

1 **II. Facts**

2 In a letter dated October 21, 2016, counsel for Defendant Antolin Garcia-Torres provided
3 a summary of the statements of proposed witness Robert Aguero. [Exhibit 2, Letter from Deputy
4 Alternate Defender Alfonso Lopez, dated October 21, 2016.] The defense also included in this
5 disclosure a map plotting purported locations of Sierra’s phone at various times on March 16-17,
6 2012. [Exhibit 1, Voice & RTT Overview.] These purported locations were derived with
7 Verizon’s Real Time Tool (RTT), a proprietary tool about which the People have received little
8 information from the defense. Mr. Aguero’s report included a disclaimer from Verizon which
9 states that, although RTT reports include latitude and longitude data, such data is “derived solely
10 from the Round Trip Delay measurement.” Neither Verizon’s disclaimer nor Mr. Aguero explain
11 how Round Trip Delay measurement works, but Verizon’s disclaimer expressly states that the
12 latitude and longitude data “are not related to any GPS measurement.” Mr. Aguero advised defense
13 counsel that “[t]he accuracy on any of these hits cannot be guaranteed by Verizon so there is no
14 way for any expert (law enforcement or defense) to say with any certainty that because a hit is
15 shown at a particular location, it means that the phone is at that specific location. It’s just
16 impossible.” [Exh. 2 at pg. 1.]

17 Verizon’s RTT data includes a “Call Location Confidence” column, with values ranging
18 from H, M, L, and N. Mr. Aguero advised defense counsel that H means “High confidence,” and
19 L means “Low confidence.” [Exh. 2 at pg 2.] Mr. Aguero advised defense counsel that Verizon
20 “will NOT provide a number of feet, yards or meters associated with” RTT data, regardless of
21 whether it is High confidence or Low confidence.” *Id.* Mr. Aguero advised defense counsel that
22 High confidence is “the best that Verizon will do,” and that Low confidence “simply means that
23 the confidence level . . . is questionable. So one cannot rely on [it] as an accurate location of where
24 the phone is located.” *Id.* Verizon’s disclaimer warned that “[m]easurements with a high
25 confidence factor may be more accurate than measurements with a low confidence factor, but all
26 measurements contained on this report are the best estimates available rather than precise location.”

27 The defense maps focus on two Low confidence RTT location data points, one on March
28 17, 2012 at 0003 hours; the second on March 17, 2012 at 0150 hours. The defense is planning to

1 introduce not only these maps, but also a video depicting the same information, so that jurors may
2 visualize the suggestion that Sierra's phone moved during the night of March 16 into the morning
3 of March 17, 2012. The defense apparently intends to do this despite their own expert concluding
4 that such an inference is "not very reliable," and of "questionable" confidence. Regarding any
5 inference of the movement of Sierra's phone during ht night, Mr. Aguero states: "there is no
6 evidence to support any movement of the phone. Any attempt to show movement based upon these
7 records is pure guesswork and not reliable." [Exh. 2 at pg. 2.]

8 The People move to exclude the defense exhibits and any reference to the data as both
9 irrelevant speculation and in violation of Evidence Code section 352.

10 III. Applicable Law

11 "Only relevant evidence is admissible." Evid. Code § 350. "Relevant evidence is evidence
12 'having any tendency in reason to prove or disprove any disputed fact that is of consequence to the
13 determination of the action.'" *People v. Wilson* (2006) 38 Cal. 4th 1237, 1245 (quoting Evid. Code
14 § 210). "The test of relevance is whether the evidence tends logically, naturally, and by reasonable
15 inference to establish material facts such as identity, intent, or motive." *People v. Cowan* (2010)
16 50 Cal.4th 401, 482 (citation omitted). "The trial court has broad discretion in determining the
17 relevance of evidence, but lacks discretion to admit irrelevant evidence." *Id.* "Evidence is
18 irrelevant, however, if it leads only to speculative inferences." *People v. Morrison* (2004) 34 Cal.
19 4th 698, 711.

