

SPECIAL TRIBUNAL FOR LEBANON

المحكمة الخاصة بلبنان

TRIBUNAL SPÉCIAL POUR LE LIBAN

**THE TRIAL CHAMBER**  
**SPECIAL TRIBUNAL FOR LEBANON**

**Case No:** STL-11-01/T/TC

**Before:** Judge David Re, Presiding  
 Judge Janet Nosworthy  
 Judge Micheline Braidy  
 Judge Walid Akoum, Alternate Judge  
 Judge Nicola Lettieri, Alternate Judge

**Registrar:** Mr Daryl Mundis

**Date:** 2 June 2017

**Original language:** English

**Classification:** Public

**THE PROSECUTOR**  
 v.  
**SALIM JAMIL AYYASH**  
**HASSAN HABIB MERHI**  
**HUSSEIN HASSAN ONEISSI**  
**ASSAD HASSAN SABRA**

**DECISION ALLOWING PROSECUTION ANALYST ANDREW DONALDSON  
 TO PROVIDE OPINION EVIDENCE**

**Office of the Prosecutor:**  
 Mr Norman Farrell & Mr Alexander Hugh  
 Milne

**Legal Representatives of  
 Participating Victims:**  
 Mr Peter Haynes, Mr Mohammad F. Mattar  
 & Ms Nada Abdelsater-Abusamra

**Counsel for Mr Salim Jamil Ayyash:**  
 Mr Emile Aoun, Mr Thomas Hannis & Mr Chad  
 Mair

**Counsel for Mr Hassan Habib Merhi:**  
 Mr Mohamed Aouini, Ms Dorothee Le Fraper du  
 Hellen & Mr Jad Khalil

**Counsel for Mr Hussein Hassan Oneissi:**  
 Mr Vincent Courcelle-Labrousse, Mr Yasser  
 Hassan & Ms Natalie von Wistinghausen

**Counsel for Mr Assad Hassan Sabra:**  
 Mr David Young, Mr Geoffrey Roberts  
 Sarah Bafadhel



## INTRODUCTION

1. Counsel acting for the Accused, Mr Salim Jamil Ayyash and Mr Hassan Habib Merhi, made a belated application to prevent the Prosecution from calling non-expert opinion evidence attributing mobile telephone usage to the two Accused and the former Accused, Mr Mustafa Amine Badreddine. The Trial Chamber will allow the Prosecution to lead the evidence but the witness, Mr Andrew Donaldson, must properly explain his methodology and qualify his opinions. The Trial Chamber will then carefully scrutinise any such opinion and, in evaluating his evidence as a whole, give it the appropriate weight.

### *The Prosecution's case and the issues for determination*

2. The Prosecution's case against the four Accused relies upon it proving beyond reasonable doubt that the four Accused, and the former Accused, Mr Badreddine, used specified mobile telephones—as pleaded in the amended consolidated indictment—in the attack against the former Lebanese Prime Minister, Mr Rafik Hariri, in Beirut, Lebanon, on 14 February 2005. These are referred to as colour-coded networks—Yellow, Blue, Red and Green, to which are added a group of 'Purple phones'.

3. The eight Red Network mobiles were allegedly used in the surveillance of Mr Hariri and six were allegedly used by an assassination team. The Green Network consisted of three mobiles operating in a closed group—allegedly used by Mr Ayyash, Mr Badreddine and Mr Merhi—that coordinated and monitored the attack. The Blue Network was 18 mobiles used in preparations for the attack, including surveillance of Mr Hariri; six of these mobiles were also used by the assassination team using the Red Network mobiles. The Yellow Network was comprised of other four mobiles used in preparation for the attack, including in surveillance. The Purple phones were three mobiles used to coordinate a false claim of responsibility for the attack, made shortly thereafter.<sup>1</sup>

4. Broadly speaking, the telecommunications part of the case hinges upon the Prosecution proving through documents, witness evidence, contact profiles and geographical analysis of call patterns, that the four Accused and Mr Badreddine, were using specified personal mobiles phones (PMPs). It must additionally prove in the case of Mr Ayyash, Mr Merhi and Mr Badreddine that these personal mobiles were 'co-locating' with the network

---

<sup>1</sup> F2720, Amended consolidated indictment, 12 July 2016, paras 14 (a) to (e).

mobiles that were allegedly used in the attack. This involves examining cell site evidence, based upon telecommunications call data records, and the predicted best server coverage of a cell used by two or more mobiles.

5. For the other two Accused, Mr Hassan Hussein Oneissi and Mr Assad Hassan Sabra, the Prosecution must prove through documents, witness statements and analysing the geographical profile of calls that they used their own personal mobiles (pleaded respectively as Purple 095 and Purple 018) in relation to the attack.

6. The Prosecution must therefore first establish that the personal mobiles can be attributed to Mr Ayyash, Mr Merhi and Mr Badreddine, and then that these mobiles co-located with the network mobiles, and thus that the network mobiles can be attributed to the three. Co-location is not relevant in Mr Oneissi's and Mr Sabra's cases.

7. Prosecution staff have analysed thousands of calls between many mobile telephones. A Prosecution analyst, Mr Donaldson (Witness PRH230), provides opinion evidence for the Prosecution attributing usage of both the personal and network mobiles to the four Accused and to Mr Badreddine. To do this, he prepared five 'attribution' reports analysing and linking many pieces of Prosecution evidence to the Accused and Mr Badreddine, to prove that they were using the specified mobiles.

8. His testimony is a form of summary evidence, which is sometimes accepted in international criminal courts and tribunals, whereby an analyst pieces together many individual strands of evidence. Mr Donaldson, however, takes it a step further and provides his opinions as to attribution of the mobiles to the Accused and Mr Badreddine.

9. Mr Donaldson's five reports analyse numerous Prosecution exhibits, including witness statements and testimony, extended family trees, extracts from official Lebanese records, and documents such as electricity bills, university records, medical records and telecommunications records. These include telephone subscriber notes and SMS<sup>2</sup> text content. Many documents link names, including those of the Accused and Mr Badreddine, to numbers.

---

<sup>2</sup> Short Message Service.

Mr Donaldson will also use PowerPoint slides, as demonstrative evidence, to help the Trial Chamber follow his evidence.<sup>3</sup>

10. Mr Donaldson also reviewed the Prosecution's cell site evidence to conclude that a single user, either Mr Ayyash, Mr Merhi or Mr Badreddine, was using multiple mobiles, including their personal mobiles and the 'network' mobiles pleaded in the amended consolidated indictment.<sup>4</sup> He used his knowledge of cell site analysis<sup>5</sup> to conclude that the mobiles were 'co-locating'. This is defined below.

11. Mr Donaldson was scheduled and expected to testify sometime in the week of 1 May 2017.<sup>6</sup> However, a mere ten days before this, on Friday 21 April 2017, counsel for Mr Ayyash and Mr Merhi filed a joint motion asking the Trial Chamber to preclude the Prosecution from leading evidence from Mr Donaldson on mobile telephone 'co-location'.<sup>7</sup> Defence counsel ask the Trial Chamber to exercise its discretion under Rule 149 (D) of the Special Tribunal's Rules of Procedure and Evidence to exclude the evidence.<sup>8</sup>

12. The Defence motion sought the exclusion from evidence of 183 paragraphs in total from three of the five attribution reports—those relating to Mr Ayyash, Mr Badreddine and Mr Merhi—which mention co-location. Broken down, these are 89 paragraphs in the Ayyash attribution report, plus its annex F (comprising 83 pages of 'co-location maps'),<sup>9</sup> 48 paragraphs from the Merhi attribution report, three paragraphs from a statement of Mr

---

<sup>3</sup> See, STL, *Prosecutor v. Ayyash, Merhi, Oneissi and Sabra*, STL-11-01/T/TC, F3125, Decision Denying Joint Defence Motion to Prevent the Prosecution Using Demonstrative Evidence (PowerPoint slides) during Mr Andrew Donaldson's Testimony, 5 May 2017.

<sup>4</sup> This pleads the use of closed networks, referred to as Yellow, Blue, Red and Green networks and, additionally, 'Purple phones', which are alleged to be personal mobiles; see F2720, Amended consolidated indictment, 12 July 2016, paras 14-19.

<sup>5</sup> This is a forensic technique 'employed to identify the approximate position of the user of a mobile telephone based on the cell site to which it connects during a call', F2793, Reasons for Decision Admitting Prosecution's cell site evidence, 26 October 2016, para. 10 ('Reasons for Decision Admitting Prosecution's Cell Site Evidence'); see also F2797, Decision on Four Prosecution Motions on Call Sequence Tables related to Salim Jamil Ayyash, Hassan Habib Merhi, Assad Hassan Sabra, Mustafa Amine Badreddine, and Five Witness Statements, 31 October 2016, paras 7-8.

<sup>6</sup> F3096, Prosecution Witness Schedule for the Weeks Commencing 24 April & 1 May 2017, 21 April 2017.

<sup>7</sup> F3098, Joint Defence Motion *In Limine* Regarding Expert Evidence from Prosecution Witness PRH230, 21 April 2017, public with confidential annexes A, B, C, D. It was distributed to the Trial Chamber, Parties and Legal Representatives of Participating Victims on 24 April 2017.

