costs and benefits of carrying -- of accepting potentially
11 large amounts of new traffic?
- 12 A. Yes.
- 13 Q. You have used whatever model you have used presumably because that accurately, or
14 sufficiently accurately reflects the material costs involved in interconnecting, yes?
- 15 A. The material external costs, yes, we didn't make an allowance for any internal costs or
16 opportunity costs that may arise.
- 17 Q. You wouldn't?
- 18 A. We didn't in this analysis. I wouldn't say we wouldn't. If the business case was
19 marginal, it may warrant further such scrutiny.
- 20 Q. I see. So only in the marginal cases do we need to worry too much about the
21 opportunity costs and the backup office costs and so forth?
- 22 A. Yes, it becomes more relevant at that level.
- 23 Q. There were other items which are immaterial, except perhaps in the most marginal of
24 cases.

1 Additional switch ports required to augment routes?

2 **A.** We worked on this on the assumption that we would have a number of freed-up switch
3 ports as a result of closing links at the tandem layer. Potentially bigger links. And
4 the working assumption in the model, but not one that was borne out with analysis,
5 was that that would be a one-for-one swap, so we would provision a switchboard
6 potentially for one terminated. At the time, March 2014, we also had an excess of
7 switch ports and gateways. That isn't actually accurate today.

8 **Q.** So where you need extra switch ports, we bear in mind you have got extensive fibre
9 network?

10 **A.** Yes.

11 **Q.** And it is correct, isn't it, that high capacity fibres carry 2-megabit channels and at the
12 Gamma end of the interconnect link the ported traffic of the DLE will go straight to
13 the same switch?

14 **A.** Potentially.

15 **Q.** So a new link won't be needed, the changes which are needed are at the BT end of the
16 transmission system, are they not?

17 **A.** There are changes at the BT end of the transmission system. It may be as simple as
18 Mr Morden explained to repatch a cable where the DLE and tandem are co-located.
19 If the tandem and DLE are not co-located it may become more complex at our end
20 because the traffic may suddenly arrive on a different switch because it's not
21 necessarily the same infrastructure serving the same switch. But additionally we
22 would go from -- from the top of my head -- 104 tandem routes to carrying ported
23 traffic which are on shared routes to 600 routes on the DLE. So you go from 100
24 routes to 600 if you are to do a DLE handover nationally.

1 Q. But you do not need to do DLE nationally at every single DLE handover route, do
2 you? You do not need to go to every single DLE?

3 A. It's a matter of choice.

4 Q. A matter of choice, thank you.

5 In terms of what is involved in providing an extra switch port, we bear in mind, as
6 you explained at your paragraphs 10 and 11 very clearly, that:

7 "While NGNs rely in large part on the same cabling as a traditional
8 network, the interconnections between networks operate on an different
9 basis. Rather than comprising discrete sets of pathways, NGN systems
10 are software based ... transformed~... digital data packet~..."

11 A. Correct.

12 Q. And transmit it by IP. And you explain that at 11. The result is that since data can
13 be routed in a more dynamic manner, you can effect that by inputting a few entries
14 into the keyboard at the end of the day?

15 A. On the NGN side, correct. However, if you are interworking with a TDM network it
16 is slightly more complex because you have TDM coming in, IP -- converting to IP,
17 the benefits of the IP network are after that gateway.

18 Q. That would already be there in this example that we are thinking of, wouldn't it?

19 A. It would. There may be some repatching required on our network or some
20 reconfiguration.

21 Q. So again we are talking about marginal costs here, overall relevant only in the most
22 marginal of cases?

23 A. I would hope so.

24 Q. The same applies to routing plan costs, which you also refer to as well. It's correct,

1 isn't it, that BT can't charge system set-up costs for implementing DLE handover?

2 **A.** Correct.

3 **Q.** So the routing plan costs are not relevant to the decision to interconnect, are they?