20 "A trial court has broad discretion to exclude relevant evidence under Evidence Code
21 section 352 'if its probative value is substantially outweighed by the probability that its admission
22 will (a) necessitate undue consumption of time or (b) create substantial danger of undue prejudice,
23 of confusing the issues, or of misleading the jury.'" *People v. Linton* (2013) 56 Cal. 4th 1146,
24 1181 (citations omitted). "Such 'discretion extends to the admission or exclusion of expert
25 testimony.'" *Id.*

26 IV. Argument

27 The defense's expert report is devoid of any information as to how RTT location data is
28 generated. The report includes a disclaimer from Verizon that the latitude and longitude

1 measurements “are derived solely from the Round Trip Delay measurement,” but neither Verizon’s
2 disclaimer nor the defense expert’s report indicate what Round Trip Delay is or how it works.
3 Verizon’s disclaimer simply warns that RTT location data “are not related to any GPS
4 measurement.” Since the jury would have no information as to how RTT location data is generated
5 by Round Trip Delay measurement, only that it is *not* based on a global positioning satellite (GPS),
6 the evidence cannot be put into context regarding what the location data may represent or assess
7 the technology that the evidence is based upon.

8 The defense’s proffer is similarly devoid of any information regarding how Verizon assigns
9 confidence levels to RTT location data. For example, what must occur for Verizon to assign High
10 confidence to RTT location data? What does it mean when Verizon assigns Low confidence to
11 such data? There is no evidence provided to answer these questions.

12 How the latitude and longitude data is generated by Verizon, as well as its accuracy or lack
13 thereof, must be established by the proponent of the evidence as a foundational matter before such
14 data can be presented to the jury. Absent such a showing, the RTT location data is simply a list of
15 latitude and longitude values with no known provenance. The two location data points are, by the
16 defense expert’s own admission, “not reliable.” [Exh. 2 at pg 2.] As a result, any inference based
17 upon these unreliable location data points, such as the suggestion that Sierra’s phone moved during
18 the night, is pure speculation. The defense expert himself concluded that “there is no evidence to
19 support any movement of the phone. Any attempt to show movement based on these records is
20 pure guesswork and not reliable.” *Id.* Accordingly, these location data points and any reference
21 to them should be excluded as irrelevant pursuant to Evidence Code § 350. “Evidence is irrelevant
22 . . . if it leads only to speculative inferences.” *People v. Morrison* (2004) 34 Cal. 4th 698, 711.

23 If this court finds the data to be relevant despite the absence of any facts as to how Verizon
24 generates the data beyond the name of the system (i.e., Round Trip Delay), the data should
25 nonetheless be excluded pursuant to Evidence Code §352, for admitting the evidence would
26 necessitate an undue consumption of time, confuse the issues, and mislead the jury.

27 First, the data itself does not support the defense’s theory. The defense expert’s report
28 includes a map depicting all of the location data points recorded between March 16, 2012 22:46

1 hours and March 17, 2012 12:56 hours. [Exh. 1.] The defense expert noted: “As you can see most
2 of them are all bunched up together around the general area where the phone was found. The only
3 two hits that hit further away occur at 0003 and 0150 hrs.” [Exh. 2 at pg. 1.] When looking at the
4 entirety of the data, in other words, nearly one thousand location data points indicate that Sierra’s
5 phone was in the same general area in which it was ultimately found by police. These data points
6 overwhelmingly indicate that Sierra’s phone did not move from March 16-17, 2012. Indeed, the
7 defense expert concluded that “the phone was in this same general area the entire time. The voice
8 call hits the same tower and sector so *there is no evidence to support any movement of the phone.*”
9 [Exh. 2 at pg. 2 (emphasis added).]

10 Only two location data points, which were cherry picked from hundreds of location data
11 points, are used to support the defense exhibit and video that Sierra’s phone moved between March
12 16-17, 2012. As defense counsel and their expert are aware, the two location data points that they
13 wish to introduce – those that occurred at 0003 hours and 0150 hours – were classified by Verizon
14 as Low (L) confidence data. Permitting the jury to speculate on the significance of this
15 questionable data would necessitate an undue consumption of time, create a substantial danger of
16 confusing the issues, and mislead the jury. “[T]here is no due process right to present factually
17 unfounded evidence.” *People v. Lucas* (2014) 60 Cal. 4th 153, 227, *disapproved on other grounds*
18 *as stated in People v. Romero* (2015) 62 Cal. 4th 1. The defense’s expert witness rejects the
19 inference that the data supports the movement of Sierra’s phone.