<sup>8</sup> Rule 149 (D) provides a Chamber with discretion to 'exclude evidence if its probative value is substantially outweighed by the need to ensure a fair trial'.

<sup>9</sup> These co-location maps are dated between 18 December 2004 and 15 February 2005 and are in the form of map extracts from the Prosecution's electronic presentation of evidence software showing, for example, on 18 December 2004, between 10:10:06 to 17:31:13, cells used by personal mobile 935, cells used by Yellow 294, cells used by both, the Ayyash family residence in Hadath, and the time since the previously mapped calls.

Donaldson, dated 13 October 2016, which relates to Mr Merhi, and 46 paragraphs from the Badreddine attribution report and its annex.

13. Mr Donaldson's reports, in their original and updated versions, were disclosed to the Defence on varying dates in 2013, 2014, 2016 and 2017.<sup>10</sup> The Trial Chamber shortened the time for a response, and the Prosecution filed a response which was in essence confined to answering the Defence motion's legal arguments, to which the Defence replied.<sup>11</sup> No proper reason was provided for the late filing of a motion of this significance. In an attempt not to delay the hearings, the Trial Chamber, on 4 May 2017, deferred deciding the motion until hearing from Mr Donaldson himself in a *voir dire* as to his qualifications and methodology.<sup>12</sup>

14. Mr Donaldson provided this evidence in a *voir dire* hearing held on 8 May 2017.<sup>13</sup> The present decision is a prerequisite to Mr Donaldson's testimony, and to receiving his reports into evidence. The Trial Chamber had to decide this issue before proceeding with Mr Donaldson's evidence-in-chief.

15. The issues for determination are whether Mr Donaldson—who has not been declared an expert—may provide opinion evidence on co-location and, if so, to what extent, or whether the Trial Chamber should exclude any evidence from Mr Donaldson on the issue. And further, whether only someone qualified as an expert under Rule 161<sup>14</sup> may provide an opinion on co-

---

<sup>10</sup> Initially, Mr Donaldson prepared four investigator's notes in October and November 2012 related to Mr Ayyash, Mr Badreddine, Mr Oneissi and Mr Sabra, and an indictment report related to Mr Merhi in July 2013. The investigator's notes were disclosed to the Defence on 26 April 2013 and 12 September 2013, and the indictment report was disclosed on 30 September 2013 and on 31 October 2014. Subsequently, Mr Donaldson updated these reports, titled all five as 'Evidence of Telephone Attribution' and distinguished them by adding the names of the four Accused and Mr Badreddine and noting the updates as versions 2 and 3. Version 2 of attribution reports, related to Mr Ayyash, Mr Badreddine, Mr Oneissi and Mr Sabra were disclosed to the Defence by the Prosecution on 21 February 2014, and two of them, the reports relating to Mr Oneissi and Mr Sabra, were re-disclosed on 31 October 2014. Versions 3 of attribution reports related to Mr Ayyash, Mr Badreddine, Mr Oneissi and Mr Sabra were disclosed on 10 February, 20 June and 15 July 2016. Version 3 of the report related to Mr Merhi was disclosed on 14 April 2014, and version 4 of the same on 10 February, 20 June and 15 July 2016. Mr Donaldson updated the attribution reports related to Mr Ayyash and Mr Badreddine, these are version 4 of the respective reports, which were disclosed on 16 and 28 February 2017, respectively.

<sup>11</sup> Order Setting a Deadline for Filing of a Response to Joined Defence Counsel's Motion of 21 April 2017 (F3098), transcript of 26 April 2017, pp 8-9; F3115, Response to Joint Defence Motion Regarding Co-Location Evidence from Witness PRH230, 3 May 2017 ('Prosecution response'); F3118, Joint Defence Reply to Reply to Motion *In Limine* Regarding Expert Evidence from Prosecution Witness PRH230, 4 May 2017 ('Defence reply').

<sup>12</sup> F3126, Interim Decision on Joint Defence Motion *In Limine* to Exclude Evidence of Analyst Mr Andrew Donaldson, 4 May 2017 ('Interim Decision on Mr Donaldson's Evidence').

<sup>13</sup> Transcript of 8 May 2017, pp 20-79.

<sup>14</sup> Rule 161 'Testimony of expert witnesses', sets out a disclosure regime for reports of expert witnesses and for notices from the responding parties as to whether they accept the report, wish to cross-examine the witness or challenge the expert's qualifications or the relevance of any part of a report.

location, that is, whether co-location is so specialised that only a qualified expert is entitled to provide a probative opinion on the topic. To determine this, it is necessary to examine the ambit of his proposed evidence—which broadly includes Mr Donaldson’s own experience—and to contrast it with that of Mr John Edward Philips (Witness PRH435), whose expertise on this topic is uncontested.

### **MR J. E. PHILIPS’ EXPERT QUALIFICATIONS AND EVIDENCE**

16. The Trial Chamber has accepted expert evidence from Mr Philips on cell site analysis and co-location.<sup>15</sup> On the Prosecution’s application, the Trial Chamber, under Rule 161, declared Mr Philips an expert in the field of telecommunications and cell site analysis.<sup>16</sup> Counsel acting for the former Accused, Mr Badreddine, challenged Mr Philips’ qualifications, but only in relation to GSM<sup>17</sup> technology.<sup>18</sup> Following a *voir dire* hearing on this point, the Trial Chamber then also declared him an expert ‘on the workings of GSM generally as applied to cell site analysis’.<sup>19</sup>

17. The Trial Chamber based its decisions on Mr Philips’ *curriculum vitae* listing his education and professional experience, his evidence on his working experience in designing and developing GSM technology,<sup>20</sup> and his report ‘An Introduction to Cell Site Analysis as applied to GSM Networks’.<sup>21</sup>

18. More specifically, Mr Philips has a first class honours degree in electrical engineering,<sup>22</sup> and 31 years of experience as a chartered engineer. His career has involved the development of radio networks and mobile telecommunications technology nationally and internationally<sup>23</sup> and, since 2001, cell site analysis. He has also lectured law enforcement authorities and the legal profession, and given expert evidence in courts in the United Kingdom in many high profile cases such as murder, terrorism and armed robbery.

---

<sup>15</sup> An ‘expert’ is ‘a person whom by virtue of some specialised knowledge, skill or training can assist the trier of fact to understand or determine an issue in dispute’, see F1610, Decision on Expert Witnesses PRH120, Professor Fouad, Hussein Ayoub, and Expert Witnesses PRH508, Dr Issam Mansour, 7 July 2014, para. 6.

<sup>16</sup> Transcript of 18 August 2015, p. 8.

<sup>17</sup> Global system for mobile telecommunications.

<sup>18</sup> Transcript of 18 August 2015, pp 4-8.

<sup>19</sup> Transcript of 18 August 2015, pp 38-39.

<sup>20</sup> Transcript of 18 August 2015, pp 12-38.

<sup>21</sup> Exhibit P549, An Introduction to Cell Site Analysis as applied to GSM networks, 24 September 2012.

<sup>22</sup> In 1971, from the Rugby College of Engineering Technology which is now the University of Coventry; see exhibit P549.

<sup>23</sup> From 1971 he worked at Marconi Communication Systems Ltd as a development engineer designing mobile radio products and systems; exhibit P549.

Additionally, he has published and presented technical papers on, among other topics, paging terminals, mobile communications, cell site analysis and the examination of mobiles.<sup>24</sup>

19. As the Trial Chamber found in declaring him an expert, he is well qualified to provide an expert opinion on cell site analysis and co-location.

*What is co-location? Mr J. E. Philips' analysis and evidence*

20. The Trial Chamber heard and received extensive evidence from Mr Philips specifically on co-location. In his report, 'An Introduction to Cell Site Analysis as applied to GSM Networks', Mr Philips stated that co-location is;

a term attributed to 2 (or more) mobile phones being cell sited in the same area as one another and/or travelling in consonance, i.e. travelling over the same route over the same time period such that the users of the mobile phones could be together.

21. These mobile handsets would activate the same cell site or cell with similar coverage, or an adjacent cell within the same time window such that they could be together.<sup>25</sup> In his testimony, Mr Philips further defined co-location as a forensic technique—based upon analysing telecommunications call data records and geography—used to prove that a single person was simultaneously using different mobile handsets.<sup>26</sup> These definitions appear not to be in dispute in the proceedings.

22. In his evidence, Mr Philips used slides to illustrate his methodology in drawing conclusions about whether mobiles could be co-located. He used several criteria. These included 'time criteria', for example, analysing calls occurring within five minutes of each other or, alternatively, based upon Lebanon's size, within 60 minutes.<sup>27</sup> He also used 'distance criteria', analysing calls in cells providing common coverage, within the same cell, in overlapping cells, in contiguous cells, or in cells which are apart.<sup>28</sup> Another criterion is an 'end cell review', which involves analysing the cell used at the end of a mobile call, which assists in determining the movement of a mobile from the start to the end of a call.<sup>29</sup> Mr

---

<sup>24</sup> Exhibit P549.

<sup>25</sup> Exhibit P549, paras 10.4.9.1.1.1, 10.4.9.1.1.7. *See also*, transcript of 19 April 2017, p. 93.