4 **A.** They should not be, unless routing plan -- unless DLE handover for changes to routing

5 plans for other purposes, for whatever reason.

6 **Q.** In other words changes to routing can occur regardless whether a DLE handover is

7 used or a CP continues to rely upon inter-switch conveyance, it can happen anyway?

8 **A.** It can happen. It does happen anyway, yes.

9 **Q.** That's why it is not really a relevant factor for Gamma to consider when you are

10 choosing to go -- to purchase DLE handover?

11 **A.** I would be surprised if it was. But that isn't to say it could not be, but I would be

12 surprised.

13 **Q.** Again it's a marginal case. The last review of this charge was in 1997, wasn't it?

14 **A.** That would be well before my time if it was.

15 **Q.** A rarely imposed charge, could you put it that way?

16 **A.** I checked over lunch. It was -- 2008 was the last invoice that we had.

17 **Q.** Just the one was it?

18 **A.** It was a large one, but it was just the one.

19 **Q.** Could you see from the invoice what caused that exceptional event?

20 **A.** We had asked BT to do a lot more work than they normally would do in that situation.

21 **Q.** So it's right to categorise that as exceptional?

22 **A.** Yes. Providing BT do not exercise their rights to back-bill over 6 years.

23 **Q.** Realistically you can take a commercial view of that, can't you?

24 **A.** Yes.

- 1 **Q.** Yes. Looking at your paragraph 51, where you are setting out this cost-benefit
2 analysis, what you do is you compare the average costs which you have identified at
3 paragraph 50 with the average number of ported minutes per DLE, per month in
4 March 2014. Is that correct?
- 5 **A.** Yes.
- 6 **Q.** The exercise that is set out here. But that of course isn't the exercise that Gamma
7 actually does. What you do not do is compare averages. What you do do is decide
8 whether to connect with a particular DLE by reference to the merits of that particular
9 DLE?
- 10 **A.** That was the case when we built out for CPS, IDA, non-BT terminating traffic, yes.
11 But in the first instance a broadbrush calculation is performed to give a high level
12 view of viability, it's only when that test is passed that we do a full analysis.
- 13 **Q.** On a very broadbrush analysis, which we bear in mind, that of the 650 DLEs the
14 overwhelming weight of traffic is concentrated in comparatively few of those DLEs.
15 That's right, isn't it?
- 16 **A.** That is likely to be the case, but I have seen traffic volumes and weights that aren't
17 always rational in some cases where there have been surprising volumes delivered to
18 areas I would not expect.
- 19 **Q.** At the margins. But on average, you can see, we can go to the figures if you like, and
20 Mr Morden, and look at those tables and so forth. But it's right to say, isn't it, that
21 the great weight of traffic, as you would expect for urban areas, is concentrated in
22 comparatively few DLEs?
- 23 **A.** It is likely to be the case, yes.
- 24 **Q.** It's unsurprising to find that you still have to have DLEs crossing all the rural areas for

- 1 the rest of the country with comparatively lower volumes of traffic. If you simply
2 average them all, you end up with a distorted picture which bears really no proper
3 relationship to the merits of concentrating on the profitable DLEs?
- 4 **A.** It is likely that there will be some DLEs that were attractive to Gamma.
- 5 **Q.** And it's also likely that those DLEs will be the ones with disproportionately numbers
6 of ported minutes going through them?
- 7 **A.** I do not think I have enough data to answer that either way, I can see how it would be
8 the case, but I can't be certain.
- 9 **Q.** We have got Mr Morden's evidence on that. I need not ask that of you.
10 In terms of other costs, you haven't included here in this analysis any cost of capital,
11 have you?
- 12 **A.** No, because it was a first broadbrush.
- 13 **Q.** Right. You had not done any separate analysis on the basis of cost to capital?
- 14 **A.** No, but that would make it less attractive if I did.
- 15 **Q.** And the cost of capital should reflect the risk of the project, shouldn't it?
- 16 **A.** The risk of the project is an element in deciding several factors, such as how you
17 finance the project. I would always just use the weighted average cost of capital
18 because it reflects the opportunity cost to shareholders of deploying that capital to
19 that project and not doing something else with it.
- 20 **Q.** Do you accept that the risk of a particular project is material to the cost of capital
21 which should be applied to it?
- 22 **A.** There are cases where a project's risk profile can inform your choice of costs of
23 capital.
- 24 **Q.** Yes, and those cases would include this case wouldn't it?

