

1 International Criminal Court
2 Trial Chamber V
3 Situation: Central African Republic II
4 In the case of The Prosecutor v. Alfred Rombhot Yekatom and Patrice-Edouard
5 Ngaiissona - ICC-01/14-01/18
6 Presiding Judge Bertram Schmitt, Judge Péter Kovács and
7 Judge Chang-ho Chung
8 Trial Hearing - Courtroom 1
9 Friday, 19 March 2021
10 (The hearing starts in open session at 9.31 a.m.)
11 THE COURT USHER: [9:31:24] All rise.
12 The International Criminal Court is now in session.
13 Please be seated.
14 PRESIDING JUDGE SCHMITT: [9:31:50] Good morning, everyone.
15 Could the court officer please call the case.
16 THE COURT OFFICER: [9:31:56] Good morning, Mr President, your Honours.
17 The situation in the Central African Republic II, in the case of The Prosecutor versus
18 Alfred Yekatom and Patrice-Edouard Ngaiissona, case reference ICC-01/14-01/18.
19 And for the record, we are in open session.
20 PRESIDING JUDGE SCHMITT: [9:32:13] Yes.
21 And I ask for the appearances of the parties. The Prosecution first, please.
22 MR LEDDY: [9:32:19] Good morning, your Honour. I'm Nicholas Leddy, I'm a trial
23 lawyer with the Office of the Prosecutor. Today with me is Kweku Vanderpuye and
24 Irina Galupa.
25 PRESIDING JUDGE SCHMITT: [9:32:28] Thank you.

1 And the Legal Representatives of the Victims, please.

2 MS DOUZIMA LAWSON: [9:32:33] (Interpretation) Mr President, your Honours,

3 I am Marie-Edith Douzima Lawson, one of the Legal Representatives of Victims of the
4 other crimes. Thank you.

5 PRESIDING JUDGE SCHMITT: [9:32:50] Thank you.

6 And the second team, please.

7 MR SUPRUN: [9:32:51] Good morning, Mr President. Good morning

8 your Honours. Appearing today on behalf of the former child soldiers

9 Nadia Galinier, associate legal officer, and myself Dmytro Suprun, counsel at the

10 Office of Public Counsel for Victims. Thank you.

11 PRESIDING JUDGE SCHMITT: [9:33:04] Thank you.

12 And we turn to the Defence, Ms Dimitri.

13 MS DIMITRI: [9:33:09] Good morning, Mr President, your Honours. This morning

14 Mr Yekatom is represented by our associate counsel, Mr Thomas Hannis; our

15 electronic evidence specialist, Mr Jason Antley; and myself Mylène Dimitri, lead

16 counsel.

17 PRESIDING JUDGE SCHMITT: [9:33:22] Welcome, Mr Antley, to the courtroom.

18 And Mr Knoops.

19 MR KNOOPS: [9:33:28] Good morning. The Defence of Mr Patrice Ngaïssona is

20 today represented by associate counsel, Ms Marie-Hélène Proulx and case manager,

21 Barbara Szmatula. Thank you.

22 PRESIDING JUDGE SCHMITT: [9:33:41] Thank you very much.

23 Before we invite the witness to take the stand, the Chamber will address a procedural
24 matter regarding the scheduling of the witnesses.

25 The Chamber notes that there have been exchange of several emails regarding

1 the scheduling of the remaining witnesses for the first evidentiary block and we've
2 come now to the following, let's say, conclusion in a sense that we at least give it a try
3 like that. So we will have today P-2193 and then we will have on 23 and 24 March,
4 as envisioned, P-2926, and on 24, 25 March, P-0287.

5 And let's say the problem that arose was about P-1847 and if we had added all
6 the time that the parties and participants said that they would need for examination,
7 we would have come to 15 hours. And the Registry has told us they can serve one or
8 two hours more, so we will be at 13.5 or 14 hours. And I simply suggest -- not
9 suggest, I have talked with the Chamber, we simply try it and we will do it. I'm
10 absolutely optimistic with that.

11 Just a second, Mr Vanderpuye.

12 And because my experience tells me that there are always ways that you can
13 accommodate that, we are talking about one hour.

14 The alternative would be very bad, with regard to the expeditiousness and
15 effectiveness of the proceedings, because I understand that the Prosecution, and that's
16 perfectly clear, it's extremely difficult for the Prosecution to bring, under
17 the circumstances, pandemic and also the circumstances in the country, to bring
18 witnesses here and I fully understand that. So it would be really a pity, and we
19 should avoid, not at all costs but as far as possible, that we simply miss two or three
20 days and miss this witness in this first block.

21 Mr Vanderpuye, you wanted to speak.

22 MR VANDERPUYE: [9:35:54] Thank you, Mr President. I know that the Chamber
23 is concerned about the scheduling of the witnesses and you are right, we are
24 very -- we are very concerned about the scheduling of the witnesses. But I think
25 there may be some information that -- I don't know, maybe it was an error in

1 the transcript, there may be some information that the Chamber might not be aware
2 of and that is with respect to Witness 2926. The scheduling of that witness was
3 supposed to proceed pursuant to an audio-visual link beginning on the 23rd of the
4 month. However, there had been some difficulties with respect to the cooperation
5 that is required to do that, interstate cooperation, and as a result of that, his testimony
6 cannot begin before the 24th.

7 And as a result of that, the scheduling of the subsequent witnesses is pushed back and
8 we have lost essentially a day in there and that's the problem that we have now in
9 terms of filling the -- in terms of the remaining amount of time versus the remaining
10 amount of -- versus the available time.

11 And if you subtract from your calculation of about 14 hours a day, it leaves us about
12 a day short. And if you work into that the amount of time that the Registry has also
13 agreed to provide, the additional time, it's another two hours or so in all, then we're
14 still about a couple of hours short of what we might otherwise need in order to
15 guarantee that the witnesses who are presently here, pending their testimony, will
16 conclude their testimony.

17 So we're still -- I'm still talking to VWS and the Registry to see whether that's feasible,
18 but that is the crux of the problem at this point is that if -- in fact, not if, but because
19 2926 cannot begin before the 24th, unless there is more room at the back end of the
20 block or in between to accommodate that day, we will be -- we will be in trouble.

21 PRESIDING JUDGE SCHMITT: [9:38:25] First of all, you are right, I misspoke. So
22 my information -- I have the information, I simply misspoke, it's 2926 starts on the
23 24th, of course, and the 25th, that is clear, we are going forward with that. P-287
24 then, 25th and 26th.

25 And then we have of course the crucial witness, so to speak, in that regard with

1 regard to the scheduling, 1847, and, yeah, you know, it's said -- the Latin says
2 *iudex non calculat*, but yet even I am able to add this up. So we are coming to
3 15 hours and we have currently 13.5 or 14 hours and this is -- and this we should
4 simply try and I would like to stick to that. We should simply -- and also perhaps
5 we should take into account what the -- how the evidence of the first witness
6 unfolded. Of course it was a different witness than Witness 1847 might be, yet it was
7 much shorter than envisioned.

8 So, as I said, my experience shows me this is -- and this is the charm of trial
9 proceedings, that hearings cannot be predicted, neither with regard to content nor
10 with regard to the time.

11 So, yeah, of course, Mr Vanderpuye, I know the problem and again I reiterate,
12 the Chamber is aware that especially Prosecution, because it's your turn at the
13 moment, is in a difficult situation. We take that into regard of course.

14 MR VANDERPUYE: [9:40:04] The only thing I wanted to add was that I understand
15 from I think it was the Yekatom Defence that they have, with respect to 287, an
16 additional hour that they would like to examine the witness on, and with respect to
17 2926, an additional half hour that they would like to examine the witness on, which of
18 course means that your calculation is exact and the concern there is if it's not, we may
19 end up with a witness who has travelled here having to return or go back incomplete.
20 But I just wanted to bring that to your attention because I wasn't sure if you were
21 aware of that particular fact.

22 PRESIDING JUDGE SCHMITT: [9:40:46] So I also heard that on 25 and 26 March
23 the Registry can also facilitate additional hour, so this would cover that. And of
24 course it's like always in life, you're never certain. You have to -- the Chamber is
25 now in a situation to have to weigh all the information and it's -- if it goes as we -- as I

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1 have told you, there are 14 hours against 15 hours envisioned and the alternative is
2 simply to say, okay, we skipped three full days. That's the alternative at the moment.
3 And we have talked about that, the Chamber, and we think we can accommodate that.
4 There must -- actually, I say now that there must be a way.
5 Okay, thank you very much for that. And also I would like to add on that that
6 the Chamber would very much appreciate it if such scheduling matters, first
7 the participants really try everything to solve these amongst themselves. It's not
8 that -- because you know much better than the Chamber all the details with regard
9 your working methods, your people that are in the courtroom, your people you have
10 conflicting dates that they have to accommodate. So really to everyone here in
11 the courtroom, try to explore avenues without the Chamber's -- before addressing
12 the Chamber.
13 So on that we can finish now the procedural matters and I would ask the witness to
14 be brought in.

15 (The witness enters the courtroom)

16 PRESIDING JUDGE SCHMITT: [9:43:25] Good morning, Mr Bromley. Can you
17 hear and understand me well?

18 WITNESS: CAR-OTP-P-2193

19 (The witness speaks English)

20 THE WITNESS: [9:43:31] Yes, I can, thank you.

21 PRESIDING JUDGE SCHMITT: [9:43:32] I would like to welcome you in
22 the courtroom on behalf of the Chamber. You are called to testify to assist
23 this Chamber in the case against Mr Yekatom and Mr Ngaïssona. There should be
24 a card in front of you with the solemn undertaking to tell the truth. Could you
25 please read out loud the content of this card.

1 THE WITNESS: [9:43:51] I solemnly declare that I will speak the truth, the whole
2 truth and nothing but the truth.

3 PRESIDING JUDGE SCHMITT: [9:43:56] Thank you very much. You are now
4 under oath. You have already been informed by representatives of the Prosecution
5 and the Victims and Witnesses Unit about the importance to speak the truth, I don't
6 have to reiterate that. But I just wanted to tell you that, as you of course are also
7 aware of, that it is an offence within the jurisdiction of the Court to give false
8 testimony.

9 I would also like to note a few practical matters regarding your testimony. You are
10 also aware that everything we say here in the courtroom is written down and
11 interpreted in various languages, it is therefore important to speak clearly into
12 the microphone and at a slow pace. And please start only answering after perhaps
13 one or two seconds when the question has finished.
14 We can start then with your testimony. You will be questioned by the lawyers from
15 the Prosecution, the Defence and the victims representatives, and perhaps
16 the Chamber too.

17 I give you the floor. Perhaps -- I give you the floor, but you know of course you
18 have to establish the preconditions for Rule 68(3).

19 MR LEDDY: [9:45:00] Yes, thank you, Mr President. Thank you, your Honours.

20 QUESTIONED BY MR LEDDY:

21 Q. [9:45:05] Good morning, Mr Witness.

22 A. [9:45:07] Good morning.

23 Q. [9:45:07] My name is Nick Leddy and I'm a trial lawyer with the Office of the
24 Prosecutor. I'm going to remind you to please talk slowly today for the interpreters
25 and if you have any questions or if anything is unclear, please let us know.

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1 Also, if you need a break at any time today, please let us know.

2 I'd ask you to please state your name and date of birth for the record.

3 A. [9:45:30] My name is Lars Bromley, born December 23, 1974.

4 Q. [9:45:38] And, Mr Bromley, you made a report for the Office of the Prosecutor
5 dated 28 October 2020; is that right?

6 A. [9:45:50] Correct.

7 Q. [9:45:50] And did you, with the help of the Victims and Witness Unit, recently
8 review this report, it's two annexes and associated material, including satellite
9 images?

10 A. [9:46:05] Yes.

11 Q. [9:46:05] And do you have any objections to its admission into evidence of these
12 materials that I just mentioned?

13 A. [9:46:13] No.

14 MR LEDDY: [9:46:15] So for the record, your Honour, it appears the conditions to
15 Rule 68(3) are met.

16 PRESIDING JUDGE SCHMITT: [9:46:20] I also see it this way and there is no
17 objections on the Defence side so we can continue. Please proceed.

18 MR LEDDY:

19 Q. [9:46:28] And I understand, Mr Bromley, you may have a correction or
20 clarification that you'd like to make from your report; is that right?

21 A. [9:46:41] Yes.

22 Q. [9:46:43] Can you please provide us with that correction.

23 A. [9:46:47] There are probably a few. And the conditions for preparing this
24 report were not ideal, due to the pandemic and other factors.

25 Most immediately I communicated to you yesterday, or last evening that in

1 the location of the coordinates for the Boeing mosque there is possibly a structure
2 which has been destroyed directly adjacent to the coordinates of the Boeing mosque.
3 Secondly, a structure relatively close to the Boeing mosque GPS coordinates was
4 certainly destroyed by 28 or 30 December, which is visible in figure 1, inset 1, but
5 the little arrow to point it out is not visible. I believe that was due to a technical
6 problem.

7 Finally, in annex 2, one of the images should have been identified as from
8 Google Earth, but I indicated it was one that we had purchased.

9 Q. [9:48:19] Thank you, Mr Bromley. And we'll get into more detail about those
10 corrections later in your testimony.

11 MR LEDDY: [9:48:25] And for the record, before we begin, your Honour, I'd like to
12 state for the record that the Yekatom Defence has agreed to jointly engage this witness
13 as an expert and for this I refer to filing ICC-01/14-01/18-719 confidential, paragraph 6.
14 And given that there is no objection to this witness being qualified as an expert, we
15 would respectively seek the Chamber's confirmation that this witness is in fact
16 qualified as an expert in the field of geospatial remote sensing and satellite imagery
17 and analysis.

18 PRESIDING JUDGE SCHMITT: [9:49:05] That's fine. Please proceed.

19 MR LEDDY: [9:49:07] Thank you, your Honour.

20 Q. [9:49:09] So, Mr Witness, since the Chamber has already authorised you
21 testifying as an expert and your CV has been submitted in evidence at tab 4 of the list
22 of materials at CAR-OTP-2130-0304, I'll just ask you a few questions about your
23 professional background.

24 Please state for the record your current job.

25 A. [9:49:36] My current job title is Specialist with the United Nations Institute for

1 Training and Research Operational Satellite Applications Programme.

2 Q. [9:49:51] And can you please briefly describe your duties and responsibilities in
3 that role?

4 A. [9:49:56] Certainly. I lead a team of about eight colleagues doing satellite
5 imagery analysis in support of UN operations, human rights investigations, security
6 analyses. All day every day we work in support of United Nations' colleagues in
7 their various operations on request under different mandates and mechanisms
8 acquiring and analysing usually commercial, high resolution satellite imagery to
9 provide information to our colleagues on issues of interest.

10 Q. [9:50:44] How long have you been in that role?

11 A. [9:50:47] I've been with UNOSAT for about 11 years now and prior to that I did
12 similar work for several years and have over 20 years' experience at this point with
13 satellite imagery and geospatial technologies.

14 Q. [9:51:09] Now, Mr Bromley, you prepared a report dated 20 October 2020 and
15 that was analysing satellite imagery in the Central African Republic from late 2013
16 through mid-2015; is that correct?

17 A. [9:51:30] Correct.

18 Q. [9:51:31] So I'd like to direct your attention to the first paragraph of the report,
19 tab 5 of CAR-OTP-2127-6617 at page 6618. You referred to the letter of instruction
20 from the Office of the Prosecutor from August 2018 and amended -- as well as an
21 amended letter of instruction from March 2020 and a third letter from the Office of the
22 Prosecutor in June 2020. Do you recall receiving those letters?

23 A. [9:52:05] Yes.

24 Q. [9:52:07] And which of these letters guided your analysis in drafting the report?

25 A. [9:52:15] I think all of them, with each letter causing me to focus on more

1 specific issues as we went along and providing additional information such as
2 corrected coordinates.

3 Q. [9:52:35] Since your report and annexes have already been submitted as
4 evidence under Rule 68(3), I will not ask you to repeat your methodology or all of
5 your findings. Instead, I will ask some follow-up questions to expand upon your
6 report and clarify certain aspects. I'll then ask you to conduct a brief technical
7 demonstration, for which I understand we have the Chamber's permission, and that
8 will be a demonstration using your laptop.

