

Trial Hearing
Witness: KEN-OTP-P-0488

(Open Session)

ICC-01/09-01/11

1 International Criminal Court
2 Trial Chamber V(a) - Courtroom 1
3 Situation: Republic of Kenya
4 In the case of The Prosecutor v. William Samoei Ruto
5 and Joshua Arap Sang - ICC-01/09-01/11
6 Presiding Judge Chile Eboe-Osuji, Judge Olga Herrera Carbuccion
7 and Judge Robert Fremr
8 Trial Hearing
9 Wednesday, 9 April 2014
10 (The hearing starts in open session at 9.40 a.m.)
11 THE COURT USHER: All rise.
12 The International Criminal Court is now in session.
13 Please be seated.
14 PRESIDING JUDGE EBOE-OSUJI: Thank you very much.
15 Court officer, please call the case.
16 THE COURT OFFICER: (Interpretation) Thank you, your Honour.
17 Situation in the Republic of Kenya, in the case of The Prosecutor versus William
18 Samoei Ruto and Joshua Arap Sang, ICC-01/09-01/11.
19 We are in open session.
20 PRESIDING JUDGE EBOE-OSUJI: Thank you.
21 Appearances.
22 MR STEYNBERG: Good morning, your Honours. Anton Steynberg for the
23 Prosecution. With me this morning Lucio Garcia, Lara Renton, case manager
24 Grace Goh and it gives me pleasure to introduce our new associate trial lawyer,
25 Melissa Simms, behind me.

- 1 MR NARANTSETSEG: Good morning, Mr President, your Honours.
- 2 Orchlon Narantsetseg and James Mawira on behalf of the victims. Thank you.
- 3 MR KIGEN-KATWA: Good morning, your Honours. For Mr Sang is myself,
- 4 Katwa Kigen, Caroline Buisman, Logan Hambrick, Honor Lanham and Rong Xin.
- 5 And Mr Sang is present. Thank you, your Honours.
- 6 PRESIDING JUDGE EBOE-OSUJI: And welcome back --
- 7 MR KIGEN-KATWA: Thank you.
- 8 PRESIDING JUDGE EBOE-OSUJI: -- Mr Kigen-Katwa.
- 9 MR FAAL: May it please, Mr President, your Honours. The Honourable Ruto
- 10 team is represented by the same set of people, including the addition of
- 11 Ms Shyamala Alagendra who just joined us this morning. Thank you.
- 12 PRESIDING JUDGE EBOE-OSUJI: Thank you.
- 13 Prosecutor, we thought we'd have a brief chat quickly before the witness is called in
- 14 so we know what we're doing with this witness. I take it, Mr Steynberg, you're
- 15 going to lead?
- 16 MR STEYNBERG: That's correct, your Honours.
- 17 PRESIDING JUDGE EBOE-OSUJI: Can you -- we've reviewed your material. Can
- 18 you give us in terms of subject matter - discrete subject matter - what you intend to do
- 19 with this witness.
- 20 MR STEYNBERG: Yes, certainly, your Honours.
- 21 Firstly, perhaps I should inform the Chamber that I've had discussions with my
- 22 learned friends from both Defence teams this morning and they have both indicated
- 23 that they do not intend to object to the expertise of this witness, so that is admitted
- 24 and we can skip the voir dire process.
- 25 Your Honours, what I intend to do with this witness is to take him briefly through

1 firstly the mandate that he received from the Prosecution; the steps which he followed
2 to fulfil that mandate in acquiring the necessary data, loading it, analysing it, et cetera;
3 and then I intend to take him to the four reports which he has produced for the
4 Prosecution.

5 They are, firstly, a report -- well, perhaps before I do anything more, may I inquire
6 whether your Honours have been given the binders which we provided this morning?
7 I think they might be on the -- there should be three binders on the desk in front of
8 you. Is that it? I believe that is, in fact, it. Yes.

9 PRESIDING JUDGE EBOE-OSUJI: All right. I do see two bundles.

10 MR STEYNBERG: If your Honour could -- Mr President, if you could perhaps hand
11 those to your colleagues.

12 It should have several coloured tabs starting a blue 1 to a pink 12.

13 PRESIDING JUDGE EBOE-OSUJI: All right. I see what you mean. You provided
14 three bundles for each -- for the three Judges.

15 MR STEYNBERG: Indeed, one each.

16 PRESIDING JUDGE EBOE-OSUJI: One each. Okay. Yes, we have those.

17 MR STEYNBERG: Thank you, Mr President.

18 The four reports I intend to refer to are at tabs 2, 3, 4 and 5. The first is the analysis
19 of satellite imagery for Eldoret at tab 2. At tab 3 analysis of satellite imagery for
20 Kiambaa church.

21 PRESIDING JUDGE EBOE-OSUJI: All right. Before we get there, what I'm
22 thinking of is the point of the testimony, the points of the testimony in terms of the
23 forensic objective of this witness's testimony.

24 MR STEYNBERG: Very well. Your Honours, the relevance of this witness's
25 evidence in a nutshell, it is relevant to the issues of the widespread and systematic

1 nature of the attacks, which the Prosecution -- or the crimes which the Prosecution
2 has alleged. And in particular this witness will give evidence of large-scale
3 destruction of structures, mainly by burning, particularly in the greater Eldoret area
4 and more specifically Huruma, Kimumu, Langas, Yamumbi and Kiambaa, which are
5 all areas covered by specific incidents alleged in the documents containing the
6 charges.

7 He will also give evidence - certain evidence - indicating removal of population,
8 forced transfer of population, and a small amount of evidence regarding roadblocks
9 and other destruction of vehicles, et cetera.

10 PRESIDING JUDGE EBOE-OSUJI: All right. When we -- when you sort through
11 the burnings -- we have reviewed your -- the admitted facts, or the admissions
12 between the parties. I do not know if you have that document filing. It should be
13 451, Annex A.

14 MR STEYNBERG: 643. Yes, I have it.

15 PRESIDING JUDGE EBOE-OSUJI: If you looked at items 100 to 114, 100 for
16 instance - item 100 - says "Houses and businesses were burnt in Turbo Town during
17 PEV;" 103 says, "Houses were burnt in Kimumu during PEV;" 104, "Houses were
18 burnt in Langas during PEV;" 105, "Houses were burnt in Yamumbi during PEV;" 107,
19 "Houses and businesses were burnt in Huruma during PEV;" 110, "Houses were burnt
20 in Kiambaa during PEV;" 111, "Homes and businesses were burnt in Kapsabet during
21 the PEV;" 113 -- sorry, 114 rather, 114, "Houses and businesses were burnt in Nandi
22 Hills Town during the PEV."

23 I do not know whether there are any more, but in light of these admissions of the
24 parties, so these are not in dispute, to what extent do we need this witness to come
25 and testify that there were malicious burning of homes and businesses in the area in

1 question; malicious?

2 MR STEYNBERG: Your Honours, I submit that the evidence which the witness can
3 bring goes beyond establishing the mere bald fact that a house or houses were burnt
4 in a particular area. The evidence which this can provide will, in my submission,
5 provide greater detail and context and nuance to those bald admissions. He will be
6 able to provide evidence of the number of houses burnt, the pattern of the burning of
7 those houses and to a certain extent the causes of the burning of those houses, in other
8 words were they caused by runaway fires, or were they deliberately set, et cetera, and
9 in my submission the evidence before the Court when properly interpreted will
10 provide support for the Prosecution's assertion that there were targeted burning of
11 houses in those regions.

12 PRESIDING JUDGE EBOE-OSUJI: On that last point, is there any dispute from
13 the -- from the Defence that the arson -- what happened was arson, as opposed to
14 runaway fire?

15 MR STEYNBERG: I'm not aware of that, your Honours. I would expect probably
16 not, but your Honours have already heard evidence from several witnesses how
17 particular houses were selected for targeting and, in the Prosecution's submission, the
18 evidence which this witness can present will corroborate to an extent those versions
19 and I think ultimately assist the Chamber.

20 PRESIDING JUDGE EBOE-OSUJI: So I ask the Defence now, counsel for both
21 Mr Ruto and Mr Sang, you have seen or -- the admissions and have read those on to
22 the record. Is there any dispute that, to the extent that the admissions say that
23 houses were burnt, what was admitted was that those were malicious burning of
24 houses? Is there any dispute that the burning was arson; in other words malice?

25 MR FAAL: Mr President, there's no dispute that there were indeed burnings and

1 there was arson. What may be in dispute would be the extent of these burnings.
2 Another thing of import is that the admissions are anchored on a wide time frame
3 during the PEV, but we are here to answer to specific charges which are pegged
4 within a particular time frame and it would be important to determine whether in fact
5 the evidence that the Prosecution adduces would prove what is contained in the
6 charges; that is burnings of particular targeted places within a particular time frame.
7 So that is of great significance for us and we expect to be able to elicit relevant
8 evidence from this witness which would go to the heart of that particular issue.
9 Another important thing raised by my learned friend opposite is whether this
10 evidence would support the testimony of witnesses who have appeared before
11 your Honours. We think that that is also another important angle from which the
12 evidence of this particular witness could be viewed.
13 So we believe that his testimony would be very important and could assist
14 your Honours significantly. Thank you, Mr President.

15 MR KIGEN-KATWA: Mr President, we -- in direct answer to your question, we
16 admit that the fires -- that there were fires and that it was in circumstances of arson.
17 On our part, we leave it to the Court as to whether or not the testimony of this witness
18 is relevant in view of the admissions that have been made by the parties.

19 PRESIDING JUDGE EBOE-OSUJI: Mr Narantsetseg?

20 MR NARANTSETSEG: Mr President, thank you. In our view the testimony to be
21 elicited by this witness is important. It's important in the sense that this witness will
22 help you to understand the extent and the nature of the harms the victims of this case
23 have suffered personally and their families as well. That's why, your Honours, from
24 our point of view the Court should hear this testimony of this witness and analyse his
25 expert testimony in light of the other testimonies provided by the witnesses and also

1 dual status witnesses, your Honours. This is our position. Thank you.

2 PRESIDING JUDGE EBOE-OSUJI: Thank you. And Defence, of course, you did
3 not react to Mr Steynberg's indication on the record that there's agreement from all
4 sides that the -- there is no dispute, rather, as to the qualifications of this particular
5 witness as an expert in the field for which he is being tendered, or being called?

6 MR KIGEN-KATWA: On our part, your Honours, we do not contest.

7 MR FAAL: We do not either. Thank you.

8 PRESIDING JUDGE EBOE-OSUJI: All right. So that's a helpful discussion.

9 Now, Mr Steynberg, the issue for the Court is -- wasn't at all that the witness may not
10 testify at all. It's just that let us, in light of admissions already made and in light of
11 evidence given which we know the extent of challenges to certain evidence witnesses
12 gave, let us not approach this witness's testimony as if he is testifying in a vacuum of
13 that sort of material we already have as if it's a virgin sort of territory for him.
14 Admissions have been made. Let's not go over those, especially not in any great
15 detail as that will -- need not consume time.

16 MR STEYNBERG: Thank you, your Honours. I'm guided. In circumstances
17 where this witness has already provided four detailed reports, I also propose from
18 time to time to lead the witness from those reports which might save some time. I'm
19 sure if there are any -- if I start approaching any aspects on which there is a dispute,
20 my learned friends will alert me in due course and I will adjust my modus operandi.

21 PRESIDING JUDGE EBOE-OSUJI: Thank you.

22 We will now call in the witness.

23 MR KHAN: Mr President, may I just indicate, with your leave, that at some point
24 today I would ask for five minutes just to make some submissions about the next
25 session. We don't have clarity as to which witnesses we should be prepared to

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1 cross-examine. At the moment we would be greatly assisted by such an indication
2 and clarity, and I would ask for five minutes at any point during today to address
3 your Honours on that matter.

4 PRESIDING JUDGE EBOE-OSUJI: And in your view that needs to be done today?

5 MR KHAN: Your Honour, really because our investigations and our preparation
6 needs to start and we don't know yet which witnesses we have to be prepared for.

7 PRESIDING JUDGE EBOE-OSUJI: All right. We'll keep that in mind.

8 MR KHAN: I'm grateful.

9 MR STEYNBERG: Your Honour, on that point the Chamber is aware that there is a
10 request before it for an ex parte (Prosecution and VWU only) status conference at
11 some stage. There are several matters which I need to raise at that status conference
12 point which might -- which will rebound upon the availability and the order of the
13 testimony to follow. After the status conference I will be in a better position, guided
14 by the Chamber, as to what we can convey to the Defence in this regard and -- and
15 what might be the best course of action for the following witnesses.

16 So it might be best if this discussion waits until after that and then whatever your
17 Chamber -- the Chamber's discussion is we can notify the Defence accordingly.

18 PRESIDING JUDGE EBOE-OSUJI: Are you able to at least -- we hear Mr Khan, he's
19 requested five minutes and then when we hear him so that also will help with
20 focused -- with focus and what we need to discuss during the status conference?

21 MR STEYNBERG: No objection to that, your Honours.

22 PRESIDING JUDGE EBOE-OSUJI: Yes, okay.

23 We will bring in the witness.

24 (The witness enters the courtroom)

25 PRESIDING JUDGE EBOE-OSUJI: Can you, court officer, administer the solemn

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1 declaration for the witness, or the oath as the case may be.

2 WITNESS: KEN-OTP-P-0488

3 THE WITNESS: I solemnly declare that I will speak the truth, the whole truth and
4 nothing but the truth.

5 PRESIDING JUDGE EBOE-OSUJI: Thank you very much, Witness, and welcome to
6 the Court.

7 THE WITNESS: Thank you.

8 PRESIDING JUDGE EBOE-OSUJI: I wish you to feel entirely comfortable in the
9 courtroom. It is your courtroom, as it is ours, so we all own it together. Your
10 testimony is important for our work, and we will need you to kindly follow certain
11 guidelines that will hopefully make it as helpful as we would want it to be.

12 A critical requirement in that regard is the need to listen carefully to the question
13 asked and just respond to that question. I say that because it's particularly an
14 important admonition or reminder to expert witnesses who are experts in their field
15 of competence. There may be a temptation to talk about something that's interesting
16 and exciting perhaps, but may not necessarily be what the questioner is looking for.
17 So it's important for you to kindly listen carefully and just respond to the question.
18 There is also one thing that tends to happen when experts -- expert witnesses testify
19 that we will try to avoid and that is a temptation to lapse into a seminar mode,
20 because expert witnesses are often women and men of great learning who are used to
21 publishing materials and giving seminars. We don't want them to approach their
22 testimony as if they're conducting a seminar at a conference, so it's important again to
23 listen to the questions and answer the question and wait for the next one. That is the
24 best strategy to avoid lapsing into a seminar mode.

25 Do not be afraid of silence. It doesn't show on the transcript that there have been

1 silence that beckons the speaker to fill it. It is for the questioner to ask you the
2 question. Just answer it in as concise a manner as possible using the fewest possible
3 words to answer the question and then wait for the next one.

4 Experts are called to assist the Court to understand complicated matters of science, be
5 it physical science or social sciences, that will take too long for Judges or juries, in jury
6 trials, to understand, so experts are called to come and break it down, make it simple.
7 It's also important to avoid making it more complicated in the effort to make it simple.
8 You know what I mean? So, again, simplicity is extremely important in the process.
9 Avoid using language or terminology that are not easily understood by everyone.
10 And if you must use those, you can from time to time, but then explain what they
11 mean, if you must.

12 So those will address in a nutshell the general direction of the substance of your
13 testimony, but there is also an important matter of logistics. The team that help
14 make this record of proceedings -- create them, rather, are court reporters as
15 well -- court reporters over there and interpreters. They're not in the courtroom.
16 Their work is extremely important because without them we will not be able to have a
17 record of the process; transcripts will not be created. But as you can see, they are not
18 in the courtroom, so they cannot hear you directly. They only hear you through
19 your headphone and when we use a microphone. And it's important then that only
20 one speaker is speaking at any point in time. So we must avoid overlapping
21 speakers because that crowds the channel and they cannot figure out what's being
22 said.

23 In order to avoid that, we've come up with what we call the five-second pause rule,
24 meaning between speakers we try to pause for five seconds before starting. So you
25 wait for the Prosecution to finish the question, and then you pause for five seconds, or

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1 even a deep breath in and out helps, and then that creates that gap that's needed so
2 when you start speaking there is no crowding of the microphone. It may seem as if
3 five seconds is too much, but it isn't because your testimony is also being interpreted
4 into French, and five seconds also allows time for the French interpreter to catch up.
5 All right.

6 So with those general advice, we will now begin your testimony. Mr Steynberg will
7 ask you the questions first in chief and then the Defence lawyers will cross-examine
8 later if they have a need to cross-examine.

9 Thank you and welcome.

10 MR STEYNBERG: Thank you, your Honours. Perhaps I missed it, but has the
11 witness been sworn in? Yes. Thank you.

12 I should say for the record that the witness has not been given the warnings in terms
13 of Rule 74 and Article 70. In light of the nature of his evidence, I presume that that's
14 not necessary.

15 QUESTIONED BY MR STEYNBERG:

16 Q. Good morning, sir. Can you please state your full name for the record.

17 A. My name is Lars Bromley.

18 Q. Mr Bromley, you'll be pleased to know that your expertise is not in dispute this
19 morning, but I would like to just highlight a few aspects relating to your experience
20 and qualifications. And, in that regard, could I ask you to turn --

21 PRESIDING JUDGE EBOE-OSUJI: Before you start, please. One second.

22 Defence counsel, the Prosecution has on -- had proposed that 66(3) and 74(1) are not
23 necessary for this witness's testimony. You did not dispute that? I take it you --

24 MR FAAL: We have no objection to proceeding as highlighted.

25 PRESIDING JUDGE EBOE-OSUJI: Mr Kigen-Katwa?

1 MR KIGEN-KATWA: We don't either, your Honours.

2 PRESIDING JUDGE EBOE-OSUJI: Thank you.

3 MR STEYNBERG: Thank you, your Honours.

4 Q. You should have a folder in front of you, a lever arch file with several tabs in it.
5 If I could ask you to turn to tab number 1, can you confirm that the document there is
6 your latest updated CV, curriculum vitae?

7 A. Yes, it is.

8 Q. And briefly for the record, is it correct that your qualifications -- your
9 educational qualifications include a BA at the American University and a Master's at
10 the University of Maryland College Park, both in -- were in geography and
11 specifically in the area of remote sensing?

12 A. My degree from the University of Maryland was in geography, remote sensing.
13 My degree from American University was in international studies.

14 Q. Very well. And for the Court, what exactly is meant by "remote sensing" in a
15 nutshell?

16 A. Remote sensing is the formal term for using satellites and other sensing devices
17 to record and detect phenomenon on a surface of the earth or in some other context
18 just a formal way of measuring something, be it vegetation or water bodies or some
19 other form of land cover.

20 Q. Thank you. And is it correct your current position is principal analyst and
21 senior advisor at UNOSAT?

22 A. Correct. I believe my formal contract title is research advisor at the UN
23 Institute for Training and Research.

24 Q. And can you tell the Chamber a little bit about UNOSAT. What does
25 UNOSAT do?

1 A. UNOSAT is the operational satellite applications programme of UNITAR, the
2 UN Institute for Training and Research. We have several different programmatic
3 areas. My specific programme area is operational mapping, essentially using
4 satellite imagery and related technologies to monitor and map natural disasters,
5 humanitarian situations, human security and human rights events.
6 We do this all day, every day, all year at request by UN partner agencies and
7 implementing organisations like NGOs. If there's a disaster or some other
8 humanitarian event or human rights event, we essentially gather and analyse satellite
9 imagery and produce analytical products at the request of other organisations.