20 **V. Conclusion**

21 The People move to exclude the two Low confidence location data points, as well as any
22 reference thereto.

23 DATED: March ¹³~~10~~, 2017

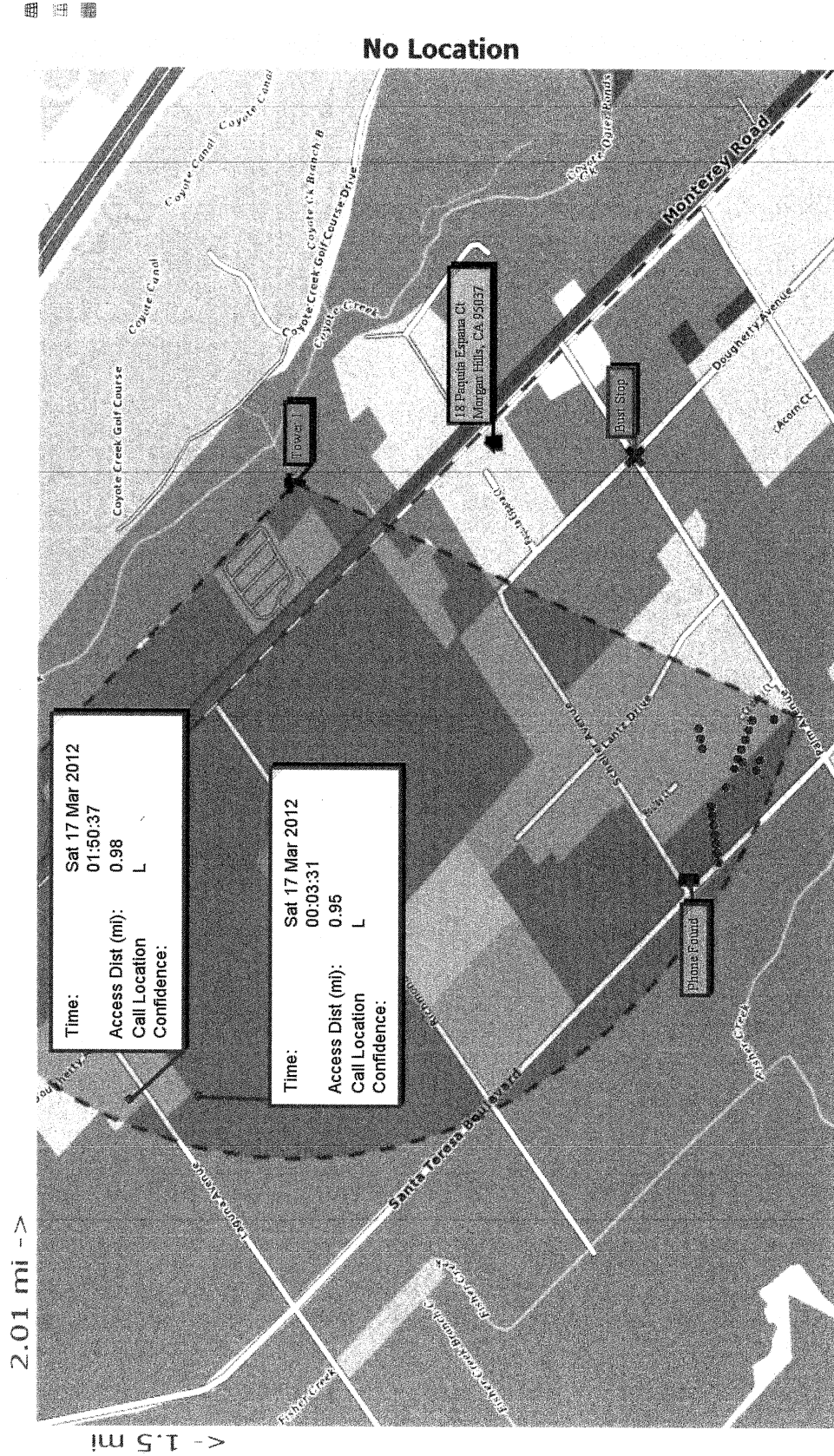
24 Respectfully submitted,

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26 District Attorney

27 DAVID R. BOYD
28 Deputy District Attorney

EXHIBIT 1

Voice & RTT Overview



Selected 01/2010 events

EXHIBIT 2

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DAVID EPPS
Supervising Attorney