- 1 A. I can see how an argument could be run that is potentially lower risk than the
2 systematic risk of the business, that is not to say it is a zero risk project, it's not to say
3 that the cost of debt is 1.5 per cent. But I can see how a debate could be had that it
4 was potentially lower than the weighted average cost.
- 5 Q. Yes. You would argue particularly hard against that case if I understand your
6 evidence?
- 7 A. I think it would be very contextual on the circumstances of the organisation in
8 question.
- 9 Q. The risk of DLE closure next. Perhaps I can just ask you this first. At a technical
10 level I think we have agreed and heard from other witnesses that there's no technical
11 distinction to be made between carrying ported traffic and any other traffic; it's all
12 traffic?
- 13 A. That's a fair simplification case, yes.
- 14 Q. And you have said at paragraph 58 of your witness statement that Gamma has
15 received a certain number of systems alteration notices?
- 16 A. Correct.
- 17 Q. You have given the number, it is confidential.
18 So we are talking about Gamma having received notice of a potential closure of
19 a certain percentage of BT's large portfolio of over 600 DLEs?
- 20 A. Yes.
- 21 Q. If we bear in mind that there's over 600 of those and we look at your number, we can
22 see what sort of percentage that is?
- 23 A. Yes.
- 24 Q. The fact that a few, on that basis, system alteration notices have been issued from time

1 to time, that hasn't stopped Gamma from interconnecting at the DLE layer at all, has
2 it?

3 **A.** Since that date, 2013, in my witness statement, I am unaware of us deploying any
4 circuits to the DLE.

5 **Q.** That's scarcely surprising if that's right, because you explain at paragraph 16 that you
6 are already at about 95 per cent of BT DLEs?

7 **A.** Correct.

8 **Q.** So you will only be looking at that tail now, the furthest-flung DLEs, I would imagine,
9 the Shetland Islands and few others besides, no doubt.

10 So the mere fact, or the mere possibility, that system alteration notices may be issued
11 in the future in respect of a small number of DLEs is not a material consideration for
12 Gamma in deciding whether to interconnect using DLE handover, is it?

13 **A.** I would say it is if BT hold their to their promise of closing the DLE layer in 2025, that
14 means I only have a nine-year investment and I would be very surprised if they all
15 closed at once, there would a programme of closures. If that date were to be held,
16 there would a roll out of closures over a period of time which gives me a more
17 limited period of payback to recover the investment.

18 **Q.** Yes.

19 **A.** And hypothetically, if BT were to close the highest payback ones first, that may be
20 catastrophic for the business case.

21 **Q.** It wouldn't Mr Farmer, would it, that is what I want you to re-visit. It couldn't
22 possibly be catastrophic when alternative arrangements would be made at BT's own
23 expense effectively?

24 **A.** I welcome BT's description of how sympathetic it would be in such a circumstance,

1 however contractually, which is all I can place weight and certainty on, I would
2 suggest it's not quite as sympathetic as that characterisation it has given.

3 **Q.** Well, contractually -- we have looked at it and can look at it again if you like, it was
4 section 40 of the SIA -- what happens is formally, contractual terms, you, as the
5 affected CP, give a quote to BT and if it can't be agreed you go through a dispute
6 resolution mechanism. And in order to minimise any potential exposure to having
7 to pay -- compensate a CP such as Gamma, you can expect BT to seek to minimise
8 the amount of disruption, can't you? Rationally.