<sup>26</sup> Transcript of 19 April 2017, p. 85. *See also*, definition in exhibit P1111, Demonstration of single person use of multiple mobile phones using Cell Site Analysis Suspect 1, J. E. Philips, dated 19 December 2014, paras 3.1.1.3-3.1.1.4.

<sup>27</sup> Exhibit P1935, Single User Analysis of Multiple Mobile Phones PowerPoint presentation, slides 21-23.

<sup>28</sup> Exhibit P1935, slides 25-41.

<sup>29</sup> Exhibit P1935, slides 494-516.

Philips relied upon maps of cell coverage supplied by the two Lebanese mobile telecommunications providers, Alfa and MTC Touch, known as best predicted server coverage maps,<sup>30</sup> to perform his geographical analysis. Mr Philips also defined ‘best server coverage’ as;

the predicted area over which any cell is likely to provide the strongest signal and, since GSM networks work on the basis that the strongest cell will normally be used for a call, the mobile phone using a cell is most likely to be located within the best server coverage of that call.<sup>31</sup>

23. In his cell site analysis report, Mr Philips explained the techniques used to determine whether mobiles were co-locating.<sup>32</sup> Tests or indications could include calls between mobiles, outgoing calls at the same time and significant overlapping of incoming or outgoing and incoming calls involving all targeted mobiles and,

Conversely, if there are no calls between the mobile phones and few overlapping calls, and the mobile phones are ‘co-located’ over the period of interest, there is every possibility that they are being used by a single person.<sup>33</sup>

24. Mr Philips also explained how travel patterns can be used to determine who is using a mobile. For example, someone could have two or more mobiles, but use only one of them over any defined period, such as a day, a part of a day or several days. This can reveal a common travel pattern of a mobile, and with commonly called numbers, can be used to attribute a mobile to a single user. But, in this example, it is not possible to determine co-location or projected co-location of more than one of the mobiles.<sup>34</sup>

25. Mr Philips testified that he could not determine co-location based on call data records alone. He explained that many factors must be considered in determining whether two

---

<sup>30</sup> In F2793, Reasons for Decision Admitting Prosecution’s Cell Site Evidence of 26 October 2016, the Trial Chamber held, ‘These illustrate the surface area over which each cell is predicted to emit the strongest signal compared with neighbouring cells. Coverage may overlap into adjacent or other cell sectors. This may depend upon the location from where in a cell sector a call is made, and can be influenced by variables such as height, topography and buildings. The evidence suggested that shape files have an accuracy of around 60 to 70 per cent’, at para. 6.

<sup>31</sup> Exhibit P1111, para. 5.1.1.2.

<sup>32</sup> Exhibit P549, para. 10.4.9.1.1.3.

<sup>33</sup> Exhibit P1111, paras 3.1.2.4-3.1.2.5; exhibit P549, para. 10.4.9.1.3.2.

<sup>34</sup> P549, paras 10.4.9.2.1.1-10.4.9.2.1.5.



mobiles have a single user, such as geographical use and calling patterns. The longer the period of analysis, the better.<sup>35</sup> He stated;

So we have to see more and different examples. The more examples we have and the more different examples are, particularly in the terms of movement, the more the case for a single user becomes. We have to try and remove the element of coincidence.<sup>36</sup>

26. Based on evaluating any two successive calls—that Mr Philips refers to as ‘adjacent calls’<sup>37</sup>—he divided determining the *possibility* of co-location into four categories.<sup>38</sup> He described these as ‘could be co-located’, ‘would not preclude co-location’, ‘may preclude co-location’ and ‘would preclude co-location’.<sup>39</sup>

27. Mr Philips relied on call data records combined with a geographical analysis (or ‘cell utilisation’). Using this method, he did not categorically conclude ‘co-location’ of mobiles in relation to any of the Accused or Mr Badreddine. Rather, he stated that there is a high degree of *probability* of co-location when the element of coincidence is removed by thoroughly analysing a multiplicity of examples, in combining potential co-location and movement in concert.<sup>40</sup> Crucially, he stated that, using call data records alone, he could not conclude with certainty that there was co-location,<sup>41</sup>

You never actually know whether two mobiles are co-located. Not from cell site analysis. You may deduce but you can never be sure. On the other hand you can be certain when they’re not co-located. So when we use the term ‘co-located’, it always has to be qualified by the use of the word “could”. It’s not a certainty. It’s a possibility.<sup>42</sup>

28. As examples, he testified that two mobiles could be co-located if they activated the same cell or, if they are in different networks, they activate overlapping cells, indicating that they are in the same area. Co-location would not be precluded where two mobiles activate

---

<sup>35</sup> Transcript of 20 April 2017, pp 93-99.

<sup>36</sup> Transcript of 19 April 2017, p. 60.

<sup>37</sup> Mr Philips’ wording reflects that the calls in question are adjacent to one another in the extracts of the call data records he analysed. *See*, for example, yellow highlights on the extract of call data record in exhibit P1935, slide 59.

<sup>38</sup> Transcript of 20 April 2017, pp 20, 36-37, 57-59.

<sup>39</sup> Transcript of 20 April 2017, pp 36-37; exhibit P1935, slide 42. *See also* transcript of 26 April 2017, pp 75-78.

<sup>40</sup> Transcript of 20 April 2017, p. 60.

<sup>41</sup> Transcript of 20 April 2017, pp 20, 60-61.

<sup>42</sup> Transcript of 20 April 2017, p. 20.

different cells or non-overlapping cells, as long as it is possible to travel the distance between the times of the calls.<sup>43</sup>

29. Conversely, Mr Philips provided practical examples of where co-location would be precluded. This, he called ‘dislocation’, defining it as a geographical separation that could not be possibly travelled in the time between the calls. For example, a difference of a minute between a call from one mobile in Beirut and a call from the other mobile, purportedly with the same user, in Tripoli. According to Mr Philips—and indeed simple logic—they are definitely ‘dislocated’ (Beirut and Tripoli are about 80 kilometres apart by road).<sup>44</sup>

30. Further, co-location may be precluded if there is a *possibility*—but not necessarily a conclusion—of dislocation between mobiles purportedly used by a single person.<sup>45</sup> As an example, Mr Philips referred to calls made eight seconds apart—by different mobiles that were attributed to a common user by the Prosecution—that activated two cells<sup>46</sup> whose masts are almost five kilometres apart, but face each other across a bay.<sup>47</sup> According to Mr Philips, this may preclude co-location because it is unlikely that the distance could be travelled within eight seconds. On the other hand, however, co-location may not in fact be precluded because signals may travel unimpeded across water, outside the network’s predicted best server coverage. He described this example as an ‘anomaly’.<sup>48</sup> This illustrates the complexity of determining with precision the location of a mobile telephone, which can become more problematic when a mobile is travelling in a vehicle.

31. In this respect, Mr Philips explained, for example, how two vehicles travelling in opposite directions ‘could be using cells for calls where, if they were static, do not provide

---

<sup>43</sup> Transcript of 20 April 2017, pp 36-37; transcript of 21 April 2017, pp 48-49.

<sup>44</sup> Transcript of 20 April 2017, pp 36-37; transcript of 21 April 2017, pp 48-49.

<sup>45</sup> Transcript of 20 April 2017, pp 36-37. For the definition of dislocation, *see* transcript of 21 April 2017, pp 48-49.

<sup>46</sup> KASLIK\_A (MTC) and TABARJ2 (Alfa), two cells situated, respectively, about 15 and 20 km north of Beirut.

<sup>47</sup> Transcript of 21 April 2017, pp 17-21; exhibit P1935, slides 206-208; exhibit P1940, OTP-EPE snapshot 119 in relation to slides 206 and 207 of P1935 showing the distance between TABARJ2 and Kaslik\_A, 21 April 2017; exhibit P1937, Demonstration of single person use of multiple mobile phones using Cell Site Analysis Suspect 2, J. E. Philips, dated 6 November 2012, paras 7.4, 7.4.1.5. On 1 October 2004, TABARJ2 was activated by SMP944 (‘sequential mobile phone’) at 00:48:19 and Kaslik\_A at 00:48:27 by PMP663 (‘personal mobile phone’). The Prosecution attributes both mobiles to Mr Badreddine.

<sup>48</sup> His report states, ‘the best server coverage from both these cells is extensive and fragmented away from the main best server coverage areas, some of which can be seen to provide best server coverage areas very close together [...]. The 2 cells also ‘face’ one another across water where there is limited path loss and so the signals from both cells may extend further than anticipated’, exhibit P1937, para. 7.4.1.5.

best server coverage and would not be used for calls’.<sup>49</sup> Put simply, someone standing in the street could connect to the predicted best cell. The two vehicles passing the pedestrian, however, could still be connected to different more distant cells that they had connected to before while driving through other best server coverage areas.