10 Q. And how many such analytical --

11 PRESIDING JUDGE EBOE-OSUJI: Pausing there for one second.

12 Witness, one more thing I should have told you which I didn't, and that's my fault, is
13 the need -- your pace as well. We also want you to watch your pace. Do not speak
14 too fast again to allow the interpreters and court reporters to record what you're
15 saying and capture it accurately. Not too slow either, but just not -- try and
16 modulate the pace, keeping in mind the need for people to record and interpret what
17 you're saying. Thank you.

18 MR STEYNBERG: Thank you, your Honours.

19 Q. If I can just add to what his Honour just said, it sometimes helps just to take a
20 break between each sentence so that the reporters can catch up.

21 You spoke of producing analytical products. Mr Bromley, how many analytical
22 products did you produce during the year 2013 in this field?

23 A. To be clear what I do is I manage a group of about seven analysts and mappers
24 who do the work, and I also do my own analysis. So as a group we publicly
25 produced 169 different reports in 2013. These reports were on natural disasters and

1 humanitarian situations. These were the public reports.

2 In addition we produced probably 40 or 50 what we call UN internal reports which
3 are not publicly released on our website but disseminated among a smaller audience
4 of UN and NGO colleagues.

5 Q. And the work of the -- your colleagues at -- whom you manage, do you check
6 their work?

7 A. Yes, I do. Essentially, every report produced eventually goes through me.

8 Q. And can you just tell the Chamber some of the human rights disaster areas that
9 you've worked on in the last few years.

10 A. It's a relatively long list. I can tell you most recently we work on Central
11 African Republic, South Sudan, Syria has been an ongoing issue for quite some time
12 now. I've also worked on Democratic Republic of Congo and Mali. These have
13 been some work for the ICC and also work for other organisations.

14 In addition, the typhoon that struck the Philippines last year, we worked on that.

15 There's been floods in Zimbabwe, Bangladesh, Cambodia as well, the Pakistan
16 earthquake. Going back, that takes us to about October of last year.

17 Back farther than that, it's Sudan, South Sudan, Syria again. Libya was, of course, a
18 major event for quite some time, Myanmar and then a great many probably smaller
19 events occurring here and there all over the world. In addition then there's what we
20 call technology development and research development.

21 Q. Thank you. I think that will suffice.

22 As regards Sudan, have you published any articles on -- or journal articles or papers
23 on that area?

24 A. Yes, I did. I did my graduate work using a specific satellite system that detects
25 fires, and I published a paper relating those detected fires to violence in Darfur

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1 in 2003.

2 Q. And is this in fact annexed to one of the reports you provided to the Court?

3 A. Yes, it is.

4 MR STEYNBERG: Your Honours, for the record I refer to KEN-OTP-0092-0882.

5 And it's at Annex B, page 0900. The title of the report is "Relating violence to

6 MODIS ...", M-O-D-I-S, "... fire detections in Darfur, Sudan." I don't propose to refer

7 to it in detail at this stage.

8 PRESIDING JUDGE EBOE-OSUJI: And the point of drawing that to the attention of
9 the Court, would it be to demonstrate the expertise of this witness?

10 MR STEYNBERG: Your Honours, yes, but more particularly the fact that the MODIS
11 fire detection technique used in this report is also a technique which we'll -- which the
12 witness will speak to during the course of the reports he will discuss.

13 Q. As a final point I note that you have published several other papers, but more
14 importantly your working expertise dates back to December 2000 -- sorry, May 1997, I
15 beg your pardon. So we're talking some 19 years of practical experience; correct?

16 A. Correct.

17 MR STEYNBERG: Your Honours, I do propose at some stage to EVD this CV. I'm
18 in your Honour's hands whether you --

19 PRESIDING JUDGE EBOE-OSUJI: Well, let's do it now.

20 MR STEYNBERG: Very well. If I can just find my own ERN. I believe the
21 number is KEN-OTP-0129-0011, which is the updated CV of the witness.

22 PRESIDING JUDGE EBOE-OSUJI: Any objections?

23 MR FAAL: No objection.

24 MR KIGEN-KATWA: No objection, your Honours.

25 PRESIDING JUDGE EBOE-OSUJI: The CV is admitted as the next in the

1 Prosecution's exhibits.

2 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0129-0011, a public
3 document, will be assigned the number EVD-T-OTP-00045.

4 MR STEYNBERG: Thank you, your Honours.

5 Your Honours, as I indicated briefly earlier, it may assist the Court by just giving you
6 a road map of where I intend to go. I intend to start with the mandate that this
7 witness received from the OTP, to go through the various steps the witness took to
8 fulfil that mandate, including identifying areas of the mandate he was not able to
9 fulfil, and then proceed to look at one by one the four reports he's provided and
10 certain additional material, just so your Honours know where I'm going.

11 MR FAAL: Mr President, if it helps, perhaps we could dispense with steps taken to
12 reach his report, because we are not disputing that he's taken the proper steps to
13 arrive at the conclusions that are contained in his report?

14 MR KIGEN-KATWA: We take the same position, your Honours.

15 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg?

16 MR STEYNBERG: Your Honours, I will keep it brief, but I do think it's necessary
17 just to go through a certain structure, otherwise the evidence exists in something of a
18 vacuum, but I will try to move along swiftly in this regard.

19 PRESIDING JUDGE EBOE-OSUJI: All right. Let's see how you do, but please do
20 not take too much time doing that.

21 MR STEYNBERG: And guided by my learned friend's kind indication, I will
22 perhaps just also lead the witness to a certain extent in this regard.

23 Q. Mr Bromley, is it correct that you received, after some initial discussions, a
24 mandate from the Office of the Prosecutor to examine -- to acquire and examine
25 satellite imagery and data relating to the post-election violence in Kenya at the end

1 of 2007 and beginning of 2008?

2 A. That is correct.

3 Q. And is it correct that this mandate is appended as Appendix A to your various
4 reports? And I refer to the first report again, 0092-0031 at 0947. That's at tab 2. If
5 you turn to Appendix A, you'll see a cover email and a six-page mandate.

6 A. That is correct.

7 Q. And the mandate requests you to examine certain alleged incidents which are
8 set out in a table, certain alleged meetings set out in a second table and to investigate
9 the distances and times between certain locations set out in a third table?

10 A. Correct.

11 Q. In respect of the first part, Chart A, the alleged incidents, which is what really
12 concerns us today, you were requested to look for data on large gatherings, large
13 movements of vehicles, destructions or burning of buildings and de-erection of
14 roadblocks; correct?

15 A. Correct.

16 Q. All right. Now, Mr Bromley in execution of that mandate, what is the first step
17 which you would have taken to acquire the necessary -- well, to perform this
18 mandate?

19 A. The first step is essentially to map the locations that we were given, which were
20 provided in the mandate. By map them, essentially just determine their latitude and
21 longitude and then start searching for satellite imagery which was acquired of those
22 locations at the time frame in question.

23 Q. Thank you. And I see that the OTP provided you with a list of co-ordinates for
24 the areas of interest which are described as "Approximate centre co-ordinates of the
25 locations or neighbourhoods of interest"; correct?

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1 A. Correct.

2 Q. And were you able to verify those co-ordinates?

3 A. Yes.

4 Q. Now, as far as the searching for data -- available satellite images and data, can
5 you tell the Court what types of data and images you would have looked for?

6 A. In the context of this request, what we're really interested in is what's referred to
7 as commercial high resolution satellite imagery. This is essentially satellite imagery
8 which has enough detail visible where you can see individual buildings and cars and
9 other features of that scale, as opposed to the many other sources of satellite imagery
10 such as weather data which would not provide that information.

11 Q. And besides the high resolution images, are there any other sources that you
12 examined?

13 A. We also looked at -- I also looked at the MODIS fire detections, which have been
14 mentioned. There were some other possibilities that lower quality satellite imagery
15 might provide us a look at something like large smoke plumes and also for this work
16 we're also interested in cloud cover, specifically knowing when areas were covered by
17 clouds, and we would thus not be able to see them in satellite imagery, or see
18 the -- see fire detections at those times.

19 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg, one minute.

20 Witness, the term "MODIS," that's M-O-D-I-S, is it an acronym for something and
21 have you already told us what that is, what it stands for?

22 THE WITNESS: Yes, it's an acronym. It stands for Moderate Resolution Imaging
23 Spectroradiometer.

24 PRESIDING JUDGE EBOE-OSUJI: Don't explain that now. I just wanted to get a
25 record that it is an acronym. If Mr Steynberg wants to explain what each of those

1 means, he can ask you.

2 MR STEYNBERG: Your Honours, that will be mainly relevant to the third report
3 and so I don't propose to break the flow and we can go into some detail, although not
4 too much. I'll spare the Court what I had to sit through.

5 Q. Very well. Now, as regards the availability of high resolution photographs, is
6 it correct that you also set out in annex the available data that you were able to
7 acquire in relation to the various areas of interest? And I refer to you to Annex
8 B -- Appendix B, I beg your pardon. Again, the ERN is 0092-0931 at page
9 0945 -- sorry, 0954. Do you have that? It's the same report we were looking at. It's
10 at tab 2, the final three pages of that report.

11 A. Yes, I have it. I think mine has a different number on it.

12 Q. The number at the page on the left should be 0954, Appendix B, right at the foot
13 of the page?

14 A. Yeah, I have 0092-1398.

15 Q. And are you at tab 2?

16 A. Ah, I'm sorry. I'm in tab 3.

17 Q. I understand that this has been appended to all three or all four reports.

18 A. Can you repeat the number?

19 Q. The page number is 0954, the last four digits, and what I'm really interested in is
20 the table which appears at 0955 and following.

21 Now, if I read this table correctly, let's turn to the first entry. This relates to Turbo
22 Town and the period the OTP was interested is on or about 31 December '07, and
23 according to the last entry it says "No immediate relevant satellite imagery for this
24 location. IK from 28 November 2005 and WV-1 from 13 December 2007." Can you
25 briefly explain that, please?

1 A. Yes. First of all, the abbreviation "IK" stands for the satellite IKONOS.
2 "WV-1" stands for the satellite WorldView-1.
3 Satellite imagery of this type is not continuously collected all day every day for every
4 location on earth. It's essentially collected in little bits and pieces, you can say, for
5 different areas at different times. So if the date of interest is 31 December 2007, the
6 closest image to that date, or the closest two images, the one before that was 28
7 November 2005 collected by the IKONOS satellite. The next one was collected by
8 the WorldView-1 satellite, 13 December 2008.

9 Q. So that was almost a year after the time of interest; correct?

10 A. Correct. And so with discussions with the OTP at the time, we determined
11 that such a long time frame -- such a long gap between the date of interest and the
12 date of acquisition made this essentially not relevant to the investigation.

13 Q. Very well. Do I understand that what you're essentially interested in is a
14 before picture and an after picture surrounding the relevant time frame?

15 A. Correct. Depending upon the analysis that we do, usually what we're doing is
16 simply comparing two images, a before image and an after image, and looking for
17 changes between the two.

18 Q. Very well. And then for the following five entries for Yamumbi, Kimumu,
19 Langas, Huruma and Kiambaa, you have indicated that relevant imagery was
20 available and this table indicates that in fact you acquired various images in respect of
21 those five locations; correct?

22 A. That is correct.

23 Q. And we'll come back to that in due course. And is it also then correct that for
24 the remaining areas of interest no relevant images were available?

25 A. That is correct.

1 Q. Once the image is acquired, Mr Bromley, how do you go about then -- or how
2 did you go about examining and analysing it to answer the OTP's mandate?

3 A. So after the search for the images, there's a purchasing process. We purchase
4 the imagery, we then download it on to our local office network and then we do a
5 standard image analysis process. We use specialised software which is called a
6 Geographic Information System, or a GIS, which is widely used and has been for a
7 long time for essentially making maps and looking at satellite imagery. The satellite
8 images that we download are loaded into this GIS system. Our particular type is
9 called ArcMap. We do some processing, just to essentially be able to look at the
10 resolution -- look at the satellite imagery at its most detailed level and with the full
11 range of -- of colours possible. Then we essentially go through a process of simply
12 comparing the two images together and essentially pan through the entire analysis
13 area at the best resolution possible so that we are seeing all the details in the satellite
14 imagery. We compare the two images to one another and then we essentially mark
15 any details of interest. In this case, the details of interest were indications of burned
16 and destroyed structures.

17 Q. Now, using your specialised software platform and the equipment available to
18 you, can you comment on the level of detail you're able to observe versus images,
19 which I will show you in due course, that are captured in PDF and displayed on a
20 normal Windows operating system and a normal monitor?

21 A. So the main differences between what we can see with our specialised software
22 versus what you have in the PDF form, obviously, the primary difference is that we
23 can simply zoom in and zoom out of the satellite image. We can take a broad view
24 at the entire area, and then we can zoom down to a -- a specific building or a specific
25 location.

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1 We also have the ability to see in what we can think of as an enhanced-colour range
2 where we can adjust the contrast and better see certain details, for example, that
3 might be in shadow areas of the image. So we have a little bit more ability to -- to
4 basically play with the image and -- and see different details. What you see in the
5 PDF is a static version of that image; you don't have the ability to zoom in and out,
6 you don't have the ability to essentially alter the -- the colour contrasts.

7 PRESIDING JUDGE EBOE-OSUJI: The software you used to give you that greater
8 level of detail or ability to see much closer --

9 THE WITNESS: Yes.

10 PRESIDING JUDGE EBOE-OSUJI: -- it something you could have put on the laptop,
11 for instance, and come to the courtroom with? I'm not asking you to do it now if you
12 haven't, but I just wanted to know.

13 THE WITNESS: Yes. And, in fact, it is on my laptop here in the Court.

14 PRESIDING JUDGE EBOE-OSUJI: Good. It will be good to see it. I don't know if
15 Mr Steynberg was going to -- to that question.

16 MR STEYNBERG: I -- I was not aware of -- I wasn't going to that, no, what I was
17 going to say is that the software was also available in the offices of the OTP where
18 items may be inspected by -- by the parties and, if necessary, by the Chamber.
19 But one concern I have is that the screen on the laptop versus the screen that we
20 looked, a 55-inch high-resolution LED screen, I'm not sure that you're going to get
21 exactly the same, but perhaps the witness can indicate that. Is this --

22 PRESIDING JUDGE EBOE-OSUJI: Yes, I think that's for him to explain that, if it is
23 possible to -- if it has not been configured already, I don't imagine it has been because
24 this seems to have been a spontaneous question from the Bench, but may be at some
25 point during the break Mr Steynberg you can look into the possibility of coupling his

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1 system to the courtroom system so he can demonstrate to us how he does this thing.

2 It would be good to see it.

3 MR STEYNBERG: I'll look into that. Thank you, your Honours.

4 THE WITNESS: Can I add one more detail?

5 MR STEYNBERG:

6 Q. Please.

7 A. The satellite imagery that we examine, and I apologise this is where it gets
8 slightly technical, it's not simply a photograph as you would expect from a camera;
9 what these satellites do is they're capturing reflected electromagnetic energy in
10 multiple wavelengths, so another primary difference that we have, using our special
11 software, versus what you see in the PDF, is we are able to access a different
12 wavelength of reflected energy, which is referred to as near-infrared energy, which
13 I can discuss at length if you prefer, but the primary benefit of that extra wavelength
14 of energy is essentially it helps you understand where vegetation is, just due to the
15 properties of how vegetation reflects this energy.

16 So, again, as I examine the image using our special software, I can essentially turn on
17 this extra wavelength of energy, which is invisible to the human eye, but is then
18 displayed through the capabilities of the software which, in certain circumstances,
19 helps me understand what a vegetated area might be, what its condition might be,
20 et cetera, et cetera.

21 PRESIDING JUDGE EBOE-OSUJI: Thank you very much. But can you look at tab
22 2, if you look at page 0936, for instance.

23 THE WITNESS: Yes.

24 PRESIDING JUDGE EBOE-OSUJI: What I'm trying to get at is does your machine
25 and its software, is it able to zoom in into these images with greater detail and greater

1 resolution than what we're seeing here?

2 THE WITNESS: Generally, when I produce this report these samples -- these are at
3 what we would call full resolution, so zooming in will not give you any further detail
4 than what you see here. You may still zoom in on occasion just to, you know, see a
5 specific area more closely, but you're not -- you're not seeing any more actual detail
6 by doing that, so these -- these samples are essentially full-resolution samples, and
7 these are also all natural colour samples. This is what it would look like if you flew
8 over in an aeroplane, so there is none of the extra wavelength going on here.

9 PRESIDING JUDGE EBOE-OSUJI: You're saying that what we then see as 0936 is as
10 good as you could see with your computer, except if you wanted to do some -- some
11 sort of spectrum analysis and things like that?

12 THE WITNESS: Yes. And then I have the ability with the software to essentially
13 change the colour stretch to -- to, perhaps, make some details more clearer but not
14 fundamentally seeing any more detail.

15 MR STEYNBERG:

16 Q. Mr Bromley, have you taken into account the resolution of the printer perhaps
17 that would have produced this image?

18 A. It's true, it would be -- we would have to compare what the printer quality is
19 versus what we would see on our high-resolution screens so, yeah, you're probably
20 losing a little bit of quality on the paper version versus the digital version. How
21 much quality I can't quite say.

22 MR STEYNBERG: Your Honours, perhaps I should also just inform the Court that
23 we have downloaded the files on to our computer and we will be going through
24 these -- we will be calling up these on our computer screens. It seems to me, from
25 what I observe on this screen and what I've observed previously, that there might be a

1 difference in resolution, but I think that it would certainly be better than -- than the
2 resolution of the printed pictures.

3 Q. So with that, Mr Bromley, can I ask you then to turn to -- at the beginning of tab
4 2 and to deal with the first report, that is the Analysis of Satellite Imagery for Eldoret,
5 Kenya, on 4 January 2008.

6 Perhaps one or two preliminary questions: The four reports that you've produced,
7 can you confirm that these reports emanate from you?

8 A. Yes, they are mine.

9 Q. And, under oath today, can you confirm the correctness of the facts and
10 conclusions contained therein subject to any caveats you might have set out?

11 A. Yes, I can. I believe I explained in the reports all the necessary caveats.

12 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg, you will be introducing the report,
13 would you not, at the end of -- well, at some point?

14 MR STEYNBERG: Yes, your Honours. I propose -- guided by your Honour's
15 earlier instruction to adduce each report as we finish talking about it.

16 PRESIDING JUDGE EBOE-OSUJI: And the reason I say that it may -- in light of the
17 discussion conducted thus far, especially the references to Appendices A and B, it
18 might assist to put in this report now, unless there's any objection, so that there's close
19 proximity with what has been discussed, that is Appendices A and B.

20 MR STEYNBERG: Very well, your Honours. That seems to be a sensible
21 suggestion. I don't think my learned friends have any objection.

22 They've -- indicating no. So I ask then that this report at tab 2 be exhibited. The
23 ERN number, once again, KEN-OTP-0092-0931. And that file will include both
24 appendices referred to previously.

25 PRESIDING JUDGE EBOE-OSUJI: I notice Defence counsel shook her head

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1 indicating there was no objection.

2 We will then be accepting the report onto the record as a next of the Prosecution
3 exhibit.

4 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-0931, a public
5 document, will be assigned the following number EVD-T-OTP-00046.