9 **A.** I would hope so.

10 **Q.** And that has been explained by Mr Morden and involves entering into dialogue,
11 moving circuits to a new DLE at no cost it is essentially to minimise its own
12 exposure -- it is not out of the goodness of its heart, it is minimising its own exposure
13 to what could be otherwise a disputed quote?

14 **A.** Yes, that is a rational way for BT to behave, but it doesn't necessarily give me the
15 certainty, the best possible environment within which to invest. Because there is
16 uncertainty about it.

17 **Q.** You could discuss with them and agree with them in the context of that process what
18 optimally would resolve your own concerns?

19 **A.** I would like to think I can, yes.

20 **Q.** It could include rearranging existing circuits to optimise new routes?

21 **A.** Potentially, if they were willing.

22 **Q.** In practice, the vast majority of costs incurred by the CP are going to be covered really
23 by taking them out of the equation at all?

24 **A.** I would like to think they could be, but in a hypothetical situation where somebody

1 was constrained in their TDM to IP conversion capacity and invested in a series of
2 media gateways for DLE handover, I would be surprised if in the closure of the DLE
3 and the SAN costs, the system alteration notice costs, BT were willing to compensate
4 for the unused economic life of that.

5 **Q.** In assessing all these risks and costs of a DLE connection, you would assess the
6 business case, the cost-benefit analysis, bearing all this in mind, wouldn't you?

7 **A.** Yes.

8 **Q.** And that is what you have been doing, and no doubt did, as you rolled out to
9 95 per cent of DLEs and could continue to in terms of considering whether or not to
10 implement DLE handover for ported traffic at any proportion of those DLEs?

11 **A.** Yes.

12 **Q.** So it's not right is it to characterise your position as saying that Gamma has no
13 practical choice other than to purchase ISC services from BT. There are practical
14 choices available, what choices you make is up to you bearing all of this in mind?

15 **A.** As I outline in my witness statement there are most likely some DLEs where it is but
16 where that doesn't add up then we have no choice, essentially, but to either make
17 a suboptimal investment with BT or to purchase ISC.

18 **Q.** I see and that equation which you have just identified is critically dependent on the
19 price of ISC, isn't it?

20 **A.** It is.

21 **Q.** On BT's price of ISC because the higher the cost obviously the more commercial
22 incentives you will have to take up DLE handover. Obviously the lower the price
23 falls the less commercially attractive to you that would be?

24 **A.** Correct.

1 Q. Direct routing. Can you agree with me first about what you said earlier, there's no
2 actual direct routing in place yet, so far as Gamma's concerned?

3 A. No.

4 Q. Nothing signed?

5 A. There is nothing signed but that my relationship with the other CPs involved is slightly
6 more amicable than that and it doesn't -- we don't wait necessarily for a signature to
7 initiate projects.

8 Q. All you can go for, at the end of the day, is your contractual entitlement; isn't that right,
9 Mr Farmer?

10 A. There is, however, we are not in a position where we would want to exercise any rights
11 under any unsigned contract against the other parties.

12 Q. I see. One of the attractions of direct routing at an industry level is it saves costs?

13 A. Yes.

14 Q. An agreement such as this, the agreements and discussions and negotiations that you
15 are having at the moment is the provision of the spoils to be agreed upon?

16 A. Yes.

17 Q. That takes time?

18 A. That does take time and I would characterise where I have got with my opposite
19 numbers with the two major CPs we are doing with this as we have shaken hands on
20 the terms by which we all do it.

21 Q. Could you turn please to bundle BT 3, tab 33. Do you have it?

22 A. Yes.

23 Q. This, for the Tribunal's note, this is the concluding statement made by Ofcom in 2007
24 on the subject of telephone number portability. You refer to this statement,

1 Mr Farmer, at paragraph 76 of your witness statement; that's right, isn't it?

2 A. Yes.

3 Q. Let's just have little look at it. If you turn the page and see section 1, it's executive
4 summary, there's a background section first of all. Within that, could you go to
5 paragraph 1.4?