32. Further, he explained how, despite best server coverage maps predicting that a mobile should connect to a specified cell in a certain location, such as a tall building, a mobile could in fact connect to different cells—possibly distant—depending upon where it was in the building, such as on a particular side or at its top or bottom.<sup>50</sup>

33. Mr Philips also drew conclusions in relation to the two Accused and Mr Badreddine. To summarise very briefly—in relation to Mr Badreddine (or ‘Suspect 2’)—Mr Philips concluded, after reviewing the usage of four mobiles pleaded in the amended consolidated indictment, ‘Over the entire period under review, all mobile phones are consistent with being used *by a single person* with no exceptions.’<sup>51</sup>

34. Of Mr Merhi (referred to as ‘Suspect 3’), he concluded—in relation to Green 071 and Purple 231—that they ‘are consistent with being used by the same person over the period analysed and this conclusion has been marginally reinforced by the addition of the end cell information...’.<sup>52</sup>

35. Regarding Mr Ayyash (referred to as ‘Suspect 1’) he concluded—in relation to seven mobiles, namely Blue 233, Yellow 294, Green 300, Red 741, and personal mobiles 170, 091 and 935—that Green 300 ‘is consistent with being used by the same user as all the other mobile phones—on an individual mobile phone basis’. And, ‘After January 4<sup>th</sup>, all mobiles are consistent with being used *by a single person*’ (with two specified exceptions on 28 January and 2 February 2005).<sup>53</sup>

36. Mr Philips also concluded that the three Green network mobiles—alleged to have been used by Mr Badreddine, Mr Ayyash and Mr Merhi—were ‘mission phones’, namely,

---

<sup>49</sup> See, e.g. exhibit P549, para. 6.5.3.2.1.26 under the heading ‘Movement’.

<sup>50</sup> See e.g. exhibit P549, ‘In-building coverage’ and ‘Elevation’, paras 6.5.3.4-6.5.3.5.1.12.

<sup>51</sup> Exhibit P1937, p. 3.

<sup>52</sup> Exhibit P1938, Demonstration of single person use of multiple mobile phones using Cell Site Analysis (with end cells) Suspect 3, dated 5 September 2014, p. 3.

<sup>53</sup> Exhibit P1111, pp 3-4.

a mobile phone which normally operates within a closed group of mobile phones (but may operate as a discrete mobile phone) which have common characteristics including operation over a very limited period and normally relates to involvement in a specific, and usually illegal, mission.<sup>54</sup>

37. He concluded, after examining multiple call sequence tables relating to specified mobiles and the networks' best predicted coverage maps, that the 15 pleaded Blue network mobiles appeared to provide a general support group function, and that six of these were paired with the six Red network mobiles. Further, a group of three mobiles in the Green network emerged. The Green mobiles operated in an 'open triangle' with Green 023 (Badreddine) at the apex and Green 071 (Merhi) and Green 300 (Ayyash) at the bottom, only ever contacting Green 023. Further, 'single user analysis of Green 300 showed co-user use with both Blue 233 and Red 741'.<sup>55</sup>

38. To summarise, Mr Philips explained in great detail his methodology and conclusions. He would not definitively conclude, on the basis of cell site analysis alone, that the mobiles were co-located. His conclusions, rather, were that, based on his assessment of 'could be co-located', the mobiles' usage was consistent with a single user. He could not and did not categorically state in his courtroom testimony that they were being used by a single user.

### **MR DONALDSON'S QUALIFICATIONS, EXPERIENCE AND VOIR DIRE EVIDENCE**

39. By contrast with Mr Philips, Mr Donaldson has 17 years of working experience in data analysis, of which almost ten years concern Lebanese call data records. He has an undergraduate law degree, but has not qualified as a lawyer.<sup>56</sup> Mr Donaldson has also received some training in cell site analysis—in 2006 and in 2010—the latter focusing on cell dump analysis and attribution.<sup>57</sup>

---

<sup>54</sup> Exhibit P1116, 'Mission Phones? 3140023, 3150071, 3159300' dated 3 May 2015, p. 2.

<sup>55</sup> Exhibit P1117, 'Common Mission Phones', dated 29 June 2015, pp 2-4.

<sup>56</sup> Exhibit P1947, and transcript of 8 May 2017, pp 22-29.

<sup>57</sup> 'Cell dumps', according to Mr Donaldson are 'taking all of the call data records from a set of cell towers so that you have all the information about the traffic that went through them on a given time', transcript of 8 May 2017, p. 35. And, according to Mr Philips, 'In order to find out whether this was the case, the police will determine the salient locations relating to the offence and request that a 'cell dump' be undertaken appropriate to each location. [...] The police will then request the identities of all cells, on all networks, providing best server coverage of the salient locations and then request a list of calls using these cells over a particular time period from each network operator. This latter exercise is termed a cell dump', see P549, paras 9.1.1.1.1.3, 9.1.1.1.1.5 and 9.1.1.1.1.6.

40. Between 2000 and 2007, he worked for British law enforcement agencies, first as an intelligence researcher, and then as an intelligence analyst. Since 2007 he has specialised in analysing telecommunications data, first in the private sector,<sup>58</sup> and then as a specialist consultant to the United Nations International Independent Investigation Commission (UNIIC) on investigative strategies relating to analysing Lebanese call data records.<sup>59</sup>

41. In 2008, Mr Donaldson became a UNIIC communications analyst. While there, he performed call pattern analysis, cell site analysis, IMEI<sup>60</sup> usage analysis, geographical and contact profiling, assessed the co-location of mobiles, and the attribution of telephone numbers. He continued in this role in the Special Tribunal's Office of the Prosecutor, where he was also responsible for training new staff members and for quality control of the analysis he relied on in his reports. For a short period, he also supervised the Prosecution's communications analysis team. He testified on 13 July 2015 in relation to creating some call sequence tables which were used to analyse call data records.<sup>61</sup>

42. In his three relevant attribution reports, Mr Donaldson concludes that certain mobiles—that the Prosecutor pleads in the amended consolidated indictment were used by Mr Ayyash, Mr Merhi and Mr Badreddine in the attack—'co-located' with other mobiles and were thus used by a single user, namely one of these three. One of the objectives of the *voir dire* hearing was to establish how Mr Donaldson reached these conclusions and whether his experience and expertise qualified him to do so and, if so, to what extent his opinion on this topic could be received by the Trial Chamber.

---

<sup>58</sup> Forensic Telecommunications Services Ltd in the United Kingdom, *see* exhibit P1947.

<sup>59</sup> Exhibit P1947.

<sup>60</sup> International Mobile Equipment Identity, the unique identifying number of a mobile handset.

<sup>61</sup> *See* exhibit P525, Witness Statement of Andrew Donaldson, dated 19 January 2015. Of call sequence tables, the Trial Chamber has held, 'As call data records are 'without further analysis largely unintelligible', the Prosecution extracted information from the call data records and entered it into what it terms 'call sequence tables' to make them accessible and capable of presentation and analysis without altering the data. Produced by a Prosecution analyst in a 'standardised' and 'mechanical' manner by 'copying and pasting the relevant data from the underlying material,' call sequence tables present chronological sequences of calls relating to a particular, or target, telephone number over a specified period of time, comprising relevant call data records and cell site information. For each call, they detail: the other telephone number in contact with the target number; the time and the date of the call; the type of call (voice or Short Message Service (SMS)); the duration; the IMEI of the handset used by the target number; the cell identity and name of the cell sector used by the target number at the start of the call; and the cell identity and cell sector at the end of the call, when necessary', F1937, Decision on Five Prosecution Motions on Call Sequence Tables and Eight Witness Statements and on the Legality of the Transfer of Call Data Records to UNIIC and STL's Prosecution, 6 May 2015, para. 2.

*Ayyash attribution evidence*

43. In relation to Mr Ayyash, Mr Donaldson's report 'Evidence of Telephone Attribution Salim Jamil Ayyash', version 4, dated 1 December 2016, under the heading 'Overview', paragraph 1 states;

This report collates evidence pertaining to the attribution of 11 phone numbers. These numbers are attributable to Salim AYYASH through a number of means, including: documentary attribution, witness statements, handset sharing, contact profile, geographic profile, co-location and events in which their use features.

At paragraph 10, it states;

This document should be considered in conjunction with Expert Reports from J. E. Philips... An Introduction to Cell Site Analysis as applied to GSM Networks, and ... Report: Demonstration of Single Person use of Multiple Mobile Phones using Cell Site Analysis Suspect 1 – Issue 2 by J. E. Philips dated 19-12-2014.

44. To reach his conclusions, Mr Donaldson performed a lengthy and detailed analysis of the evidence relating to two landlines and nine mobiles (four personal mobiles, two Yellow network mobiles and one Blue, Green and Red network mobile). To provide context to this decision, some is summarised: to attribute personal mobile 165 (described as a 'precursor' to personal mobile 935) to Mr Ayyash, Mr Donaldson used bank records (of Mr Ayyash's wife), a passport application (for Mr Ayyash's son), and an application for a landline (in Mr Ayyash's name), and other bank records (of Mr Ayyash), and statements from service providers, all of which used this number as a contact. One handset (identified by its IMEI) also shared mobile 165 with mobiles 647, 249 and 471 and Yellow network mobiles 425, 576, 809, 120, 488 or 920.

45. Additionally, personal mobiles 165 and 935 were used in Mr Ayyash's BMW car-phone in 2004. To attempt to prove that it was Mr Ayyash's BMW, Mr Donaldson examined various vehicle records in Mr Ayyash's name, including sale, accident and insurance reports, all of which provided the number 935. To attribute personal mobile 091 to Mr Ayyash, Mr Donaldson used a 2005 bill of lading that was in Mr Ayyash's name, using that contact number.

46. Personal mobile 170 was the number used on a motor vehicle insurance policy in Mr Ayyash's name in March 2005, and on vehicle registration documents. Yellow 669 and personal mobile 170 also used the same handset, in 2004 and 2005.