9 Do you have any objection to me asking about a few technical terms first? The first I
10 would like to ask you is about remote sensing. Can you define that for us, please?

11 A. [9:53:16] Yes. So remote sensing is a broad field dealing with using sensors
12 and instruments to gather data on something from some distance. In my field it's
13 interpreted as using satellites which are in orbit around the planet and acquiring
14 imagery, satellite imagery, which we then use to conduct specific analyses on
15 different issues.

16 For this body what I'm using are a specific set of satellite images and we're reviewing
17 them visually to identify features of interest according to what you have asked us.
18 In other situations we might be using more computational algorithmic methods to, for
19 example, map vegetation or floodwaters or issues like that.

20 Q. [9:54:27] And could you also give us a definition, brief definition of geospatial
21 analysis; what is that?

22 A. [9:54:38] Geospatial is just a term used to identify data that has a geographic
23 component. So latitude and longitude, for example, the mailing address of any
24 home or office is also geographic data, but it is essentially data that is assigned to
25 a specific location on the surface of the earth.

1 Q. [9:55:08] What is orthorectification? And if you could please explain the role it
2 played in your analysis.

3 A. [9:55:21] Orthorectification refers to a very complex area or field which used to
4 be much more difficult but is now simpler based on the software available.
5 The satellites are moving at very high speed in orbit, they are often looking down at
6 the surface of the earth but at different angles. The surface of the earth itself will
7 have different slopes and terrain and so correcting out the distortion that those factors
8 introduce into the image is orthorectification. Without orthorectification, if I look at
9 two satellite images, they may be offset from each other by, you know, 10, 20 metres
10 or less. With orthorectification they become much more aligned and easier to
11 analyse.

12 Q. [9:56:35] I would like to direct your attention now to annex 2 of your report,
13 located at tab 7 under CAR-OTP-2127-6634.

14 I'd ask the court officer to please show this document on evidence 1 and I confirm it
15 can be shown publicly.

16 Mr Witness, we'll just ask for your patience for a second while we set that up.

17 PRESIDING JUDGE SCHMITT: I think it should be there.

18 MR LEDDY: [9:57:51] Is it? Okay.

19 Q. [9:57:50] Can you see it on your screen, Mr Bromley?

20 A. [9:57:55] I see the cover page for annex 2.

21 Q. [9:58:00] Okay, great. So if you proceed through the annex to the subsequent
22 pages, can start at page 1 and go to page 2, I'd ask you to please explain the columns
23 that we see in this annex and their significance.

24 A. [9:58:15] So the annex provides information on all the possible satellite images
25 that were available for the locations I was provided.

1 Column 1 says "Image Date" and that is the date of the image acquisition.
2 Column 2 is the specific satellite. There are multiple satellites in use. This
3 particular page shows satellites with names like WorldView-2 and GeoEye-1.
4 The third column is the image ID and so this is the specific alphanumeric code that
5 identifies the specific image in question. So, for example, when I purchase
6 the imagery from the vender, I use that code to make sure we are getting the specific
7 image that we want.
8 The third column is the per cent of clouds visible on the image. These satellite
9 images are all optical satellite images, the same thing that you would see if you were
10 flying over in a plane and looking out the window, and therefore clouds are
11 the biggest problem with imagery like this because if an area is completely cloud
12 covered, you're not seeing the ground at all.
13 The final column is the off-nadir angle. I mentioned earlier that a satellite can
14 acquire an image at an angle. The best possible satellite image is when it's looking
15 straight down and it would have an off-nadir angle of zero. You almost never see
16 images with an off-nadir angle of zero. The higher the off-nadir angle the poorer
17 quality the image will have in terms of what you can visibly see in it and also
18 the greater distortion you might experience even with orthorectification.
19 Q. [10:00:40] Can you explain the difference between the yellow and blue
20 highlights, please.
21 A. [10:00:48] The yellow highlighting indicated imagery which we were able to
22 purchase with relatively limited budget for this particular analysis.
23 The blue highlighting is imagery that I looked at using something called
24 Google Earth Pro, which is freely available software from the Google corporation
25 which has a large amount of satellite imagery already loaded into it.

1 For this particular project, if I felt it was necessary, I did refer to the Google Earth
2 imagery just to give me an additional look at the location because in several cases we
3 could not afford to purchase that image.

4 Q. [10:01:35] You mentioned earlier this morning about wanting to make
5 a correction for one of these highlights. Can you indicate which one that was?

6 A. [10:01:46] Can you scroll or go to the next page?

7 The next page.

8 I believe it was the one there for Bossangoa. The top one should have been
9 identified as from Google Earth. But I confess I'm suddenly drawing a blank on
10 whether that's accurate.

11 Q. [10:02:41] We can come back to that.

12 So after receiving the letters of instruction from the Office of the Prosecutor, how did
13 you identify where to obtain the relevant images from?

14 A. [10:03:05] For this particular time period there weren't very many satellites in
15 operation. We generally search a public -- or a commercial publicly available library
16 repository of images to determine what images are available for a specific location on
17 specific days.

18 So I referenced that commercial catalogue and then, based on the funds available and
19 further discussions with the Office of the Prosecutor, we determined which images
20 we could actually purchase, which were the best ones to answer the question for
21 a particular location.

22 In general, if the incident in question happened say on December 15, your best image
23 pair to analyse that would be acquired on the 14th and the 16th, right before and right
24 after, and then the analyst, myself, is just comparing those two images.

25 In reality, in an area like Central African Republic, the image collections are much

1 more infrequent and so it might be a month before or a month after are the best
2 images that you have available to purchase.

3 And then factors like cloud cover and the off-nadir angle would also influence
4 the purchasing decision.

5 Q. [10:04:44] And can you explain what resolution you looked for in the images
6 that you found?

7 A. [10:04:50] The best resolution possible. Again, taking into account the clouds,
8 the off-nadir angle and the date. The off-nadir angle will reduce the resolution in
9 practice, but in general, 50 centimetres was probably the average resolution of all
10 the imagery used, sometimes slightly better, oftentimes a bit worse. The QuickBird
11 satellite that you see listed is one of the oldest ones, it's no longer in operation, but I
12 think in 2013 it was acquiring imagery at 70-centimetre resolution.

13 Q. [10:05:41] In your report you often mention obtaining more than one image for
14 the same location. Can you explain why that is?

15 A. [10:05:49] Again, ideally you want one image before and one image after so that
16 you have the two images to compare. In some areas, if, for example, it was
17 a QuickBird image or the off-nadir angle was high, I may have purchased an
18 additional image just to provide a little bit better look at that location.

19 Q. [10:06:19] And on page 3 of your report, this is tab 5 at CAR-OTP-2127-6617 at
20 page 6619, you mention the decision not to purchase some imagery from a few sites.
21 I believe you said it seemed unlikely to be useful. Can you explain that decision for
22 the record, please.

23 A. [10:06:47] Again, our budget on this project was limited. In a perfect world I
24 certainly would have purchased every single image possible, but that simply was
25 not -- not possible in this particular analyses. Some of the issues I was asked about

1 were things like: Was a crowd gathered at a particular location at a particular time?
2 And therefore if the image was acquired a week after, or something, yes, I don't think
3 there would be any chance that the crowd would still be there. So, therefore, in
4 those specific situations we -- I chose not to purchase the image.

5 Q. [10:07:39] Your report mentions the providers DigitalGlobe, Airbus Defence and
6 Space corporation, and Google Earth Pro. Have you obtained images from these
7 providers in the past for other analyses?

8 A. [10:07:56] All the time. Just one note, the imagery visible on Google Earth Pro
9 also comes from DigitalGlobe and Airbus and a few other sources. So
10 Google Earth Pro is not the imagery source, but it is the imagery provider.

11 Q. [10:08:24] And in the past, have you ever had problems with the accuracy or
12 reliability from the images that you've obtained from these providers?

13 A. [10:08:34] No, I mean, you always want better resolution, you always want
14 cloud-free imagery, but you do the best you can with what's available. When you're
15 getting imagery from Google Earth Pro you have somewhat less ability to alter
16 the contrast and the stretch of the image to, for example, you know, get a better look
17 at a specific location. An image from Google Earth Pro is kind of a one size fits all
18 image. What you see is what you get. There is very little ability to improve
19 the visibility of certain features. Whereas imagery that we purchase from the vender,
20 you can adjust the contrast and the stretch to see some details a little bit more clearly.
21 But that is all perfectly common in the image analysis world.

22 Q. [10:09:37] And can you explain the different file types that these providers have
23 and the ones that you gave to us as well, thanks.

24 A. [10:09:49] Certainly. And in hindsight, I'm realising I should have documented
25 that a little bit better. What I provided to the Court was most often the entire

1 package of files that were delivered to us by the vender. That entire package of files
2 includes the satellite image, which is called a TIFF file or a GeoTIFF file. And in
3 addition, there are multiple other files included in what the vender delivers to us,
4 everything from perhaps the bill of sale or the licensing conditions and then other
5 geospatial data that describes where the image is on the surface of the earth, and
6 finally, a low resolution JPEG image, which is what we call the browse image, and
7 that is just a very small lightweight file that allows us to see quickly if, for example,
8 there are clouds in the image.

9 The full TIFF file is often several hundred megabytes so -- and we often deal with
10 imagery up to 20 or 30 gigabytes, so these can be very large files. And so if you just
11 need a lightweight file that you can email as an attachment to show someone that
12 there are no clouds, you would use the browse image, the JPEG image.

13 But, yes, what I delivered to you included the TIFF file as well as all that other
14 additional data which just comes along with it for -- for the record.

15 The imagery that I got from Google Earth Pro would have only included a JPEG
16 which was taken from Google Earth Pro.

17 Q. [10:11:44] Can you explain what a KMZ file is?

18 A. [10:11:52] A KMZ file is the file format for Google Earth Pro. There's also
19 a Google Earth. And so it stands -- so there is a KML file which stands for Keyhole
20 Markup Language, which is just another file -- another geospatial data file format.
21 The KML file is then often compressed into a zip file and that's what we call the KMZ
22 file.

23 Q. And were the electronic files that you obtained in this case stored in a secure
24 manner?

25 A. [10:12:36] Yes. We are fortunate to be based at the Cern research facility

1 outside Geneva, Switzerland, with endless computing capabilities and extremely high
2 security and that is where the imagery was downloaded to and stored and then also
3 moved over to a web server to share with the Court.

4 Q. [10:13:05] And I understand that the files that you reviewed with the Victims
5 and Witness Section earlier this week are the same files that you sent to us on
6 29 October 2020; is that correct?

7 A. [10:13:18] Correct.

8 Q. [10:13:21] Now I would like to move to the next area to ask you a few questions
9 about your analysis. You've mentioned ArcGIS Pro, I believe. Can you please
10 explain briefly how you used it in this case.

11 A. [10:13:39] Yes, so ArcGIS Pro is a geographic information system, that's the GIS.
12 GIS software is common in our profession. There are many different types of GIS
13 software. For this particular analysis I used ArcGIS Pro because basically that's what
14 I had, that's what I had the licence for. I think of a GIS software as sort of like a word
15 processor but for maps. You use it to load imagery and other data into and do your
16 analysis and produce your infographics or your maps out of the GIS software. And
17 that's what I did in this case. As we acquired imagery from the vendors, I loaded it
18 into ArcGIS Pro and conducted the analysis and then used it produce
19 the -- the figures and insets that I delivered to you.

20 Q. [10:14:51] Did anyone else assist you in this analysis?

21 A. [10:14:56] In the analysis, no. A colleague, a junior colleague helped with some
22 of the graphic figure production, but only the graphical side.

23 Q. [10:15:11] And did you supervise that junior colleague?

24 A. [10:15:17] Yes, very closely.

25 Q. [10:15:19] Now I would like to direct your attention to page 3 of your report,

1 again at tab 5 of the list of materials, to the second paragraph and this is at page 6619.
2 Can you clarify what you meant here by saying, quote: "Damage or destruction of
3 structures occurring in the time between the acquisition of the two satellite images is
4 usually readily visible when doing this comparison, assuming sufficient damage was
5 done." What did you mean by "sufficient damage"?

6 A. [10:15:51] It's important to remember, yes, you're looking at the ground from
7 a satellite in space. The damage has to be of a type or a level that, first of all, you
8 would see it from above, looking down. It also has to be of a magnitude that is big
9 enough for the satellites to see. So, for example, broken windows, invisible -- or
10 broken windows are invisible to a satellite. Cracks to the wall, cracks to
11 a foundation, all invisible to the satellite. Any interior damage, if the structure was
12 ransacked or something like that, invisible to a satellite.

13 If the structure was completely burned or completely destroyed in some way, that is
14 what a satellite would see. If it was partially damaged or burned and a portion of
15 the roof was damaged, that is what a satellite would see.

16 So we know we're not seeing all the damage, we're really confined to a more
17 catastrophic level of damage that is visible in the satellite imagery.

18 Q. [10:17:15] Now staying on the same page of your report in the next
19 paragraph you differentiate between the "simple, single class assessment of 'damaged
20 or destroyed'" generally used in this case and more complex analyses.

21 Can you explain the difference between the simple and complex analyses, please?

22 A. [10:17:42] One moment, let me read this.

23 So, yeah, what I've learned in my years working with the Court is it's best to keep it
24 simple. So in this case I really only indicated structures which were certainly
25 destroyed. In other analyses we might be also interested in things like possibly

1 damaged or partially destroyed. Possibly damaged, for example, if we see debris
2 around a structure, that could indicate that the structure itself was damaged. But
3 since it's not directly visible in the image, it's a different class of analysis.

4 In the interest of time and basically a cleaner evidence product, in this case I confined
5 myself to the simple analyses.

6 We've done it in the past where we include the possible and moderate damage and it
7 is more difficult to present in a courtroom.

8 Q. [10:19:03] So am I to understand from your answer that in this case you did not
9 include those buildings that were possibly damaged?

10 A. [10:19:10] Correct.

11 Q. [10:19:13] And can you explain for the record what a vector is, please.

12 A. [10:19:21] Vector data is a point, line or polygon, generally it's a geometric
13 creation which is then recorded by the -- by the software using the coordinates to
14 determine where the different parts -- where the point is, or if you're a line, where
15 the start point and the end point is, or a polygon, where the different facets of the
16 polygon are.

17 Q. [10:19:57] And just one last question before we get into your demonstration.

18 You mentioned earlier this morning you had a bit of difficulty recalling which item in
19 annex 2 was actually from Google Earth. So I'd like to direct your attention, please,
20 to annex 2 of your report, that's tab number 7 and that's at CAR-OTP-2127-6634 and
21 I'd like to direct your attention to page 6642, specifically at the item marked
22 "Table Six".

23 Now, looking -- do you see that in front of you, Mr Witness?

24 A. [10:20:46] Yes.

25 Q. [10:20:47] And looking at that item, does that refresh your recollection as to

1 which image was in fact obtained from Google Earth rather than the provider
2 indicated?

3 A. [10:20:59] Yeah, it was the top one, 19 January 2014.

4 Q. [10:21:04] And for the record, I indicate that's Table Six in the Carnot area.
5 Now, Mr Witness, I'd like to ask you to do a bit of a demonstration for us, using your
6 laptop, in fact, a visual presentation of the software you mentioned. I'll ask you to
7 do your demonstration on two locations. First at Bossangoa and then in Boeing.
8 So we'll start with Bossangoa. I'll direct your attention to annex 1 of the -- of your
9 report at tab 6, that's CAR-OTP-2127-6626 and on page 6629 to the map of Bossangoa.

10 A. [10:21:52] Can I take over the screen? Yes.

11 Q. [10:21:55] Yes, I understand, Madam court officer, that the witness can use
12 evidence 1 for his presentation?

13 A. [10:22:05] It's on evidence 2, I believe.

14 Q. [10:22:15] Correction, I believe it's evidence 2.

15 A. [10:22:18] So this is just a very basic quick demonstration of the ArcGIS Pro
16 software, so this is GIS software. Over here where you see the world map, this is
17 what we call the map frame or the data frame. Over on the left you basically see
18 a table of contents which has all the data loaded for this particular demonstration.
19 If I was doing the analysis, maybe slightly different datasets would be loaded, things
20 would be configured differently, but this is basically what a GIS software looks like.
21 Up along the top you have a lot of tools and a lot of options and a lot of things that we
22 could use. We won't really get into that. But again, looking at this world map, we
23 can easily zoom into Central African Republic. So this is the outline of Central
24 African Republic. In terms of the data that I was given in the letters of instruction,
25 I've just turned that on, so this is geospatial data. We were given geospatial data to

1 identify the different locations and this is what it looks like when you -- you plot it on
2 the map.