6 A. Yes.

7 Q. And that explains that, in November 2006, Ofcom had consulted on proposals to
8 introduce a common database?

9 A. Yes.

10 Q. And at that stage it concluded that that was appropriate and so it consulted on
11 a number of options for deploying the common database in July 2007, we see that at
12 paragraph 1.5, don't we?

13 A. Yes.

14 Q. Then on page 16, section 3 which sets out Ofcom's reasoning and conclusions.
15 Ofcom starts, as is its habit, by setting out the views of stakeholders and then
16 Ofcom's responses to those views, that's at page 18. The first issue is the merits of a
17 centralised common database. Then on page 21, three-quarters of the way down,
18 Ofcom sets out respondent's views on costs and timeframes for deploying a --

19 A. I missed the reference, sorry.

20 Q. Page 21, have you got that? We are just trying to orientate ourselves in this
21 document, page 21, do you see that heading "Uncertainty about Costs and
22 Timeframes"?

23 A. Yes.

24 Q. So Ofcom success out the respondent's consultees' views on those. Then at page 22,

1 paragraph 3.36 to 3.37, we have BT's views recorded, do you see that?

2 A. Yes.

3 Q. I want to refresh your memory of that, if you would like to read those paragraphs.

4 (Pause).

5 A. Okay.

6 Q. So at 3.37 Ofcom is there summarising BT's argument that Ofcom had not addressed

7 in its analysis the unequal distribution of the costs and benefits between fixed and

8 mobile networks from the deployment of a common database, do you see that in first

9 sentence of paragraph 3.37?

10 A. Yes.

11 Q. The last sentence of that paragraph is specifically addressing the benefits of a common

12 database, isn't it?

13 A. The last sentence of paragraph 3.37?

14 Q. Yes?

15 A. The one that says "BT's, no net benefits from it". I want to make sure I am on the

16 right sentence.

17 Q. Paragraph 3.37, last sentence of that paragraph:

18 "BT propose ...(Reading to the words)...unequal distribution of costs and

19 benefits"?

20 A. Okay, I apologise, I missed that as a sentence.

21 Q. The paragraph says nothing about BT's view as to the commercial viability of direct

22 routing itself, does it?

23 A. That final sentence, no, it expresses a view about the funding of such a database.

24 Q. The paragraph as whole doesn't say anything about BT's view as to the commercial

1 viability of direct routing itself, does it?

2 **A.** I read the penultimate sentence, where it says "It will experience no significant gross
3 benefits and potentially negative net benefits".

4 **Q.** Yes.

5 **A.** "As can be interpreted as taking a view on that".

6 **Q.** Reading that in context:

7 "No significant gross benefits and potentially negative net benefits."

8 That is in the context of specifically addressing that argument about an equal
9 distribution of costs and benefits; it's not expressing a view as to the commercial
10 viability of direct routing itself?

11 **A.** On the presumption of a certain split of fixed mobile funding, yes, I see where you're
12 coming from.

13 **Q.** Lastly, you gave some evidence earlier in answer to questions from Ms Love to which
14 you said that BT hadn't yet provided you with the APCC information for this year;
15 that's right isn't it?

16 **A.** Yes.

17 **Q.** Ofcom has determined that rates must now be based on pure LRIC, hasn't it?

18 **A.** Yes.

19 **Q.** Subject to the outcome obviously of this appeal?

20 **A.** Yes and subject retrospectively to the outcome of a separate appeal, yes.

21 **Q.** Sorry?

22 **A.** For the period January 2015 to June 2015 that is contingent upon a separate appeal.