October 21, 2016

David Boyd
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San Jose, CA 95110

RE: Antolin Garcia Torres
DOCKET#: 213515

Dear Mr. Boyd:

As discovery in the case I am disclosing a CD and including summaries of my communications with Robert Aguero and Greg Stutchman. Contained in the CD are (11) PowerPoint type slides, a spread sheet that he used contained in discovery, and a (10) minute video depicting the locations where the phone was connecting to the network throughout the night and next morning. Additionally, here are some further communications I had with my consultants.

Summary of Mr. Aguero Statements:

The 510-709-9110.pdf shows the voice and RTT records for the victim's phone (510-709-9110). The second file is an animated video showing the movement of the phone during this time period.

Page 2 shows a disclaimer from RTT basically stating that the GPS data is only a "best estimate" and it is not precise. I read the additional reports including email correspondence from Verizon employee who basically say the same thing. These records were never meant to track people, so the accuracy was never an issue for Verizon. The accuracy on any of these hits cannot be guaranteed by Verizon so there is no way for any expert (law enforcement or defense) to say with any certainty that because a hit is shown at a particular location, it means that the phone is at that specific location. It's just impossible.

Pages 3 shows an overview of all the voice and RTT hits between 03/16/12 2246 hrs and 03/17/12 1256 hrs. The green wedge going out from the cell tower is the sector hit by the voice calls made to the phone. The dots represent all the RTT hits between this time period. As you can see most of them are all bunched up together around the general area where the phone was found. The only two hits that hit further away occur at 0003 and 0150 hrs. See below for more information on those hits.

Page 4 shows a list of all the RTT hits between 2246-2341 hrs. If you look at the Call Location Confidence column they are all shown as "H" or High confidence. That is the best that Verizon will do. They will NOT provide a number of feet, yards or meters associated with the High confidence level.

Pages 5-6 show an overview map and a close up map showing the voice call (green sector) and the dots for the hits during this time frame. As you can see all the RTT hits are within a .3 mile radius of where the phone was found. They all vary some, so none of them can be assumed to be the actual location of the phone, only an approximate location of the phone.

Page 7 shows the RTT hit at 0003 hrs. If you look at the Call Location Confidence it is shown as "L" or Low confidence. Again Verizon will not provide a number of feet, yards or meters associated with Low confidence. But it simply means that the confidence level of this hit is questionable. So one cannot rely on this hit as an accurate location of where the phone is located.

Page 8 shows the RTT hit at 0150 hrs. If you look at the Call Location Confidence it is shown as "L" or Low confidence. Again Verizon will not provide a number of feet, yards or meters associated with Low confidence. But it simply means that the confidence level of this hit is questionable. So one cannot rely on this hit as an accurate location of where the phone is located.

So basically the only two hits that may put the phone at a further away location are both Low confidence and in my opinion not very reliable.

Pages 9-11 show the RTT records for the hits between 0346-1256 hrs. The confidence level on these hits is High. I am only showing the first few lines and the last few lines. There are quite a few. Please refer to the original records for a complete list of all the hits.

Again looking at page 11 we see a close up view and all the hits are within a .3 mile radius of where the phone was found.

By looking at the entire content (after 10:46 pm) in sequential order we see that the phone is basically in this same general area with the two exceptions of the two hits with low confidence. So the only unbiased opinion one can make is that the phone was in this same general area the entire time. The voice call hits the same tower and sector so there is no evidence to support any movement of the phone. Any attempt to show movement based on these records is pure guesswork and not reliable.

I reviewed the police reports with regards to the contacts with the Samsung engineers. It stands out that while they may be experts on the operation of the Samsung phone, they are definitely not experts on the Verizon records. As an example there was a question of what the "F" meant on the call detail records. They felt it may have meant "Failed". Well this is a very common code use by Verizon and anyone with minimal expertise should know that is a call forwarding feature, typically to voicemail. So they are not much by way of experts to comment on the meaning of the Verizon records.