3 You wanted to start with Bossangoa?

4 Q. [10:23:54] Yes, I'll direct your attention to inset 2 of the map of Bossangoa to
5 the location marked "*École de la Liberté*".

6 And for the record, these two images are the TIFF images referenced at tabs 48 and 49
7 of your binders, that's CAR-OTP-2127-6689 and CAR-OTP-2127-6690.

8 Mr Witness, can you explain your analysis that you did for these two images, please.

9 A. [10:24:31] So this is quite simple. This is the location of the school. One
10 moment. So here is the GPS coordinates that I was given for *École de la Liberté*.

11 What you're looking at on the screen is the image from 4 December 2013, showing
12 the grounds of the school. I can zoom in to quite a good level of detail.

13 If I then turn on the image from 12 December 2013, which is eight days after the first
14 one, you see a lot of white and some blue objects have appeared on the grounds of the
15 school. These are what we would commonly identify as IDP shelters, internally
16 displaced persons. In this particular analysis what I do is do my best to identify each
17 particular shelter and then I simply click on it and make a vector data point and you
18 end up with something like this where the blue squares indicate each individual
19 separate shelter.

20 Now, importantly in a lot of -- in some areas the shelters are kind of merged together
21 or grouped very closely, and so, yes, there are probably more actual shelters than
22 what I counted here, but this is a good approximation of what you're going to get out
23 of the image.

24 But again, the analysis procedure for this is quite simple. You're just comparing
25 the two images, one to the other, and identifying the change and then doing your best

1 to document the specifics of the change, how many specific shelters are you seeing.

2 Q. [10:26:40] And for these two images, is it correct that in your report you
3 mentioned that in the second image of 12 December 2013 you identified about
4 100 tent-like structures?

5 A. [10:26:55] Correct. And I mean, we can check that in the attributes of the data.
6 And so, yeah, there were 95 specific structures in that -- in that area.

7 Q. [10:27:09] And you also mention in your report on page 6 in the fourth
8 paragraph down, this is at page 6622 on tab 5, you mention in that paragraph that,
9 quote, several hundred more tent-like structures are visible. And I believe this is in
10 reference to subsequent imagery from 16 December 2013, 8 January 2014, and
11 22 January 2014.

12 Now, sitting here today, do you recall whether you in fact sent the Office of the
13 Prosecutor these three subsequent images?

14 A. [10:27:53] I don't recall actually. But I did get two of them and I have them
15 here ready to show if we want to show.

16 MR LEDDY: [10:28:10] With the Chamber's permission, we'd ask the witness to
17 show (Overlapping speakers)

18 PRESIDING JUDGE SCHMITT: [10:28:13] You know, the witness has brought it
19 with him, why not have a look at it.

20 MR LEDDY: [10:28:17] Thank you, your Honour.

21 Q. [10:28:20] Mr Witness, please proceed.

22 A. [10:28:22] Okay. So again, these images come from Google Earth Pro. When
23 you get them from Google Earth Pro, that's what you get, you don't have any ability
24 to improve them so they are quite a lot uglier than what you're seeing here. But I'm
25 now going to turn on the image from 8 January 2014 and (a) you'll see its uglier, and

1 that's again just because of the image source, but you can certainly see that by
2 8 January the area of IDP shelters, in this case they're just very white, has grown
3 versus 12 December 2013.

4 Now, the next image is 22 January and is even uglier in terms of how it appears, but
5 with a little work you can get in here and see that the area of shelters has grown quite
6 a bit versus the previous two images. And so that's how I arrive at the conclusion
7 that it's grown by 22 January.

8 Q. [10:29:37] When you say "uglier", what do you mean exactly?

9 A. [10:29:42] It's -- what is happening here is you have a very white area, both
10 the tent shelters and then the -- the dirt road and the dirt around it is all highly
11 reflective, and the sensor and the way the image has been processed, the image is
12 what we call saturated, just like if you look at something that's too bright, your eyes
13 will get saturated. And so it's so white and bright that it's much more difficult to
14 determine the individual structures. I wouldn't necessarily try and count these
15 structures, that's why I just estimated their -- their overall numbers.
16 If we had been able to buy this image, then I would have more ability to play with
17 the saturation and the colour balance and reduce this, you know, amount of bright
18 white and make the shelters a little bit more visible.

19 Q. [10:30:48] Is that the kind of work that you mentioned performing earlier? You
20 said you had done some work on these subsequent images, can you describe what
21 kind of work that was.

22 A. [10:31:00] On the Google Earth Pro images or the other images?

23 Q. [10:31:04] The Google Earth ones.

24 A. [10:31:06] Yeah, if -- in other areas it's not this bad. You don't have this bright
25 white saturation kind of blurring everything. You can use the image much more like

1 a better quality image to conduct your damage assessment. But, yeah, the work with
2 these images in -- in the most extreme case involves bringing them in to ArcGIS Pro to
3 conduct your analysis. Sometimes -- in this case, what I did previously was I just
4 looked at them in Google Earth Pro and determined that, yes, by the end of January
5 the area had grown quite a bit.

6 Q. [10:31:53] So I would like to move from your IDP analysis to the property
7 damage analysis for Bossangoa and going back to the images of 4 and 12 December.
8 I'll ask you some questions about the property damage you mentioned in your report
9 at tab 5, page 6622, in the last sentence of the second paragraph, that as of at least
10 4 December 2013, that hundreds of structures exhibit signs of destruction but would
11 need comparison with a previously-acquired image for verification. Can you
12 explain what you meant by that.

13 A. [10:32:36] So in that particular case had we been able to afford an image
14 acquired before 4 December, then I could have done a detailed assessment of images
15 destroyed by 4 December. Since we did not have that previous image, I did not
16 attempt that analysis using Google Earth Pro because it would, yeah, be much more
17 difficult and time-consuming and the results would not be as solid.

18 Q. [10:33:09] Do you recall, sitting here today, in which areas of Bossangoa those
19 hundreds of destroyed structures existed as of 4 December 2013?

20 A. [10:33:21] I don't, I'm sorry. But, yeah, I remember them quite frequently
21 scattered around. But, yeah, I don't -- I don't recall specifically where they were.
22 With a little bit more time, I'm happy to provide some additional information.

23 Q. [10:33:47] We'll come back to that if needed. But you also mentioned in
24 the same paragraph there were some indications of burning present in some of these
25 houses in Bossangoa on both 4 and 12 December 2013. Can you give us perhaps an

1 example of what some of these indications look like or describe them for the record.

2 A. [10:34:12] Yes. Usually when -- if a structure -- if a wooden structure is burned,
3 you end up with a lot of black charred remains, sometimes you might see white ash,
4 depending on, on the overall conditions. In addition, you might see some of the
5 vegetation immediately adjacent to the structure was also burned. But, yeah,
6 the blackened areas tend -- tend to be the big clue.

7 Q. [10:34:44] And I'd like to now show you an image and seek your expert opinion
8 on it.

9 This is tab 61 of the list of materials at CAR-OTP-2085-3122 and I'll ask
10 Madam court officer to pull that up on evidence 1, I believe.

11 Please let us know when you see that image in front of you.

12 A. [10:35:56] Yes, I see it.

13 MR LEDDY: [10:36:00] Is it possible, Madam court officer, for that image to be
14 broadcast to the public as well.

15 Q. [10:36:23] I'll ask you, Mr Witness, in your expert opinion, is this image
16 consistent with the kind of damage you observed in the satellite imagery which you
17 obtained for Bossangoa?

18 A. [10:36:37] Yes. So here, you know, what you would see in a satellite image, so
19 the pre-image would show the structure with a roof and then the post-image, the big
20 clue would be the roof is gone. And then what you're also seeing is some of the
21 blackened charred remains on the ground, and also some of the white ash that I
22 mentioned. And so all of that would be very subtle but certainly visible if the image
23 had been collected while it was -- it was still visible.

24 The white ash in particular tends to blow away relatively quickly, but the blackened
25 soot will stay, you know, and gradually ablate, we call it, gradually kind of diminish.

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1 But, yeah, for here the -- you know, the immediate clue is the absence of the roof and
2 then the blackened parts are the indication of burning.

3 Q. [10:37:47] Now, next I'd like to show you a short excerpt from a video and this is
4 at tab 63 of our list of materials. The ERN is CAR-OTP-2088-2204 and the excerpt I'd
5 like to show you is from minute 1 through minute 4:19. And I'll ask your expert
6 opinion, after watching this video.

7 We would like to request the video not be broadcast to the public and be put on mute
8 for the parties and participants.

9 I'd also like to state for the record the French translation of the transcript is at tab 65,
10 that's CAR-OTP-2127-6408 at 6410 to 6412, lines 3 through 75. And also for
11 the record, your Honours, this video was discussed in a witness statement,
12 CAR-OTP-2088-2173 at 2195, paragraph 130 -- 123, excuse me.

13 Is the video okay to play?

14 THE COURT OFFICER: [10:39:29] Yes, the video is ready to be played.

15 MR LEDDY: [10:39:32] Thanks. If we could start at minute 1, I'd appreciate it.

16 Thanks.

17 (Viewing of the video excerpt)

18 MR LEDDY: [10:43:00]

19 Q. [10:43:01] Mr Witness, having seen this video, is the damage that you saw in
20 the buildings depicted there consistent with the kind of damage you saw in
21 the satellite imagery for Bossangoa?

22 A. [10:43:15] Yes. Certainly indications of burning and then the frequent roofless
23 structures. It may be that this video was taken some time after, so some of the
24 blackened soot would have washed away in the rains, but yeah, this is very
25 consistent.

1 Q. [10:43:37] Now I would like to move to the second area for your demonstration
2 of the Boeing mosque location. I'll direct your attention to annex 1 of your report,
3 that's tab 6 at CAR-OTP-2127-6626, to the first page, 6627, and the map of Bangui and
4 Boeing. Now directing your attention further to inset 1, the Boeing mosque.
5 For the record, these images are the TIFF images referenced at tabs 37, 38 and 41 of
6 your binders, CAR-OTP-2127-6678, 6679 and 6682.

7 Now, Mr Witness, I'd ask you to please describe the analysis that you did on these
8 images and please include the corrections and clarifications that you mentioned this
9 morning.

10 PRESIDING JUDGE SCHMITT: [10:44:36] Can it be shown to the public?

11 MR LEDDY: [10:44:38] Yes, your Honour.

12 PRESIDING JUDGE SCHMITT: [10:44:29] I also wondered if perhaps also the video
13 that we have seen could have been shown to the public. Perhaps we can keep that in
14 mind. Actually, there might be a reason, but I -- I think we can be -- as I said on
15 the first day already, what we can do to be as transparent as possible we can do.

16 MR LEDDY: [10:45:01] I appreciate that, your Honour. Our concern was at the end
17 of the video there are certain individuals depicted and without being able to notify
18 (Overlapping speakers)

19 PRESIDING JUDGE SCHMITT: [10:45:13] I already thought this as the only possible
20 reason, yet it would be very difficult to identify them, it was very quick. But I
21 understand this now. Okay. Please proceed.

22 MR LEDDY: [10:45:23]

23 Q. [10:45:26] So, Mr Witness, if you could please proceed with describing your
24 analysis for the Boeing mosque area, using your laptop, for the Court, we'd
25 appreciate it.

1 A. [10:45:39] Is it on screen?

2 Q. [10:45:45] I believe it should be coming up on evidence 1.

3 PRESIDING JUDGE SCHMITT: [10:45:50] At least we have an image on
4 evidence 1, so ...

5 THE WITNESS: [10:45:55] Oh, yeah. Okay, so, yes, this is the -- what you're seeing
6 labelled in red --

7 MR LEDDY:

8 Q. [10:46:04] Just for the record, Mr Witness, I believe it's evidence 2. Thank you.

9 A. [10:46:09] So the label in red is the Boeing mosque, these are the GPS
10 coordinates that I was given. The image that you're looking at here is
11 27 November 2013. We can zoom in. And now I will turn on the image from
12 8 December 2013 and you see a slight shift in the image and that's due to the
13 orthorectification issues, but you will see numerous structures in the area that again
14 have lost their rooftop or otherwise changed in configuration.
15 I can turn on the analysis layer, so these buildings are now marked in red. So once
16 again, you're looking at 27 November 2013. And then I turn on 8 December 2013
17 and again, accounting for the slight shift, but you can see multiple structures there
18 have essentially lost their rooftops. I do believe that there is indication of burning
19 here, it's blackened. However, there's also a lot of vegetation and trees casting
20 shadows, so some slight uncertainty there.

21 As I went through this -- so, as you may recall, one of the problems was we had no
22 photo of the mosque and I didn't really have a description of the mosque and, in
23 hindsight, I frankly think I assumed that the largest building was the mosque, which
24 was probably erroneous. And so as I was preparing this, I realised I should
25 probably correct myself a little bit and say that right here, directly adjacent to the GPS

1 point is some sort of structure which, when we look at 8 December, has possibly
2 changed configuration. And again, I don't like doing the possibly discussion in this
3 courtroom, or in any courtroom, just because it's less certain. But after I reviewed
4 this, I felt frankly obligated that I should at least mention that directly adjacent to
5 the GPS point was a -- a possibly damaged or destroyed structure.

6 Now, if we jump forward to 30 December 2013, and this is the QuickBird image, so
7 lower quality, this is where an analyst might really have to play with the image, I
8 mean, change the contrast and the stretch to better understand what they're seeing.
9 But most importantly, going back to 8 December, here we go, we also see this white
10 rooftop here. And if we go to 30 December, then that white rooftop has clearly
11 disappeared. That would certainly be visible even in this lower quality imagery.
12 And so, yeah, those were the two corrections I would like to, to let you know about.

13 Q. [10:49:59] And I'll direct your attention to page 5 of your report, that is tab 5 at
14 page 6621, in the third paragraph you indicate that a structure is within 20 metres of
15 the Boeing GPS coordinates for the mosque that were provided in the 9 March 2020
16 letter of instruction. Can you please show us which building you were referring to
17 in your report.

18 A. [10:50:32] So that would be this relatively large one here. So this is
19 a -- probably a metal rooftop and then you're seeing a white line which just indicates
20 that it is a peaked, peaked roof. And so if we look at -- you're looking at it now on
21 27 November 2013, 8 December 2013, all of that is gone. You see very faintly
22 the interior timbers, the wood frame of the structure, but, yeah, the roof -- the roof is
23 certainly gone and then several of the structures around it also show those
24 characteristics.

25 Q. [10:51:21] And can you show the Court, please, how you calculated that

1 20-metre distance?

2 A. [10:51:27] So a GIS has a good measurement tool and so if we go from -- hold on.
3 If we go from the GPS point here and then to kind of the nearest corner, it's about
4 22 -- these are in feet, sorry. So, yeah, from there to the centre of the building and
5 then around here is roughly a 20-metre radius.

6 Q. [10:52:06] And how far is it to the edge of that structure that's closest to the GPS
7 coordinates?

8 A. [10:52:12] The edge, about 11 -- yeah, 11 metres.

9 Q. [10:52:18] And in the same paragraph of your report you mention four other
10 structures adjacent. Can you show the Court which four you're referring to in
11 the report?

12 A. [10:52:29] So that's this one down here and then these two up here and then one
13 up here. But all of those clearly, clearly disappear as of 8 December.

14 Q. [10:52:48] And how did you mark those in the annex that you provided to
15 the Prosecutor's office?

16 A. [10:52:56] Probably with a similar --

17 Q. [10:53:04] I can direct your attention to map 1a in annex 1, that's tab 6 at
18 page 6627.

19 A. [10:53:13] So on the big map frame I just had the -- the red squares on top of the
20 damage. And then in the insets we point to them with arrows because if you put
21 the red square right on top of the damaged building, then you wouldn't be able to see
22 the damaged building.