6 MR STEYNBERG: Thank you, your Honours.

7 Your Honours, on reflection there's one other document I think I'd like to refer to
8 before starting this report, it is contained at tab 6, and -- no, I beg your pardon, tab 10,
9 and it is an image I intend to call up. And I'll have to ask the court management to
10 give me the floor in order to do that.

11 PRESIDING JUDGE EBOE-OSUJI: Is this also an appendix to the first report to what
12 was introduced?

13 MR STEYNBERG: Your Honours, I see it is entitled Appendix C. Yes, indeed,
14 I believe it is an appendix -- yes, it is an appendix to the first report, that's correct, it
15 deals with Eldoret only, but it is because of the size of the file it is a
16 separate -- submitted separately.

17 PRESIDING JUDGE EBOE-OSUJI: Any objection?

18 MR FAAL: No objection.

19 MR KIGEN-KATWA: No objection, your Honours.

20 PRESIDING JUDGE EBOE-OSUJI: The -- how do we label this now? Let's do it this
21 way: It will come in, we do not give it a separate exhibit number, do we, because it
22 is part of the report itself and the report has Appendices A and B, and this is
23 Appendix C, so we're basically completing the first exhibit so it comes in without
24 separate --

25 MR STEYNBERG: That is --

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1 PRESIDING JUDGE EBOE-OSUJI: -- without separate exhibit number, or do you
2 need to give it a separate exhibit number for any reason?

3 MR STEYNBERG: Your Honours, I think for a -- the technical reason that it is
4 uploaded in eCourt as a separate file it might require a separate exhibit number. I
5 have no objection if it's simply given the next number on -- on the exhibit list. Our
6 colleagues from CMS might be best -- best placed to advise on that.

7 I might add, your Honours if there's a second version of this, which I don't intend to
8 refer to in court, this is what's known as the annotated atlas of Eldoret, which
9 indicates certain destroyed and possibly destroyed buildings. There's another one
10 which is basically just the naked photograph with no annotations on it. The reason
11 why it is necessary is because sometimes the annotations obscure the underlying data,
12 so it is best always to have a clean one as well. So although I won't be referring to it
13 now, I would ask that also be exhibited, so for that reason, perhaps, we could give
14 them separate but sequential exhibit numbers.

15 PRESIDING JUDGE EBOE-OSUJI: All right, why don't -- let's do it that way instead
16 of trying to make it perfect. So we will then be admitting this document now as a
17 separate exhibit but next in the Prosecution exhibit. Now, we have co-related it
18 to -- on the record to the first document to report itself. So we will admit this as a
19 next in the Prosecution exhibits.

20 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-*1401, public,
21 will be given the following number: EVD-T-OTP-00047.

22 PRESIDING JUDGE EBOE-OSUJI: Thank you. And you say there is another
23 version of this, did you say that?

24 MR STEYNBERG: Indeed, your Honour. (Microphone not activated)

25 THE INTERPRETER: Microphone, please.

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1 MR STEYNBERG: I beg your pardon. I should repeat that.

2 It is the unannotated version of the same document. It's not been printed due to the
3 length, it's some 150 pages, but I ask that it be exhibited as -- well, as the next in the
4 sequence. And its ERN number is 0092-1169. It is essentially the same document
5 without the dots and writing on it.

6 PRESIDING JUDGE EBOE-OSUJI: The same number of pages. The only difference
7 being one is marked up, the other one is not?

8 MR STEYNBERG: That is my understanding, your Honour. Perhaps the witness
9 can just confirm that.

10 THE WITNESS: Yes, that's correct.

11 PRESIDING JUDGE EBOE-OSUJI: The Defence.

12 MR FAAL: Well, we would have preferred that the material is provided to all the
13 participants, but nonetheless we have seen them because they have been previously
14 disclosed, so we have no objection.

15 MR KIGEN-KATWA: We do not object, your Honours.

16 PRESIDING JUDGE EBOE-OSUJI: All right. We will then be admitting that as well
17 on to the record as the next in the Prosecution exhibits.

18 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-1169, a public
19 document, will be assigned the following number: EVD-T-OTP-00048.

20 MR STEYNBERG: Thank you, your Honours. I ask my learned friend then to call
21 up that image. All right. And I'm advised that in order to see this image the
22 computers will have to be put on to PC 1.

23 PRESIDING JUDGE EBOE-OSUJI: So you're calling up --

24 MR STEYNBERG: KEN-OTP-0092-0958, the first page of the annotated atlas of
25 Eldoret at page -- at tab 10.

1 Q. Very well, Mr Witness. Does this represent the extent of the area you
2 examined from the photograph acquired of 4 January 2008?

3 A. Yes, it does.

4 Q. And I see the picture is divided into a number of grid sections numbered A1 all
5 the way down to N14, I believe it is; correct?

6 A. N15.

7 Q. N15, thank you. And how did you go about then examining this image to
8 analyse or to detect the features you were asked to look for?

9 A. So, again, if it -- when we load it into our GIS software, we're following a
10 process similar to what you see with the grid cells on this screen and we're essentially
11 just moving from one section of the image to the -- to the next, from top to bottom.
12 When we reach the bottom of the column, then we pan the screen over to the right
13 and we go back all the way up to the top and we repeat that process until we've
14 examined the entire satellite image.

15 In total, we did -- I did a full review of these images twice in that fashion and then
16 essentially went back and looked at some other areas again and again and again.

17 I guess a primary difference is the scale of the -- the atlas book is 1 to 3400, which is a
18 little more than twice the scale at what I look at the image when I use my GIS. So I
19 look at it at a scale of 1 to 1500 and so I essentially see a little bit more detail on the
20 GIS than what you see here in the atlas book.

21 The main reason I didn't produce the atlas book at the scale of 1 to 1500 is that it then
22 would have been 300 pages and even larger and more difficult to deal with.

23 Q. And just so we understand how it works, if we scroll to the next page. So
24 we're now looking at the second page of this report. This would represent then the
25 top left-hand grid section of the larger image on the first page; correct?

1 A. Yes, that is correct.

2 PRESIDING JUDGE EBOE-OSUJI: What's the grid number? A1?

3 MR STEYNBERG: A1, your Honours, correct.

4 Q. And then if we were to work our way sequentially through all of these pages,
5 we would cover the whole image -- which I don't propose to do today -- correct?

6 A. Correct.

7 Q. Very well. I think we can take that image down. Thank you. So turning
8 back to where I wanted to go a moment ago, to tab 2 again of your report, and the
9 first page of the actual report is at 0933. It's marked page 1. I don't propose to go
10 into all the technical details, but is it correct then that you examined and compared
11 the two satellite images detailed in the table acquired from QuickBird, the first being
12 dated 14 March 2006 and the second 4 January 2008?

13 A. That is correct.

14 Q. And the resolution, the last entry in that table, panchromatic resolution .6
15 metres, is that regarded as high resolution satellite photography?

16 A. Yes, there's really no specific definition of what is high resolution, but as
17 a -- kind of a term of practice, you would call this either high resolution or very high
18 resolution commercial satellite imagery.

19 Q. Thank you. Can I ask you to turn over to the next page, figure 1, which is
20 a -- appears to be an aerial photograph of the larger area of the Rift Valley including
21 Uasin Gichu, and there's a red square in that photograph. What does the red square
22 represent -- rectangle should I say?

23 PRESIDING JUDGE EBOE-OSUJI: Can we pull it up on the screen?

24 MR STEYNBERG: We can, your Honours. Give us one moment, please. I'm
25 informed it should be on the screen, your Honours.

1 PRESIDING JUDGE EBOE-OSUJI: It is. It is now on the screen, yes.

2 MR STEYNBERG:

3 Q. The red rectangle slightly offset to the right, what does that represent?

4 A. That represents the specific area of the high resolution QuickBird satellite image
5 that I examined. And just to clarify, the other image on that page is from a different
6 satellite. It's not an aerial photo. It's from the Landsat satellite.

7 Q. Thank you for that clarification.

8 Now, because that red square is offset, I'd just like to, for the sake of orientation, when
9 we are looking at the satellite image from QuickBird, which we are going to go to in a
10 moment, would it be correct then that true north would not be to the top of those
11 images but rather to a direction more towards the top left corner?

12 A. No. On this one the true north is to the top. I believe the -- the offset of
13 the -- of the image is -- was determined specifically by the co-ordinates I was given by
14 the ICC. So when you -- the satellite image covers a larger area than what I -- what
15 we purchased and analysed, but we have to extract a rectangle from that image
16 during the purchasing process, so that's the reason that it's angled the way it is.

17 Q. Thank you, Mr Bromley. My question was though not related to this -- the
18 larger image we see on this page before us, which I understand does represent a
19 north-south axis, but if we perhaps just briefly turn to figure 5 at page 0939 -- I don't
20 think it's necessary to call it up on the screen right yet -- it's page 7 of this report ERN
21 0939. The red square on figure 5, does that correspond with the red square on figure
22 1 we've just looked at?

23 A. Yes, that is correct. And for figure 5 then I did rotate it essentially to make it fit
24 on the page more easily.

25 Q. And in fact, if we look at the, correct me if I'm wrong, the longitude references

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1 at the top and bottom of the page, you'll see there's a figure at the top left of 35
2 degrees, 16 minutes, 0 seconds east; correct?

3 A. Correct.

4 PRESIDING JUDGE EBOE-OSUJI: Where are we now, Mr Steynberg?

5 MR STEYNBERG: Sorry, your Honours.

6 PRESIDING JUDGE EBOE-OSUJI: Are we back to figure 1?

7 MR STEYNBERG: No. We're still on figure 5, your Honour. I beg your pardon.

8 PRESIDING JUDGE EBOE-OSUJI: Figure 5. All right.

9 MR STEYNBERG:

10 Q. So I've referred to the black script number in the top left-hand corner, 35
11 degrees, 16 minutes, 0 seconds. And, Mr Bromley, if you look at the bottom
12 right-hand corner of the same image, you'll see a corresponding number 35 degrees,
13 16 minutes, 0 seconds east; correct?

14 A. Correct.

15 Q. And if one were to draw a straight line between those points, would the axis of
16 that line represent a north-south axis?

17 A. Yes.

18 Q. Thank you. The point of all this is when I refer to these photographs, I may
19 have to talk to -- talk about left and right and up and down rather than east, west,
20 north, south, as one might normally do on a map.

21 MR STEYNBERG: My learned friend draws my attention to the clock, your Honours.
22 Perhaps this might be an appropriate time.

23 PRESIDING JUDGE EBOE-OSUJI: Yes. Thank you very much. This will be a
24 convenient time to take our morning break.

25 Witness, we will take our morning break now and then we will return at 11.30.

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1 The Court will rise.

2 THE COURT USHER: All rise.

3 (Recess taken at 11.00 a.m.)

4 (Upon resuming in open session at 11.38 a.m.)

5 THE COURT USHER: All rise.

6 Please be seated.

7 PRESIDING JUDGE EBOE-OSUJI: Thank you very much.

8 And, Witness, welcome back.

9 Madam Registrar has some matter to deal with.

10 THE COURT OFFICER: (Interpretation) Thank you, Mr President. I wanted to

11 correct the number for Prosecution exhibit number 47, and the ERN is

12 KEN-OTP-0092-0958. Thank you.

13 PRESIDING JUDGE EBOE-OSUJI: Thank you. That was a correction to the right

14 ERN number.

15 Mr Steynberg, before you continue, Mr Khan, you requested to speak for five minutes

16 and you said you wanted the matter dealt with. We will not be able to give you the

17 certainty you want today and -- since this witness is the last witness for this session.

18 That's the case, isn't it, Mr Steynberg?

19 MR STEYNBERG: Correct, your Honour.

20 PRESIDING JUDGE EBOE-OSUJI: Yes. We do not want to interrupt his testimony

21 and hold a status conference in the middle of his testimony, so what the Chamber will

22 do is hold a status conference after this witness's testimony during which time we will

23 look into all these matters, including the one you may be talking about. So it's for

24 you now to decide whether you want to wait until then, since you will not be getting

25 any answer before that time, or whether you still want to do your five minute

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1 submission?

2 MR KHAN: Your Honour, if it's tomorrow, it will be fine. I will not be here on
3 Friday, so if it's tomorrow that would be satisfactory.

4 PRESIDING JUDGE EBOE-OSUJI: But even if you're not here on Friday, I believe
5 one of your colleagues can speak to the --

6 MR KHAN: Yes, they can.

7 PRESIDING JUDGE EBOE-OSUJI: Yes.

8 MR KHAN: Or I can just raise the issue very briefly as well. It's simply relating to
9 Witness 32 could be brought in to fill the time we have at the next session. It doesn't
10 make sense to come all this way and go to the expense of a hearing if there is one
11 witness only available. And that's the nub of it, but I can expand later.

12 PRESIDING JUDGE EBOE-OSUJI: All right, thank you. We will return to that
13 later.

14 Mr Steynberg, please continue your examination-in-chief.

15 MR STEYNBERG: Thank you, your Honours. I can inform the Court that the
16 technicians have managed to hook-up Mr Bromley's computer and in due course I
17 will ask him to pull up one of the images, but it may be more efficient to follow the
18 images we have in his report until such time as we need to get to specific details.

19 PRESIDING JUDGE EBOE-OSUJI: It's in your -- we're in your hands, Mr Steynberg.
20 Please proceed.

21 MR STEYNBERG: Thank you very much, your Honours.

22 Q. If I can direct your attention, Mr Bromley, once again to tab 2, to your Eldoret
23 report, and to page 3 of the report at ERN 0935. It's the page opposite figure "1" and
24 it has a smaller figure "2" up in the right-hand corner. Do you have that?

25 A. Yes.

1 Q. What does this tell us about the coverage of the two images you acquired?

2 A. Figure 2 indicates that the two images cover slightly different areas.

3 Essentially the image from 14 March 2006 covers 131 square kilometres, whereas the
4 image from 4 January 2008 covers 140 square kilometres which is an additional 9
5 square kilometres. So figure 2 then indicates which areas are essentially not covered
6 by both images.

7 Q. And if I understand the image correctly, the darkened corners, top right and
8 bottom right, are areas that are not covered by the before picture as it were; the earlier
9 image?

10 A. Correct.

11 MR STEYNBERG: And can I ask my learned friend to call up then figure 3 on the
12 following page, it's tab 0936, and we'll need the floor from our colleagues at CMS
13 please.

14 PRESIDING JUDGE EBOE-OSUJI: But, Mr Steynberg, the triangles, the dark
15 triangles in the top right and bottom right of figure 2, are you saying that this witness
16 would not be testifying to occurrences in those areas?

17 MR STEYNBERG: No, your Honours. I will ask the witness to explain in a bit
18 more detail in a moment, but essentially those areas are areas for which he has been
19 able to identify certain destroyed structures, but he's not in a position to say whether
20 those structures were in fact there before the violence. So that introduces a degree of
21 uncertainty into his analysis, but I will go into greater detail in due course.

22 PRESIDING JUDGE EBOE-OSUJI: So that will be delineated on the record when we
23 get to it?

24 MR STEYNBERG: Indeed, your Honours.

25 PRESIDING JUDGE EBOE-OSUJI: Good.

1 MR STEYNBERG: And in fact the way that the witness has annotated these -- these
2 structures he's identified will also indicate that.

3 Your Honours, I believe that my learned friends have called up this image, but what
4 I had requested is that they give the floor to us, the Prosecution, so that we may
5 manipulate the image, please. The reason I'm doing this is because we have the
6 original files here which are of slightly better quality than the files. When they are
7 uploaded into eCourt, the quality is decreased.

8 Q. Do you see that image in front of you, Mr Bromley?

9 A. Yes.

10 Q. And just to orientate those in court, there are two images juxtaposed. Is it
11 correct the top image is as it were the before picture, dated 14 March 2006 of a
12 particular area, and the bottom image is the corresponding area depicted in -- as at 4
13 January 2008?

14 A. Yes.

15 Q. Now, with the assistance of this image, or these images, I'd like you to please
16 explain to the Court how you through your analysis were able to identify destroyed
17 and particularly burnt buildings during the course of your analysis?

18 A. So, as I mentioned, the -- in this case the image analysis process is essentially a
19 comparison between the before and the after image. So as we review the -- as I
20 review the two images in the GIS, you're essentially turning them on and off to
21 compare them to each other directly. When you locate an area where structures
22 have essentially disappeared between the after image and the before image, then you
23 of course pause at that location and you try and determine why the structure has
24 disappeared.

25 Obviously, there is quite some time that elapsed between the acquisition of the before

1 image and the acquisition of the after image, so in some cases structures were
2 temporary and simply removed. In some cases they may be abandoned and just
3 otherwise disappeared.

4 In these particular cases, I would identify the structures as having been burned. In
5 the examples on the screen in front of you, where the red dots are, these are locations
6 which in the before image clearly had structures and then in the after image the
7 structures have disappeared, and what you see remaining are essentially artefacts of
8 what I would call or what I would see as burning.

9 So most visible is a lot of white greyish material lying on the ground, which we
10 can -- which I would basically identify as ashes. The ash remains of the structures.

11 A little bit less visible, especially in this area but much more visible in other areas,
12 would be blackened charred remains of the structures and surrounding vegetation.

13 So between the disappearance of the structures, their replacement with a white
14 ash-like substance and occasionally blackened remains, I would classify those as
15 burned structures.

16 Some of them have not burned completely or have not disappeared completely, and
17 then you have clearer structural remains. Often times the roof will collapse and
18 what you see are the remains of the interior walls of the structure. So it's an
19 analytical -- analytical process where you're first noting the disappearance of the -- of
20 the structure and then identifying characteristics which indicates which it's likely
21 been burned.

22 Q. Thank you. If I can direct your attention on the lower image to the first -- the
23 four red dots on the right-hand -- well, the first four red dots from the right of the
24 photograph that are running more or less a horizontal line below the road running
25 from left to right. Do you see those?

1 A. Yes.

2 Q. If you compare those to the corresponding structures on the top image, can you
3 indicate what is -- what you can tell from the presence or absence of shadows?

4 A. So if you look --

5 PRESIDING JUDGE EBOE-OSUJI: Where is the top image?

6 MR STEYNBERG: Sorry. Sorry, your Honours. I think you can see both images
7 now.

8 Q. Go ahead.

9 A. So if we look at those, that particular area, obviously in the before image the
10 structures are visible. Some of the clues that we look for are on their top edge,
11 they're basically casting shadows. The black lines directly adjacent to the top edge of
12 the structures are shadows. Obviously when a structure is intact and elevated, it's
13 going to be casting a shadow. The absence of the shadow indicates that the structure
14 is no longer elevated in the bottom image, and essentially nothing is blocking the
15 sunlight in casting the shadow.

16 Q. Thank you, Mr Bromley. And referring to those same four red dots on the
17 lower image, just below the white grey piles which you identified as ashes, there is a
18 black margin around those ashes. What would you identify that as?

19 A. So that would essentially be most likely the burned vegetation which was next
20 to the structures, which would have caught on fire at the same time and it leaves the
21 blackened soot remains.

22 Q. Thank you. And it doesn't seem to be particularly in dispute, but can you from
23 this photograph identify whether these buildings were destroyed by a natural
24 phenomenon such as a wild fire or rather by a more targeted individual acts of
25 incineration?