23 **Q.** Yes, that's right. Given that those rates would be at pure LRIC, providing those rates
24 would allow you and other CPs to reverse engineer, identify, the LRIC floor rates for

- 1 other competitive services such as ITC and LTC, wouldn't it?
- 2 **A.** If the LRIC rates are provided for each group potentially that information would be
3 useful, yes.
- 4 **Q.** We have seen how you can reverse engineer ITC and LTC rates from the prices of
5 composite services, we've seen that in other evidence, it has been done by Mr Perry,
6 it has been done by Mr Morden. So providing that information at this stage would
7 allow you to obtain that pure LRIC information. In other words, the actual costs to
8 BT of providing those services?
- 9 **A.** Yes, however there was a period where BT was publishing the LRIC and its regulated
10 financial statements, so some of that information may already be in the public
11 domain. Off the top of my head, I would be able to tell you which or what, but BT
12 did voluntarily publish that information along with DSAC and fully allocated cost,
13 for a period.
- 14 **Q.** That information could be used in other markets such as the competitive unregulated
15 market for ordinary non-ported ITC and LT, couldn't it?
- 16 **A.** Yes.
- 17 **Q.** That could drive a coach and horses through the operation of that competitive market,
18 wouldn't it? It would wholly undermine BT's negotiating position with every CP on
19 the market; that's right, isn't it?
- 20 **A.** With respect to just the pricing for that service, yes, I can see why BT would have
21 a problem.
- 22 **Q.** Including transit markets?
- 23 **A.** Yes.
- 24 **Q.** Including call termination markets?

- 1 A. Over and above the fixed termination rate which is regulated.
- 2 Q. Exactly, people would want to drop off the call that much sooner, wouldn't they?
- 3 A. If it was commercially viable, yes.
- 4 Q. If they could identify the LRIC rate, identify precisely what it was and say, come on,
5 that's your bottom line, isn't it.
- 6 A. That is your bottom line without any common costs included, which BT still has to
7 recover, yes.
- 8 Q. That's right. That's a very significant piece of commercial information for someone
9 like you to have, Mr Farmer I bet you can't wait?
- 10 A. I have to admit I would quite enjoy having it for the reasons you have outlined.
- 11 Q. Can you see how that might be disadvantageous overall to the operation of a
12 competitive market?
- 13 A. I could counter to say that a lowering of my wholesale prices may be advantageous to
14 my consumers by those prices being passed, there is a welfare analysis that leads
15 from it. It's not necessarily that simple. However, if I were BT, I would be
16 uncomfortable for those reasons. However, we still have not had a file outlining the
17 volumes between the groups which would inform some decision-making without
18 specifically the LRIC of each component.
- 19 Q. Mr Farmer, thank you very much for answering the questions?

20 **THE CHAIRMAN:** Ms Love.

21 **Re-examination by MS LOVE**

22 **MS LOVE:** One very quick point in re-examination. Mr Farmer, towards the outset of
23 the questions from Mr Palmer, you discussed the question of third-party hosting and
24 transit service. You explained that Gamma sells a bundle of products and services

1 to those CPs who provide hosting. Just to be absolutely clear, when porting services
2 are provided as part of that bundle, is it the case that you are buying into switch
3 conveyance from BT or self-supplying?

4 **A.** We are buying it from BT.

5 **Q.** Thank you.

6 **THE CHAIRMAN:** Thank you very much, Mr Farmer.

7 **(The witness withdrew)**

8 **MR HOLMES:** Sir, that now concludes the factual evidence. Given the hour, and
9 given also the relevance of some of the factual materials to the experts' evidence,
10 subject to the Tribunals' views, it may be more sensible to begin cross-examination
11 of the experts tomorrow morning if that suited the Tribunal. I think, speaking
12 personally, we are in fairly good shape in terms of the timetable.

13 **THE CHAIRMAN:** That seems sensible, Mr Holmes and we will proceed in that way.

14 **(4.15 pm)**

15 **(The court adjourned until 10.30 am on Tuesday, 24th May 2016)**

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