23 Q. [10:53:33] So which colour arrows did you use to mark these four structures in
24 inset 1?

25 A. [10:53:40] Orange.

1 Q. [10:53:45] And the red arrows in inset 1, what do those signify?

2 A. [10:53:52] Those signify the buildings damaged by -- wait, I may have gotten
3 that backwards. So the arrows are different. I think the arrows are switched. So
4 in the insets, the -- yeah, okay, it's sort of self-explanatory. So in the insets the red
5 arrows show the structures destroyed 30 December. The orange arrows show
6 the structures destroyed 8 December.

7 Q. [10:54:35] And in the same paragraph of your report you mentioned six
8 structures destroyed nearby towards the airport. Can you indicate for us which six
9 structures you were referring to?

10 A. [10:54:55] So that's over here. So here is the Boeing mosque location and then
11 there are four up right adjacent to the airport which were destroyed and then two also
12 next to the airport but down here.

13 Q. [10:55:15] So those additional six structures do not appear in inset 1; is that
14 correct?

15 A. [10:55:20] Correct.

16 Q. [10:55:35] On the same page in the next paragraph you mention that "Blackened
17 remains consistent with burning are somewhat visible but image-colour quality for 28
18 [December] and 30 December is limited due to the sensor source." Can you describe
19 for the record what that means?

20 A. [10:55:55] So again those came from the QuickBird satellite. The QuickBird
21 satellite was a glorious creation launched in I think 2001, but, yeah, the technology at
22 that time, the sensor wasn't as sensitive as what we would see now and you get
23 less -- less ranges in the colours that the sensor can capture. The resolution is also
24 lower. So all in all it just yields a less clear image simply because the age of the
25 sensor.

1 The QuickBird satellite was decommissioned several years ago, whereas the other
2 satellites that I used in this analysis are still in operation.

3 Q. [10:56:47] Now, finishing up here in Bangui, for the 30 December date we have
4 two photos for the same part of Bangui, one is in colour and the other appears black
5 and white.

6 And for the record, I'm referring to the TIFF files located at tabs 41 and 42 at
7 CAR-OTP-2127-6682 and 6683.

8 Can you explain the significance of these two images?

9 A. [10:57:20] The black and white image is -- probably comes from a specific
10 satellite called WorldView-1. WorldView-1 only collects imagery in panchromatic,
11 black and white basically.

12 Q. [10:57:40] And for your analysis in map 1a, did you look at both the black and
13 white and colour images?

14 A. [10:57:49] If you don't mind, I would like a moment to check on what you're
15 saying just in case there's some -- some confusion.

16 Q. [10:57:59] Please, yeah, take a minute.

17 (Pause in proceedings)

18 THE WITNESS: [10:58:21] So just to be clear, you're referring to map 1b? Are you
19 referring to a black and white image in the -- in annex 1?

20 MR LEDDY:

21 Q. [10:58:33] I apologise, yes, I'm referring to the image of Bangui, images of
22 Bangui that you purchased located at tabs 41 and 42. I understand these to be
23 images of Bangui larger than what appears at a certain inset in your annex 1.

24 A. [10:58:59] Is that on evidence 1?

25 Q. [10:59:07] I don't believe the underlying TIFF files are displayable through our

1 software, but if you could possibly look at the files that you have on your laptop that
2 are corresponding with these dates.

3 A. [10:59:25] And what were the dates?

4 Q. [10:59:26] It's for 30 December 2013.

5 A. [10:59:33] In Bangui?

6 Q. [10:59:35] That's right.

7 A. [10:59:37] Okay. So if you're seeing a black and white image for
8 30 December 2013, what you may be looking at is the panchromatic version of that
9 image. So just a brief technical discussion, when these satellites are collecting images,
10 they're collecting kind of two images at the same time. First is the panchromatic,
11 which is black and white, that's the one at the highest resolution. The second image
12 is the multispectral image, that's the colour image.

13 What we do for the analysis is we do what's called pansharpening where we merge
14 those two files together. So in the report in the annex 1, the images may be all in
15 colour because you're seeing the -- the pansharpened version of them. Whereas in
16 the original TIFF files, yes, you may have them separately, one of them is
17 a panchromatic and then the other one would be the multispectral.

18 I hope that makes sense and I can certainly talk more about that.

19 PRESIDING JUDGE SCHMITT: [11:00:55] I think it would now be a good time to
20 have a break. Or do you have something that you would like to discuss and finish
21 now? Then we do that and adjust the break accordingly.

22 MR LEDDY: [11:01:06] Your Honour, I just need a couple of minutes to finish.

23 PRESIDING JUDGE SCHMITT: [11:01:10] Okay. Then this is of course -- then we
24 would do that first and then have the break.

25 MR LEDDY: Great.

1 PRESIDING JUDGE SCHMITT: [11:01:11] Thank you, Mr Leddy.

2 MR LEDDY: [11:01:15] Thank you, your Honour.

3 Q. [11:01:17] So, Mr Bromley, I'm just going to wrap up and ask you about a few of
4 the limitations from your reports and your analysis.

5 So we talked about clouds already and how those can impede analyses. Can you
6 describe any other limitations that satellite image analysis has for the purposes of
7 your report?

8 A. [11:01:40] Most immediately again it's an image acquired from, you know,
9 a sensor in orbit. It in no way means that we are actually seeing all the detail of
10 what's visible on the ground. And as analysts we are very aware of that and that is
11 something we train quite a lot on. We are not seeing all the details simply because
12 we're limited to objects 50 centimetres or larger or whatever the resolution of the
13 image is.

14 The off-nadir angle can also reduce the quality of the image and, for example, you
15 know, if the satellite is up and to the right and looking down from an angle and there
16 is a tree standing between a house and the satellite, the tree will block what
17 the satellite can see, basically.

18 So, yeah, you have those sorts of visibility issues.

19 Sometimes there is also not exactly clouds but atmospheric haze where it may not be
20 very visible that you're actually looking through a cloud, but myself as an analyst,
21 when I see the image, I can see immediately, oh, we must be looking through some
22 haze because the quality is degraded.

23 Q. [11:03:16] And do you recall seeing such haze or having such problems in your
24 analysis in this case?

25 A. [11:03:22] Yeah, for the 30 December and 28 December images there was a bit of

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1 haze on one of those, which is why I had the two of them, just to help compensate for
2 that. It was in some areas and then not in others. And then, yeah, as mentioned,
3 clouds are also visible on some of them.

4 Q. [11:03:49] Now, for -- for gatherings of people, for example, the IDP camps,
5 these imagery can't tell you who those people are, can it?

6 A. [11:03:58] No.

7 Q. [11:03:58] And same question for damage assessments, it can't tell you who
8 damaged the buildings, right?

9 A. [11:04:04] No.

10 MR LEDDY: [11:04:05] I have no further questions for this witness, your Honour.
11 Thank you, Mr Witness.

12 PRESIDING JUDGE SCHMITT: [11:04:11] Thank you very much, Mr Leddy.

13 So then we will then have a break, let's say half an hour, although we reconvene, if I
14 say now at 11.35, it's a little bit odd, but let's give it a try that we all keep in mind that
15 it's not 11.30, it's 11.35.

16 THE COURT USHER: [11:04:31] All rise.

17 (Recess taken at 11.04 a.m.)

18 (Upon resuming in open session at 11.37 a.m.)

19 THE COURT USHER: [11:37:07] All rise.

20 Please be seated.

21 PRESIDING JUDGE SCHMITT: [11:37:39] I don't assume that the representatives of
22 the victims have questions, so I would give the floor to Mr Antley for the Yekatom
23 Defence, as I understand it correctly.

24 MR ANTLEY: [11:37:57] Good morning, your Honours. Thank you for having me
25 here. I just wanted to raise one issue with you before we started. In light of some

1 disclosure we received this morning, we would request a little bit more time just to
2 prepare and to disclose our own analysis to the Prosecution. We've spoken with
3 Dr Knoops and he is willing to go first and then hopefully after lunch we can both
4 start and finish the witness.

5 PRESIDING JUDGE SCHMITT: [11:38:23] Thank you for this constructive approach.
6 I would have suggested it immediately the same way, so of course we accommodate
7 that.

8 Mr Knoops, if you want to start, we are fine with that.

9 MR KNOOPS: [11:38:35] Thank you very much, Mr President.

10 QUESTIONED BY MR KNOOPS:

11 Q. [11:38:40] Good morning, Mr Bromley. My name is Alexander Knoops. I'm
12 one of the counsel for Mr Patrice Ngaïssona. I first have some small introductory
13 questions for you before I go into the specific areas of your research.

14 First of all, my question to you is in the amended letter of the Office of
15 the Prosecution, you were given some geographical coordinates. Were you able to
16 do on-site verifications of those coordinates?

17 A. [11:39:22] If I recall correctly -- I mean, in terms of on site, going to Central
18 African Republic, no. I verified the coordinates in the GIS software. I believe I
19 spotted an error with one or two of them, which was then corrected later on with
20 the letters -- with the subsequent letter of instruction.

21 Q. [11:39:48] Thank you. You also told us this morning that you sometimes had to
22 make a decision on whether to purchase an image or not. Who was able to make
23 the final choice when purchasing the image or not?

24 A. [11:40:09] That was myself, based on the budget available.

25 Q. [11:40:13] And were you able to, before you made a decision on the budgetarian

1 consequences of a choice, were you able to assess the quality, the difference between
2 an image which is purchased and --

3 A. [11:40:30] You don't get to see the full resolution image until you've paid for it.

4 Q. [11:40:35] Okay. Thank you.

5 Now in your report, the Prosecution requested a single class assessment as to
6 the damage or destruction. Could you be more precise as to whether you were able
7 to, in every instance, detect the cause of the destruction or damage?

8 A. [11:41:06] No, not -- I mean, in -- in areas where the blackened charred remains
9 were clear, then I would indicate that I thought that fire was involved. But in other
10 areas, no. I was essentially finding roofless structures and counting them as
11 destroyed.

12 Q. [11:41:29] Yes. In your report in footnote 8 you mention that "Damage must be
13 of a significant degree to be visible in imagery, involving some [type] of external
14 structural damage" and you mentioned this already this morning before, such as
15 broken windows, kicked-in doors, internal destruction, and other signs of violence.
16 But you already observe in your report in footnote 8 that these symptoms, these signs
17 are in principle not visible in commercially available satellite imagery. In your
18 research, Dr Bromley, in this case --

19 A. [11:42:24] I have no PhD.

20 Q. [11:42:28] I'm sorry.

21 A. [11:42:28] Thank you for the upgrade, though.

22 Q. [11:42:30] But still -- it reflects my respect to you as expert. Did you encounter
23 in your research, Mr Bromley, in any way any of these signs which you just -- I just
24 alluded to in your report footnote 8, so were you able to detect in one of the images
25 you saw in this case any signs of broken windows, kicked-in doors, internal

1 destruction, or other signs of violence --

2 A. [11:43:09] No, the --

3 Q. [11:43:12] -- which --

4 A. [11:43:13] Yeah, those types of damage are invisible in imagery. The imagery
5 just does not see that level of detail.

6 Q. [11:43:18] But my question was were you able to detect this other than through
7 imagery in this case? You have no --

8 A. [11:43:26] No.

9 Q. [11:43:27] -- proof that --

10 A. [11:43:27] I only use satellite imagery.

11 Q. [11:43:30] Yeah, okay.

12 A. [11:43:31] Correct.

13 Q. [11:43:33] In your report you mention in your last page that in relation to Yaloké,
14 we will come to this later, you refer to the relevant range of time, range of time in
15 order to extrapolate certain imagery to a certain incident. What is, in your
16 professional opinion, an acceptable range of time, based on which you can relate
17 a certain imagery to a certain event?

18 A. [11:44:16] I mean, the destruction will stay visible if the structure is not repaired,
19 and so it's more did the destruction happen in the time frame that I was being asked
20 about? So in that area I was asked about the end of January 2014, but I was not able
21 to get an image until 14 February 2015, and so therefore that is a much longer time
22 frame where that damage might have occurred.

23 Q. Yeah.

24 A. [11:44:56] So I am confident in the damage, but, yeah, the -- the length of time
25 that had passed means that I can't say whether the end of -- or, yeah, the end of

1 January 2014 was the time period where it happened.

2 Q. [11:45:11] Yes. My question to you is, Mr Bromley, indeed you referred to this
3 report, your report at page 8 regarding -- then we directly take the example of Yaloké,
4 you say, "Given the amount of time passed before the February 2015 no attempt was
5 made by UNOSAT to determine the cause of structural removal." And we're
6 speaking here about the time frame January 2014, February 2015.

7 For you at that moment, you took into account the amount of time which passed. Is
8 there, for you as an expert, a certain limit, a certain border on the basis of which you
9 say, this is for me too much in terms of amount of time to investigate or to make any
10 attempt to extrapolate from the image a certain cause of structural removal?

11 A. [11:46:23] So in -- in that case I was referring to whether fire -- fire was involved
12 or not.

13 Q. [11:46:30] Yes.

14 A. [11:46:32] For the use of fire, it's -- again, it's going to leave blackened charred
15 remains, it will often leave white ash. I wouldn't really have a time frame, it will
16 differ from environment to environment. Central African Republic is a relatively
17 rainy place so I would not go beyond the onset of the rains because that is going to
18 wash away a lot of the soot and char and then vegetation is going to grow rather
19 quickly.

20 In other environments, desert environments, you might see the damage for -- you
21 know, you might see indications of fire for years after, because the environmental
22 change there is very slow. Again, the term we use is ablation, which is the gradual
23 change as something dissolves or changes and, yeah, in an environment like Central
24 African Republic it's going to change relatively quickly.

25 Q. [11:47:39] Right. Thank you. Just for my curiosity, maybe also for

1 the curiosity of the Court, are there any scientific protocols to say this is the range of
2 time beyond which an expert like you should abstain from giving any assessments,
3 any answer to questions such as the Prosecution asked you in their letter of
4 assignment? Is there any international standard beyond which --

5 A. [11:48:11] There's none that I would know of. We're an operational office.
6 We're not an -- we're not an academic office, so we don't have a lot of time to do
7 the academic side of things. For us, I mean my office, my team, kind of the dividing
8 line would be the rainy season in this particular environment.

9 Q. [11:48:32] Right. Did you, by the way, do other similar investigations in Africa
10 as a continent, except for the CAR?

11 A. [11:48:40] Yeah, we -- we've done this -- I've done this, I mean, South Sudan,
12 Sudan, DR Congo, Ethiopia.

13 Q. Yeah.

14 A. Yeah, yeah, we do this all the time.

15 Q. [11:48:52] Why I'm asking you this, Mr Bromley, because you just said
16 the landscape in CAR changes relatively fast. If you compare to other --

17 A. [11:49:03] Yeah, compared to Darfur, for example.

18 Q. [11:49:05] Yeah, that was my question. If you compare it, put it in context to
19 other countries in Africa, you would say the landscape in the CAR changes quicker
20 than compared to --

21 A. [11:49:19] Correct.

22 Q. -- the other --

23 A. Yeah.

24 Q. -- countries you (Overlapping speakers)

25 A. Yeah, like a very arid -- a very arid desert area where you get almost no rain --

1 Q. Yeah.

2 A. [11:49:29] --the signs of destruction might be visible for decades. In an area
3 where you have a rainy season and you have vegetation, you know, it's season to
4 season is what's going to change basically.

5 Q. [11:49:43] Right. Okay. So these were some introductory questions to you,
6 Mr Bromley. I now would like to systematically go into the questions
7 the Prosecution suggested to you, starting with the Bangui area of Boy-Rabe.
8 In your report, Mr Bromley, you indicate that this area was not analysed. What was
9 the decision, what was the reason to decide with the Office of the Prosecution, as you
10 mentioned in your report, not to purchase these available images for the location?
11 Because that's not explained, if I recall well, in your report. You just said you
12 consulted the OTP on this matter and a decision was apparently made not to go into
13 this investigation further into Boy-Rabe.