1 A. It's -- of course it's an image of an event. So I wasn't there, but I have looked at
2 many other images which depict wild fires, and those essentially burn entire
3 continuous areas. So the fact that there is no -- the vast majority of the surrounding
4 vegetation is not burned would indicate to me, both in this area and other areas of the
5 image, essentially that the fire was, you know, deliberately ignited on the structures
6 piece by piece. It did not spread evenly across the entire area and burn every
7 structure and every item in the area.

8 Q. And if we continue to the left of the four dots we've been looking at, following
9 the line of the road running from right to left, there are two further dots and then a
10 space and then a series of seven further dots going down towards the bottom
11 left-hand corner. Do you have those?

12 A. Yes.

13 Q. And each of those represents a burnt structure; correct?

14 A. Yes, some of them are burned completely and some of them I identified as
15 partially burnt.

16 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg, your colleague, whoever is
17 manipulating, can zoom in and out as you are discussing the area so that we can
18 make certain determinations, if possible? Yes.

19 MR STEYNBERG: Just to confirm, your Honours, you would like the image to be
20 zoomed in so that -- when we're discussing a particular area?

21 PRESIDING JUDGE EBOE-OSUJI: Yes.

22 MR STEYNBERG: Thank you, your Honours.

23 Q. And if we look below that line I've identified, there are some scattered red dots
24 below, but in the middle of all those there's one building which seems to be standing
25 untouched, a long narrow building along the axis of top to bottom. Do you see that?

1 A. Yes. To the -- to the right of the seven dots; correct?

2 Q. Correct. Just below the junction -- the Y junction of the road.

3 A. Yes.

4 Q. Can we draw any conclusion from the fact that that building is untouched
5 amongst all the other destroyed burnt buildings?

6 A. Again, that would indicate to me that it wasn't -- it wasn't a continuous burn
7 across -- across the area. A wild fire is essentially going to have a front like a
8 weather front, which would move with the wind and burn across -- evenly across the
9 area. This is what in my analysis we would call selective burning where certain
10 buildings were burned and other buildings are untouched.

11 Q. Thank you. And from your analysis of these images, are you able to give any
12 indication of a time frame when these buildings were destroyed by burning?

13 A. That gets much more difficult, but just essentially by simple logic, you know
14 that ash will blow away quite quickly. I would say depending on the wind
15 conditions it's, you know, going to be gone within a couple of days, two or three days,
16 something like that.

17 The fact that you're still seeing ash in the location would indicate that it's a very
18 recent event.

19 Q. And can any conclusions be drawn from the blackened vegetation, the colour of
20 the blackened vegetation as visible on your images?

21 A. Again, that's much more difficult and relatively speculative, but especially in
22 other areas of the image, the blackened vegetation when it's -- when it's a pure black,
23 a deep black, that's a very recent burn. As time goes on, the black fades away and as
24 new vegetation grows, eventually it disappears altogether.

25 And again, the example isn't -- isn't very abundant in this particular section of the

1 image, but in other areas of the image you see the blackened remains are
2 extremely -- they're pure black almost. They're not -- they haven't faded to a dark
3 grey or a light grey at all.

4 Q. When you refer to "other areas of the image," are you referring to the image
5 before us or the larger image that you examined?

6 A. The larger image, essentially the surrounding areas outside the frame of this
7 particular figure.

8 Q. Thank you. We'll return to some examples of that in due course.

9 Now, the degree of certainty, can you tell the Court the structures which you've
10 represented as red dots, the degree of certainty by which you can say that these are
11 burnt structures?

12 A. Certainly the structures that have completely disappeared, I would -- I would
13 certainly call burned structures. The majority of the others, just given the blackened
14 char marks on some of the roofs, the holes in the rooftop which is characteristic of
15 burning, those are certainly -- almost certainly burned in my opinion.
16 Some of the others, there's certainly a little bit of speculation, at least for the smaller
17 structures where they appear to have lost a rooftop but may not exhibit other signs of
18 burning. There's some uncertainty on those. But in general, you would view the
19 whole area and say, okay, if every building is burned and the building next to it
20 appears damaged, then it's most likely a burning.

21 Q. Thank you. Now, the President asked you before the break whether or not you
22 were able to hook up your system to show the Chamber how you go about examining
23 it on your bespoke software. I understand you've managed to do that during the
24 break. Is that correct?

25 A. Yes, I have -- or we have.

1 Q. Perhaps just at this stage if I could ask the floor to be given to the witness, and if
2 I could ask you to call up this same image or the image of the same area, just to give
3 the Chamber -- I don't intend to do this for every image, but just to give the Chamber
4 an idea of how you were able view this, bearing in mind the limitations of the screens
5 on which we are viewing it.

6 A. Is it in front of everyone else? No. There we go. So the -- what you're
7 looking at here is the -- the full window is the Geographic Information System which I
8 mentioned. This is an ArcMap GIS. There are other versions of GIS, which are
9 either available for purchase or open source and you can download.

10 But this is -- this is the software that I've always used, that my office use. It's
11 specially designed essentially for map making and geographic analysis so --

12 PRESIDING JUDGE EBOE-OSUJI: Witness, out of interest, is this what we see
13 outlined in red at Prosecution document 0934, page 0934?

14 MR STEYNBERG: That would be figure 1 of the Eldoret report.

15 PRESIDING JUDGE EBOE-OSUJI: Yes, figure 1 of the Eldoret report.

16 THE WITNESS: Yes. So the image area here that I indicate with the cursor is the
17 area inside the red box. The completely blackened, black stuff outside is what we
18 call no data.

19 So the software just essentially allows you to zoom in and out. It goes a lot faster on
20 a bigger computer, but this is essentially how it works on a -- on a smaller lap top.

21 Anyone who is familiar with Google Earth or something like that has seen something
22 like this. This software has a set of specific capabilities, which something like Google
23 Earth wouldn't have. But essentially you're able to zoom in and out, look around the
24 image, see the analysis -- or see the imagery and do your analysis.

25 I can turn on and off different layers. So what I'm doing now is I'm turning off the

1 image from 4 January 2008 so that I can see the previous image, which is 14 March
2 2006. Now I'm turning the 2008 image back on. And that's essentially a large part
3 of the analysis process right there. You turn them on and off. You do the
4 comparison. You look for changes between the two.

5 Now, you'll notice a slight shift between the two images. That's about a 15 metre
6 shift in the images. That's essentially a relic of the image acquisition process in this
7 particular satellite. In my report I talk about the processing and rectification stages
8 of the analysis. That's where we essentially work to remove that shift between the
9 two images so that at any time you're turning one on and off, you're essentially
10 looking at the exact same area in the other image.

11 The final sorts of things I can do with the image that you don't do with a PDF, this is
12 the vegetation capability. One second. So since this was a dry time of year it's
13 harder to see but you'll notice the vegetation here has essentially been turned red.
14 This is just a little tool, a little trick that's -- that's able to be used to help me more
15 easily identify vegetation versus structures, also live vegetation versus dead
16 vegetation. It -- this is what uses that extra wavelength of energy that the human eye
17 doesn't see. It's the near-infrared wavelength of energy. And it's just basically a
18 very good way of differentiating vegetation.

19 MR STEYNBERG:

20 Q. Thank you, Mr Bromley. Are you able to find the location that was identified
21 on the figure 3 we were examining a moment ago just so we can have an indication of
22 the differences in what you can see on your system?

23 A. Yes. So here it is zoomed out. This is at a much broader scale than what's
24 represented in the report. And we can essentially zoom in. And so as we get closer
25 to it this is still not full resolution.

1 Down here is roughly the scale that it was presented in the report, maybe a little bit
2 closer. And so, again, this is what we call full resolution of the imagery. At this
3 resolution you can zoom in more, but it's not really going to offer you any more, any
4 more details.

5 So this is the 4 January 2008 image. I can alter the colour stretch a little bit just in
6 hopes of perhaps getting a little bit more contrast and detail out of it. And then
7 again, I can turn on and off the -- the different images and do the direct comparison
8 on screen to see the two.

9 And, again, there is this slight shift. And this -- this is not present when I do the
10 analysis in actuality on my computer in the office, it's simply because I had to set this
11 up quickly for display here.

12 But it is present in the original imagery because it's -- it's an artefact of the original
13 image acquisition. But this is -- this is essentially the process. Then I would do my
14 best to identify separate building structures, which is a little bit subjective simply
15 because you're looking for breaks in the rooftops or changes in the rooftops that
16 would differentiate one building from the next. Obviously if the buildings are
17 clearly separated by a few metres, or a metre, that's quite easy. But if it's -- if the
18 buildings are joined at the rooftops, then it can get a little bit more, essentially,
19 subjective.

20 So, again, we see the shadows of the buildings in the previous image, up along here,
21 indicating they're raised, and they're -- in the after image, the shadows on those
22 particular buildings have disappeared, but the shadows over here are still present.
23 So that tells me the sun conditions and sun position were roughly the same between
24 the two image acquisitions, and all the structures would be casting shadows if they
25 were there.

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(Open Session)

ICC-01/09-01/11

1 Q. Thank you, Mr Bromley. And if I can just go back to that image for a moment,
2 please.

3 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg, would -- is there ability for this
4 evidence or this testimony to tell us how to zero in on the particular neighbourhoods
5 of interest, in terms of there have been some discussions about certain
6 neighbourhoods where you would have concentration of Kikuyus versus other
7 neighbourhoods, that kind of information? Is it possible to get it from this?

8 MR STEYNBERG: Perhaps that would be a question for the witness, your Honours,
9 but I don't know -- I don't see how --

10 PRESIDING JUDGE EBOE-OSUJI: It wouldn't -- it would not be for him; it would be
11 you supplying him the information about a locality to look for. I don't imagine that
12 he would have known where the witnesses -- or, the witnesses told you Kikuyus lived
13 and that sort of thing.

14 MR STEYNBERG: Your Honours, what I can say is that as the witness has already
15 testified, we did supply him with approximate co-ordinates of five of the locations
16 which we were interested in for the purposes of the charges. And those may be seen
17 probably best at tab 6, which is just an A3 printed version of figure 5 in the Eldoret
18 report. And the blue pentagon-shaped dots indicate the centre co-ordinates of
19 Kimumu, Huruma, Yamumbi and Langas.

20 So, I will come to this with the witness, but it is possible to zoom in on those localities
21 if you wish.

22 For my purposes, once I have established how the witness identified definite and
23 possible destroyed structures - we'll come to the possible destroyed structures in a
24 moment - then I would suffice to refer to the larger picture, which demonstrates the
25 layout or the concentrations of those areas vis-à-vis the -- vis-à-vis the co-ordinates

1 provided.

2 So what I am trying to say is I don't propose, unless the Chamber wishes to do so, to
3 zoom in on each of those individual areas, but it can be done. And I would --

4 PRESIDING JUDGE EBOE-OSUJI: I would think that actually that would have been
5 a very, very useful thing for this witness to have done for us with you instructing him
6 on what to zoom in on. There has been admissions of burnings, but the Defence
7 have not admitted that anybody's property in particular were burnt. They do admit
8 burnings. But it would help us if witnesses are saying, well, there is a certain area
9 where Kikuyus live, Kikuyu neighbourhoods, tendency of Kikuyus to live in those
10 neighbourhoods and less so in other neighbourhoods. So if we can see -- zero in on
11 those neighbourhoods identified by witnesses as Kikuyu neighbourhoods so we can
12 see whether there is a larger concentration of burnings in those areas comparative to
13 other areas.

14 MR FAAL: Well, Mr President, I must apologise for intervening at this stage, but
15 that is an area of interest. And I just wish to announce that that is the entire subject
16 of our proposed cross-examination. Thank you.

17 MR STEYNBERG: Your Honours, the report was dated in early 2013, which
18 predated many of our witness statements on -- on the crime base. And, obviously,
19 the witness could do that but he would have to be provided with reliable information
20 and co-ordinates. Unfortunately the challenges we've had with many of our
21 witnesses is that they have been unable to identify or understand themselves satellite
22 images or aerial photographs in order to point out where their particular house may
23 or may not have been, which makes it difficult for us to provide that information to
24 the -- to the witness.

25 But the underlying information is here and we propose to admit it before the Court.

1 And there's nothing to prevent at a later stage, if certain areas of interest are identified
2 for the parties or the Chamber themselves, to zoom in on those areas because what I
3 propose to do, your Honours, is at the end of the bundle of documents I've provided,
4 there is a CD containing PDF files of each of these reports and all of the images I
5 intend to propose, which can be loaded into the computer and viewed individually
6 by any of the parties involved.

7 PRESIDING JUDGE EBOE-OSUJI: Proceed.

8 MR STEYNBERG: Thank you, your Honour.

9 Q. One last question, Mr Bromley on this witness -- on this picture before we
10 continue. I note that the blackened areas above and below the destroyed structures
11 appear on this image, to my eye in any event, much blacker than on the aerial or on
12 the image we were looking at earlier.

13 A. I'm sorry, can you clarify that?

14 Q. Yes. We spoke earlier about the usefulness of looking at blackened vegetation
15 surrounding burnt structures and determining the age of the burn. Do you recall
16 that?

17 A. Yes.

18 Q. And on the image which the Prosecution had pulled up from its PDF file
19 compared to the image you have on your screen at the moment, can you comment on
20 the intensity of the blackened areas surrounding these structures?

21 A. You mean this -- this stretch here?

22 Q. Indeed, and above the two dots just below the junction, to the left of that.

23 A. Again, the software I'm using gives me some, some capability to alter the stretch.
24 So some of what you're seeing is just -- just the contrast that I -- I selected. I can
25 essentially darken the entire image and then make the contrast a little bit less.

1 But you can certainly tell the difference between, you know, shadow, building
2 shadow and burnt vegetation. For example, for one thing, on this the shadows fall
3 on the north side of the buildings, not on the southern side of the buildings. And
4 it's -- it's tough to or difficult for me to get the exact same contrast in the image on
5 your screen as what you had in the PDF --

6 Q. All right.

7 A. -- but it's possible.

8 Q. All right. Thank you.

9 Those are all the questions I have for your images at the moment, unless there are any
10 further questions from the Bench? No.

11 Could we have the floor back, please, court officer.

12 Q. Do you have on your screen, Mr Bromley, now figure 4 from your Eldoret
13 report ERN 0937?

14 A. Yes.

15 Q. All right. Now, on the previous screen there were various red dots. We see
16 on the bottom half of this figure certain orange dots. Can you please explain to the
17 Court what those orange dots represent?

18 A. The orange dots essentially represent possibly destroyed structures. So as I
19 mentioned when we do the image analysis we're comparing a before and an after
20 image and then I'm looking for buildings which have essentially disappeared in the
21 after that I can see in the before image.

22 However, since so much time has passed since the acquisition of that image in 2006
23 versus the one in 2008, what you also had was buildings which were built, structures
24 which were built in that time period and which, according to my analysis, were then
25 also likely burnt down.

1 So in this case the orange dots represent those buildings which I cannot verify that
2 they existed in the before image but, according to my interpretation, they are most
3 likely a building which was burnt down as of 4 January 2008. So they are one of
4 three types of possibly destroyed structures that I identified.

5 So the red dots are structures I'm very certain which were previously existing
6 structures which were burned or otherwise destroyed and then the orange dots are in
7 this case buildings which I believe to have been burned down, but I cannot verify that
8 there were structures there previously.

9 Q. Thank you. And you mentioned two other types or categories of possibly
10 burnt structures. What are they?

11 A. The other two categories, the first simplest one is as we discussed before. The
12 two images covered slightly different areas, with the 2008 image covering an
13 additional 9 square kilometres compared to the 2006 image. So obviously in those 9
14 square kilometres I also identified possibly destroyed structures but, since I did not
15 have a previous image for that location, I could not verify that the structures had been
16 there. So that's a second type of possibly destroyed structures.

17 The third type is where I had some analytical doubt that the structure had been -- had
18 been destroyed. It may have been exhibiting some characteristics of having been
19 burned or destroyed, but either the level of detail of the image wasn't sufficient for me
20 to be certain about that, or perhaps there was some obscurity like a tree was next to
21 the -- or near the structure and essentially casting a shadow on it which would have
22 limited my ability to see the structure; some factor like that which gave me some
23 doubt before I -- that did not allow me to classify that structure as definitely
24 destroyed.

25 Q. Thank you.

1 PRESIDING JUDGE EBOE-OSUJI: Sorry, did you just say what factors may inform
2 your conclusion that a building was possibly destroyed?

3 THE WITNESS: Yes, sir. So again the red dots are the ones that I would classify as
4 definitively destroyed and then the orange dots would be the three classes of possibly
5 destroyed, with one of those types of possibly destroyed being some sort of analytical
6 uncertainty on my part.

7 PRESIDING JUDGE EBOE-OSUJI: What I'm trying to find out is what makes
8 you -- what would you be looking for to come to the conclusion that possibly
9 destroyed?

10 THE WITNESS: I think mostly what you see is you see small holes in the roof which
11 are blackened, but they're small enough that they're right at the edge of what the
12 sensor can actually see. So there's a chance that it's just not -- you know, it's some
13 sort of, you know, perhaps a chimney sticking up from the top of the structure is
14 casting a shadow, and so what I'm seeing is literally just a tiny little black spot on the
15 roof top. So there are -- you know, there are factors like that that would cause me to
16 call it possibly destroyed.

17 Sometimes a structure may partially collapse but from space it still looks like a
18 relatively square structure, but perhaps it's no longer casting as big of a shadow, or
19 perhaps the configuration - the appearance - of the structure has changed slightly
20 leading me to think that it's collapsed, but I just can't be sure about it from the
21 imagery.

22 PRESIDING JUDGE EBOE-OSUJI: But you can -- you first make a determination
23 that there is definitely a structure, is that the case, and then your next -- your question
24 is that this is a structure, but is this structure possibly destroyed or not?

25 THE WITNESS: Correct.

1 PRESIDING JUDGE EBOE-OSUJI: Thank you.

2 MR STEYNBERG:

3 Q. Thank you, Mr Bromley. I think we can then move to the results of your
4 analysis - and this is contained at ERN-0938, page 6 of the report - and can you just
5 tell the Court then from your analysis of the area covered by the respective
6 photographs what you're able to detect as far as destroyed and burnt buildings?

7 A. So after I completed the analysis which I described, going through the entire
8 image piece by piece until I had covered the entire image, there were a total of 696
9 structures that I identified as destroyed. Of the 696 I classified 506 of those
10 structures as definitively destroyed, so those were ones where there was no doubt,
11 there was no gap in the imagery, and then the additional 190 structures were possibly
12 destroyed according to the criteria that we discussed.

13 Q. With regard to the definitively destroyed structures -- well, no. With regard to
14 the total figure of 696 destroyed buildings, you go on to say almost all apparently by
15 fire. What sort of ratio are we talking about of buildings that were not destroyed by
16 fire, but by some other cause?

17 A. To be certain I would have to go back and review the data, but it was, you know,
18 85/90 per cent, something like that.

19 Q. Thank you. Now, I note towards the end of that paragraph that you refer to
20 certain other information you managed to gather relating to the remains of a possible
21 roadblock made from burning tyres, a burnt cargo truck and certain areas of people
22 navigating the town on foot. For my purposes the roadblock is of interest, and
23 perhaps I could ask you to if my colleague can draw -- call up the relevant page from
24 the atlas, unless you are able to find it on your GIS system?

25 A. It's probably safer and faster if we use the atlas page.

1 MR STEYNBERG: Very well. So then I'm going to ask my learned friend if we
2 have the floor to go to the Appendix C, the annotated atlas of Eldoret, and it's
3 according to footnote 9 in quadrant G3 of that document.