With the issue of determining when the phone was on or when it was off, they would be the best expert to determine if there is any way of knowing when the phone is turned on or when the phone is turned off. They manufacture the phone, so they would be the best authority to determine if there is any log or other records to show the dates and times that a phone was turned on or off. From what I read it sounded like they were conceding that there are NO records of when the phone is on or off.

Looking at the records we see that on 03/16/12 0712-1132 hrs there were no RTT hits as well as no voice calls on the CDR. So if there is no activity there will not be an RTT captured. RTT will only occur when a voice, SMS or data transmission is done on the phone. If the phone is idle and not being used then there will not be any RTT records. So the lack of activity during this time is not enough to say the phone was powered on or powered off.

Between 1133-2245 hrs there are calls made to the phone and attempts to get an RTT hit. However the phone is not within connection of the network so no activity was recorded. Using these records alone and having a lack of connection is not sufficient to say the phone was powered off or powered on. It is impossible to say. The only thing that can be said is that the phone is not within network coverage. Things like obstructions can cause the phone to lose connection to the network. As an example if someone is inside a Costco that has large concrete walls, or inside a hospital or sometimes even inside a courthouse, one can lose connection with the network and not have service, thus the records would show no activity, but the phone could be powered on. So lack of activity cannot be assumed to be powered off either manually or abruptly. It's just impossible to tell.

The network does not keep track of this type of data. I believe the email correspondence with Verizon shows that this is the case. Verizon just does not keep track of that type of data. The Samsung engineers went to great lengths to say that the phone sends a signal to the carrier, but again that data is not kept.

The engineers also went to great length to describe water damage to the phone. I know from personal experience that when water damage occurs there is a good chance that the power will go out and come back. I've seen that on phones that I have examined, but it is unlikely that it will occur for long periods of time. If this phone was left in a grassy area for some time, the area was wet with dew or other watering, that could be one potential explanation for why the phone lost connection with the network for approximately 25 minutes or so. It is also possible that depending on the conditions that something may have blown over the phone covering it and causing the network connection to be lost until it was blown away. The possibilities are endless as to what may have occurred and consists of mostly guesses. One cannot say with any certainty if the phone was ever powered on or powered off versus off the network.

As to the engineers comment about a lack of signal being recorded indicates the phone was unnaturally shut down. That is just not supported by the records. There are no records to show the normal, routine connections such as handshakes that occur between the cell phone and the network. I believe that one of the persons contacted in the various emails stated that the network does not know the difference between a normal shutdown and an abnormal shutdown. All the network sees is a lack of communications from the phone, thus lost connection. So to make any other assumptions is pure guesswork.

Any attempts to say that anyone can determine the times that a phone was turned on or turned off or if those were powering down in a normal fashion or abruptly losing connection, solely based on these records is guessing and seriously misunderstands what the Verizon records mean. I do NOT believe that any Verizon employee will come to court and testify that based on these records (CDR and RTT) that were provided that they can tell this type of information. That information may have been available once up on a time in some other records, but if they were not preserved they would be long gone by now. And please note that I say "may have been available" leaving some room for some unknown. From

prior contacts I have had with Verizon I have always been told these type of records are not kept. I think the Samsung folks are going outside their expertise in trying to help out the police.

Finally, I combined the tower dumps into one file and have narrowed the data to Tower 1 Sector 3 as requested. The attached spreadsheet has all calls that went through tower 1 sector 3 for the time period of 03/16/12 2200 hrs to 03/17/12 0330 hrs. It shows both calls that started in sector 3 as well as calls that only ended in sector 3. So some calls may involve other towers but either started or ended in sector 3.

Summary of Greg Stutchman Statement:

There is no forensic clarification of the photos that he reviewed meaning that they were not altered. The images were converted from JPEG to Bitmap and viewed with AC DC Imaging Software and a high resolution screen. The JPEG had no EXIF data so it was requested and received. Photos selected were those depicted in the exhibits attached to the report. A pattern comparison of the knot and hair was performed. He looked at color and shutter speed accounts for color. Images were cropped, rotated, and arrows and lettering was added to identify specific areas.

End of Summary

Sincerely,



Alfonso Lopez
Deputy Alternate Defender
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Enclosure: (1) CD.