14 A. [11:50:39] Right.

15 Q. [11:50:42] That's to be found in your report, Mr Bromley, on page 5.

16 A. [11:50:49] Page 5.

17 Q. [11:50:50] The first -- the first paragraph.

18 A. [11:50:51] Right. So if I recall correctly, yeah, at Boy-Rabe we were -- the issue
19 was whether there were gatherings, gatherings of people, which took place on specific
20 days. And so, yeah, a gathering of people is an ephemeral event, it's, you know,
21 there for an hour or two and then it's totally gone. If you do not collect an image at
22 that exact moment, you are not going to see the people because they are not going to
23 be there.

24 In some cases, if they had, you know, camped out or, you know, caused a lot of, you
25 know, damage to the vegetation or something, then maybe you would see indications

1 of it, but I felt the likelihood of seeing anything useful was nil. And again, given
2 the budgetary considerations, we decided -- I decided not to do that. Had we had
3 adequate budget, I certainly would have bought the images and we would have still
4 probably seen nothing.

5 Q. [11:51:59] Yeah. My second question regarding this district relates to
6 the second question the Prosecution asked you about, the neighbourhoods in Bangui,
7 and it struck me in the question put to you that the Prosecution asked you whether
8 you could verify the existence of an attack against a number of neighbourhoods in
9 Bangui.

10 Now my question to you: Are you, Mr Bromley, in your position as expert, able to
11 determine whether a certain type of damage or destruction originated from an attack,
12 an armed attack? Are you able, in the position, to answer such a question at all?

13 A. [11:52:55] I mean, in this particular situation, when you're seeing things like
14 burning, the fact that it's only houses burned and not say the vegetation between
15 them, then that means somebody is walking the fire from structure to structure. So
16 it's -- it's arson, arson, arson. Wildfires do happen, but people are pretty good at,
17 you know, saving their town from them. But, yeah, if you saw burning kind of
18 equally affecting all vegetation and structures, then perhaps we would say it's
19 possibly a wildfire. But when we see the isolated structures only burned, then that's,
20 to me, arson.

21 Other than that, in this particular area, explosives aren't used, heavy weapons aren't
22 used, there's no shell craters, there's no tanks driving around or anything like that.
23 Explosives will, you know, cause a different pattern of destruction, obviously. They
24 will throw debris out and usually level the structure, meaning it's gone. Mortars and
25 tank fire, you know, then you're looking at craters, and yeah, none of that was visible

1 in these particular areas. But whether the -- whether the persons committing
2 the arson or however the arson happened, whether they were specifically armed or
3 not is not something I would -- I would speak to.

4 Q. [11:54:39] No. So you would agree with me, Mr Bromley, that if you qualify
5 a certain destruction as a potential arson, it's for you not the same as an attack?

6 A. [11:54:52] I would usually -- yeah, in my work we would -- we commonly see
7 fire used as a weapon, so, yeah, it -- you know, unless you have some other plausible
8 explanation for the -- for the burning, yeah, we would generally call a widespread
9 burning of an area to be an attack.

10 Q. [11:55:14] But you just said if there are no indications for such an armed attack --

11 A. Well, it's --

12 Q. [11:55:24] -- and you just see that houses are burned, maybe even on a larger
13 scale, are you in a position to answer the question whether this qualifies as an armed
14 attack?

15 A. [11:55:35] In my judgment it would be because again you're not seeing
16 the vegetation between the structures burned. If you saw the entire area burned
17 evenly, then perhaps you would say it's a wildfire that had somehow caused
18 catastrophic damage. But, yeah, when you see the individual structures burned, for
19 us that's -- yeah, we would -- we would call that an attack.

20 Q. [11:55:59] And you just answered the questions of the Office of the Prosecution
21 before they broke this hearing, you have -- you cannot as an expert indicate whether
22 such an incident originates from a certain group of people, from a certain location
23 where it started --

24 A. [11:56:30] Not in this particular case. In other areas, if you -- I'll slow down,
25 sorry.

1 In other areas of the world, if the image is collected while the attack is happening and
2 perhaps you see 20, you know, 20 trucks or 20 armoured vehicles, then that would tell
3 you a lot about who was doing it. But in this particular area, no, we didn't get that
4 kind of imagery with that kind of time.

5 Q. [11:57:03] So you didn't in your research see any imagery of armed groups or
6 indications that armed groups were on the ground responsible for those alleged
7 attacks?

8 A. [11:57:15] With our kind of satellite imagery you generally don't see people,
9 especially individuals. One of the figures does show a group of people next to
10 a bridge, so I can see people if they're grouped together or if the conditions are perfect,
11 meaning that the sun is in the right position and the people are casting long shadows.
12 But, yeah, I can't tell the difference between a person and a person standing there
13 with a -- with a rifle, for example.

14 Q. [11:57:49] Right, yeah.

15 A. [11:57:51] And, yeah, with no vehicles or other hardware like that,
16 there's -- there's nothing to see.

17 Q. [11:57:56] Yeah. Could you with your expertise and based on satellite imagery
18 detect whether a truck would be a military truck or a civilian truck?

19 A. [11:58:11] Very often, yes, assuming the military truck is, you know, a typical
20 large green truck. Some of the imagery, if you're looking at what we call a light
21 truck or a pickup truck and then they have a gun mounted in the back, what's
22 commonly called a technical, with some imagery you can --

23 Q. [11:58:39] You can see it.

24 A. [11:58:40] -- see the gun mounted in the back, but in other imagery you don't get
25 that level of detail.

1 Q. [11:58:46] No. You did not encounter any level of detail in this regard --

2 A. No.

3 Q. -- in this situation; that's correct?

4 A. Correct.

5 Q. [11:58:56] Yeah. Speaking about trucks, Mr Bromley, then I make a small step
6 also again to the district of Yaloké. In your report you describe on the last -- the last
7 page that you observed a large truck convoy parked on the road adjacent and perhaps
8 this was a social event relating to the trucks and not an IDP camp.

9 A. [11:59:31] Yes.

10 Q. [11:59:32] It's -- you recall it, Mr Bromley?

11 A. [11:59:35] Yes.

12 Q. [11:59:35] It's on your last page. So I deduce from your analysis in this regard
13 that you apparently were able to detect that there was a large truck there?

14 A. [11:59:58] Yes.

15 Q. [11:59:59] And you associated that truck with perhaps -- perhaps a social event?

16 A. [12:00:07] Well, so these are, you know, typical transport trucks, heavy, heavy
17 freight trucks. I believe them to be parked because they're all very close together,
18 there's no dust, they don't appear to be moving. And then, yeah, nearby you have
19 something that looks like tent shelters. However, this is also 14 February 2015, so
20 again so much time has passed that, yeah, there's some doubt that those are displaced
21 person shelters. Maybe this is an important truck convoy and they just arrived and
22 they get some sort of refreshment was all I was thinking there.

23 Q. [12:00:59] So here, and that's my point here, we have an example whereby you
24 were able to identify this type of truck not being a military truck, so it's fair to say that
25 if you would have seen on one of the images a vehicle which resembles a military

1 truck, you would have reported this; is that correct?

2 A. [12:01:24] Yeah. And, yeah, in general vehicles were very sparse.

3 Q. [12:01:28] Sparse?

4 A. [12:01:28] Yeah, yeah, a few here and there but certainly nothing that --

5 Q. [12:01:35] Right, yeah, yeah.

6 A. [12:01:36] -- looked off.

7 Q. [12:01:36] Okay, I'll go back to the first district because we are -- we went back
8 and forth with Yaloké, but still speaking about the district of Bangui. On page 3 of
9 your report, and I ask you to look at footnote 7, footnote 7, it is said that "... in Bangui
10 a smaller analysis area was designated to shorten [the] time required for analysis."
11 And my question to you is, Mr Bromley, what would be the direct implications of
12 such a reduced analysis? When you mention a smaller analysis area was designated,
13 does it mean that the area was kept smaller from your perspective as researcher, or
14 does it mean that the quality of that area was reduced?

15 A. [12:02:35] The first.

16 Q. [12:02:36] The first?

17 A. [12:02:37] Yeah, I -- I analysed a smaller area because I was running out of time.
18 A larger area takes longer to analyse and so I made the judgment call to -- to analyse
19 a subset of the image as opposed to the entire image.

20 Q. [12:02:57] Right. Thank you. With respect to the area of Bimbo, you also
21 indicate that no imagery was acquired for Bimbo. Also here the question is what
22 was your decision not to purchase the images for the Bimbo area? And also here,
23 was this your choice or was this a choice made in consultation with the OTP, or is
24 the answer the same, that it was a budgetary --

25 A. [12:03:26] It was a budgetary limitation. OTP would have preferred that I

1 analysed -- or purchased and analysed everything, but yeah, we were -- I was under
2 significant constraints for this.

3 Q. [12:03:41] I understand.

4 With respect to the Cattin neighbourhood you indicated that no information was
5 provided on the location of Cattin and therefore it could not be reliably located. Was
6 this a matter of problems with the coordinates or was this -- had it a different reason
7 why no information was provided on the location of Cattin?

8 A. [12:04:09] Yeah, there were no coordinates provided for Cattin, if I remember
9 correctly. It was mentioned in the letter of enquiry, but no specific coordinates were
10 given. And I actually got into this issue a bit in the last couple of days and Cattin is
11 probably very well known in Bangui, but it's not represented in any of the geospatial
12 data that I have access to.

13 Q. [12:04:44] I understand, yeah. Then we go to the Boeing mosque. Already
14 touched upon this morning, Mr Bromley. Prosecution asked you already about
15 the qualification consistent with arson, consistent with arson. But you answered that
16 based on at that time the QuickBird satellite, which is not longer -- any longer
17 commissioned, you said the resolution was lower, less clear image due to age of
18 the -- the age of the sensor and so all in all it just yields to a less clear image.
19 Can you explain to the Court what implication does it have with and for your
20 qualification consistent with arson. Is there any -- what is the degree of uncertainty
21 you can tell us? If you say on the one hand, the QuickBird satellite at that time,
22 which is now decommissioned, had several impediments, on the one hand, and still
23 you were able to say, well, it's consistent with arson, what degree of uncertainty can
24 we expect from such a qualification?

25 A. [12:06:11] That's hard to say. I mean, first of all, it's not that the satellite got old

1 and was getting less and less quality over time. It's just that it was an older -- older
2 model, you know, and not as robust as the newer models because technological
3 advancements in sensor technology had been made. How much it changes my
4 certainty level, yeah, I mean it -- in other areas it would not have been a big factor, but
5 here with the vegetation you end up with a very dark landscape regardless, and so it's
6 harder to say if the structures are blackened within that landscape. So it does -- it
7 does bring some more uncertainty onto the arson issue not onto the destruction issue.

8 Q. [12:07:13] I understand.

9 A. Yeah.

10 Q. [12:07:14] Thank you. Now you told us this morning, Mr Bromley, with
11 respect to the Boeing mosque that in the direct environment of the mosque is a lot of
12 vegetation and trees where they were casting shadow. You would expect, if
13 the mosque indeed is surrounded what you said by a lot of vegetation and trees
14 casting shadows, that these would have been destroyed by arson?

15 A. [12:07:49] Again, it's a wet environment. A building will burn easier than a wet
16 tree simply because the inside of the building is dry, so you can easily start a fire in
17 a building, but whether the tree is totally consumed I -- you know, I would say
18 probably not, especially if it's damp, if it had recently rained. With a lot of
19 additional analysis you could probably determine if the vegetation had been
20 damaged, but again, we were constrained by time on this.

21 Q. [12:08:29] But the observation you made that there was a lot of vegetation and
22 trees surrounding the mosque casting shadow implies that that vegetation, trees, was
23 intact?

24 A. [12:08:44] Yeah, yeah. Yeah, it -- or it wasn't -- it wasn't necessarily intact, but it
25 wasn't damaged to a degree that I was able to see. There are other areas where, yes,

1 you could see a house had been burned --

2 Q. [12:08:59] (Overlapping speakers)

3 A. [12:08:59] -- and then a small patch of grass nearby had also burned.

4 Q. [12:09:09] All right. When you have to ascertain the cause of the, let's put it for
5 the sake of argument the potential arson of the mosque, are you able to say what
6 the cause thereof would be?

7 A. [12:09:33] Beyond some sort of fire, no.

8 Q. [12:09:35] No. But I mean how the fire came about to exist?

9 A. [12:09:41] It could be a cigarette lighter, it could be a torch, it could be, you
10 know, any -- anything that would start with a fire, but there -- you know, it wasn't
11 something like napalm, which is a munition that leaves distinct patterns. It wasn't
12 things like white phosphorus or something like that.

13 Q. [12:10:06] But it could have been a human cause or natural cause other than an
14 attack?

15 A. [12:10:16] I wouldn't be able to comment on that. Again, when you're seeing
16 the individual structures burned, it's a deliberate act. But, yeah, I mean it -- whether
17 it was an attack or not, I mean I -- to me it is automatically an attack if that happens,
18 but I can't say who did it or motivations or anything like that.

19 Q. [12:10:42] But you just said it could be cigarette lit so it could be a deliberate
20 cigarette lit, that's what you mean to say?

21 A. [12:10:53] Yeah, or a cigarette lighter. I mean, there are many ways to burn
22 a building, I'm sure.

23 Q. [12:10:56] Okay. Now I ask you, Mr Bromley, to go to your report. We're still
24 speaking about the Bangui area. Your report mentions that blackened remains
25 consistent with burning are somewhat visible, but the image-colour quality and

1 the 30 December is limited due to the sensor source?

2 A. [12:11:30] Correct.

3 Q. [12:11:32] So what are we to understand from your words "somewhat visible"?

4 It seems to me relatively vague, arbitrary, these are my words. So I ask you to
5 explain to the Chamber what you mean with the word "somewhat", are "somewhat
6 visible"?

7 A. [12:11:57] So, again, yeah, with imagery analysis we are always aware we are
8 not there on the ground and so, you know, perhaps too much we point out when we
9 are feeling more uncertain. In this particular instance, for example, if you had an
10 area with heavier vegetation, I would be less certain of arson of structures in those
11 areas.

12 However, a structure by itself that was blackened, you know, without any nearby
13 vegetation casting shadow or anything like that, then even in that lower quality
14 imagery I would call that burning. So on balance you just have less areas where I am
15 more certain of the burning, because of the lower quality of the imagery.

16 Q. [12:12:51] Right. Thank you.

17 Now I ask you to pay attention to the -- your assessment on the Yamwara school.

18 You have concluded that "No obvious gathering of individuals or gravesites are
19 visible on any of those days" you researched "nor any significant changes of any kind
20 that may indicate graves."

21 My first question is: Does satellite imagery permit you as an expert to identify
22 whether individuals on the ground are indeed, for instance, children belonging to
23 the school or adults? Is this at all possible?

24 A. [12:13:44] So if -- if the conditions are right and people are casting a long enough
25 shadow, then we are seeing the shadow that they cast, with -- with most of the

1 imagery that I've used here. And so, yeah, a lot of times, you know, if you see
2 a soccer pitch somewhere, you can see where the players are because they're casting
3 a shadow.

4 But the difference between children and adults, I would not do that. The only time
5 we've done that is when we look at bodies laid out for burial and wrapped up in
6 shrouds and then, since they're laying on the ground and they're in a white shroud,
7 you can measure each one and tell which one are children and which one are adults.
8 But that did not happen here.

9 Q. [12:14:37] In your table, which is not included, this observation, in your report,
10 but in your table 1 on page 4 of your report, Mr Bromley, you say in the third column
11 that, in brackets, "normal schoolyard activity seen on 27 November 2013". And it
12 struck me that this is not reflected as such in your report, so how were you able to
13 conclude that on 27 November 2013, apart from not observing any gravesites or
14 gatherings, that was as of 30 December, that on 27 November apparently you were
15 able to detect with the satellite imagery that was normal schoolyard activity going on
16 on that day?

17 A. [12:15:41] So the satellite image is collected roughly 11 in the morning local time.
18 And I recall -- I don't recall what day of the week 27 November was, but I think it was
19 a schoolday, a weekday, and, yeah, when you look at it you see exactly what is
20 a schoolyard would look like at 11 a.m., you know, on a school morning. You see,
21 you know, people scattered around which you could interpret to be just normal
22 schoolyard activity but not a -- you know, not a large group basically.