4 PRESIDING JUDGE EBOE-OSUJI: What page?

5 MR STEYNBERG: For the record it's KEN-OTP-0092-1051 at tab 10, but it will
6 probably be more visible on the screen.

7 Q. Is that the relevant page I've just referred to, Mr Bromley?

8 A. Yes.

9 MR STEYNBERG: Can I ask my colleague to zoom in on the top right-hand corner?
10 It might be a little bit more visible. All right.

11 Q. Do you -- are you able to identify the roadblock on that image? It's moved
12 again. Just one second.

13 A. Yes.

14 Q. Can you point it out, please?

15 A. It's on -- yeah, it's essentially right there. It's on the asphalt road. It has some
16 sort of light truck parked next to it, or possibly in motion but most likely stationary,
17 and it's the black line across the road.

18 MR STEYNBERG: Just for people who are subsequently reading the record, the
19 witness points to a spot in the top right-hand corner of this image, just below and to
20 the left of the intersection of the black latitude and longitude lines, on the asphalt
21 road running diagonally from left down to right.

22 Q. Mr Bromley, what makes you say those are burning tyres?

23 A. It's somewhat speculative, but we've seen this -- I've seen this before.

24 Essentially it's the black charred remains of something that was put across the road.

25 The fact that if you -- if you really look closely at them, they're -- they're elongated in

1 a certain direction, which is essentially the black soot that billows off of a
2 burning -- burning tyre, or something like it. And all that is going in the same
3 direction, which means it's probably from wind pushing it in a certain direction.

4 Q. You call it the remains of a roadblock. Is there anything to suggest to you that
5 it's not an active roadblock?

6 A. It certainly could be. It's difficult to tell since the substance that you're looking
7 at is black. Any shadow that you would be seeing in there would essentially be
8 absorbed into the sub -- you know, it would be difficult to distinguish from the
9 substance itself.

10 The fact that there is a vehicle at the angle that it's positioned might indicate that it's
11 an active roadblock.

12 Q. Are you able to comment on the presence or absence of people at that location?

13 A. There may be a few. That's something I would like to take a closer look at in
14 the GIS. People are extremely difficult to see in imagery of this type. Essentially
15 what you are often seeing is the shadow cast by people, and so what you are looking
16 at are tiny little black dots and trying to assess whether those are people. That's
17 something I would prefer to do in the GIS and perhaps report back later.

18 Q. Thank you. I don't think we need to spend more time on that then. Thank
19 you, you can take that image off.

20 Returning then to your report and to your results, I refer you again to figure 5. Your
21 Honours, this is the same image that we have in A3 size at tab 6 where it has a
22 different ERN number, 0092-0957. So whichever -- whichever image is clearer to the
23 Bench, you're welcome to use.

24 Does this represent then the plot of all of the definitive and possibly destroyed
25 structures that you identified during your analysis?

1 A. Yes.

2 Q. And we've already established that the blue dots indicate co-ordinates provided
3 for for certain areas of interest; correct?

4 A. Yes, so those were the original co-ordinates I was provided and then I
5 essentially wrapped the image purchase around them for lack of a better term.

6 Q. And all of these structures were then destroyed by 4 January when the
7 photograph was taken, or possibly destroyed as the case may be?

8 A. Correct.

9 Q. Now, we'll come to the MODIS in due course, but while we're looking at this
10 image what are the red shaded areas, top right, bottom left and on the left-hand just
11 above the mid -- middle of the picture; the shaded red squares, or pink?

12 A. So those would be the areas in which a fire detection was, or a fire was detected
13 by the MODIS sensor. So the MODIS sensor is essentially identifying the centre
14 point of a pixel, where it's assessed -- an algorithm has assessed the MODIS data and
15 determined that a fire was most likely occurring in that area at the time of the satellite
16 overpass.

17 Q. And in red script next to each of those shaded areas, so let's look at the one in
18 the top right-hand corner. There's an ID number followed by a date and a time
19 stamp; is that correct?

20 A. Correct.

21 Q. And does that represent the date and time when the image or the detection was
22 recorded?

23 A. Correct.

24 Q. Now -- and we'll go into the specifics again in due course when we deal with
25 report number 3, but the absence of red shaded areas in places where you have

1 identified burned structures, does that -- can we draw any conclusions from that?

2 A. So the MODIS sensor - the fire detection sensor - is carried on two different
3 satellites, which are overhead any particular point, you know, for a fraction of a
4 second essentially. So the fact that all the fires weren't detected -- all the possible
5 fires weren't detected doesn't mean they didn't occur. It could mean essentially that
6 they were occurring while the sensors were not passing overhead.

7 In addition, the MODIS sensor essentially detects relatively large fires that have to be
8 burning again when the sensor is overhead. So if the -- if the burning does not reach
9 a certain critical mass --

10 Q. Sorry. I'm just getting indications you're going a little bit too fast. Could you
11 slow down a little bit, please.

12 A. So if the burning does not hit a certain level of intensity, then it may basically
13 just be too -- too minor for MODIS to detect. So it's -- MODIS is not designed to
14 detect individual house fires. It's designed to detect larger fires. But when you get
15 multiple fires burning together, that's when MODIS is able to detect them.

16 So essentially the fact that a fire was not detected does not mean it did not occur.

17 Conversely, the confidence is quite high that the fires that were detected actually did
18 occur.

19 Q. Thank you.

20 PRESIDING JUDGE EBOE-OSUJI: But how frequently does MODIS overpass?

21 THE WITNESS: Basically it -- it doesn't -- it overpasses all areas of the planet at least
22 two times per day and up to four times per day. So there are certain gaps and
23 overlaps in the orbital pattern that optimise it so it passes over land as opposed to
24 water and covers the entire planet in the long term in an even fashion. But there are
25 some times where -- some days where it does not detect, there's a gap in the coverage.

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1 But in general it's at least two times per day and up to four times per day.

2 MR STEYNBERG:

3 Q. And while we're on that point, are there any other variables or climatological
4 factors which might affect the detection of fires by MODIS?

5 A. For any optical satellite system cloud cover is the number one thing to consider.
6 Even dense fog and dense haze will essentially block the detection capability.
7 In some rare cases if the fire that's burning is emitting enough smoke, that will also
8 essentially block the detection capability.

9 Q. Thank you. As I say, we will come back to that in some more detail to that in
10 due course.

11 Moving on with your report then, I intend to go through fairly quickly figures 6 and 7.
12 Perhaps you can just look at them even just in the printed versions. And they're at
13 pages 0940 and 0941.

14 So turning to figure 6 at 0940 --

15 PRESIDING JUDGE EBOE-OSUJI: What tab again?

16 MR STEYNBERG: It's tab 2. I beg your pardon, your Honours.

17 PRESIDING JUDGE EBOE-OSUJI: Before we go back to tab 2, since we've discussed
18 0957, this will be a good place to put it in.

19 MR STEYNBERG: Yes. Thank you, your Honours. May I ask then that this also
20 be admitted as the next in the Prosecution exhibits. This is the A3 document at tab 6
21 of the binder.

22 PRESIDING JUDGE EBOE-OSUJI: I take it no objections from Defence counsel?

23 MR FAAL: No objection, Mr President.

24 MR KIGEN-KATWA: None, your Honours.

25 PRESIDING JUDGE EBOE-OSUJI: The document is admitted into evidence at this

1 point.

2 THE COURT OFFICER: (No interpretation)

3 (Interpretation) ... 57, document -- public document we will give the number

4 EVD-T-OTP-00049.

5 MR STEYNBERG: Thank you, your Honours.

6 Q. So I see we have on the screens, but for our purposes we can just look at the

7 paper copy. Is it correct that figure 6 again depicts the destruction of various

8 buildings including what appears to be -- including what appears to be a large blue

9 roofed structure visible on the before picture at the top?

10 A. Correct.

11 Q. And in this particular case there appears to have been burnt vegetation. Can

12 you point that out on the bottom image?

13 A. It's indicated by the blue arrow directly below the blue roof structure.

14 Q. And is that what we would be looking at if we were seeing widespread wild

15 fires, that sort of thing on a larger scale?

16 A. Yes, sort of. Those were trees which were burned which are obviously a bit

17 more vegetation than the surrounding grass and scrub. But yeah, essentially, if you

18 saw kind of a continuous area like that, that would be indicative of a wild fire.

19 Q. And once again, is it correct that interspersed amongst the red dots on the lower

20 image, the destroyed structures, are various other structures which appear to be

21 untouched?

22 A. Yes.

23 Q. Moving on then to figure 7, again, just another example of three definitely

24 burned structures; correct?

25 A. Yes. And in particular these were some of the most isolated structures. So

1 literally nothing, no other vegetation burning in the area.

2 Q. I see. And then of more interest to me is figure 8 where you've indicated in the
3 centre of the picture running sort of top to bottom four definitively burnt structures;
4 correct?

5 A. Correct.

6 PRESIDING JUDGE EBOE-OSUJI: You're talking about the date of the 4th?

7 MR STEYNBERG: Yes, I'm talking about the after -- the lower -- the picture on the
8 lower -- the lower picture, your Honours.

9 Q. And what can you tell the Court about the burnt areas surrounding these
10 buildings?

11 A. This is -- this is where the vegetation burned directly next -- directly around the
12 burned structures has been a lot more intense. That's the blackened vegetation
13 remains of whatever grass was there before.

14 To the -- to the top and to the right, that may indeed be some sort of agricultural
15 burning or it may have been piles of agricultural detritus that caught on fire during
16 this burning.

17 Q. And what can you tell about the age of this burn?

18 A. These would be extremely recent. The ash is all still completely -- or the ash is
19 still visible and present. The blackened -- blackened burn around the buildings is
20 still purely black. The surrounding -- the surrounding possible agricultural burns
21 might be slightly older just based on the fact that they're not as deep and black as the
22 burns around the buildings.

23 Q. And again, when you say "extremely recent," can you put a time frame on that?

24 A. Again, that's -- that's difficult, but I would say this had been within a week of
25 the image being collected.

1 Q. Thank you. May we move on then to figure 9 at page 0943. The upper image
2 is described as being an image of the Eldoret cathedral on 4 January 2008; correct?

3 A. Correct.

4 Q. And can you tell the Court what you observed on that image from your
5 analysis?

6 A. So in this particular example in the PDF, I didn't provide the pre-image. This
7 is only the post-image from 4 January 2008. But again, based on the image
8 comparison that I used for the rest of the analysis, you essentially just notice an awful
9 lot of activity at this particular location, multiple cars, some light trucks, possibly
10 some buses. It's possible that there's people visible on the grounds of the cathedral
11 as well, but basically there's -- there's a lot going on, a lot of vehicles, certainly, and a
12 lot of activity there at that time.

13 Q. Figure 10, the Kimumu cathedral doesn't -- well, can you tell us about that? It
14 doesn't appear to have nearly as much activity.

15 A. Correct. At the time of the image acquisition, there's -- there's no vehicles on
16 the grounds of the cathedral. There are some vehicles nearby on the roads, but that
17 cathedral essentially looks empty.

18 Q. And the final image for this report, figure 11, is described as being an image of
19 the Langas police station on 4 January 2008; correct?

20 A. Correct.

21 Q. And please tell the Court what you observed in that image?

22 A. Again, doing the comparison method, in this particular image you're now
23 seeing a large number of cars, trucks, definitely some dump trucks, which you
24 can -- or panel trucks, which you can identify by the shadows on their -- their
25 particular shadow pattern, and possibly some -- some buses as well.

1 Where the blue -- where the blue arrow indicates is either a large crowd of people or
2 essentially a collection of things, for lack of a better word. But that field changed
3 considerably between the two images. So you're seeing an awful lot of material
4 which is now in that field. I would say that some of what you see there is certainly
5 people, but a lot of it is also just other -- other things. It may be shelters or
6 belongings or something like that.

7 Q. Thank you. Then moving on to your conclusions, Mr Bromley, what did you
8 conclude at the end of your analysis of this data?

9 A. Again, after reviewing the entire image, there is essentially ample evidence of a
10 lot of structural burning in and around the areas I was provided by the ICC. Again,
11 506 buildings definitively burned in my opinion and an additional 190 buildings
12 possibly burned in the imagery in my opinion.

13 In this sort of analysis, we always know we're not identifying 100 per cent of
14 everything that's in the image. You're always going to miss some. Basically if
15 shadows from trees block it or if some other factor doesn't allow you to see a structure,
16 you may miss it, or if it's just not clear. But without a doubt, the 506 buildings that
17 we identified were almost certainly burned.

18 Again, the MODIS assessment indicates that at least some of the MODIS fire
19 detections were directly approximate and intersecting the burned buildings -- the
20 burned buildings as well.

21 Q. And what conclusion can you draw from that as to the dates of the burning?

22 A. So the MODIS detections are very precisely time stamped down to the -- to the
23 millisecond of acquisition. So the MODIS detections that occurred on those dates
24 were detected at that time.

25 In terms of the QuickBird image, the optical image that we located all the destroyed

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1 structures in, then it's a little bit more speculative, but the -- essentially the level -- the
2 intensity of the blackness of the soot and the presence of ash indicates that the
3 burning was very recent, I would say within the previous week, five days, some sort
4 of time frame like that.

5 Q. So in your expert opinion, the acquisition dates of the MODIS data being 3
6 January, 1 January, 1 January, 1 January, 1 January and 1 January? I'm just reading
7 the dates on Exhibit 0957. Would those be consistent with the observable burning
8 patterns that you detected in your analysis?

9 A. Yes.

10 Q. Thank you, Mr Bromley. I think that's all for now with the Eldoret report.
11 Can we move to the second report you provided us, which is at tab 3 of your binder.

12 PRESIDING JUDGE EBOE-OSUJI: Before we go there, back to Exhibit 957, is that
13 what you said? It was at tab 6.

14 MR STEYNBERG: 0957, 0957.

15 PRESIDING JUDGE EBOE-OSUJI: Yes, yes. That's the ERN number, not the
16 exhibit number, ERN 0957.

17 MR STEYNBERG: Correct.

18 PRESIDING JUDGE EBOE-OSUJI: Why do we have a different date on the same
19 photo? I see that the ID number 20883 indicates date of 3 January 2008. And the
20 rest indicate 1 January 2008.

21 THE WITNESS: So those, sir, are just two different dates of -- of the fire detections.
22 So the majority were detected on 1 January, but that particular one was detected on 3
23 January.

24 PRESIDING JUDGE EBOE-OSUJI: Thank you.

25 MR STEYNBERG: Very well. Tab 3. I see that we are approaching the lunch

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1 break, so perhaps -- perhaps we could do the admission of the documents for the
2 Kiambaa imagery?

3 PRESIDING JUDGE EBOE-OSUJI: What tab is that?

4 MR STEYNBERG: It's tab 3, your Honours, and if I can just get the witness to
5 confirm.

6 Q. I think you've confirmed all four of your reports, but do you again confirm that
7 this document at KEN-OTP-0092-1380 is your report and you confirm the correctness?

8 A. Yes.

9 MR STEYNBERG: Your Honours, together with this we will be referring to the
10 appendix separately contained at tab 11, which is again Appendix C Annotated Atlas
11 of Kiambaa, much shorter than the previous one, and that is KEN-OTP-0092-1402. If
12 I could ask that these could please be given the next two Prosecution exhibit numbers.

13 PRESIDING JUDGE EBOE-OSUJI: Defence?

14 MR STEYNBERG: Sorry, there is one more, your Honours, if I may interrupt. As
15 with the previous one at tab 7, there is a larger A3 image of one of the figures
16 contained in the report and that is KEN-OTP-0092-1401. And there is likewise an
17 unannotated version of the Kiambaa atlas, which has not been printed for the same
18 reasons.

19 PRESIDING JUDGE EBOE-OSUJI: All right. Let's take it one at a time. First we
20 deal with tab 3, that is the Analysis of Satellite Imagery for Kiambaa Church, Kenya,
21 as of --

22 MR STEYNBERG: ERN 1380. Yes, thank you.

23 PRESIDING JUDGE EBOE-OSUJI: Yes. Okay.

24 Defence, any objection?

25 MR FAAL: No objection.

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- 1 MR KIGEN-KATWA: None, your Honours.
- 2 PRESIDING JUDGE EBOE-OSUJI: The document is admitted as the next of the
- 3 Prosecution exhibits.
- 4 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-1380, public
- 5 document, will be assigned number EVD-T-OTP-00050.
- 6 PRESIDING JUDGE EBOE-OSUJI: What is the next one?
- 7 MR STEYNBERG: Your Honours, the next one will be tab 11.
- 8 Appendix C, the annotated atlas KEN-OTP-0092-1402.
- 9 PRESIDING JUDGE EBOE-OSUJI: Any objections?
- 10 MR FAAL: No objection.
- 11 MR KIGEN-KATWA: None, your Honour.
- 12 PRESIDING JUDGE EBOE-OSUJI: That document is also admitted as the next of the
- 13 Prosecution exhibits.
- 14 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-1402, a public
- 15 document, will be assigned the number EVD-T-OTP-00051.
- 16 PRESIDING JUDGE EBOE-OSUJI: You said there is another one, Mr Steynberg?
- 17 MR STEYNBERG: Two more in fact, your Honours. So the following would be the
- 18 unannotated Kiambaa atlas, the ERN number is 0092-1457.
- 19 PRESIDING JUDGE EBOE-OSUJI: Is it in the bundle here?
- 20 MR STEYNBERG: No, your Honours. This is the corresponding unannotated
- 21 version of the document at tab 11, which has not been printed.
- 22 PRESIDING JUDGE EBOE-OSUJI: So it is in the CD ROM, or what?
- 23 MR STEYNBERG: It is collect -- it is in the CD ROM, which we will come to in due
- 24 course, but it is also uploaded in eCourt, so it can be exhibited directly from eCourt.
- 25 MR FAAL: No objection.

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1 MR KIGEN-KATWA: No objection.

2 PRESIDING JUDGE EBOE-OSUJI: It is admitted as the next of the Prosecution.

3 And Defence --

4 MR FAAL: Mr President, if it helps, we're not objecting to any of the documents
5 going in.

6 PRESIDING JUDGE EBOE-OSUJI: All right. So we will just admit them as the
7 Prosecution brings them up. That's good to know.

8 Mr Kigen-Katwa, the same for you?

9 MR KIGEN-KATWA: Yes, your Honours.

10 PRESIDING JUDGE EBOE-OSUJI: Thank you.

11 THE COURT OFFICER: (Interpretation) Documents KEN-OTP-0092-1457 will be
12 assigned the reference number EVD-T-OTP-00052.

13 MR STEYNBERG: Thank you. Then, finally, your Honours, the A3 image at tab 7
14 is KEN-OTP-0092-1401.

15 PRESIDING JUDGE EBOE-OSUJI: That too comes in as the next of the Prosecution
16 exhibit.

17 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-1401 will be
18 assigned the reference number EVD-T-OTP-00053.

19 MR STEYNBERG: Thank you, your Honours. And that would appear to bring us
20 rather neatly to the lunch adjournment.

21 PRESIDING JUDGE EBOE-OSUJI: Yes, we will take our lunch break now.

22 Witness, we will revert -- you will join us again at 2.30.

23 In light of the subject matter, Defence, it is my intention to allow the Prosecution to, if
24 they need to, clean up anything with the witness during breaks to do that.