47. Blue 233 made 97% of its calls to the other Blue network mobiles, yet made calls to mobile 401 which in turn called the landline 696, and the personal mobiles 165 and 935. Blue 233 had 145 days of common use with at least one personal mobile, and moved in concert on at least 142 of those days. They were used close in time, within ten minutes, 223 times in that period.

48. In relation to Green 300, it was never in contact with any of the other mobiles, yet moved in concert on 42 out of its 43 days of use, with personal mobiles 091, 170, Yellow 294 and Blue 233. Red network mobile 741 was in use for 11 days and moved in concert on nine of these days, with personal mobiles 091, 170 and Blue 233, and was used close in time on five occasions.<sup>62</sup>

49. To attribute Yellow 294 to Mr Ayyash, Mr Donaldson analysed 137 days of common use, with activations of the two mobiles within ten minutes of each other, in close geographical proximity. When Mr Ayyash's BMW had an accident on 20 November 2004, personal mobile 935 made relevant calls, while Yellow 294, which was present near the same location, called an associate using mobile Yellow 932 (Subject 21) who then travelled to the locality.

*Merhi attribution evidence*

50. Regarding Mr Merhi, paragraph 1 of the report, 'Evidence of Telephone Attribution Hassan Habib Merhi', version 4, dated 13 November 2015, under the heading 'Overview', states;

This report examines evidence regarding the attribution of three phone numbers: 357231, Green 3150071 and 386091. The evidence shows 357231 and Green 3150071 are attributable to Hassan Habib MERHI... 3686091 is attributable to Hassan MERHI's family.

---

<sup>62</sup> Various references in 'Evidence of Telephone Attribution Salim Jamil Ayyash', version 4, dated 1 December 2016, and PowerPoint slides, D0519311-D519583.

Paragraph 3 specifies;

This document should be considered in conjunction with... Expert Report from Eddie Philips which provides an overview of cell site analysis and other communications based evidence.

51. To attribute Green 071 and Purple 231 to Mr Merhi, Mr Donaldson examined another mobile, namely mobile 091, which was in contact with Purple 231. Mobile 091 was attributable to Merhi family members, including Mr Merhi's father.

52. Mobile 091 was noted on Mr Merhi senior's income tax records, on records for delivering a mattress to Mr Merhi's family residence in November 2004, and on university records and medical records for Mr Merhi's children. Purple 231 was also used as a contact number for the delivery of the mattress. In September 2007, mobile 091 was also noted as a contact number for Mr Merhi's application for compensation in the 'Rebuild Lebanon' recovery project after the 2006 war with Israel.

53. Another example is that Purple 231 and 091 were both used in the same locations relevant to the funeral of Mr Merhi's younger brother on 10 March 2004. SMS content review reveals that mobile 091 was used by the Merhi family in 2005 and 2006 and, in particular, by Mr Merhi's three sons; the name 'Merhi' is also written as the sender in four text messages.

54. In relation to the network mobile Green 071, Mr Donaldson analysed that it was active for 23 days of which it shared 22 days of usage with Purple 231. He concluded that it co-located from geographical factors, their close use in time in the same cell sector, no inconsistencies in common use, and the lack of contact between the two numbers. For these reasons (among others), Green 071 is attributed to Mr Merhi.<sup>63</sup>

*Badreddine attribution evidence*

55. Concerning the former Accused, Mr Badreddine, the report, 'Evidence of Telephone Attribution Mustafa Amine Badreddine', version 4, dated 27 February 2017, under the heading, 'Overview', at paragraph 1, states;

The purpose of this report is to establish who the user of Green 3140023 was. The nature of Green 3140023 requires that this be done in several stages. The first stage is to establish any other phones carried by the same user. Throughout the use of Green 3140023, three other

---

<sup>63</sup> 'Evidence of Telephone Attribution Hassan Habib Merhi', version 4, dated 13 November 2015, D0481043-D0481215, – various references in report and in accompanying PowerPoint slides, D0519101-D0519585.



phones were used by the same person. The second stage is to establish who the user of these phones was. It will be seen that evidence points to the user of these phones being Mustafa Amine BADREDDINE and Sami ISSA. The third stage is to reconcile that these two people were in fact the same person; Sami ISSA was an alias assumed by Mustafa Amine BADREDDINE. Each of these stages will be addressed in reverse order throughout this report.

56. This report does not refer to any of Mr Philips' reports, including that relating to Mr Badreddine, which is exhibit P1937.

57. To attribute personal mobile 354 to Mr Badreddine, Mr Donaldson used Mr Badreddine's university records and his daughter's telephone subscriber notes, which noted that number as a contact, and the evidence of friends and associates of Mr Sami Issa (an alleged alias of Mr Badreddine) who used personal mobile 663—which had the same profile—to contact Mr Issa. The SMS text content of mobile 663 also identified Mr Issa as Mr Badreddine. The two mobiles had 1,034 days of common use, with activations within 10 minutes of each other. Green 023, sequential mobile 944 and personal mobiles 663 and 354 had 57 days of common use with 129 activations within 10 minutes.<sup>64</sup>

*Mr Donaldson's experience in cell site analysis and co-location*

58. During the *voir dire* hearing, Mr Donaldson stated that, in 2007, his work was focused on cell dumps and co-location. It then evolved to examine suspect mobiles and to identify third party contacts and to build profiles and to search for links. From 2012 onwards, his task was trying to package all of that evidence into his reports, as the 'reports are essentially an organisation of underlying evidence'.<sup>65</sup> Concerning his specialised knowledge and experience—and referring to the participants in the trial and to Mr Philips—Mr Donaldson stated that he himself only knew 'as much as everybody else here around how a cell phone network operates. I'm aware of the limitations. I'm aware of the benefits. I have a distinct skill set from him [Mr Philips]'.<sup>66</sup>

59. Co-location, he said, is a 'mechanical exercise' involving analysing the location of a mobile from call data records, for which he relied on his 10 years of experience in 'looking at

---

<sup>64</sup> Various references in 'Evidence of Telephone Attribution Mustafa Amine Badreddine, version 4, dated 27 February 2017, D0515693-D0515968, and PowerPoint slides, D05193236-D519310.

<sup>65</sup> Transcript of 8 May 2017, pp 27-28.

<sup>66</sup> Transcript of 8 May 2017, pp 24-25.

what a single phone can do'.<sup>67</sup> He believes that every member of his team in the Office of the Prosecutor would be qualified to provide an opinion on co-location<sup>68</sup> because, according to Mr Donaldson, a lot of the expertise involved in spotting a co-locating mobile 'comes down to common sense'.<sup>69</sup>

60. He testified that, by contrast, Mr Philips could look at two locations on a map—of the predicted best server coverage of a cell sector—and provide an opinion as to whether it was consistent with, or may not preclude, co-location. Mr Donaldson could not do that, and his methodology involved extracting the data and then measuring the distance between cell towers and how often the two mobiles are used within ten minutes of each other.<sup>70</sup>

61. Mr Donaldson examined, for example—regarding paragraph 353 of his Ayyash attribution report—the mobiles referred to in the amended consolidated indictment as 'Yellow 294' and personal mobile phone 395, and concluded that they moved in concert for 135 days. He did this by examining every 'close call across 137 days, and when they were used close in time they were close in geography. When one moved to a different area, the other phone moved to a different area. They moved in concert'.<sup>71</sup> He explained to the Trial Chamber how he could state that two mobiles were co-locating, as opposed to doing something else, by saying,

I can really only draw upon my experience with working with call data records and the experience of seeing individual phones move, but the actual movements themselves are borne out through the data. What I am doing is saying I believe that these are consistent with a single user, and that I can only draw upon my experience and common sense to say that a coincidence can happen once, it can happen twice, but coincidences don't happen over 135 days.<sup>72</sup>

62. Regarding the more technical aspects of co-location, Mr Donaldson stated that Mr Philips could provide an opinion as to the coverage area of a particular cell that he, Mr Donaldson, could not, for example, to identify anomalies in co-location.<sup>73</sup> Regarding his

---

<sup>67</sup> Transcript of 8 May 2017, pp 39-40.

<sup>68</sup> Transcript of 8 May 2017, pp 41-42.

<sup>69</sup> Transcript of 8 May 2017, p. 42.

<sup>70</sup> Transcript of 8 May 2017, pp 46-48.

<sup>71</sup> Transcript of 8 May 2017, p. 51.

<sup>72</sup> Transcript of 8 May 2017, p. 52.

<sup>73</sup> Transcript of 8 May 2017, p. 53.

references to Mr Philips in his reports,<sup>74</sup> Mr Donaldson stated that ‘Mr Philips and his work had no bearing on any paragraph within my reports’.<sup>75</sup> The reference was merely to refer the reader to what Mr Philips had done. His own methodology had existed long before he met Mr Philips. Their work, however, was meant to be complementary.

*Submissions on the voir dire hearing*

63. In its interim decision, the Trial Chamber summarised the written arguments of the Parties on whether Mr Donaldson, as a non-expert, could provide any opinion evidence.<sup>76</sup> In short, the joint Defence motion argued that Mr Donaldson is unqualified to provide an opinion on co-location, as this requires ‘an in-depth knowledge of how telephones and telephone networks operate; how to interpret call data records; and how to interpret and utilise cell site evidence’.<sup>77</sup> The Prosecution, on the other hand, contended that there was no strict delineation between expert and non-expert opinion, and the strength of the opinion was simply a matter of weight when the Trial Chamber evaluated it, and Mr Donaldson’s experience entitled to him to provide some opinion evidence on co-location.