23 Q. [12:16:23] Yeah. Do I take it from your answer, Mr Bromley, that the satellite
24 image taken on that day was of the time 11 in the morning --

25 A. Yeah.

1 Q. -- 11 a.m.?

2 A. [12:16:38] It'll be somewhere around there, say 10.30 to 11.15 for natural
3 historical reasons is when the satellites usually collect their imagery.

4 Q. [12:16:51] Yeah, yeah. You just said sometimes it's possible based on the sheer
5 size of the individual to detect whether it's a child or an adult?

6 A. [12:17:01] If they're laying on the ground.

7 Q. [12:17:04] If they're laying on the ground?

8 A. [12:17:05] Yeah. And, you know, wrapped in a white shroud or wearing
9 something that is easy to discern.

10 Q. [12:17:11] Right. So based -- based on these ingredients, you came to
11 the conclusion it's a normal school day, normal school activities (Overlapping
12 speakers)

13 A. [12:17:29] Only -- yeah, only based on the time of day and just the way
14 the activity looked in the image, not any attribute of the size of the individuals seen.

15 Q. [12:17:39] Yeah. Thank you. Now I go to the area of Bangui PK9. Also here
16 the Prosecution asked you to verify the existence of a checkpoint at or next to
17 the bridge crossing the M'Poko River in PK9 after beginning of January 2014.

18 My first question to you, Mr Bromley, on this subject relates to page 5 of your report.
19 You used images from 30 December 2013 till 28 February 2014. Why did you decide
20 to purchase the image of 30 December 2013? was this your decision or was it made
21 in consultation with the OTP?

22 A. [12:18:37] That would have been my decision. And if I recall correctly, yeah, I
23 wanted something what we would call, you know, "pre".

24 Q. [12:18:54] For comparison?

25 A. [12:18:56] Correct, yeah.

1 Q. [12:18:56] Yeah, I thought so, yeah.

2 A. [12:18:57] Yeah.

3 Q. [12:18:58] And were there any differences between those images when making
4 that comparison?

5 A. [12:19:07] I mean, as I say, the eastern side of the bridge includes, you know,
6 what we would call market-like activity. So there is not a large amount of difference
7 except for the fact there are different vehicles and different groups of people visible
8 there.

9 Q. [12:19:44] On page 6 you conclude there was no checkpoint visible. That's
10 correct, I think?

11 A. [12:19:51] Yeah, I mean, in satellite imagery, you know, a proper checkpoint
12 with a, you know, arm across the road or a fortification, you know, a fighting position
13 of some sort, that would all be visible. A guy standing there with a rifle stopping
14 cars, not visible at all. The fact that there are cars stopped there, I have -- you know,
15 I can't tell are they there for a Coca-Cola or are they there because somebody stopped
16 them and it's a checkpoint in that sense.

17 Q. [12:20:34] Yeah.

18 A. [12:20:36] Even if they lay stones across the road, we would usually see -- see
19 some indication of that. You know, any, any military base, anything with
20 a controlled access, you know, when you have to weave your vehicle through what
21 we call chicanes, all of that is visible, that's what we would call a checkpoint. If there
22 was an actual barrier across the road like, you know, a barricade, we call that
23 a roadblock. But in this case none of that was visible. Vehicles were stopped.
24 There are people there. If it was a checkpoint, it was not a, a physical constructed
25 checkpoint.

1 Q. [12:21:20] I see. Thank you.

2 A. [12:21:24] It was -- yeah.

3 Q. [12:21:25] Yeah, yeah. Just to go one question back before I pursue with this
4 question. How would you define the market-like activity? Is there something here
5 specific which led you to the conclusion that there was a market-like activity? You
6 just mentioned already the way the people were grouped or (Overlapping speakers)

7 A. [12:21:52] Yeah, I mean, so there are what we would consider, you know,
8 probable market stalls, meaning, you know, the little kiosk selling sodas and
9 whatever. They were not there several years ago, it was a -- it was a relatively recent
10 development. And then the fact that there are vehicles stopped there and people
11 gathered, yeah, is consistent with a market-like area.

12 Now, a -- there are other parts of the city where there is the traditional market which
13 is much denser, it's not along a main road.

14 Q. [12:22:34] Yes, yeah.

15 A. [12:22:36] And yeah, those markets are elsewhere. But, yeah, this -- this looked
16 like, you know, the last refreshment stand before you leave the area.

17 Q. [12:22:47] Yeah, yeah. When you mention, Mr Bromley, in your report that
18 prior Google image actually reflected similar market-like activities for some years,
19 does it mean that you went beyond this information and you also looked into these
20 Google images to compare whether those activities throughout these years didn't
21 change?

22 A. [12:23:17] Right, right. Yeah, I was interested in when that collection of
23 structures actually appeared.

24 Q. [12:23:22] Yeah, yeah.

25 A. [12:23:22] But, yeah, I used -- I used Google Earth Pro for that --

1 Q. [12:23:27] Yeah.

2 A. [12:23:27] -- because we didn't buy the imagery.

3 Q. [12:23:30] And you identified no substantive changes in these type of activities?

4 A. [12:23:37] Not -- it grew a bit over time so the addition of new possible market
5 kiosks. I do recall it was -- you know, it was empty at some point, you know, I think
6 back in maybe 2007 or that area.

7 Q. [12:23:57] Yeah. But all in the context of market-like activity?

8 A. [12:24:01] Yeah.

9 Q. [12:24:02] So this -- that was the only thing which grew in your assessment of
10 those images?

11 A. [12:24:08] Yeah.

12 Q. [12:24:09] My final question on -- in regards to PK9 is a question also out of
13 curiosity and maybe it's also relevant, we don't know what you're going to say about
14 that. In your annex 1, map 1b, inset 1 there is an image where there is a white object
15 in the centre.

16 A. [12:24:39] Mm-hmm.

17 Q. [12:24:40] Maybe you'll recall it. It's --

18 A. [12:24:42] Yeah, I see it.

19 Q. [12:24:43] -- for the Court, CAR-OTP-2127-6653.

20 You see a small white object?

21 A. [12:24:51] Yeah.

22 Q. [12:24:52] I have my own interpretation, but I would like to ask you,
23 Mr Bromley, what is your interpretation of that white object?

24 A. [12:25:02] Yeah, so it's -- it's a flare. It's exactly what happens with your
25 eyeballs if you look into a light that's too bright. So in this particular case that's

1 probably a metal roof that's reflecting sunlight directly into the sensor and the line
2 that you see coming off of, you know, the bulb, is simply because the sensor is
3 moving very fast so it essentially drags that point for, you know, 20 -- 20 metres or so,
4 but it's the same -- the sensor was saturated by -- by reflected light.

5 Q. [12:25:42] It's reflected in the screen.

6 A. [12:25:46] Yeah.

7 Q. [12:25:46] Okay, thank you. These were my questions for PK9. I'm now
8 moving on to Bossangoa.

9 Some questions based on the Prosecution question whether you could verify
10 the existence of an attack on Bossangoa on 5 December and the gathering of
11 thousands of individuals at *École de la Liberté*.

12 My question is, to you, Mr Bromley, in your annex 2, in your report, you indicate that
13 you purchased two images for Bossangoa, namely from 4 and 12 December. Three
14 you viewed from Google Earth, these were the ones of 16 December, 8 January and
15 22 January. So in my calculation, the images from 5 December, 12, 15, 16, 22,
16 29 December and January 16 -- 6, sorry, 14, 26 were not purchased or accessed.

17 If this is correct, if the calculation is correct, my question to you is why were only 5
18 out of the 14 images accessed by you or purchased for the Bossangoa area? Was
19 there any reason for (Overlapping speakers)

20 A. [12:27:19] Again, yeah, budget for the purchase, and then the images that are
21 available on Google Earth I don't have any control over what is in there. I am only
22 able to see what they've -- what they've put in there. I know that they are choosing
23 their images, they want the highest quality, they don't want clouds or, you know,
24 haze or high off-nadir angles and stuff like that. So, yeah, in this particular case we
25 spent our budget on what we could.

1 Q. [12:27:54] (Overlapping speakers)

2 A. [12:27:55] And then I used a few images from Google Earth, but, you know,
3 I don't -- I can't tell Google to put imagery on Google Earth Pro for us to look at.

4 Q. [12:28:05] Yeah, thank you.

5 My second question relates to the video which was shown to you this morning by
6 the Prosecution. You commented on this video, Mr Bromley, by saying that maybe
7 the video was taken quite some time after. Could you clarify, please, to us what you
8 mean or could you specify what you mean with was some time taken after
9 the alleged --

10 A. So --

11 Q. [12:28:36] -- underlying event?

12 A. [12:28:37] Yeah, I mean, you -- you know, we saw signs of fire, but we didn't see
13 anything smoking, so therefore, you know, the fire had been completely extinguished.
14 The other thing I look for is the white ash, because the white ash tends to blow away
15 quite quickly, depending on the local conditions.

16 And then also it's -- yeah, you know, you saw signs of fire, but maybe not enough
17 so -- you know, what I was thinking was that it had rained possibly a few times
18 between the video was taken -- or when the destruction happened and when
19 the video was taken simply because it -- yeah, that was just the feeling I had from it.
20 Also things like the large vehicle tyres that were in some of the buildings were
21 probably put there afterwards. Yeah, but it's -- yeah, it's just a quick judgment based
22 on that one viewing.

23 Q. [12:29:49] But in your estimation it's unlikely that this video was directly taken
24 on the spot when the incident happened?

25 A. [12:29:58] Definite -- yeah, I mean, you would have -- if you had seen debris

1 smoking -- but, yeah, it had the feeling of an event at least, you know,
2 maybe -- maybe only a few days after but, yeah, certainly, certainly not during or
3 right after.

4 Q. [12:30:18] Also here, Mr Bromley, the question whether you were able to detect
5 if the vegetation was affected by potential arson?

6 A. [12:30:33] In the video?

7 Q. [12:30:34] Or in one of your images.

8 A. [12:30:39] For which particular area?

9 Q. [12:30:41] Bossangoa.

10 A. [12:30:47] One moment.

11 Q. [12:30:48] Because you said this morning at transcript page 32, line 18 of the
12 English transcript that -- you say the reason why you came to the conclusion of
13 potential arson is, you said the blackened area tend to be the big clue. But you said
14 at the same time normally you might see vegetation immediately adjacent to
15 the structure also being burned.

16 A. [12:31:16] Not always. Again, it's going to depend on the conditions at the time.
17 If you had a rainy morning and someone came and burned your house down,
18 the vegetation might be fine.

19 Q. [12:31:30] Yeah. But were you able to detect here any clear signs of burning
20 which affected vegetation in the surroundings of --

21 A. [12:31:45] I don't recall specifically in Bossangoa if I saw the burned vegetation.
22 I didn't mention it here.

23 Q. [12:31:54] Right.

24 A. [12:31:54] But yeah, I remember the -- yeah, just the blackened skeleton of the
25 structures.

1 Q. [12:32:00] I see. Thank you. Still speaking about Bossangoa, you say in your
2 report that the images of 4 December would include "hundreds of structures that
3 exhibit signs of destruction", but then you say, Mr Bromley, at the same time, "but
4 would need comparison with a previously acquired image for verification." That's
5 on page 6 of your report.

6 A. [12:32:31] Mm-hmm.

7 Q. [12:32:32] Also in footnote 9 you say the same about a different image.

8 My first question is: Was this comparison being made, were you able to make that
9 comparison?

10 A. [12:32:44] No. Again, we were limited by budget. I could buy what I bought
11 and I -- I had it. So the -- the assessment of possible destruction by 4 December is
12 based because I am seeing a large amount of those skeletal structural remains, but I
13 do not have a previous image with which to verify that.

14 Q. [12:33:13] Yeah. So this destruction, alleged destruction could have been
15 occasioned before 4 December; you agree with me?

16 A. [12:33:23] Yes.

17 Q. [12:33:24] Thank you.

18 A. [12:33:25] For those particular structures.

19 Q. [12:33:27] Yes, of course.

20 A. [12:33:28] The ones identified on 12 December, yeah, then I'm using 4 December
21 as the comparison.

22 Q. [12:33:34] So actually without such a comparison, a possible time frame or date
23 or an extrapolation to a time frame cannot be found, cannot be concluded?

24 A. [12:33:50] Not with the present resources.

25 Q. [12:33:53] Right. Interesting, I just got an interesting message from my team.

1 Do you know how much rain seasons the CAR exhibits?

2 A. [12:34:09] Not off the top of my head, no.

3 Q. [12:34:12] Okay. If I would tell you that there are two seasons, in October and
4 March, what would you say? Is this something which might change any of your
5 conclusions?

6 A. [12:34:24] No, no. I mean ...

7 Q. [12:34:27] Okay. April, September, that's the rainy season, does it ring a bell to
8 you?

9 A. [12:34:42] I do -- I do know the rainy seasons in multiple places, so, yeah,
10 the April to September in that part of the continent of Africa, South Sudan has
11 a similar rainy period. The dry period tends to be -- be December-ish. But, yeah,
12 you know, I do know looking at Central African Republic you will see cloud cover
13 year round and so, yeah, I think you could have some rain year round, it's just that
14 you have a rainy season.

15 Q. [12:35:21] Yeah. So a rainy season, if a country has several rainy seasons per
16 year, that could affect, of course, the extrapolation of the dates between the incident
17 and the imagery?

18 A. [12:35:41] The main thing is we would not get imagery during the rainy season
19 because it's consistently cloudy, but we've also seen plenty of destruction in many
20 places during the rainy season or right after the rainy season. I believe if you're
21 determined, you can burn a building in any -- in any weather, almost.

22 Q. [12:36:10] Speaking about Bossangoa, in your report there is a document, which
23 is CAR-OTP-2079-0671. And this is the document prepared by UNOSAT in
24 the context of its rapid emergency response, where it's indicated that additional 893
25 buildings between that period would have been destroyed. It mentioned, this

1 document disclaimer, saying, I quote: "The depiction and use of boundaries,
2 geographic names and related data shown here are not warranted to be error-free ..."
3 What type of errors or potential disclaimers are we referring to here?

4 A. [12:37:20] So this refers specifically to the national boundaries or any place
5 names, any town names displayed. So we -- we as a United Nations entity have to
6 be very careful that we do not accidentally endorse, you know, some interpretation of
7 a boundary, and so this -- this disclaimer appears on all of our maps just because it's
8 better to have it on there than not have it on there. Many, many, many countries
9 have, you know, small border disputes with their neighbours and so if we release
10 a map that takes a side of, you know, one country versus another, yeah, then that
11 disclaimer is what keeps us out of trouble, for lack of a better term.

12 Q. [12:38:20] Speaking about Bossangoa still, we arrive at the assessment of the
13 *École de la Liberté*, you did indicate that a tent encampment is not visible as of
14 4 December but is clearly visible as of 12 December 2013, and you said it numbers
15 around a hundred tent structures by 22 April -- sorry, January 2014. This morning in
16 your evidence you gave to the Office of the Prosecutor you said: We would
17 commonly identify these tents as IDP shelters. How are you able to identify these
18 structures as IDF shelters?

19 A. [12:39:15] IDP.

20 Q. [12:39:17] IDP, internally displaced persons shelters.

21 A. [12:39:24] Primarily based on years of experience of looking at this sort of stuff
22 and also given the context, reports of violence, reports of displaced persons and then
23 suddenly you see a tent encampment popping up. I don't know of another way to
24 explain that during a period of conflict.

25 Q. [12:39:57] So can I take it that you came to this conclusion based on not a visual

1 assessment but a combination of your experience, your interpretation of certain
2 reports what happened in the CAR?

3 A. [12:40:13] It's partially visible just because the way they are clustered together.

4 I mean, it's not a -- it's not a social encampment, there's not a games area or something
5 like that.

6 But, you know, I've looked at a lot of these in Somalia, South Sudan and a lot of other
7 places and, yeah, it's a tent encampment in the middle of a conflict situation. It's not
8 military. Military ones would be -- would have a perimeter, there would be fighting
9 positions. But, yeah, in the absence of any other explanation, we would call it an IDP
10 settlement.