25 MR FAAL: No, no, no objection, Mr President.

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1 PRESIDING JUDGE EBOE-OSUJI: No difficulty with that, Mr Kigen-Katwa?

2 MR KIGEN-KATWA: No.

3 PRESIDING JUDGE EBOE-OSUJI: Yes. So you've heard what the direction is, so if
4 there's any need for you to discuss with the witness with a view to narrowing
5 anything down or clarifying anything in the meantime --

6 MR FAAL: Mr President, I misunderstood you. We would have a bit of a difficulty
7 with regards to that, unless of course if your Honours insist and --

8 PRESIDING JUDGE EBOE-OSUJI: That's what we intend to do. We will not be
9 applying the same --

10 MR FAAL: Well, we think it would be a bit inappropriate considering also that we
11 have already disclosed our material and it would be obvious what our lines of
12 questioning would be, but we stand guided by your Honours. We won't create any
13 difficulties with that, but we think that it's definitely not the way to proceed under the
14 circumstances. Thank you.

15 PRESIDING JUDGE EBOE-OSUJI: Because you've already disclosed your --

16 MR FAAL: Yes, Mr President. Yes.

17 PRESIDING JUDGE EBOE-OSUJI: I see.

18 MR FAAL: And our lines of questioning would be very obvious. We do not wish
19 the Prosecution to be given an opportunity to sit with the witness somewhere and
20 clear those issues. Thank you.

21 MR STEYNBERG: Your Honours, I can certainly give an undertaking. I have not
22 seen the documents yet, but I have no intention of discussing Defence documents
23 with the witness.

24 MR FAAL: But nonetheless it is inappropriate.

25 PRESIDING JUDGE EBOE-OSUJI: See the concern is this Mr Faal is -- we have

1 asked the Prosecution to narrow down areas, and then it should be possible for
2 the -- for us to trust the Prosecution not to do anything untoward.
3 MR FAAL: We will continue to be very co-operative, Mr President.
4 PRESIDING JUDGE EBOE-OSUJI: Thank you. We will leave it at that.
5 Prosecution, your responsibility as a lawyer is implicated in all of this. Thanks.
6 We will take our lunch break now and come back at 2.30.
7 THE COURT USHER: All rise.
8 (Recess taken at 1.00 p.m.)
9 (Upon resuming in open session at 2.40 p.m.)
10 THE COURT USHER: All rise.
11 Please be seated.
12 PRESIDING JUDGE EBOE-OSUJI: Thank you very much.
13 And, Witness, welcome back.
14 Mr Steynberg, please.
15 MR STEYNBERG: Thank you, your Honours. Before I continue with the
16 questioning, I should just indicate that my colleague, Mr Lucio -- Mr Garcia and I
17 briefly met with the witness just before we resumed and in particular to ask him
18 whether it would be possible to plot certain additional information on his map such
19 as that raised by the President earlier regarding areas of interest.
20 I explored it from the possibility of being able to superimpose other available map
21 images such as Google Maps on the data he has provided. He explained that that
22 would be technically not possible, but if we were to provide him with a list of areas of
23 interest, areas that might have been spoken about by various previous witnesses - I
24 won't mention those areas in public session - he would overnight be able to plot those
25 particular points of interest on one or more of the maps which he's provided to the

1 Chamber.

2 Would that be of assistance to the Chamber?

3 MR FAAL: Mr President, we think that that's already been done and the reports
4 provided by the learned expert will attest to that fact. During cross-examination we
5 would be able to show that that exercise has in fact already been done, but we do not
6 think that it is right for the Prosecution to try to fatten a cow in a market day. Work
7 that needed to have been done two years ago cannot be done overnight with this
8 witness, but we think that that is absolutely unnecessary. The areas of interest are
9 known to all: Huruma, Langas, Yamumbi and Kimumu for Greater Eldoret and
10 Kiambaa church.

11 All the others are absolutely unnecessary, and that work has already been done and is
12 very evident in the material already provided. So it would be improper or unfair to
13 burden the expert to look at certain areas overnight, which if the Prosecution needed
14 that information, they should have done so two years ago when the expert was
15 instructed. Thank you, Mr President.

16 If for some reason after cross-examination we have not been able to elicit relevant
17 information, the Judges are at liberty to ask for that information or to task the expert
18 to provide some further information, but at this stage I think it is improper to go as
19 suggested by the Prosecutor.

20 Thank you, Mr President.

21 Another thing is that we were hoping honestly that we would finish with this witness
22 today, and we still hope that that objective is still possible. Thank you.

23 PRESIDING JUDGE EBOE-OSUJI: Mr Kigen-Katwa, do you have anything to add?

24 MR KIGEN-KATWA: Just one observation, your Honours, that if the Prosecution
25 are allowed to improve on their case through the device they have sought, it will be

1 such a process that we will not have had notice of and will not have been prepared to
2 handle, and we would oppose on that ground, your Honours.

3 PRESIDING JUDGE EBOE-OSUJI: But Mr Faal indicates that you've had ample
4 notice of it. He's saying that it isn't necessary to do it.

5 MR KIGEN-KATWA: Yes. To the extent to which it has been done, we have notice.
6 The areas that the Prosecution proposed to introduce are areas that I then wouldn't
7 have had notice of, your Honours.

8 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg, let's proceed in this way: Let's
9 not do that now. If that is an additional exercise you had in mind, other than what
10 you were planning to do, as Mr Faal says, he says that the list of areas indicated or
11 outlined in this witness's testimony he said have already been covered. It may well
12 be that in asking him the questions you may be able to get that anyway short of
13 having him overnight, as you suggested, go to overlaying of maps and that sort of.
14 And if at the end of it the information is not sufficiently clear, we will see if the
15 witness can do that in the course of the cross-examination; if not, then we'll return to
16 that question. But as I was saying during my own -- when I raised this matter before,
17 I thought that that would have been the core brief of this witness as it were, but it
18 seems like you didn't -- you had a different sort of trajectory in mind.
19 We'll proceed.

20 MR STEYNBERG: Your Honours, if I can just clarify one or two things. The core
21 brief of this witness was to provide evidence of the areas covered, the incidents
22 alleged in the DCC, and those are the incidents that are projected on the maps.
23 This suggestion was prompted by a query from the Chamber relating to witnesses
24 before the Court who had spoken to, for instance, predominantly Kikuyu areas that
25 they said were targeted. Those areas do not necessarily coincide exactly with the

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1 points on the map and, thus, it was the query from the Chamber which prompted this
2 exercise or this suggestion.

3 And therefore, you know, it's not that the Prosecution is trying to fatten the cow; it's
4 that the Prosecution is trying to provide the Chamber with information which the
5 Chamber has indicated it might find useful.

6 PRESIDING JUDGE EBOE-OSUJI: Some may say that that question shouldn't even
7 have been instigated by the Chamber, I do not want to comment too much on that, in
8 the sense that in the course of investigation, of course, before the witness himself is
9 briefed, the testimonies of investigation of the Prosecution may have zeroed in on
10 areas that the argument may be made later that: Look, there is a pattern of attacks,
11 and this pattern tends to show victimisation of Kikuyus in particular, and expert
12 witness comes to verify that. That is why he should have been part of the case to
13 begin with. That's the point I'm making. But we will continue.

14 MR STEYNBERG: As the Court pleases.

15 Q. Mr Witness, before the adjournment we were about to commence with the
16 report on the satellite imagery of Kiambaa. And for the record again, the ERN
17 number is 0092-1380 at tab 3 of your binder.

18 And would I be correct in saying that, in general, the modus operandi and analysis
19 you performed in this report is very similar to that performed in the Eldoret report
20 we've just spoken about?

21 A. Yes.

22 Q. In particular, I draw your attention to page 1 of the report at ERN 1382. And I
23 note that the dates of the images you used were 14 December 2005 and 4 January 2008
24 respectively; correct?

25 A. Correct.

1 Q. So the after image as it were is on the same date, 4 January?

2 A. Yes. It's in fact a different section of the previously mentioned image.

3 Q. And, finally, it's the same satellite and the same resolution as the previous
4 image; correct?

5 A. Correct.

6 Q. Turning over then to the next page, ERN 1383, similar to the previous report,
7 does that depict, the red square in that image depict the outer boundary of the area
8 you analysed for the purpose of this report?

9 A. Yes.

10 Q. And, once again, we notice that the rectangle is offset so that north would be
11 towards the left top corner of that quadrant, correct, the red quadrant?

12 MR FAAL: Mr President, if it helps, we have indicated to my learned friend
13 opposite that we do not have any objection to anything contained in the report on the
14 Kiambaa church. So he can put in the report with all the findings contained in it
15 agreed to by the Defence. So that way we could shorten the time. Thank you.

16 PRESIDING JUDGE EBOE-OSUJI: Mr Kigen-Katwa?

17 MR KIGEN-KATWA: That is similarly our position, your Honours.

18 PRESIDING JUDGE EBOE-OSUJI: So to be clear, you do accept the conclusions in
19 the report in relation to Kiambaa church?

20 MR FAAL: To the extent that Kiambaa church was destroyed by burning. Thank
21 you.

22 MR KIGEN-KATWA: Yes, your Honour.

23 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg, that seems to help matters, doesn't
24 it?

25 MR STEYNBERG: It does indeed help matters, your Honours. My experience has

1 unfortunately shown that if expert reports are simply handed in and one moves on,
2 when the time comes to assess those reports, questions often arise which should have
3 been dealt with and could have been dealt with when the expert was there to answer
4 them.

5 I certainly don't intend to go through this report in any great detail, but I would just
6 like to highlight one or two issues. Your Honours will notice I've been leading the
7 witness, and we're progressing very rapidly. If I may be given a little bit of space,
8 we should finish this report within the next ten minutes at the maximum.

9 PRESIDING JUDGE EBOE-OSUJI: All right.

10 MR STEYNBERG: Thank you, your Honours.

11 Q. Moving on swiftly then to figure 2 on ERN 1384, it appears that from that image,
12 if I'm correct, the overlap between the before and after pictures was quite close?

13 A. Correct. The January 2008 image is less than 1 square kilometre larger than the
14 December 2005 image.

15 Q. Turning then to your results which have been admitted on page 1385, is it
16 correct that you were able to determine in this area of examination 123 buildings
17 destroyed, almost all apparently by fire, of which 93 were identified as definitely
18 destroyed and 30 possibly destroyed?

19 A. Correct.

20 Q. And to the next page, 1386, does that again represent by red squares and orange
21 squares respectively plotted on the map the locations of the destroyed and possibly
22 destroyed buildings?

23 A. Yes, that's correct.

24 Q. Now, the Kiambaa church is annotated there by a blue dot in the -- towards the
25 top left-hand corner, and if one turns over to page 1387 - ERN 1387 - is it correct that

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1 that represents before and after images of the burnt church at Kiambaa?

2 A. It represents a before and after of a burned building, but having never been
3 there I don't know what the building is, but those were the co-ordinates I was given
4 for Kiambaa church.

5 Q. I see. So the Kiambaa annotation was information provided to you by the
6 OTP?

7 A. Correct.

8 Q. The following figure, figure 5, can you tell the Court what is the significance of
9 that figure that you represented in your report?

10 A. This was -- figure 5 was provided as an additional example of definitely
11 destroyed structures in the area southeast of Kiambaa church.

12 Q. Thank you. And then finally your conclusions are represented on page 1389
13 and I don't think it's necessary to re-read those again; correct?

14 A. Correct.

15 MR STEYNBERG: Thank you, Mr Bromley.

16 Your Honours, I'll move on then from this report.

17 Q. If I can ask you to turn to tab number 4, Mr Bromley, can you identify this as
18 your third report, the "Analysis of Fire Detection in Eldoret, Kenya, Relating to
19 Post-Election Violence in 2008"?

20 PRESIDING JUDGE EBOE-OSUJI: Have we introduced the Kiambaa report?

21 MR STEYNBERG: I'm going to ask him to -- oh, the Kiambaa report. Yes, we did
22 that before the -- before luncheon adjournment, your Honours.

23 PRESIDING JUDGE EBOE-OSUJI: It is already an exhibit?

24 MR STEYNBERG: That's correct, and as soon as the witness has identified this
25 report I propose to repeat that process.

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1 THE WITNESS: Yes, this is my report on fire detections in Eldoret.

2 MR STEYNBERG:

3 Q. And once again you confirm it's your work and the correctness of the report?

4 A. Yes.

5 MR STEYNBERG: Your Honours, once again then I would ask that this be exhibited
6 and this time there are no additional files to go with it. It's just this single report. It
7 has various annexes, but they're all part of the same bundle.

8 PRESIDING JUDGE EBOE-OSUJI: Accepted as the next of the Prosecution exhibits.

9 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-0882 is a
10 public document and will be given the EVD number T -- EVD-T-OTP-00054.

11 MR STEYNBERG: Thank you, your Honours.

12 Q. Now, it may be necessary to explain in a little bit more detail at this stage about
13 MODIS fire detection. I know you've already given a brief introduction, but let's
14 start with what data you managed to obtain relating to the fire detection data for
15 Kenya and in particular for the area of interest?

16 A. Okay. So, as mentioned, the MODIS sensors are flown on two different
17 satellites operated by the US Space Agency, NASA. These are the Terra and Aqua
18 satellites. They overpass the entire world between two and four times per day.
19 They're collecting imagery, or they're collecting data, in multiple reflected light
20 wavelengths. They are also measuring thermal emissions, so thermal heat data from
21 the surface of the earth. As that data is downloaded to NASA, a series of automated
22 processes are run on that data which are examining each pixel acquired by the
23 satellite and essentially assessing it for whether it is a possible occurrence of a fire, or
24 not a fire. It simply does that by -- it does that by essentially taking two different
25 thermal wavelengths and comparing them -- comparing that pixel to surrounding

1 pixels. And areas where they -- where the computer detects a great increase in the
2 thermal temperature of a particular pixel, compared to other pixels around it, that is
3 denoted as a fire pixel. All this data is then stored on a NASA computer system,
4 which is publicly accessible. Then you -- I simply access that data, download it and
5 analyse it for this particular area or any other area.

6 Q. And for -- well, if I could perhaps lead this on -- you on this. Is it correct that
7 you downloaded this data from the whole period of November 2000 through to
8 September 2012 for the whole of Kenya?

9 A. Correct.

10 Q. And what is this sort of data useful for? Is it more useful for detecting
11 individual events, or detecting patterns of fire or thermal anomaly events?

12 A. At this point it has a variety of uses. It is used by national fire-fighting
13 agencies, for example, to monitor remote areas for outbreaks of fire. It's also used by
14 the scientific research community, for example, for understanding carbon emissions
15 resulting from burning and a great many other applications in-between. So you can
16 use it both to assess an individual fire event and also to assess kind of the long-term
17 fire record.

18 Q. Is this tool able to distinguish between the type of fire and the causes of the fire,
19 or not?

20 A. No, it's simple a binary value of is it a fire or is it not a fire.

21 PRESIDING JUDGE EBOE-OSUJI: Mr Steynberg, where are we going with this line
22 of questions?

23 MR STEYNBERG: Your Honour, what I'm going to show is -- ask the witness to
24 testify on now is a pattern of fire detections over the relevant time. The only reason
25 I'm going through this is that the value or the interpretation of that, those results, are

1 coloured by the sort of things that this data can and cannot show the Court, but
2 perhaps this is a little bit more detail than is required. Let me move on and, if there
3 are any questions the Court have, then perhaps -- we can perhaps clear that up later.
4 PRESIDING JUDGE EBOE-OSUJI: It's not about clearing up any questions the Court
5 has. It's about making sure that there's value to it. Definitely it's an interesting
6 science and description of it, but we want to keep it relevant for our needs.
7 We began this morning with the indication that there has been an admission as to
8 arson having been committed. We don't want the witness to testify that there were
9 burnings and those burnings amounted to arson. That's a waste of our time. But if
10 we can move away from that, if that is what you were planning to do with this line of
11 questions, it may be a waste of time in light of the admissions. But if you were
12 planning to do something else that has other forensic value, then you can let me know
13 now.

14 MR STEYNBERG: Yes, your Honour, I'll let you know right now. The previous
15 analysis done on the high resolution photographs has established what has already
16 partially been admitted, that a great number of houses were burnt in the relevant
17 areas.

18 The question which remains unanswered at this stage is when those houses were
19 burnt. We have not had an admission that the houses -- that houses were burnt in
20 the relevant areas during the time frame covered by the charges, and the Chamber is
21 aware that that is an issue which has been litigated in the past and I imagine it is a
22 matter which the Defence will seek to make something of at the end of this case when
23 we reach the end. So this witness will be able to provide certain data which will
24 assist the Court, in my submission, to attach a chronological or a temporal stamp to
25 the destruction which he has already testified about.

1 MR FAAL: Mr President, we have agreed certain facts and if that is to have any
2 meaning, if it is to bear any dividends, at least it should shorten the process that we
3 are going through. If we have to go back over all the issues that have been agreed,
4 then there would be no meaning to this. We have agreed the report. That is
5 something I had indicated earlier; that we have agreed that the reports and all the
6 conclusions can go in. So I think it would suffice if learned counsel can just read out
7 the conclusion, put it to the witness and once he endorses it that should be fine, but
8 that is a way that could help shorten this process.

9 PRESIDING JUDGE EBOE-OSUJI: All right. Let's narrow down what's in litigation
10 now as to the arson; the period of arson.

11 Mr Steynberg, you're saying that there has been admissions, but this witness is going
12 to prove the period during which the arsons were committed - is that what you're
13 saying - and what would be those periods, so that we can narrow it down and get the
14 Defence to see whether they're contesting it?

15 MR STEYNBERG: Your Honour, proving the period might be putting a bit too high,
16 but what he is going to do - and if I can maybe just turn the Court's attention directly
17 to page 5 of the report at 0888 - is he will demonstrate that on 1 January there was a
18 significant spike in the number of fires detected in the Uasin Gishu area, which would
19 correspond then with the Prosecution's period of charging and also with his analysis
20 of the burnt structures that he's previously testified to.

21 We're taking into account my learned friend's admissions. I can simply take the
22 witness to that, confirm that issue and then we can be done with this report.

23 PRESIDING JUDGE EBOE-OSUJI: All right.

24 Mr Faal, are you disputing that on 1 January there was a significant spike to the arson
25 incident?

1 MR FAAL: Mr President, we do not dispute the finding in the report that on 1
2 January there was a significant spike on fires detected. That is the extent of our
3 admission. The witness cannot testify as to the cause of those fires, because the
4 witness as he said was never present there. Thank you.

5 PRESIDING JUDGE EBOE-OSUJI: Mr Kigen-Katwa?

6 MR KIGEN-KATWA: That is exactly the same position we have, your Honours.

7 PRESIDING JUDGE EBOE-OSUJI: Now with that admission done, as indicated by
8 counsel, Mr Steynberg can you proceed.

9 MR STEYNBERG: Thank you. It will be very brief then.

10 Q. I just would like to differentiate between figure 3, which is entitled "Fire
11 Detection Dynamics within Uasin Gishu District." Is it correct that that indicates the
12 MODIS detection data for the political district of Uasin Gishu that you analysed? Is
13 that correct?

14 A. Correct.

15 Q. And the corresponding table on figure 5 at ERN 0890, if you just turn the page,
16 you'll see a similar document, that is the same data but for a slightly different area
17 that's an area of 30 kilometre radius of Eldoret, Kenya, also showing a spike of fire
18 detection on 1 January.