64. During the *voir dire* hearing, counsel for Mr Ayyash further submitted that only an expert witness can provide expert testimony. The analysis of cell site data in determining co-location is an area reserved for an expert. Mr Philips is such an expert. Mr Donaldson is not, yet provides expert opinion of co-location. His evidence on this point is therefore inadmissible.<sup>78</sup> Prosecution counsel responded that a Chamber may hear opinion evidence, expert or otherwise, from a witness who is not categorised as an expert under Rule 161.<sup>79</sup>

65. Counsel for Mr Ayyash submitted that Mr Donaldson was merely providing subjective opinions without explaining their basis. Cell site analysis requires expertise that Mr Donaldson does not have. His opinions therefore have no probative value. Counsel for Mr Merhi supported these submissions.<sup>80</sup>

66. The Prosecution responded that Mr Donaldson’s experience and methodology was sufficient for the Trial Chamber to consider his opinion on co-location, based on his 17 years

---

<sup>74</sup> Transcript of 8 May 2017, pp 41-42.

<sup>75</sup> Transcript of 8 May 2017, p. 54.

<sup>76</sup> Interim decision on Mr Donaldson’s evidence, paras 6-14.

<sup>77</sup> Joint Defence motion, para. 11.

<sup>78</sup> Transcript of 8 May 2017, pp 15-16.

<sup>79</sup> Transcript of 8 May 2017, pp 54-56.

<sup>80</sup> Transcript of 8 May 2017, pp 69-70.

of analytical experience, including ten confined to the Lebanese context. He has significant experience with analysing ‘cell dumps’ and significant experience in conducting co-location analysis. There is no ‘degree in co-location, or specific training’. Both an expert and a ‘lay’ witness such as Mr Donaldson could provide opinion evidence about co-location. Mr Donaldson has specific and well developed skills.<sup>81</sup> Prosecution counsel further submitted that, for the purposes of Mr Donaldson’s evidence, ‘co-location simply means calls are in the same area at the same time’ and it was for the Trial Chamber to decide whether to accept as a matter of evidentiary weight ‘whether multiple co-locations point to a single user’.<sup>82</sup>

### **DISCUSSION AND DECISION**

67. The Prosecution’s case, as described above, relies upon analysis of calling patterns and the co-location of personal mobiles that the Accused and Mr Badreddine were allegedly using with the pleaded networks and, additionally, the ‘Purple phones’. To do this, the Prosecution must prove that the Accused were using their own mobile telephones, or those that could be attributed to them. The evidence supporting this is a combination of subscriber information, calling patterns of calls to friends and relatives—whose numbers and identities are established through other documents, such as subscriber notes, and using the number on different relevant documents, official and commercial—and numerous other records.

68. In its decision to hold the *voir dire*, the Trial Chamber reiterated—referring to the Rules at other international criminal courts and tribunals equivalent to the Special Tribunal’s Rule 161—that international criminal law procedural law permits a Chamber to receive opinion evidence from witnesses who have not been formally qualified as experts.<sup>83</sup> Referring to a decision of the International Criminal Court in *Lubanga*,<sup>84</sup> the Trial Chamber held,

Whether the opinions or conclusions of witness are probative—assuming that they are relevant to the case—will depend upon differing factors. These include the witness’s personal and professional experience and, in the context of the case, what they have themselves witnessed. Opinion evidence cannot be confined to those who have been declared as experts under Rule

---

<sup>81</sup> Transcript of 8 May 2017, pp 70-72.

<sup>82</sup> Transcript of status conference hearing on 18 May 2017, p. 26.

<sup>83</sup> Interim Decision on Mr Donaldson’s Evidence, paras 17-23.

<sup>84</sup> ICC, *Prosecutor v. Thomas Lubanga Dyilo*, Case No. ICC-01/04- 01/06, Judgement pursuant to Article 74 of the Statute, 14 March 2012, para. 645; *Prosecutor v. Thomas Lubanga Dyilo*, Case No. ICC-01/04 01/06, Judgement on the Appeal of Mr. Thomas Lubanga Dyilo against his Conviction, 1 December 2014, paras 231-262.

161. Doing that would artificially constrict the evidence that a Chamber could hear and hence prejudice the ability of a Party to present its case.<sup>85</sup>

Accepting opinion evidence from non-experts should thus be decided on a case by case basis.

69. Mr Philips is of course qualified to provide expert testimony on cell site analysis. This includes the possible co-location or, conversely, the ‘dislocation’ of mobile telephones. He testified extensively on this subject and his reports were received into evidence. But Mr Philips, in his reports and evidence, cautiously differentiated between mobiles that *could* be considered to co-locate—carefully using the term ‘does not preclude co-location’—and those that could not. Mr Philips would not categorically state, on the basis of cell site analysis alone, which is based upon call data records, that two mobiles co-locate. On the other hand, Mr Donaldson, who is not an expert on cell site analysis or on co-location, apparently does draw such conclusions or purports to form opinions in this regard.

70. Mr Donaldson’s evidence is undoubtedly relevant as it goes to the core of the Prosecution’s case against the four Accused, which includes the material facts pleaded in relation to Mr Badreddine’s alleged role. That Mr Donaldson is not an expert on co-location or cell site analysis naturally limits the probative value of any opinion he can express on either and, in particular, of course, on co-location. But this of itself does not prevent him from providing one—based upon his extensive professional experience in the area—on either topic.

*How should Mr Donaldson’s evidence be classified and what are its limits?*

71. Mr Donaldson is not testifying as an expert. His five reports provide an overview of the Prosecution’s evidence and, in this respect in some places, more resemble a Prosecution final trial brief than an expert report. Much of the content of his five reports evidence is therefore more in the nature of summary evidence, but with an accompanying analytical overview.

72. However, in part he provides opinions, or conclusions, as to matters the Trial Chamber must decide, namely, whether mobiles allegedly used by Mr Ayyash, Mr Merhi and Mr Badreddine are co-locating, and are thus attributable to the three. An expert may of course venture into this territory, but how far can Mr Donaldson go as a non-expert?

---

<sup>85</sup> Interim Decision on Mr Donaldson’s Evidence, para. 22.

73. The International Criminal Tribunal for the Former Yugoslavia, (ICTY) has received summary evidence, prepared by analysts working for the Party submitting the evidence, but on the condition that no conclusions are drawn regarding the commission of crimes and that the underlying material is itself admissible under the Rules.<sup>86</sup> In *Milošević*, the issue was whether a Prosecution investigator could testify in summary form about the content of witness statements that were not in evidence, in lieu of the witnesses testifying themselves. The Appeals Chamber refused to allow this but held, on the issue of summary statements,<sup>87</sup>

No question arises in this appeal as to the admissibility, in principle, of what has been called summarising evidence – the summarising of material which is relevant to the issues of the case. It has been admitted on many occasions in appropriate cases. Whether it is appropriate in the particular case for the evidence to be admitted will depend upon the circumstances of that case. If the material being summarised is uncontroversial, there will clearly be a considerable saving of time if that material is summarised either in a document or by one witness rather than given by many witnesses. In every case, the basic issue is whether the material being summarised would itself be admissible. A summary made by one person of material provided by another person is necessarily hearsay evidence in character. The admissibility of hearsay evidence pursuant to Rule 89(C) should not permit the introduction into evidence of material which would not be admissible by itself. As Rule 92bis requires the witness statements to be admitted into evidence and the witness to be available for cross-examination if the Trial Chamber so orders, the material summarised in the present case was not admissible as hearsay evidence.

74. Similarly, in the *Bemba* contempt trial at the ICC, which was based largely upon telephone and financial records, the Prosecution was permitted to lead summary evidence from an in-house analyst. The analyst listed calls from call data records, ‘cut-off dates’ provided by the Victims and Witnesses Unit, and telephone numbers attributable to individuals derived from documents and emails seized from the Accused, open source records and other materials. In this respect, this case has some similarities with the *Ayyash* case, but one distinct difference is that the ICC analyst did not offer opinions or conclusions.

---

<sup>86</sup> See ICTY, *Prosecutor v. Slobodan Milošević*, IT-02-54-AR73.2, Decision on Admissibility of Prosecution Investigator’s Evidence, 30 September 2002, paras 17, 21 (‘*Milošević* Appeal decision’); *Prosecutor v. Perišić*, IT-04-81-T, Decision on Defence Motion *In Limine* for Prosecution Witness Bretton Randall, 11 February 2009, paras 13, 15-16; *Prosecutor v. Popović et al.*, IT-05-88-T, Decision on Joint Defence Motion Requesting Determination as to the Admissibility of the Testimony of Jean Rene Ruez, 6 September 2006, pp 2-3.

<sup>87</sup> *Milošević* Appeal decision, para. 21.