11 Q. [12:40:56] But it could be an encampment by people who decided to shelter
12 there without being displaced persons?

13 A. [12:41:09] Theoretically, yes.

14 Q. [12:41:11] Do you agree that the terminology "displaced persons" is
15 a terminology you cannot use as expert, because it relates to a certain normative
16 qualification?

17 A. [12:41:27] I mean, it is a very standard term in our world. Mostly we explain to
18 people you're not a refugee until you cross a border. Until you cross a border,
19 you are internally displaced, IDPs. And, yeah, we -- we map this so much in so
20 many countries that -- that, yeah, I ...

21 Q. [12:41:56] But are you able to distinguish, Mr Bromley, between a white tent put
22 by persons who decided to voluntarily shelter and a white tent set up by internally
23 displaced persons, are you able to differentiate this based (Overlapping speakers)

24 A. [12:42:12] Not necessarily, no. I mean, in some areas if you see rather luxurious
25 campgrounds, then we might not call them displaced persons. Bedouin tents in

1 the desert, for example, are kind of a different story. But, yeah, this is -- you know,
2 it's a contextual thing for us --

3 Q. [12:42:38] Yeah.

4 A. [12:42:39] -- conflict and shelters appearing.

5 Q. [12:42:42] So I understand from your testimony that before you took on this
6 assignment, you did read a lot about the conflict in the CAR and what happened
7 there and you took this into account when qualifying these tents as IDPs --

8 A. [12:43:00] I did not --

9 Q. [12:43:02] -- shelters.

10 A. [12:43:03] So we were very focused on Central African Republic back in 2013/14,
11 my team and I. So the map that you referenced earlier was produced at that time.
12 We did a lot of analysis on the conflict as it developed. For this -- for anything I do
13 for the -- for the ICC, I don't generally go out and look for any additional information.
14 I -- I stay confined to what's in the letter of instruction.

15 Q. [12:43:37] Yeah. But, Mr Bromley, take away, take away the conflict, take away
16 all your knowledge on the conflict and you see from a satellite image a cluster of
17 white tents, and I would ask you, Mr Bromley, can you identify whether these tents
18 are tents by displaced persons or by ordinary civilians, what would be your answer?
19 Extract it from the conflict.

20 A. [12:44:12] Yeah, I mean, if you just showed me random images of tents and
21 didn't tell me where they were, yeah, it could be a campground, you know, here in
22 the Netherlands. The only other thing is just the way these are grouped together,
23 you know, they're in a small place -- small a space as possible, they're as crowded
24 together as they can be, and so, yeah, that to me would perhaps say not a -- not
25 a social event, but yeah, I mean, at the end I'm seeing tents. And, yeah, that's -- that's

1 all I would say purely based on the imagery.

2 Q. [12:45:02] You ever went to youth camp --

3 A. Yes.

4 Q. -- in your youth?

5 A. [12:45:05] Yes.

6 Q. [12:45:06] Speaking about clustering tents. I'll leave it at that.

7 Mr Bromley, speaking about the situation in Bossangoa in those days, you reported
8 there were no obvious signs of roadblocks and checkpoints and you reviewed
9 the image from Google Earth Pro collected on 16 December 2013. But you say at
10 a certain point in your report that a possible group of people estimated at 10-20
11 metres is visible on the east side of the bridge of the Ouham River, and that this may
12 be the only potential checkpoint based on that location.

13 And my question to you is: How did you arrive at the conclusion that this was
14 a potential checkpoint and if it's correct that this was the only potential checkpoint
15 you were able to detect on the basis of the materials?

16 A. [12:46:23] So again, just like PK9, you know, if a checkpoint is constructed, if it's
17 a physical checkpoint with a barrier and a fighting position of some sort, then that is
18 visible. If it is one or two people standing there stopping cars, or stopping people,
19 we wouldn't see it.

20 In some areas of the world where people have more -- you know, where cars are more
21 frequent, you can identify checkpoints because you just have two lines of opposing
22 cars stopped in the middle of the road for no reason. But here there's very few
23 vehicles so we don't see anything like that.

24 The group of people at the bridge, the main thing there is they are at a bridge and so
25 if you want to cross that bridge you have to go through those people. And given

1 the timing of the image acquisition, yes, that could be a checkpoint. But for me it
2 was the bridge that was -- you know, that's an ideal place for a checkpoint. There's --

3 Q. [12:47:48] So that was the only reference, the bridge?

4 A. [12:47:51] And the group of people.

5 Q. [12:47:52] But this group of people could have moved?

6 A. [12:47:54] Yeah, yeah, they could have been walking. This is -- a satellite image
7 is a moment in time.

8 Q. [12:47:58] A moment.

9 A. Yeah.

10 Q. So these people could have moved from one side of the bridge to the other?

11 A. [12:48:07] Yeah. They look like they're grouped there, but, yeah, that's -- it was
12 really their position related to the bridge. It is a very good location for a checkpoint.

13 Q. Yeah.

14 PRESIDING JUDGE SCHMITT: [12:48:19] May I shortly.

15 I think from the wording of your report you say "... a possible group of people ... this
16 may be the only potential checkpoint", I think we can deduct from that that there
17 there is a high level of uncertainty, if not speculation, if I may word it like that, in that;
18 isn't that correct?

19 THE WITNESS: [12:48:42] Yeah, yeah. I mean, it -- looking at it I would say it's
20 a group of people. If you wanted to go out and put up, you know, 15 wooden posts
21 to make it look like a group of people, then I would not be able to tell the difference.

22 PRESIDING JUDGE SCHMITT: [12:48:59] I think that that is clear (Overlapping
23 speakers)

24 MR KNOOPS: [12:49:01] Thank you, Mr President, yes.

25 PRESIDING JUDGE SCHMITT: [12:49:02] Also it's clear to the Chamber, I think.

1 MR KNOOPS: [12:49:07] Yes.

2 Q. I look at the time, I just have 11 minutes, Mr Bromley, I would like to finish my
3 questions before 1. So I quickly move on to move to the district of Berbérati, some
4 questions on this.

5 First of all, you mentioned that 15 structures were visibly damaged or destroyed.

6 Also here the question is: Could you ascertain the cause of the damage or
7 destruction? For instance, is it possible based on the satellite image evidence to say
8 it's a natural cause, it could be natural, could be human cause, and if human, what
9 would be the underlying activity which caused this damage?

10 A. [12:49:48] I do say occasional blackened remains indicate arson, so there were
11 a few that appeared black. The rest generally appear as roofless structures with
12 skeletal interior remains and that could indicate fire, but the signs of it have -- have
13 gone by the time the image was collected.

14 Q. Right.

15 A. [12:50:19] I can say again high explosives, no. You know, heavy munitions, no.
16 But, yeah, I mean, people could pull it apart with their hands and it would look
17 the same.

18 Q. [12:50:33] Of course, but also the exact time of destruction you cannot deduct
19 from the evidence you were shown?

20 A. [12:50:43] Right. I have images 16 January and 9 March.

21 Q. [12:50:47] So it could be at a different time frame caused?

22 A. [12:50:53] (No verbal response)

23 Q. [12:50:57] Yeah, right. With respect to Berbérati, the question was put to you
24 by the Prosecution whether there was -- to verify the existence of a gathering around
25 300 Muslims in the compound of the Catholic mission throughout 2014. It may be

1 an open door, but are you able as an expert to say if an individual is a Muslim or not
2 based on satellite imagery?

3 A. [12:51:23] An individual, no.

4 Q. [12:51:25] Right. So the question to you whether there is a gathering of 300
5 Muslims is not a question you could answer at all?

6 A. [12:51:33] I think I was only told 300 people in the letter of instruction.

7 Q. [12:51:38] Okay.

8 A. [12:51:39] Yeah.

9 Q. [12:51:40] But, in any event, you didn't detect any obvious gatherings on
10 the basis of the evidence --

11 A. [12:51:47] No, and --

12 Q. -- correct?

13 A. [12:51:49] Right. Again, we were limited by budget.

14 Q. [12:51:51] Yeah, right.

15 A. [12:51:52] Now, just to be clear --

16 Q. Yes.

17 A. [12:51:52] -- things like a cathedral, a church, a wealthier mosque with a minaret,
18 these are things you can see in imagery, Buddhist pagodas, stuff like that. But, yeah,
19 individuals, no, you can't -- you can't tell any religion of a person based on an image.

20 Q. [12:52:22] Yeah. And were you able to label one of these buildings or
21 structures as a Catholic church?

22 A. [12:52:35] There were -- I did look at other maps to see where church
23 compounds were. In general in this area they're bigger and wealthier looking than
24 other things you might see. Sometimes you see the -- you know, the cross on
25 the rooftop or something like that or they've, you know, laid out stones in like a cross

1 pattern or something. I don't recall if I saw anything of that here.

2 Q. [12:53:12] Right. Thank you. I have some questions on Boda.

3 The images you reviewed were from 8 January and 28 February 2014, but the alleged
4 attack was from 29 January in Boda. My question to you is: Is there any way to
5 discern if the alleged destruction occurred on that specific date indicated by
6 the Prosecution in its letter to you, if there is any indication for you to say this is likely,
7 not likely?

8 A. [12:53:52] No. I -- yeah, these two image dates are what I had.

9 Q. [12:53:56] Okay.

10 A. [12:53:59] Nothing -- again, your ideal situation would be an image 28 January
11 and 30 January, but that never happens.

12 Q. [12:54:09] Yeah, the probability of fire which you indicated as a potential cause
13 of the damage, you say an obvious -- that an obvious market area and many large
14 commercial structures were destroyed and the cause thereof being probably fire,
15 page 7 of your report.

16 Did you take into account other causes which may look like fire and cause blackened
17 remains or collapsed structures, is there in your experience any other alternative
18 explanation to it?

19 A. [12:54:52] I mean, if you're (Overlapping speakers)

20 Q. [12:54:54] Plus you mention probably fire.

21 A. [12:54:56] Yeah. I mean, again, I don't -- if you're talking -- if you're talking
22 about people demolishing structures and painting them black in order to fool
23 satellites, that is certainly possible, of course. But, yeah, based on the imagery that
24 we have or based on the context, I'll assume that's not the case.

25 Q. [12:55:19] Yeah.

1 A. [12:55:21] So, yeah, we would say probably fire.

2 Q. [12:55:23] But also here like you answered before, Mr Bromley, it could
3 be -- the underlying cause could be a cigarette lighter or any other form not being, as
4 to say, deliberate acts of arson?

5 A. [12:55:39] That would be an awful lot of cigarettes.

6 Q. [12:55:42] Yeah. When you speak of the enclave, the alleged enclave in
7 the context of -- we're still in the area of Boda, you were asked by the Office of
8 the Prosecution whether this compound was surrounded by water in the area. And
9 then you answer, well, if water is considered to be a small waterway fashioned into
10 pools which envelop an area of the north of Boda, then there is a potential candidate.
11 Is this not, with all due respect, also purely speculation?

12 A. [12:56:51] This was -- so there were no buildings that were perfectly encircled by
13 like a moat of water. However, if you were trying to run from this compound, you
14 would quickly run into water. But, yeah, there was nothing where there was a -- you
15 know, a compound with a perfect moat of water around it and so, yeah, that was
16 the best I could kind of think of based on what was in the letter.

17 Q. [12:57:31] Yeah. Thank you. In my last four minutes I would like to take you
18 to Carnot and my question to you is, the Prosecution asked to you verify the existence
19 of a gathering of around 1,500 to 2,000 individuals at the Catholic compound in
20 Carnot, following the February 2014 attack. Your answer was no, no clear indication
21 of a Catholic compound, et cetera. My question to you is: If such gathering would
22 have existed on those days, would it be easy for you to detect this on the images you
23 have seen?

24 A. [12:58:18] So with imagery on 4 March or 19 January, basically, yeah, that many
25 people would certainly be visible. That's -- that's a fairly large gathering. But

1 the -- yeah, I didn't see anything like that, but, yeah, if they were there on 4 March,
2 unless they were in buildings somehow, you know, under cover, but if they were
3 outside kind of camped out in the open as we saw earlier, then that would -- that
4 would almost certainly be visible.

5 Q. [12:59:01] Of course that was the question, whether they were visible on the
6 compound.

7 A. [12:59:05] Yeah.

8 Q. [12:59:08] Yeah.

9 A. [12:59:09] But again, I think the compound was big enough that if -- yeah, if you
10 put people in different buildings and basements, you could probably fit, you know,
11 that number of people in there, but they just weren't outside where -- where I was
12 going to see them.

13 Q. [12:59:22] Yeah. Thank you very much. My questions on the district of
14 Yaloké, we already discussed when we started, Mr Bromley, the interrogation of you,
15 and the same counts for the district which preceded, that's the -- I think that was
16 the -- one second, please.

17 PRESIDING JUDGE SCHMITT: [12:59:57] I think you went through all of them, I
18 would say.

19 MR KNOOPS: [13:00:00] Yeah, I went through -- Yaloké we already discussed. So
20 it's 1 o'clock, I just have one final question from my team.

21 Q. [13:00:16] Right, my final question, Mr Bromley, apologies for mentioning that
22 I was finished, but I have one question. In annex 1 of your report, page 6, that's map
23 4, the image assessment represents a damage and destruction occurred in Boda,
24 28 February 2014. The OTP introduced to you a map, that's CAR-OTP-2080-1476,
25 and that was allegedly an area identified as a Muslim area. Was this taken into

1 account in your analysis?

2 A. [13:01:14] No, I don't think that -- that was --

3 Q. [13:01:18] Because it seems to us, if we look at it, that this part was not destroyed.

4 Can you verify this? This is my last question.

5 A. [13:01:29] Can you say that again, sorry.

6 Q. [13:01:33] The map is OTP-2080- and then the following numbers 1476. That
7 area is identified by the Prosecution as a Muslim area.

8 A. [13:01:51] Okay, yeah. I mean, I haven't seen this map before, but yeah, I think
9 I see what you're going for. Give me --

10 Q. [13:01:57] Can you recall whether you were able to detect from the imagery if
11 this area was affected in any way by arson or any form of destruction?

12 A. [13:02:10] At the northern, so the uppermost part of it you see some destruction
13 and then a few scattered instances in the interior. But, yeah, it's --

14 Q. [13:02:29] Largely intact?

15 A. [13:02:31] Yeah, much more intact than the stuff around it.

16 Now that map is May 2014 and this image is 28 February, so that would have
17 a -- again, the dates are always important.

18 Q. [13:02:45] Thank you very much, Mr Bromley, for your time. And apologies
19 that I passed the time limit with two minutes. Sorry. Thank you.

20 PRESIDING JUDGE SCHMITT: [13:02:58] This is within the margin that we would
21 always give you. Thank you very much, Mr Knoops.

22 We will now have the break until 2.30 and then we will start with the Yekatom
23 Defence, Mr Antley.

24 THE COURT USHER: [13:03:17] All rise.

25 (Recess taken at 1.03 p.m.)

1 (Upon resuming in open session at 2.32 p.m.)

2 THE COURT USHER: [14:32:33] All rise.

3 Please be seated.

4 PRESIDING JUDGE SCHMITT: [14:33:01] Good afternoon.

5 Mr Antley, you have the floor.

6 MR ANTLEY: [14:33:13] Thank you, your Honour. And everyone around
7 the courtroom.

8 QUESTIONED BY MR ANTLEY:

9 Q. [14:33:20] Mr Bromley, I have a few questions for you today about your report
10 and some of the things that you covered today in direct examination.

11 I'm going to start with the change in location or the supposed location of the
12 Boeing mosque. Yesterday you indicated that you felt that you had one location for
13 the mosque and that you clarified it this morning; is that correct?

14 A. [14:33:49] Say that again, I'm sorry.

15 Q. [14:33:51] Sure.

16 A. [14:33:54] Ah, no, I understand what you're asking. I -- I felt I was obligated to
17 point out that there was a possible structure directly adjacent to the coordinates as
18 opposed to, you know, 10 to 20 metres away. But it's -- it's faint and difficult to see,
19 so it's a possible.

20 Q. [14:34:26] And is there anything that prompted you to make this change last
21 night?

22 A. [14:34:32] Not really. Just having another look at -- at the imagery and
23 preparing my testimony and, you know, erring on the side of caution, essentially.