19 A. Correct, with Eldoret, Kenya, being an approximate centre point at the centre of
20 the town.

21 Q. All right. And your conclusion then on the next page is that the analysis
22 indicates the highest ever level of fire detections in Uasin Gishu district and Eldoret
23 area on 1 January 2008 coinciding with the reports of violence?

24 A. Correct.

25 MR STEYNBERG: Thank you, your Honours. We can move on from that report.

1 The final report, and this will be very brief --

2 PRESIDING JUDGE EBOE-OSUJI: Have you tendered it?

3 MR STEYNBERG: I believe we have before we started, yes.

4 PRESIDING JUDGE EBOE-OSUJI: (Microphone not activated)

5 MR STEYNBERG: The final report, your Honours, is at tab 5 entitled Analysis of
6 Potential Travel times in Kenya. Do you confirm again this is your work and the
7 accuracy of the contents?

8 A. Yes.

9 Q. Before we exhibit it, if I could just bring one possible correction to your
10 attention, if you could look at the table on page 3 of the report, which is at 0920, it's
11 entitled Table 1 Straight Line Distances and Helicopters Travel Between ICC
12 Locations of Interest. Do you have that?

13 A. Yes.

14 Q. I draw your attention to the seventh entry, location number 2, which currently
15 reads "Kisumu". Do you have that?

16 A. Yes.

17 Q. If you look at the previous entry which gives a distance between Sagoi House
18 and Kisumu the distance is indicated as 81 kilometres. The entry to which I've
19 drawn your attention indicates the same two points, but gives the distance of 13
20 kilometres. It seems that one of those locations is incorrect?

21 A. Yes.

22 Q. With reference to the table on the following page, which provides the same list
23 of locations, can you tell the Court what the correction should be?

24 A. The correction should be Kipkaren.

25 Q. Thank you. So for clarity of the record on 0920 the seventh entry, location

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1 number 2, instead of "Kisumu" it should read "Kipkaren"; correct?

2 A. Correct.

3 PRESIDING JUDGE EBOE-OSUJI: So there will be then two Kipkarens; is that it?

4 MR STEYNBERG: That is correct, your Honour. There will be two Kipkarens in a
5 row as location 2, but location 1 is different, so it measures distances from
6 different -- different points.

7 Subject to that correction then, your Honours, may I ask that this exhibit, which is
8 ERN-KEN-OTP-0092-0917 be admitted and exhibited.

9 PRESIDING JUDGE EBOE-OSUJI: Document admitted as the next of the
10 Prosecution exhibit.

11 THE COURT OFFICER: (Interpretation) Public document KEN-OTP-0092-0917
12 shall be assigned the following number: EVD-T-OTP-00055.

13 PRESIDING JUDGE EBOE-OSUJI: Thank you.

14 MR STEYNBERG: Thank you, your Honours.

15 Q. Now, this document largely speaks for itself but is it correct, Mr Bromley, you
16 were asked to provide approximate distances and travel times from various specified
17 locations both by air and by road?

18 A. Yes, that is correct.

19 PRESIDING JUDGE EBOE-OSUJI: "By air" you mean helicopter?

20 MR STEYNBERG: Your Honours, yes, I was getting to that.

21 Q. And as far as the air travel is concerned, you've provided at table 1 distances by
22 helicopter based on two types of helicopter, one you've designated as fast and the
23 other designated as slow; correct?

24 A. Correct.

25 Q. Similarly for travel by road, you've provided again distances by road and travel

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1 times by a car travelling at a certain fast speed and a car travelling at a slower speed
2 which you have detailed in your report; correct?

3 A. Correct.

4 Q. And this is all subject to the various caveats which you have set out fully in
5 your report; is that right?

6 A. Yes.

7 Q. That is all I intend to lead at this stage on that report, your Honours. There are
8 just two further documents I need to deal with briefly, that appear at tabs 8 and 9, and
9 these are documents that do not have accompanying reports, so I'm going to ask the
10 witness just to explain what they are and what their significance is.

11 Q. Turning to tab 8, I refer to document KEN-OTP-0092-1514, can you tell the
12 Court please what is represented by these diagrams?

13 A. These were maps produced by my current employer, my current organisation
14 UNOSAT, but at the time I was -- I was not working there so these were produced by
15 colleagues who were there previously. They are a graphical representation of the
16 same MODIS fire detection data which is mentioned in -- in the report we'd
17 previously discussed.

18 Q. And the modus operandi of putting this sort of report together would that be
19 the same as the -- the report that you put together?

20 A. Yes, basically, indicating large increases in fire detections within a certain time
21 frame.

22 Q. And, again, all the caveats relating to gaps and cloud cover would equally apply;
23 is that correct?

24 A. Yes.

25 Q. What we see in this report is -- chronologically it seems to start in the bottom

1 right-hand corner and progress up to the top left-hand corner, so reverse chronology,
2 as it were, again we see a bloom of -- or, a significant increase of fires in the greater
3 Uasin Gishu and surrounding areas on 1 January. Would that be a fair summary of
4 these maps?

5 A. Yes, the only thing I should add or point out is NASA has gone through several
6 iterations of their processing algorithm for this. And which version was in use in
7 January 2008 I can't say. The results should be nearly identical though.

8 Q. Unless there are any objections, your Honours, I'd propose to exhibit this
9 document as well.

10 MR FAAL: Mr President, if it helps we would object to admission of this report
11 because the witness does not have any firsthand knowledge of it. He wasn't present
12 when it was prepared, he just happened to work for the same organisation, saw the
13 report, deemed it relevant and, therefore, submitted it. We do not think that that is
14 sufficient really for the admission of this document. The reports that he has worked
15 on, has prepared and has seen the underlying data we have no objection to that, but
16 on this occasion it doesn't appear that he has seen the underlying data or examined
17 the underlying data in order to determine whether, in fact, what is represented in this
18 document is in fact accurate. We have no knowledge of that and, therefore, in all
19 fairness, it ought not to be admitted. Thank you.

20 MR KIGEN-KATWA: Mr President, additionally to the arguments made in
21 objection to its production is the admission by the witness himself that he doesn't
22 know the formula that was used and that the formula has since changed.

23 MR STEYNBERG: May I just inquire before your Honours renders a decision
24 whether or not the -- the witness has himself taken any steps to verify this data? It
25 might be --

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1 PRESIDING JUDGE EBOE-OSUJI: I was coming to that. So why don't you see
2 what is the -- the -- essentially the Defence's objection is lack of foundation, as it were.
3 Are you able to lay the foundation for why this witness should be the one tendering
4 this document?

5 MR STEYNBERG: Let me try to do that, your Honours, otherwise we can possibly
6 deal with it by -- by way of bar table at a later stage.

7 Q. Mr Bromley, you've told us that you weren't employed at the time when this
8 data was collected. Have you done any work to verify the -- the results and
9 correctness of these documents?

10 A. Due to time limitations, I didn't dig up the -- I didn't recover the old map
11 production files and compare them with my files with the data that I had downloaded.
12 At a glance, they're certainly almost identical as near -- as near as I could tell. They
13 are in our -- in our -- in my organisation's archives. They are available on our
14 website. They've never been disputed by anyone who's reviewed them, so I did not
15 evaluate them in detail but I didn't see anything wrong with them.

16 PRESIDING JUDGE EBOE-OSUJI: When you say that they are nearly identical,
17 identical to what?

18 THE WITNESS: So the -- the data that I download from NASA is indicating the
19 location of fire detections just as a latitude and longitude, it's a point. So the fire
20 icons on the map we just looked at is also a -- a point indicating fire, and the two
21 points would be almost identical based on the short look that I took at them.

22 PRESIDING JUDGE EBOE-OSUJI: You're saying that what -- the information
23 apparent from these material are identical to your own analysis; is that what you're
24 saying?

25 THE WITNESS: Yes. The data sources are the same with the caveat being that I'm

1 not entirely sure what version of the algorithm NASA was using at that time, but
2 any -- any differences in the results would be extremely small and may not even affect
3 this particular area.

4 MR FAAL: Mr President, we wish to observe that this report covers a much
5 greater -- much greater geographical location. This covers western and almost all of
6 Rift Valley. The reports that the learned expert dealt with pertain mainly to Eldoret,
7 so, therefore, the information that is captured in this report is a whole lot broader
8 than what the expert was expected to look at and, as such, it would be difficult for
9 anyone to accept at this stage that what is contained, what is represented in this
10 report is identical with what he has looked at because we have no information that he
11 has looked at --

12 PRESIDING JUDGE EBOE-OSUJI: Isn't this something you can explore in
13 cross-examination?

14 MR FAAL: Well, we think it should be dealt with now because it deals with the
15 admissibility of this particular document because this is a whole lot broader than
16 what the expert looked at and, as such, the information that he was seized with could
17 not have provided sufficient information for him to assess whether what is contained
18 in this report is in fact accurate simply because he received less information. We do
19 not know that -- at least we've not been provided with any material from him
20 pertaining to say Nyanza or in western Kenya, and this report covers all those areas.
21 So all we're saying is the information he has may very well be almost identical with
22 what is contained in here with regards to Eldoret, but certainly it does not extend to
23 Nyanza or western areas which he did not examine. Thank you.

24 MR STEYNBERG: Your Honours, if I can just point out that the witness did say that
25 he'd had received MODIS data for the whole of Kenya, not just for the Uasin Gishu

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1 district, although that was the only part that was the subject of his actual report.

2 (Trial Chamber confers)

3 PRESIDING JUDGE EBOE-OSUJI: The witness does say that there is an extent to
4 which the document now on the screen provides identical information with the one
5 he -- with his own analysis. To that extent we will admit the document, and the rest
6 we will deal with in --

7 MR FAAL: Much obliged.

8 PRESIDING JUDGE EBOE-OSUJI: Yes, in the process of arguments.

9 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0092-1514, a public
10 document, shall be assigned the following number: EVD-T-OTP-00056.

11 MR STEYNBERG: Thank you, your Honours.

12 Q. On the same basis then, I would like to ask the witness to turn to tab 9 and look
13 at document KEN-OTP-0092-1515, which is a similar but slightly more detailed map
14 of what appears to be the same area, MODIS fire detection of the same area. Can
15 you confirm that, Mr Witness?

16 A. Yes.

17 Q. And since this is dated 3 January, do I also assume that you were not employed
18 at that time that it was produced?

19 A. I was not employed at UNOSAT.

20 Q. I beg your pardon. That's what I meant.

21 Finally, as with the last image, are you able to give the Chamber any indication of any
22 verification or otherwise reliability of this data?

23 A. My previous comments would be the same for this one.

24 PRESIDING JUDGE EBOE-OSUJI: How do you correlate what we're looking at now
25 with the previous document we saw with four slides as it were represented?

1 THE WITNESS: Your Honour, I think what the map maker did at the time, instead
2 of splitting the data into four time periods, they combined it all into one map. So
3 they showed multiple days within a single map, but it's the same data.

4 MR FAAL: Mr President, we raise similar objections, because you could see that it's
5 getting murkier, because there is a bit of guesswork as to how this map was produced
6 simply because the witness was not present, and it's unfair to put him in a position
7 where he would have to guess as to how the data was put together.

8 We think that this piece of evidence should be rejected considering also that it came
9 from a different organisation, UNICEF, it makes is even more remote for this
10 particular witness. For that reason it should be rejected.

11 MR STEYNBERG: I have a correction to my learned friend. Both of those
12 documents come from UNOSAT, which is the organisation that the witness works for.

13 PRESIDING JUDGE EBOE-OSUJI: UNOSAT.

14 MR STEYNBERG: And with respect, your Honours, there's no guesswork required,
15 because what is on these documents is stated quite clearly in the title. The first
16 document, which is effectively the later of the two documents, dated 4 January, is
17 entitled "Active Fire Locations Detected with MODIS (27 December 2007 to 3 January
18 2008)" And the second one, "Active Fire Locations Detected by MODIS (27
19 December to 2 January 2008)"

20 So it's fairly clear that the one is split into four periods, or the other one is one picture
21 depicting the entire period. I don't think there's any speculation required.

22 MR FAAL: But, Mr President, we think that that is not enough. If the OTP really
23 wanted this witness to give an expert opinion as to what is contained in these
24 documents they should have briefed him accordingly and get him to look at the
25 underlying data, but he has not looked at the underlying data.

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1 The only thing we know is it came from particular organisations. We're not
2 disputing the credibility of those organisations or the fact that they would come up
3 with maps with wrong data.

4 But what we are saying is the indicia for reliability, it's not there. This witness has
5 no connection with these particular documents. Putting these documents through
6 the witness would be stretching the rules. He has no connection with them. It is
7 like getting a document prepared by another organisation and say, "Oh, take a look at
8 this. It's similar to what you have looked at and therefore it can be admitted."

9 I mean, under -- the OTP did indicate that the witness looked at all information from
10 Kenya. But that information is not before us. It's not before the Court. What is
11 before the Court is information about Eldoret.

12 PRESIDING JUDGE EBOE-OSUJI: Mr --

13 MR FAAL: And this is a whole --

14 PRESIDING JUDGE EBOE-OSUJI: Mr Faal, Mr Faal --

15 MR FAAL: Yes, Mr President.

16 PRESIDING JUDGE EBOE-OSUJI: You know the rules about business records.

17 Does the keeper of the records have to be the person who actually created it?

18 MR FAAL: For purposes of admissibility, Mr President --

19 PRESIDING JUDGE EBOE-OSUJI: It's different -- in other words, I'm saying would
20 this be different from what one may call in other courts a business record?

21 MR FAAL: Yes, in this particular instance, because this is opinion evidence. This is
22 opinion of another person. This witness is here to offer his own opinion. He has
23 not had privy to the underlying data. It's difficult for him to sit here and say, "Well,
24 this is accurate. This is correct. You can rely on it" simply because he has not had
25 access to the underlying data. Thank you.

1 MR KIGEN-KATWA: Mr President, I would make reference to what the witness
2 said at page 96, line 17 to 20, and he disowns this report in these words, "Yes. The
3 only thing I should add or point out is that NASA has gone through several iterations
4 for processing algorithms and which version was in use in January 2008, I can't say.
5 The results should be nearly identical though."

6 Mr President, your Honours, we emphasis on his use of the words "various versions"
7 and also on his use of the words "nearly identical."

8 PRESIDING JUDGE EBOE-OSUJI: What does this -- Mr Kigen-Katwa, what does
9 this document show that is troubling you so?

10 MR KIGEN-KATWA: Me in terms of Mr Sang, or me --

11 PRESIDING JUDGE EBOE-OSUJI: The Defence.

12 MR KIGEN-KATWA: Mr President, our concern is that we expect that this witness
13 can come and justify the opinions he has arrived at it in his reports, which is the basis
14 of his having been called.

15 PRESIDING JUDGE EBOE-OSUJI: What is that opinion that is troubling you?

16 That's what I'm getting at. You see, you've been -- you've made certain admissions.
17 Does this document simply not show there were burnings in the area? Isn't that
18 what it shows?

19 MR KIGEN-KATWA: Mr President --

20 PRESIDING JUDGE EBOE-OSUJI: And possibly if we might even pinpoint it more
21 accurately, if one can even go that far, the best one can say, there was a spike on 1
22 January 2008, if we're able to even interpret that out of this; but even if we did that,
23 that is what will happen, isn't it? Isn't that a conclusion?

24 MR KIGEN-KATWA: Mr President, the Prosecution have taken the witness through
25 the process, their data, the raw data used to arrive at -- (overlapping speakers)

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1 PRESIDING JUDGE EBOE-OSUJI: No, no, no, no. So we don't talk all over the
2 place and then still end up in the same place, what I'm saying is if this document
3 already contains or, rather, shows no more than what you have admitted, then why
4 are we objecting? Suppose if it shows something else that is in dispute, then we
5 have a real reason to object, isn't it?

6 MR KIGEN-KATWA: We must come from the position, Mr President, that these two
7 documents show something different from what -- or a particular, some particular
8 details which the Prosecution have not been able to produce through the witness in
9 the reports he already made himself, and that's why they want to introduce them.
10 Mr President, if these reports show exactly the same thing that he had done, then
11 there would be no reason for the Prosecution to produce them.

12 (Trial Chamber confers)

13 PRESIDING JUDGE EBOE-OSUJI: The document will be admitted. Again, we
14 know, we've noted the limits of this witness's testimony as to the identity between
15 what his own analysis shows and what this document shows. We know that.

16 MR FAAL: Much obliged.

17 MR STEYNBERG: Then that leaves one final issue, your Honours, and that relates to
18 the -- oh.

19 THE COURT OFFICER: (Interpretation) Thank you, Mr Steynberg.

20 Document KEN-OTP-0092-1515, public document, will have the EVD number
21 T-OTP-00057.

22 MR STEYNBERG: Thank you, your Honours. The final issue I referred to was the
23 CD which forms part of a bundle we've handed up. Now, this CD contains files,
24 PDF files of all of the documents that have previously been admitted, but they are in a
25 format which is of higher quality than that which is contained in Ringtail.

1 My request, your Honours, would be to hand this in as a real exhibit, and the parties,
2 if they wish to at a later stage examine more closely any of the areas contained in
3 these files, would be able to do so far more usefully on those, with those documents.
4 And I do this bearing in mind that if one day this issue might end up on appeal, the
5 Judges on appeal might not have been in the position to have heard these
6 explanations and might themselves want to examine the evidence in more detail as
7 indeed your Honours might wish to do several months down the line.

8 So I ask that the CD KEN-OTP-0130-0038 be admitted as a real exhibit.

9 PRESIDING JUDGE EBOE-OSUJI: Have you given copies to the Defence?

10 MR STEYNBERG: Indeed, your Honours, all parties and the Bench have copies.

11 MR FAAL: We have received a copy. We wonder though whether this would be a
12 real exhibit or just a working document for us. The exhibits have already been put in.
13 But we leave it in your Honours' hands.

14 PRESIDING JUDGE EBOE-OSUJI: We will admit the CD-ROM then.

15 Mr Kigen-Katwa, I didn't ask you.

16 MR KIGEN-KATWA: Mr President would be surprised, I wasn't going to oppose it.

17 PRESIDING JUDGE EBOE-OSUJI: You were not. Good.

18 MR STEYNBERG: Your Honours, in case my learned friend is having any difficulty,
19 I'm told that it's not uploaded in eCourt yet. So if that presents a problem, then it
20 may be necessary to do this at a later stage. We can just note it for now and proceed
21 with it later.

22 PRESIDING JUDGE EBOE-OSUJI: You're using the term "learned friends" all over
23 the place. So it's traditionally channeled amongst -- between counsel. Were you
24 referring to counsel, or to the court officers, or Registry?

25 MR STEYNBERG: Sorry. I was referring to the Bench, your Honours.

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1 PRESIDING JUDGE EBOE-OSUJI: All right.

2 MR STEYNBERG: But pointing out that, if there is any problem, it can be admitted
3 later. Maybe the court officer can clarify?

4 PRESIDING JUDGE EBOE-OSUJI: Yes, the court officer will give an evidence
5 reference number as the document has been admitted on to the record as an exhibit.

6 MR FAAL: Mr President, just for clarity, much as we have been served with this
7 CD-ROM, we really have not seen it. We don't know what is contained in it. I just
8 leave it at that.

9 PRESIDING JUDGE EBOE-OSUJI: Noted. It's good for you to note that now in
10 case it needs to be addressed later.

11 MR FAAL: Indeed. Thank you, Mr President.

12 PRESIDING JUDGE EBOE-OSUJI: Mr Kigen-Katwa, the same with you?

13 MR KIGEN-KATWA: Yes, Mr President, but I took Mr Steynberg's word that it
14 relates to the material that they already disclosed to us.