75. The ICC Trial Chamber held that its understanding was that this summary evidence should be limited to ‘facts that are immediately apparent in the evidence collected by the Prosecution and are available without any specific knowledge beyond what is contained in this material’, and facts that are included in other material such as the cut-off dates, but ‘ultimately, as with all the evidence submitted to the Chamber, it is the Judges’ duty to assess and weigh the evidence’.<sup>88</sup>

76. In the *Charles Taylor* case, the Special Court for Sierra Leone’s Trial Chamber received non-expert summary evidence of a human rights adviser, who had previously worked for the Office of the Prosecutor, and collected and documented the testimonies of victims and witnesses. In doing so, however, the Trial Chamber held that it was solely admissible for its factual content and that any opinion evidence, including touching upon the ultimate issue of the case, or reaching conclusions which are within the Trial Chamber’s province were to be disregarded.<sup>89</sup>

77. So, to summarise, international criminal law procedural law permits a chamber to receive summary evidence from a Party’s in-house analysts or investigators. But in what manner and the extent to which it will receive the opinion of a non-expert should be considered on a case by case basis. The case law is clear on the point that an expert cannot testify, or provide an opinion, as to the ultimate issue, namely, the guilt or acquittal of an accused person.<sup>90</sup> Here, that would mean Mr Donaldson’s opinion or conclusion as to whether the Accused were guilty or should be acquitted. He does not, however, express his conclusions in that manner; rather, he states that certain mobiles are attributed to them.

78. It appears that Mr Donaldson’s evidence thus lies somewhere between that of an expert, and that of an analyst who is putting together numerous pieces of evidence to provide a summary overview, but with analytical opinions, from which the trier of fact can draw conclusions. His evidence—as a non-expert—is therefore distinguishable from that of an

---

<sup>88</sup> ICC, *Prosecutor v. Bemba et al.*, ICC-01/05-01/13, Oral Decision on the Joint Defence Request to Restrict the Scope of Witness P-433’s Testimony, transcript of 30 September 2015, p. 6.

<sup>89</sup> SCSL, *Prosecutor v. Taylor*, SCSL-03-1-T, Decision on Defence Application to Exclude the Evidence of Proposed Prosecution Expert Witness Corinne Dufka or, in the Alternative, to Limit its Scope And on Urgent Prosecution Request for Decision, 19 June 2008, para. 27.

<sup>90</sup> See, e.g. ICTY, *Prosecutor v. Dragomir Milošević*, IT-98-29/1-T, Decision on Defence Expert Witnesses, 21 August 2007, para. 10; *Prosecutor v. Stanišić and Simatović*, IT-03-69-PT, Decision on Prosecution’s Submission of the Expert Report of Nena Tromp and Christian Nielsen pursuant to Rule 94 bis, 18 March 2008, para. 12.

analyst providing purely summary evidence without conclusions, as for example, in *Milošević* and *Bemba*.

79. The Trial Chamber has previously held, but in respect of expert evidence, that ‘Statements falling outside the expert’s area of expertise should be treated as personal opinions and weighted accordingly’.<sup>91</sup> The question, therefore, is how far Mr Donaldson, as a non-expert, can go in providing an opinion or a conclusion, or in other words, what is its probative value?

80. The Trial Chamber must first assess whether Mr Donaldson’s evidence satisfies the threshold test of *prima facie* reliability in order for the reports and expected testimony to have some probative value. This is distinct from the issue of the weight any opinion or conclusion may be given in evaluating Mr Donaldson’s evidence as a whole.

*The prima facie reliability of Mr Donaldson’s reports and anticipated testimony*

81. It is self-evident that cell site analysis alone—without more—is insufficient to categorically conclude with 100% certainty that one person was using more than one mobile at a given time. Proof beyond reasonable doubt, however—based upon analysing call data records, calling patterns, calling contacts, and the geographical locations of mobiles, in combination with other evidence, in other words, analysing the totality of the evidence against an Accused person—is a different matter.

82. The Trial Chamber is concerned about the manner in which Mr Donaldson’s reports have been prepared, and most particularly in Mr Donaldson venturing positive conclusions that mobiles are co-located and thus attributable to Mr Ayyash, Mr Merhi or Mr Badreddine, but without sufficiently explaining his methodology. This is compounded by the reluctance of the relevant expert, Mr Philips, to express categorical opinions on co-location and hence attribution of a mobile usage to a single user, namely, an Accused or Mr Badreddine. Prosecution counsel have referred to the importance of Mr Donaldson’s evidence to their case, yet his reports have been prepared in a manner which invites the Trial Chamber to disregard his opinions or conclusions as those of someone who may not be properly qualified to make them. That is the essence of the complaint in the joint Defence motion to exclude the evidence.

---

<sup>91</sup> F1610, Decision on Expert Witnesses PRH120, Professor Fouad, Hussein Ayoub, and Expert Witnesses PRH508, Dr Issam Mansour, 7 July 2014, para. 5.



83. It is therefore apparent that better legal oversight of the structure and content of the three reports could have been provided. In particular, Mr Donaldson's reports should not have expressed unqualified conclusions about co-location, and most particularly, the methodology underlying the expression of any opinion should have been properly explained.

84. The various reports are now in versions 3 and 4 and have been an ongoing 'work in progress' for around five years. This is more than long enough to have found the time to draft a methodology section and to explain the basis of any expressed opinions, especially as to attribution. Moreover, the reports should also have explained any reliance upon Mr Philips' work as an expert in cell site analysis and co-location. It is still unclear, even after Mr Donaldson's *voir dire* evidence, exactly how the two interact.

85. However, unlike Mr Philips, whose review was confined to cell site evidence such as call data records and best predicted cell server coverage, Mr Donaldson appears to have reviewed practically the entirety of the Prosecution's evidence on attributed mobile usage to the four Accused and to Mr Badreddine. He thus has an overview of the evidence that Mr Philips does not have. He also has significant experience in analysing cell site evidence, although he does not have Mr Philips' technical expertise, and admittedly not in analysing the best cell server coverage. His reports also reveal the sources he is relying upon to reach his conclusions about co-location and thus attribution through single usage.

86. As described above at paragraphs 9-10 and 43-58, Mr Donaldson has performed a comprehensive review of the Prosecution's cell-site and attribution evidence, and has collated and analysed it. His reports will assist the Trial Chamber in better understanding how to piece together the myriad pieces of Prosecution evidence relating to the attribution of personal mobiles and co-location of network mobiles, and therefore attribution of personal and network mobiles to Mr Ayyash, Mr Merhi and Mr Badreddine. It is evident that Mr Donaldson has individually and collectively analysed each piece of evidence underlying his conclusions and opinions.

87. In these circumstances, the Trial Chamber is satisfied—from Mr Donaldson's evidence in the *voir dire* hearing and from the content of his reports—that his reports and evidence have the necessary *prima facie* indicia of reliability to provide them with some probative value. How much will therefore be a matter of weight.

*The probative value of Mr Donaldson's opinions and conclusions*

88. Mr Donaldson's evidence is relevant and has some probative value, and may thus be received under Rule 149 (C). The Trial Chamber will not exclude the evidence in the manner sought and is satisfied that it should not exercise its discretion under Rule 149 (D) to exclude the evidence. It is satisfied, in the circumstances described, that the balance here lies in receiving the evidence but requiring Mr Donaldson to properly explain his methodology and opinions.

89. As explained above, the Trial Chamber has heard much evidence about co-location and single use attribution of mobiles to Mr Ayyash, Mr Merhi and Mr Badreddine. As the trier of fact, it must decide whether the mobiles have co-located, as alleged by the Prosecution, and then, whether their use can be attributed to the Accused or Mr Badreddine, as alleged.

90. The Trial Chamber, consistent with the international case law referred to above, and most particularly in circumstances where the expert, Mr Philips, has qualified his own findings—cannot simply accept Mr Donaldson's conclusions—inserted into summary evidence reports—of whether the specified allegedly co-located mobiles are actually attributed to a single user. In other words, that they co-locate and therefore that Mr Ayyash, Mr Merhi or Mr Badreddine was using a particular network mobile. Mr Donaldson, however, may provide an opinion regarding the consistency of use. It is within the Trial Chamber's discretion in receiving evidence to allow this.

91. It follows that Mr Donaldson, in the Trial Chamber's view, is sufficiently qualified by his experience in the area to proffer an opinion on co-location and therefore *possible* attribution, but that any opinion must be suitably qualified in a manner similar to that of Mr Philips. The Trial Chamber will therefore not accept Mr Donaldson's opinions as unqualified conclusions. It will not allow him to categorically conclude, as he appears to have done in his three reports, that there was co-location, and hence attribution of personal and network mobiles to Mr Ayyash, Mr Merhi or Mr Badreddine.

92. The Trial Chamber will therefore receive Mr Donaldson's three reports into evidence—subject to any necessary further submissions on their admissibility—but with the qualification that Mr Donaldson must explain the basis of any opinions expressed, and

suitably qualify them. Mr Donaldson should not have concluded that there was co-location without explaining the methodology he employed and how his conclusions or opinions related to those of the expert, Mr Philips. Mr Donaldson is on far stronger ground with his opinions, based upon analysing the totality of the evidence, of attribution of personal mobile usage to an Accused or to Mr Badreddine.

93. Mr Donaldson may therefore provide an opinion, based upon his experience in analysing call data records and other cell site evidence, as to whether co-location *is possible* on the evidence he has reviewed. He is not entitled to conclude that there was co-location and hence single user attribution of personal and network mobiles. Mr Philips, the expert, would not go that far, and that determination is for the Trial Chamber's alone.