24 Q. [14:34:47] If we can take a step back, is there anything in satellite imagery that
25 can assist you with determining if a building is a mosque?

1 A. [14:34:55] If it has a minaret. So, you know, we look at Syria a lot of course
2 and, yeah, so a more expensive mosque with a minaret is generally how we would
3 identify it.

4 Q. [14:35:14] Is there a minaret visible on either of these two possible locations?

5 A. [14:35:18] No, not that I could see.

6 Q. [14:35:25] When you look at mosques in other places is there anything else that
7 can assist you with determining if it is a mosque?

8 A. [14:35:31] I mean if it appears on a map. Off the top of my head, I mean, we
9 also -- if there is a cemetery associated with it and the graves are oriented in a certain
10 direction. But that's not always the case.

11 Q. [14:35:55] What about the orientation of the building itself, can that assist you?

12 A. [14:36:01] I don't recall that I've ever done it that way, but we would usually rely
13 on the minaret. That is a question I will follow up on myself, but, yeah, in general
14 the orientation of the building itself is not something I've used.

15 Q. [14:36:25] But are you aware of others who may use the orientation of the
16 building towards Mecca? In this instance it would be towards the north-east.

17 A. [14:36:35] No, I mean, this building is almost due north-south. The larger
18 building is north-east, depending on which end.

19 Q. [14:36:54] Thank you very much, Mr Bromley. If I can next take you to a video
20 that the Prosecution took when they tried to measure the GPS of the mosque.
21 And for the court officer that's CAR-OTP-2121-2859, that's at tab 11. And if it's with
22 the sound off, I believe that can be public.

23 (Viewing of the video excerpt)

24 PRESIDING JUDGE SCHMITT: [14:37:42] So we are seeing it already, for everyone.

25 (Viewing of the video excerpt)

1 MR ANTLEY: [14:37:52] Thank you, your Honour.

2 Q. [14:37:53] There were just two points there, Mr Bromley. I don't know if you
3 could have your attention drawn to -- there is a building on your left, a large white
4 building.

5 A. [14:38:02] Mm-hmm.

6 Q. [14:38:03] Thanks. And then as well there was a large sort of empty, empty
7 concrete platform, correct?

8 A. [14:38:11] Yeah.

9 Q. [14:38:17] Okay. (Microphone not activated) Now if we can also go to
10 CAR-D29-0008-0001, that's a YouTube video, it's public. It's from 3 March 2021 and
11 it's a MINUSCA video of 26 February 2021 about the reopening of a mosque in
12 Bangui.

13 And if we can go to 1:47, please. I guess if we keep the sound off, that's fine too.

14 Thank you.

15 So just before we do play it, sorry, if we can all just keep that white building there in
16 the back and then if we can play it now. Thank you.

17 (Viewing of the video excerpt)

18 MR ANTLEY: [14:39:52]

19 Q. [14:39:52] So again there was a large foundation there, and then again the white
20 building. Also appear to be prayer mats, some sort of structure over the foundation.
21 And then if we can actually go back again, I'm sorry, to 2 minutes -- I'm sorry, 01:47.

22 PRESIDING JUDGE SCHMITT: [14:40:20] Yeah. And could we perhaps for
23 the benefit of the Chamber elaborate where this is supposed to be exactly. So I
24 assume that might be your line of questioning, but I simply would indicate that we
25 would like to orientate ourselves also.

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WITNESS: CAR-OTP-P-2193

(Open Session)

ICC-01/14-01/18

1 MR ANTLEY: [14:40:39] Absolutely, your Honour. What I'm hoping to suggest
2 here is that this is a video that is the same area that we saw on the Prosecution
3 video, sir.

4 Okay. So again just I would like to draw attention to the white building there.

5 We can take that off the screen now. (Microphone not activated)

6 Go to CAR-D29-0005-0144, that's at tab 15. I don't think there's anything in it that
7 would make it confidential, so you could just play it publicly.

8 Q. [14:41:47] So the first figure there, Mr Bromley, is a comparison between what
9 we saw in the Prosecution video, 2121-2859, and then the YouTube video of the
10 Boeing mosque, just to show the orientation as his Honour asked where we were for
11 both videos. Would you agree with me that those videos -- or those buildings do
12 appear to be the same buildings?

13 A. [14:42:19] They appear to be.

14 Q. [14:42:20] Okay. Can we scroll down, please. And again the first set of
15 images there is another demonstration of the white building that we see multiple
16 times in the YouTube video. And then the second set of images, that is the large
17 foundation along with the house in the back - which we've highlighted in yellow or
18 orange, as your eye colour may be. And then in the YouTube video we've tried to
19 indicate the same structures there.

20 Would you agree with me as well, Mr Bromley, that that appears to be the same,
21 the same house and, as a consequence, the same foundational area?

22 A. [14:43:09] Yes, looks to be.

23 Q. [14:43:11] Okay.

24 Now if we can go to the next page, please, and if we can shrink that so I can get both
25 satellite images on the same screen.

1 And I appreciate, Mr Bromley, this is all a bit last minute. The top, if we can -- this is
2 from 8 December 2013, it's from Google Earth, it's a satellite image. And what we've
3 tried to do is highlight -- I guess, court officer, sorry, can we zoom in back on that first
4 image, figure 3. Right.

5 So the image in green is the large structure which may be the mosque. There's an
6 image boxed in in red directly south, which was the image you drew our attention to
7 last night. And then as well there's an area in yellow, which is covered up by trees at
8 the time, and actually appears to be nothing on 8 December 2013.

9 Does that all make sense, Mr Bromley?

10 A. [14:44:24] Yes.

11 MR ANTLEY: [14:44:25] Can we do the same now for the next image.

12 PRESIDING JUDGE SCHMITT: [14:44:28] Thank you very much, court officer,
13 you are so quick, and court usher. Thank you, really.

14 MR ANTLEY: [14:44:33] Thank you very much.

15 Q. [14:44:39] So what we've done here, this is actually from 8 December 2020 -- no,
16 that's not right, 18 January, I'm sorry, 2020, so almost contemporaneous with
17 the Prosecution video. And we bracketed in, again in green, the area that used to be
18 that large building. The area in red, again, what used to be a smaller building due
19 south. And then the area in yellow which is -- now looks to be a large structure.

20 Is that all making sense still, Mr Bromley?

21 A. [14:45:15] Yes. Yes.

22 Q. [14:45:18] Okay.

23 Now if I can ask the court officer to go to the next page. And I appreciate this is
24 getting even more complicated. But if we go to the map itself -- and his Honour
25 asked a couple of minutes ago where exactly were we. This is what we tried to do,

1 sir. You can see the camera location there with a little camera icon, and then what
2 we tried to do - and, court officer, if you can zoom out maybe a little bit - you can see
3 we started to pick out images. And what we've done is we've compared
4 the Prosecution video, 2121-285 (sic) and the Google Earth imagery. Now, this is
5 from 17 December 2019 simply because it's a clear image, but I don't think much has
6 changed in the intervening year.

7 So working around, Mr Bromley, you can see the -- from the left, that's again
8 the white building there. And that seems to be corresponded then to the satellite
9 imagery. And then as you move across the screen you can see there's various houses
10 which we tried to locate, again on the satellite imagery.
11 And then if the court officer can zoom out for us. We've indicated there in green that
12 large cement foundation.

13 Does that all seem correct, Mr Bromley?

14 A. [14:47:10] Yeah. The only thing I would double-check is the building in white I
15 think has a reddish rooftop, if I saw correctly earlier, and then in the satellite image
16 the rooftop looks white. Not that that's a -- you know, not that that makes it
17 impossible but that's what I would double-check.

18 Q. [14:47:33] Okay. Thanks very much, Mr Bromley.

19 So then if we can go -- you can take this off the screen actually, court officer, and
20 thank you very much for your indulgence there.

21 Earlier this morning you told us that the large building, that when you looked at it on
22 8 December that there were still interior timbers present; is that correct?

23 A. [14:48:04] Yeah, it looked that way.

24 Q. [14:48:10] Would that be consistent with arson?

25 A. [14:48:15] Yes. I mean, you know, a building won't burn completely

1 necessarily. So, yes, you could -- you often have interior timbers remaining. Not
2 always, but often. I mean, you know, some of the time at least.

3 Q. [14:48:38] Okay. Is that consistent with damage caused by grenades or rockets?

4 A. [14:48:46] Ah, I would expect more debris to be visible if there was explosives
5 being used like that, and you wouldn't see -- you wouldn't see the roof
6 a hundred per cent gone. It would be, you know, at the impact points things would
7 be blown off.

8 Q. [14:49:04] Okay.

9 A. [14:49:07] But there's no reason explosives can't then cause a fire.

10 Q. [14:49:11] I understand. But you would expect, you would expect debris?

11 A. [14:49:18] Yeah, I mean if it was -- if it was rockets and grenades, unless the site
12 was cleaned up or something like that.

13 Q. [14:49:27] Okay. And finally just on this topic, we have evidence of
14 a Prosecution witness that testified the other day. I appreciate you may not have
15 access to this, but I can read it to you. It's P-2682 on 15 March and it's Prosecution
16 evidence about how the mosque actually was destroyed. And this is on page 41 of
17 the transcript and it is from open session.

18 Question: "What, if anything, happened to the Boeing mosque during and after
19 the attack on 5 December, if you know?"

20 Answer: "Well, I went out two days after the events, but I know that
21 the Boeing mosque was destroyed, razed to ground. The bricks from used by some
22 people to build their houses, but the plot is completely empty, the mosque no longer
23 exists.

24 Question: "And had you heard how this happened, the destruction of the mosque?"

25 Answer: "Well, you know, when something is destroyed it can be seen.

1 The roofings were taken away and then progressively the bricks were often off.
2 After that, they started digging the ground and they even dug up the cement in order
3 to plaster their walls. So the mosque completely ceased to exist."

4 In light of all this, Mr Bromley, the evidence of the Prosecution witness, the location
5 of the mosque, its orientation and the information we've seen about the large
6 foundation that is present still in 2021, do you think that you were not in error but
7 you were in fact correct about the location of the mosque until last night?

8 A. [14:51:15] Yeah, yeah, based on what you just showed me, if the -- if that area
9 was the mosque, yeah, I think the original assessment, the bigger building is
10 the mosque.

11 Q. [14:51:25] Thank you, Mr Bromley.

12 Now the Prosecution also asked you to look at Yamwara school to see gatherings of
13 individuals or any grave sites visible between 5 December 2013 and 15 January 2014;
14 is that correct?

15 A. [14:51:55] Correct.

16 Q. [14:51:55] And in fact in your report, annex 1, you helpfully give some insets in
17 the report itself to demonstrate what you found; is that correct?

18 A. [14:52:12] Yes, I believe so. Let me ...

19 Q. [14:52:14] I'll get the reference for the court officer now. So that's 2127-6626.
20 That's our tab 4. It's public. And if you go to the second page, which is 2127-6627.
21 And it's down at the bottom, court officer, it's inset 3.

22 And specifically, Mr Bromley, I wanted to ask you about the satellite imagery there,
23 8 December 2013. And if we could compare that to what is on my list at tab 8,
24 CAR-OTP-2126-0269. It's confidential, but I believe the satellite image which is at
25 that ERN can be shown publicly.

1 Thank you, Mrs Court Officer.

2 So, Mr Bromley, is this image here on the screen now, is that the same area as you
3 analysed in your report?

4 A. [14:54:55] Yes, it is. We discussed this the other day. So this is a much later
5 date than what I was analysing, based on the -- the changes to the landscape and
6 some of the new structures around it.

7 Q. [14:55:12] Thank you very much.

8 And I think I just have one more topic for you, Mr Bromley, and again we spoke
9 about this the other day, is it possible in your experience to determine a road surface
10 from a satellite imagery?

11 A. [14:55:34] Yes, if it's a tarmac road and it's not too covered in dirt, then it will
12 generally appear as you would expect.

13 Q. [14:55:46] Would the satellite imagery that you used to conduct your report,
14 especially of the Boeing area, would that be precise enough or would we need to
15 show you Google satellite imagery in order to make that determination?

16 A. [14:55:59] Remember, Google and my imagery are the same source. For me it
17 would be more about the -- I mean, I could probably look at it and tell you, but if
18 there was a margin of error it would be that the red dirt of that area has -- has covered
19 it and wouldn't -- wouldn't wash away until it rained.

20 Q. [14:56:20] Sure. I think what we'll do then is we'll just go directly to our
21 document. It's on tab 9, it's public, and it's CAR-D29-0003-0012.

22 And just while we're waiting, the red, the red dust does tend to get everywhere in
23 Bangui during the dry season, correct?

24 A. [14:57:12] I'm no expert on Bangui, but it's certainly common in the satellite
25 imagery.

1 Q. [14:57:14] And it could certainly end up on a roof, couldn't it?

2 A. [14:57:19] Theoretically.

3 Q. [14:57:19] Okay. So here is a -- from Google Earth, we have marked there in
4 red -- this is the satellite imagery of 8 December 2013, sorry, and we've marked in red
5 what you have marked in your report as simply "Bangui", so it's the same, it's
6 the same GPS coordinates?

7 A. [14:57:42] Correct.

8 Q. [14:57:42] Okay. And then if we can go to the next page, please, and what
9 we've done is we've put a box in blue around a junction as you proceed west from
10 that PK5 crossroad, or what you previously marked as Bangui. And again this is
11 from 8 December 2013.

12 So if we can go to the next image, please. And we've gotten quite a lot tighter here in
13 terms of the zoom. You can see on the right where we still are, although I just
14 noticed my box moved down on that image. Anyway, this is still the PK -- this is
15 the crossroads coming from the west out of PK5?

16 A. [14:58:46] Correct, yes.

17 Q. [14:58:48] Okay. Is there anything there that can assist you in determining
18 the surface of that road as it comes from the east and then drops down to the south?

19 A. [14:58:55] I would say that's a dirt road. The -- you can see kind of the striping
20 that goes around the corner. And then the large circular area, that is probably from
21 water at some point, maybe not, you know, that week or something. But, yeah, that,
22 that to me says that you're dealing with a dirt road that has mud issues at times.

23 Q. [14:59:27] And the road that proceeds then straight to the west, would that also
24 be a dirt road?

25 A. [14:59:34] Yeah, that is less clear but it seems to be the same material as the other

1 roads. So, yeah, to me those all look like dirt roads.

2 Q. [14:59:46] We'll just show you a couple more images from different time periods
3 and see if there's anything that changes your analysis.

4 Court officer, if we can go to the next image, please.

5 A. [15:00:04] Ugh.

6 Q. [15:00:05] Not a great image, I can tell based on that reaction.

7 A. [15:00:12] Yeah, I'm -- I see the same mud curve, but yeah, that's a horrible
8 image.

9 Q. [15:00:26] Okay. We'll try one more and see if I'm lucky. It's 9 December 2013,
10 Mr Bromley. Does that help at all?

11 A. [15:00:42] Again, yeah, I would say it's dirt. In this case the junction to the west
12 is showing signs of mud. But, yeah, again, I'm -- I'm sure the dirt covers everything
13 at times, so, yeah, that's my only caveat.

14 Q. [15:01:01] Okay. Thank you, Mr Bromley.

15 Mr Bromley, your Honours, those are my questions. Thank you very much.

16 PRESIDING JUDGE SCHMITT: [15:01:19] Thank you very much.

17 This concludes the testimony of Mr Bromley. Thank you very much on behalf of the
18 Chamber that you came to the Court. Also thank you very much, Mr Antley, that
19 you were prepared to examine under this aggravated circumstances, to put it this way,
20 but this is one of the preconditions that we could do it this way.

21 Again, I wish -- Mr Bromley, I wish you a safe trip back home.

22 This also concludes the hearing for today.

23 We have discussed this this morning, the further scheduling. The next witness is
24 P-2926 and it starts at 24 March, that is Wednesday, I think, Wednesday 9.30. Till
25 then.

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WITNESS: CAR-OTP-P-2193

(Open Session)

ICC-01/14-01/18

- 1 THE COURT USHER: [15:02:07] All rise.
- 2 (The hearing ends in open session at 3.02 p.m.)