15 PRESIDING JUDGE EBOE-OSUJI: Sometimes we must do that as lawyers amongst
16 ourselves. Yes.

17 THE COURT OFFICER: (Interpretation) Document KEN-OTP-0130-0038 will have
18 the EVD number EVD-T-OTP-00058.

19 MR STEYNBERG: Thank you, your Honours, and that brings to the conclusion my
20 evidence in-chief. I thank the witness for his patience.

21 PRESIDING JUDGE EBOE-OSUJI: Thank you, Mr Steynberg.

22 Mr Faal? Mr Kigen-Katwa? Mr Faal, are you going first?

23 MR FAAL: Yes, Mr President.

24 PRESIDING JUDGE EBOE-OSUJI: And how long do you think you will be with the
25 witness, noting -- noting the extent of the testimony?

1 MR FAAL: I was thinking that I would take no more than an hour, but the use of the
2 documents may make it a little difficult. So I may just be a little over an hour, or a
3 little less.

4 PRESIDING JUDGE EBOE-OSUJI: All right. Please proceed.

5 MR FAAL: Thank you.

6 QUESTIONED BY MR FAAL:

7 Q. Good afternoon, Mr Bromley. It's nice seeing you again. You will recall that
8 we had met in my previous life as team leader for Darfur investigations and senior
9 trial lawyer for Darfur. Do you remember that?

10 A. Yes. It was long ago, but I remember.

11 Q. And during those periods we discussed the possibility of using satellite imagery
12 and remote sensing for the Darfur investigations. Do you recall that?

13 A. Yes.

14 Q. And you would therefore agree with me that the Kenya cases are not your first
15 interaction with the Office of the Prosecutor; is that right?

16 A. Correct. Well, yes, that's correct.

17 Q. And your interaction with the Office of the Prosecutor dates as far back as 2009
18 or thereabouts, possibly earlier?

19 A. Yes. I mean, at the time I was never requested to do anything by the Office of
20 the Prosecutor. We were essentially volunteering information from the organisation
21 I worked for and another NGO.

22 Q. With regards to your instructions on this case, do you recall when you were first
23 instructed?

24 A. On this particular case, it -- essentially it was a -- my organisation, UNOSAT,
25 was first instructed in late 2011 as far as I know. However, we had a staff change

1 and a communication problem and so the issue did not come to me until I want to say
2 September/October of 2012, but that's when the original emails were basically
3 forwarded to me.

4 Q. And your instructions included using remote sensing data to detect fires, did it
5 not?

6 A. Yeah, I think the original emails made reference to what UNOSAT had
7 produced during the post-election period and were making reference to that and
8 asking for more information. The -- what prob -- what I think happened was I then
9 volunteered the results of a fire analysis system that I had created while at UNOSAT,
10 but dating all the way back to 2008.

11 Q. Okay. And in addition to remote sensing data to detect fires, you also
12 analysed satellite imagery for the purposes of providing evidence of burning or
13 destruction of property?

14 A. Correct.

15 Q. You also looked into information pertaining to travel time from particular or
16 identified locations; is that right?

17 A. Correct.

18 Q. And your instructions also included looking at imagery for the purposes of
19 detecting large gatherings. Do you remember that?

20 A. Yes.

21 Q. Were you provided with information on which particular gatherings you were
22 to look for?

23 A. In the letter of instruction, there were specific locations under the heading
24 "Large ..." -- relating to crowds or large gatherings.

25 Q. Did you take steps to obtain imagery for large gatherings for the dates and

1 places mentioned in the letter of instruction?

2 A. As detailed I think in Appendix A of several of the reports, most -- all of those
3 locations, as far as I remember, did not have relevant imagery that had been acquired
4 at the time and so therefore there was nothing for me to obtain.

5 Q. Your report - one of your reports - deals with using MODIS in order to detect
6 fires. Do you remember that?

7 A. Yes.

8 Q. And you would agree that there are problems with this method of using MODIS
9 in order to discover fires; is that right?

10 A. As I said before, if a fire is not detected it does mean it did not occur. It means
11 something interfered, or the satellite wasn't overhead. But if a fire is detected, it's
12 reasonably certain that a fire did occur.

13 Q. But you would agree with me that the results that are produced are sometimes
14 ambiguous; is that right?

15 A. Yes. You're -- you're detecting a fire. You don't know the source of the fire,
16 or many other details about the fire, and if the satellite is not overhead, or if there's
17 cloud cover when the fire is burning, it would not be detected. So that's what we call
18 normal technical limitations.

19 Q. And in page 3 of your report contained in tab 4 of the OTP bundle, that is
20 KEN-OTP-0092-0884, you stated as follows, "Analysis of Fire Detections in Eldoret,
21 Kenya." That is the name of the report. You said that, "Review of the location of
22 each fire detection using imagery from Google Earth indicates that the majority of
23 such detections are in heavily agricultural woodland areas leading to some ambiguity
24 as to the likely source of the detection." Do you remember saying that in your
25 report?

1 A. Yes.

2 Q. And would you say that that finding is correct?

3 A. Basically the imagery on Google Earth may or may not have extended back to
4 the time period in question, so the imagery that was available on Google Earth at the
5 time that I looked at it was indicating agricultural areas or woodland areas.

6 Q. And therefore the results would be ambiguous; is that right?

7 A. Without really further investigating the conditions of each fire detection at the
8 time it was detected and the terrain as it existed at that time, which I simply didn't
9 have time -- the time for, yeah, the -- based on just a quick review on Google Earth
10 then that statement's accurate.

11 Q. So, in fact, you are suggesting that a more detailed assessment of each of these
12 locations was necessary for you to be able to come up with conclusive findings; is that
13 right?

14 A. Yeah, I mean more time is always good.

15 Q. Were you in fact given this time to do it?

16 A. No, there was a dead-line for all this work. It was a considerable amount of
17 work and we had other -- we had other projects and dead-lines at the time. I gave it
18 as much attention as I could at the time.

19 Q. Such analysis would have been helpful to the Judges in arriving at their findings
20 at the end of the day as to the existence of some of these fires and their likely cause,
21 would it not?

22 A. Possibly.

23 Q. In a sense we are saying that some helpful work that needed to have been done
24 to better the understanding of the Judges of what actually happened was in fact not
25 done; is that right?

1 A. It's impossible to say how helpful it would have been. It depends on what
2 imagery would have been available. It would essentially constitute an entire
3 additional -- or an additional analysis, but without starting the analysis you can't say
4 what might be possible.

5 Q. But, Mr Bromley, it was your assessment that a detailed assessment of each
6 location would have been helpful. Is that not the case?

7 A. It certainly would have been helpful to answer the question about whether there
8 was more to be found there, but I can't say what the results of it would have been.

9 Q. Indeed, but this more helpful detailed assessment of each location was not done
10 due to time constraints. That's the case, isn't it?

11 A. Correct.

12 Q. You have used MODIS in order to compare fires detected in Eldoret over a ten
13 year period; is that right?

14 A. Yes.

15 Q. And according to your report that is contained in tab 4 of the binder, you have
16 noticed a spike in fires on 1 January 2007; is that right?

17 A. Yes.

18 MR STEYNBERG: 2008, your Honours.

19 THE WITNESS: Yes, 2008.

20 MR FAAL: Excuse me, 2008. My mistake.

21 Q. And that same report also suggests in figure 4 that there was a rather high
22 fire -- high level of fire on 2 January 2006; is that right?

23 A. Correct.

24 Q. And in fact, unless I read the chart wrongly, it appears that there were nine fires
25 on 2 January 2006; is that right?

1 A. Correct.

2 PRESIDING JUDGE EBOE-OSUJI: Where are you looking at?

3 MR FAAL: I'm looking at tab 4. That is figure -- tab 4 of the OTP binder and that is
4 figure --

5 PRESIDING JUDGE EBOE-OSUJI: At what page?

6 MR FAAL: At 889 -- 0889.

7 Q. It's a chart which shows the spikes in fires and you would notice that on 2
8 January 2006 there is a sub-spike in fires; is that right.

9 A. Yes.

10 Q. And do we know what is responsible for that? Do you have any information?

11 A. No.

12 Q. But you would agree with me that this is an aberration compared to what
13 happened in previous years; is that right?

14 A. At that point it was the largest number of fires detected in a single day, yes, so --

15 Q. But you would agree with me that there was no known violent conflict that
16 occurred in Kenya on this date, 2 January 2006?

17 A. I wouldn't know what was happening on that day at that location.

18 Q. I now move on to your observations with regards to satellite imagery using the
19 QuickBird images that you analysed, and you would agree with me that certain
20 factors create uncertainty in the results of the analysis; is that right?

21 A. For the class of possibly destroyed buildings seen in the imagery, yes. And in
22 general the fact that you're looking at a satellite image is of course not the same as
23 standing on the ground right there.

24 Q. And some of these factors include the imagery extent, the quality, the severity of
25 the burning, the building materials used in the structure, vegetation, or construction

1 activities. All this may affect the way in which an imagery is analysed or, in fact, the
2 conclusions that are arrived at; is that right?

3 A. Again, in this case the imagery extent wouldn't be an issue because the extent is
4 what we analysed. We had imagery for that extent. I think what I meant with that
5 statement is sometimes there's simply no imagery available for the extent that you
6 want to look at. The other factors would have influenced, again, the possibly
7 destroyed structures, but less so the -- the definitively destroyed structures.

8 Q. And that is why in your report you identified certain structures as definitely
9 destroyed and with regards to other structures you gave a qualified opinion; is that
10 right?

11 A. Correct.

12 Q. And it seems that from your report it's only the red dots that be reliably be said
13 to have been definitely destroyed is that right?

14 A. As indicated, yes.

15 Q. So your finding with regards to the yellow dots are not conclusive; is that right?

16 A. It's standard in imagery analysis to identify the things you're not -- you're less
17 certain about. It's kind of a normal practice for us to indicate the level of uncertainty.
18 The alternative is to essentially give a false impression of confidence in some areas.
19 So yes wherever possible I will make it clear where the findings are perhaps subject to
20 a little bit more uncertainty.

21 Q. So therefore the finding as to possibly destroyed buildings can only be relied on
22 to the extent of the caveat that it is possibly -- or these are possibly destroyed and not
23 necessarily definitively destroyed and as such should be taken as that?

24 A. I think the best thing to do would be to analyse each of the possibly destroyed
25 locations and multiple analysts might identify which ones they were certain about

1 and then identify which ones they're not. But yeah, based on my review these were
2 possibly destroyed as opposed to definitively destroyed.

3 Q. In fact, you are suggesting that that extra work that would have enabled you to
4 state a more definite conclusion wasn't done?

5 A. It wouldn't really be necessary. That sort of work is rarely done on any
6 situation where you have a deadline.

7 Q. Okay.

8 A. You can't -- yeah.

9 Q. Therefore, with regards to these 190 buildings, you cannot state beyond
10 reasonable doubt that they were in fact destroyed; is that right?

11 A. There were three classes of possibly destroyed. Of those three classes you
12 know, I mean possibly half or more than half I would feel stronger about or less
13 strong but it's again standard in imagery analysis to have this possible class just to err
14 on the side of caution.

15 Q. That is the point, is it not, and that is why you cannot state beyond reasonable
16 doubt that these yellow dots represent structures that were actually destroyed?

17 A. Yes, there is some doubt there.

18 Q. And you have compared two images or two imageries the 14 March 2006 and 4
19 January 2008 images is that right?

20 A. Yes, for the Eldoret analysis, I believe.

21 Q. Yes. And you would agree with me that the structures that appeared burned
22 or destroyed in the 2008 imagery may have been destroyed due to other factors over
23 the post-election violence; is that right?

24 A. That would be a lot of speculation on my part. The -- I was asked to look for
25 indications of burning using the imagery I could get. I can tell you that the vast

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1 majority of the structures were indeed burned as a date close -- relatively close to the
2 date of the image acquisition.

3 Q. I can -- I can accept that. We can accept that. And in your report that is
4 contained in tab 2 you indicated -- this is at page 938, ERN reference is
5 KEN-OTP- 0092-0391 at 938 -- at 939. And you state as follows, "Results of analysis
6 on MODIS fire detections according from 1 to 4 January 2008 in Eldoret area are
7 somewhat ambiguous due to their approximate to agricultural fields. Specifically
8 five die techs are called within the Eldoret analysis area on 1 January 2008 and one
9 detection on January 2008 no fire detections occurred in -- possibly due to the light
10 cloud cover on the area on that day. Of the five areas a-RGD according to the two of
11 them ID areas 20863 and 20864 occur in an area which indicates very recent burning
12 of fields in the satellite image from 4 January 2008. And these detections are
13 possibly due to agricultural burning. The three additional detections on 1 January
14 2008ID numbers 20821, 20862 and 20865 indicate both burned homes and agricultural
15 burning as of 4 January 2008. And thus five detections could be due to either factor."
16 Do you recall that?

17 A. Yes. And that's also expressed in table 2.

18 Q. Now, we want to understand what you have stated in this part of the report,
19 and I recall that my learned friend opposite has taken you through tab 6 of the OTP
20 bundle. It's a document that looks like this and the ERN number is
21 KEN-OTP- 0092-0957. Do you remember that document?

22 A. Yes.

23 Q. Could you please take a look -- could you turn to the OTP binder tab 6 and refer
24 to that document. And you indicated certain ID numbers on the document. Do
25 you -- do you see those ID numbers?

1 A. Yes.

2 Q. Am I correct in saying that the areas shaded pink and given ID numbers
3 represent those areas you refer to as having been burnt due to agricultural activity?

4 A. No. The pink areas are the approximate extent of the pixel of which the
5 MODIS fire detection is the centre. And there's no indication of the source of the
6 burning.

7 Q. I am trying to understand what is contained in the report and let's take for
8 instance ID number 20883 and according to the report -- sorry let's take ID number
9 20863 which is to the bottom left of the document. Is it correct to say that MODIS
10 detected fire in this particular area at a time when there was agricultural burning? Is
11 that right?

12 Q. You can't say whether it was agricultural burning. MODIS detected a fire on
13 January 2008 at the indicated time. Beyond that you would look at the indicated
14 satellite imagery and determine what the cause of burning might be.

15 Q. Let's go back to the segment of the report that I have read out and we try to
16 dissect what is stated there. And --

17 PRESIDING JUDGE EBOE-OSUJI: At tab 2 you mean?

18 MR FAAL: We go back to paragraph -- to the last paragraph of -- of the page ending
19 938 that is page 6 of the report. Tab 2.

20 Q. And let me just remind you of you what you said. You said of the five
21 detections owe occurring on 1 January two of them ID numbers 20863 and 20864
22 occur in an area which indicates very recent burning of fields in the satellite imagery
23 and these detections are possibly due to agricultural burning.

24 A. Correct.

25 Q. And let us identify those two locations. 20863 and 20864. 20863 would be at

1 the bottom left of the document; is that right?

2 A. Yes.

3 Q. And 20864 would be towards the middle, that is between Kimumu and
4 Yamumbi; is that right?

5 A. Correct.

6 Q. And the burning detected on these two places could have been due to
7 agricultural activity?

8 A. Correct.

9 Q. So now let's move on to the other three. 20821, 20862 and 20865. And your
10 finding was that they indicate burned homes and agricultural burning. Burned
11 homes and agricultural burning. Is that right?

12 A. Correct.

13 Q. And your conclusion with regards to those ones is that the fire detected could
14 have been either arson or agricultural burning; is that right?

15 A. Correct.

16 Q. And the places that we are referring to are 0821 that is around Kimumu area
17 ID20821; is that right?

18 A. Correct.

19 Q. And the other area we are talking about is 20862 which is located just to the left
20 bottom left of the report but above 20863.

21 A. Correct.

22 Q. And all these burnings could have been as a result of agricultural burning; is
23 that right?

24 A. Yes.

25 Q. And the other area that you have identified is 20865 which is above Huruma to

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1 the left?

2 A. Yes.

3 Q. That is just a little above the middle to the left?

4 A. Yes.

5 Q. So we are saying that these five detections of fire could have been as a result of
6 agricultural burning.

7 We would now move on and talk about some of these -- some of these areas that you
8 were supposed to examine. You talked about Kiambaa. Do you remember that?

9 A. Yes.

10 Q. Perhaps before that I would take you through this report that has been admitted
11 in evidence. It is KEN-OTP-0092-1514, which is a report of the chronology of fires in
12 Rift Valley Province. I cannot recall which tab it was in the OTP binder.

13 THE COURT OFFICER: (Interpretation) I beg your pardon. The interpreters are
14 reminding you not to rustle the documents so close to the microphone. It is
15 interfering with their work.

16 MR FAAL: Thank you very much for that reminder. I will pay attention to that.

17 Q. This is tab 8 of the OTP binder. It is a chronology of fires in the Rift Valley
18 Province. And if you look at the second -- the box below the first one to the left, the
19 one dated 29 to 30 December 2007, have you seen it?

20 A. Yes.

21 Q. And you would agree with me that this particular map shows fires in several
22 places in the Rift Valley and in the Western Province and in Nyanza and even Central
23 Province, right?

24 A. As far as I can tell, yes.

25 Q. It shows fires in Soy near Kakamega -- near Turbo. Soy you will see it in the

1 middle between Kitale and Eldoret.

2 A. Okay.

3 Q. It also shows fires in Nyanza; is that right? Nyanza Province around Kisumu
4 area?

5 A. Correct.

6 Q. It also shows fires in Equator?

7 A. Correct.

8 Q. It also shows fires in Nakuru?

9 A. Correct.

10 Q. And these fires are supposed to have occurred between 29 and 30 December
11 2007?

12 A. Correct.

13 Q. And if you look at the next one -- sorry, excuse me. And then the one above it,
14 you would see that apart from Eldoret there were also fires in other places like
15 Kaptumu, Muhoroni and other parts of the Rift Valley, is that right, the top one?

16 A. Correct.

17 Q. We would move on to Kiambaa. When you analysed the data with regards to
18 Kiambaa, were you provided with information --

19 PRESIDING JUDGE EBOE-OSUJI: One second. We may have overrun our time.

20 MR FAAL: I am sorry, Mr President. I was under the impression that we were
21 going to stop at 4.30, but --

22 PRESIDING JUDGE EBOE-OSUJI: Where did you get that impression?

23 MR FAAL: I don't want to point to anyone. I was under the mistaken impression.
24 Blame it on me, Mr President. So in that case I crave on your indulgence to finish
25 tomorrow. Thank you.

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- 1 PRESIDING JUDGE EBOE-OSUJI: You will finish tomorrow.
- 2 MR FAAL: Thank you.
- 3 PRESIDING JUDGE EBOE-OSUJI: We will adjourn now for the day.
- 4 And, Witness, we will -- you will rejoin us at 9.30 tomorrow.
- 5 THE WITNESS: Yes, sir.
- 6 PRESIDING JUDGE EBOE-OSUJI: Thank you. Court will rise.
- 7 THE COURT USHER: All rise.
- 8 (The hearing ends in open session at 4.11 p.m.)
- 9 CORRECTION REPORT
- 10 The Court Interpretation and Translation Section has made the following correction
- 11 in the transcript:
- 12 *Page 27 line 20
- 13 "Document KEN-OTP-0092-1402" Is corrected by "Document KEN-OTP-0092-1401"