94. Using Mr Philips' terminology, Mr Donaldson may therefore provide an opinion as to whether the evidence he has reviewed entitles him to provide an opinion in respect of certain mobiles, for example, as to whether mobiles 'could be co-located', 'would not preclude co-location', 'may preclude co-location' and 'would preclude colocation', and thus whether this is consistent with a mobile having a single user. He cannot go further than Mr Philips. But, to modify Mr Donaldson's own words, identifying *some* co-locating mobiles may well involve 'common sense'. Even that, however, involves a careful case by case analysis of distinguishing the obvious from other examples.

95. And there are of course some obvious examples of 'dislocation' or non-co-location, in which no real expertise is required to reach a conclusion—by virtue of geographical distance alone—that one person could not simultaneously be using two mobiles. But, conversely, it is apparent that, in some instances, to reach a conclusion about even possible co-location, technical expertise beyond Mr Donaldson's may be required. This is well illustrated by Mr Philips' evidence about anomalies,<sup>92</sup> and the examples referred to at paragraphs 30-32 above of radio cell coverage across water, converging vehicles, and mobiles in tall buildings. These areas are beyond Mr Donaldson's competence to offer any more than an informed opinion based upon his experience.

---

<sup>92</sup> See e.g. exhibit P1935, slides 199-217, regarding Mr Badreddine, pointing out possible anomalies in relation to Mr Philips' findings regarding 'may preclude' co-location, on 28 September, 1 October and 20 October 2004 and 19 January 2005, and Mr Philips' evidence at transcript of 20 April 2017, pp 104-108, and transcript of 21 April 2017, pp 11-24.

96. The probative value of any opinion from Mr Donaldson as to whether co-location is possible is therefore a matter of the weight for the Trial Chamber when it assesses the totality of the evidence. The Trial Chamber is cognisant that Mr Philips is an expert in cell site analysis whereas Mr Donaldson is not, and will take this into account in assessing the opinions of the two witnesses and attributing the necessary weight to the evidence of either. The Trial Chamber will bear in mind the technical limitations of Mr Donaldson's evidence, and in this respect, he must point out to the Trial Chamber any aspects of his three reports in which he has offered an opinion on co-location, in which he must defer to Mr Philips' expertise.

97. This decision will necessitate some restructuring of Mr Donaldson's testimony and, in particular, in his qualifying his numerous unqualified conclusions as to co-location and hence attribution. The Trial Chamber is confident that competent Prosecution counsel can lead Mr Donaldson through his reports and make the necessary adjustments in the most efficient manner possible.

*The late filing of the joint Defence motion*

98. Another matter requiring consideration is the timing of the filing of the joint Defence motion and its effect on the trial's progress. The Trial Chamber is mindful of the Prosecution's submissions that to exclude the evidence in the manner sought and to require it to lead Mr Donaldson orally through those parts of his evidence would lengthen his testimony, of an anticipated 12 to 14 days in examination in chief, by a 'factor potentially of 3 or 4' and it would be painstaking and lengthy.<sup>93</sup>

99. The Trial Chamber must ensure that the proceedings are both fair and expeditious.<sup>94</sup> In deciding whether to exclude the evidence in the manner sought in the joint Defence motion, namely the total exclusion of any evidence on co-location, the Trial Chamber is weighing a number of factors.

100. These include the Prosecution's estimate that it would require three to four times more court time to present Mr Donaldson's evidence if the 183 paragraphs plus annexes, plus parts of a statement were excluded and the extremely late and untimely filing of the joint Defence motion to exclude this evidence—filed only on 21 April 2017, at most two weeks before Mr

---

<sup>93</sup> Transcript of status conference hearing on 18 May 2017, pp 25-26.

<sup>94</sup> See Article 16 (2) and (4) (c), Statute of the Special Tribunal for Lebanon.

Donaldson was scheduled to commence testifying.<sup>95</sup> Rule 8 specifies a fourteen day period for responses to motions unless otherwise ordered, and had the Trial Chamber not shortened the period for the Prosecution's response, this would have overlapped with Mr Donaldson's testimony.

101. This is highly unsatisfactory. This is especially so given that the original versions of Mr Donaldson's attribution reports for the original four Accused and of the Merhi attribution report were respectively disclosed to counsel for Mr Ayyash in April 2013,<sup>96</sup> and in September 2013,<sup>97</sup> and to counsel for Mr Merhi in February 2014, (once his case was joined to that of the other four Accused).<sup>98</sup> All these documents contained a similar mixture of fact and opinion, including on co-location and attribution. This late Defence motion has also had the effect of delaying the trial.<sup>99</sup>

102. Defence counsel have therefore known for some years that the Prosecution intended that Mr Donaldson should offer his opinion on these two areas, albeit until 19 June 2016 as an expert. Some of the paragraphs for which exclusion is sought are identical in form or content to those in the first version of the reports.<sup>100</sup> The Prosecution informed Defence counsel on 20 June 2016—by filing its updated witness list in which he was not listed as an expert—that it was not intending to call Mr Donaldson as an expert witness, but rather as a *viva voce* or 'live'

<sup>95</sup> F3096, Prosecution Witness Schedule for the Weeks Commencing 24 April & 1 May 2017, 21 April 2017.

<sup>96</sup> Original versions of Mr Donaldson's attribution reports for the original four Accused: ERN 60274581-60274624, Investigators Note -- Evidence of Telephone Attribution -- Assad Hassan Sabra, 19 October 2012; ERN 60275071-60275087, Investigators Note -- Evidence of Telephone Attribution -- Hussein Hassan Oneissi, 24 October 2012; D0187748-D0188040, Investigators Note -- Evidence of Telephone Attribution -- Mustafa Amine Badreddine, 31 October 2012; D0205729-D0205934, Investigators Note -- Evidence of Telephone Attribution -- Salim Jamil Ayyash, 04 November 2012.

<sup>97</sup> Original version of Mr Donaldson's attribution report for Mr Merhi: D0327911-D0328017, Indictment Report -- Attribution of Phone Numbers to Hassan Habib Merhi, 29 July 2013.

<sup>98</sup> STL-11-01/T/TC, *Prosecutor v. Salim Jamil Ayyash, Mustafa Amine Badreddine, Hussein Hassan Oneissi and Assad Hassan Sabra*, and STL-13-04/PT/TC, *Prosecutor v. Hassan Habib Merhi*, Joint Hearing, Decision on the Joinder of cases STL-11-01 and STL-13-04, Transcript of 11 February 2014, pp 91-96; F1424, Decision on Trial Management and Reasons for Decision on Joinder, 25 February 2014; Transcript of 12 February 2014, pp 115-117. The Prosecution disclosed to all Defence counsel the other versions of the attribution reports in February 2014 (for the original four Accused) and in April 2014 (for Mr Merhi).

<sup>99</sup> See, transcript of 8 May 2017, p. 77.

<sup>100</sup> As to the Ayyash attribution reports, compare D0205729-D0205934, paras 234(b), 241, 259-261, and 266(a)-(i) to, respectively, D0506541-D0507009, Evidence of Telephone Attribution -- Salim Jamil Ayyash, 01 December 2016, version 4, paras 322(b), 327, 345-347, and 352-362; as to the Badreddine attribution reports, compare D0187748-D0188040, paras 191(a)-(l), 255, and 295-297 to, respectively, D0515693-D0515968, Evidence of Telephone Attribution -- Mustafa Amine Badreddine, 27 February 2017, version 4, paras 217(a)-(l), 298, and 291(b)-(c); As to the Merhi attribution reports, compare D0327911-D0328017, paras 11, 146-151, 186, 192 to, respectively, D0481043-D0481215, Evidence of Telephone Attribution -- Hassan Habib Merhi, 13 November 2015, version 4, paras 14, 203-208, 238, 245.

witness.<sup>101</sup> Despite this, Defence counsel waited ten months, until 21 April 2017, to file a motion seeking to exclude this evidence on the basis that only an expert could testify about co-location. Given the late stage at which it was filed, the timing of the motion could be viewed as tactical.

### **DISPOSITION**

**FOR THESE REASONS**, the Trial Chamber dismisses the joint Defence motion to exclude any evidence from Mr Andrew Donaldson on co-location derived from cell site analysis.

Done in Arabic, English, and French, the English version being authoritative.

Leidschendam,  
The Netherlands  
2 June 2017

*David Re*

\_\_\_\_\_  
Judge David Re, Presiding

*Janet Nosworthy*

\_\_\_\_\_  
Judge Janet Nosworthy

*Micheline Braidy*

\_\_\_\_\_  
Judge Micheline Braidy



<sup>101</sup> The Trial Chamber is satisfied by this that the Prosecution expressly informed Defence counsel that it was no longer intending to call Mr Donaldson as an expert. The revised witness list lists Mr Donaldson as a live witness, while it lists experts as giving testimony 'under Rule 161'. The column 'Live testimony or under Rule' therefore does not exclusively indicate 'mode of testimony', as argued by the joint Defence motion, at footnote 9. See F2626, Prosecution Notice of Updated Revised Witness List, 20 June 2016, confidential annex A 'List of Remaining Witnesses as at 20 June 2016'.