International Criminal Court

Trial Chamber VI

Situation: Democratic Republic of the Congo

In the case of The Prosecutor v. Bosco Ntaganda - ICC-01/04-02/06

Presiding Judge Robert Fremr, Judge Kuniko Ozaki and Judge Chang-ho Chung

Trial Hearing - Courtroom 3

Friday, 9 December 2016

(The hearing starts in open session at 9.34 a.m.)

THE COURT USHER: [9:34:28] All rise.

The International Criminal Court is now in session.

Please be seated.

PRESIDING JUDGE FREMR: [9:34:56] Good morning, everybody.

Court officer, call the case.

THE COURT OFFICER: [9:35:01] Thank you, Mr President.

The situation in the Democratic Republic of the Congo, in the case the Prosecutor versus Bosco Ntaganda, case reference ICC-01/04-02/06.

We are in open session.

PRESIDING JUDGE FREMR: [9:35:15] Thank you, court officer.

Now appearances, if changed compared to yesterday.

Prosecution.

MS SAMSON: [9:35:21] Good morning, Mr President and your Honours, there is no change in the composition of the Prosecution team today.

PRESIDING JUDGE FREMR: [9:35:27] Thank you, Ms Samson.

Defence, please.

MR BOURGON: [9:35:32] No change, Mr President. Thank you.

PRESIDING JUDGE FREMR: [9:35:37] Legal Representatives.

MS PELLET: [9:35:41] (Interpretation) Thank you, Your Honour. No change for the child soldiers. Thank you.

MR SUPRUN: [9:35:47] (Interpretation) Good morning, your Honour. For the victims of the attacks, there's no change.

PRESIDING JUDGE FREMR: [9:35:53] So I thank Mr Bourgon, Ms Pellet and Mr Suprun.

And before we invite Mr Witness into the courtroom, the Chamber was told that Mr Bourgon would like to address the Chamber.

Mr Bourgon. Mr Bourgon, don't take it wrong, but you almost make it as a regular part of our schedule that always in the morning you address the Chamber. No, no, go ahead.

MR BOURGON: [9:36:19] Thank you, Mr President. I would have liked to do this in writing but at the time that we were working on this, there was no point in doing it in writing, Mr President.

Yesterday we asked for disclosure of some documents and my colleague agreed to disclose some documents concerning the security concerns and the security situation of the witness P-0031.

If we can move into private session, Mr President, please.

PRESIDING JUDGE FREMR: [9:36:50] For sure.

Court officer, let's move into private session.

(Private session at 9.36 a.m.)

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THE COURT OFFICER: [10:02:17] We are in open session, Mr President.

PRESIDING JUDGE FREMR: [10:02:19] Thank you, court officer.

So after deliberation our ruling is that we will solve this issue by change of our schedule, because at the moment we have no knowledge of the documents concerned, that it would also take some time to get acquainted with them, but we believe that the concern of both parties could be satisfied by the change of the schedule in fact proposed by Defence, by Mr Bourgon. So we will continue with testimony of this witness until 1 o'clock for this session and the next one. Then we will break this testimony and during the lunch break we can make preparations which are relatively demanding for testimony of our expert witness, which will start at 2.30 and will continue on Monday morning. And then we will return back to the rest of cross-examination of the current witness. We believe that this solution will avoid

any further dispute and will satisfy the concern of both parties.

So now -- Ms Samson.

MS SAMSON: [10:03:45] Yes, thank you, Mr President. I have a question related to a different witness. I understand that Witness P-773 will be heard during the eighth block rather than during this evidentiary block, and the question that I have is: Would the Chamber be minded to ensure that we have Witness 453 ready to testify immediately following Witness 868? I assume so, but I just would like to be sure.

PRESIDING JUDGE FREMR: [10:04:16] Yes, looking at our schedule, as you are recently aware we had to in fact postpone testimony of Witness 773, even if we are -- we know that it's not ideal solution, but for some logistic reasons and the current problematic situation in the DRC, we had to make this decision, which means that in fact after -- now we change the schedule a bit, so after expert witness, we will finish Witness 0031 and then we'd like to continue with Witness P-0453 without any break. Am I right?

MS SAMSON: [10:05:05] I think there might be one witness in between, Witness 868.

PRESIDING JUDGE FREMR: [10:05:11] 863.

JUDGE CHUNG: [10:05:12] 868.

PRESIDING JUDGE FREMR: [10:05:14] 868. Sorry, sorry, sorry. So after 0031, it should be 868 and then the last one - sorry for this fault - the last one should be 453.

MS SAMSON: [10:05:26] Thank you. I just wanted to ensure that we have the witness's travel arrangements set to come a bit earlier. Thank you.

PRESIDING JUDGE FREMR: [10:05:33] Thank you, Ms Samson.

And now we can invite Mr Witness into the courtroom.

(The witness enters the courtroom)

PRESIDING JUDGE FREMR: [10:06:35] Good morning, Mr Witness.

WITNESS: DRC-OTP-P-0031 (On former oath)

(The witness speaks French)

THE WITNESS: [10:06:43] (Interpretation) Good morning, your Honour.

PRESIDING JUDGE FREMR: [10:06:44] Mr Witness, welcome back. We will continue with the next part of your cross-examination, so it's my duty to remind you first that you are still under oath, which means that you have to speak the truth and nothing but the truth. And the second remainder, it's pretty possible that some questions put to you by Defence will not -- you will not like, if I may say, but still I have to remind you that both parties have to be treated equally. It's part of the game here, that the Defence is trying to find some discrepancies, if any, in the testimony of the witness or the previous statement and testimony of the witness, so please take it as a fact and remain patient. All right?

THE WITNESS: [10:07:37] (Interpretation) Thank you.

PRESIDING JUDGE FREMR: [10:07:38] Now, Mr Bourgon, you have the floor. Do you want to proceed in open or in private session?

MR BOURGON: [10:07:44] Private session, Mr President, please.

PRESIDING JUDGE FREMR: Court officer, let's move into --

MR BOURGON: Actually, Mr President, I think we can remain in open session.

PRESIDING JUDGE FREMR: [10:07:50] All right. So we will remain in open, but please, Mr Bourgon, remain vigilant.

QUESTIONED BY MR BOURGON: [10:08:09] (Continuing) (Interpretation)

Q. [10:08:09] Good morning, Witness.

A. Good morning, Counsel.

Q. [10:08:12] I would like to start by reading to you a paragraph of your statement, DRC-OTP-0162-0002. And I'm going to quote it from paragraph 22, page 0162-0006.

In paragraph 32 you say what follows in your statement.

MR BOURGON: We have to go into private session, Mr President.

PRESIDING JUDGE FREMR: [10:09:08] So we will have to redact the last sentence --

MR BOURGON: [10:09:18] For the future sentence. So far there's been no damage so far, but the next sentence would have been.

PRESIDING JUDGE FREMR: [10:09:23] All right. So we will have to move into private.

MR BOURGON: [10:09:26] Yes, please, Mr President.

PRESIDING JUDGE FREMR: [10:09:27] Now I understand. So let's move into private session.

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THE COURT OFFICER: [11:08:32] We are in open session, Mr President.

PRESIDING JUDGE FREMR: [11:08:34] Thank you, court officer. We take our regular break now and we will reconvene at 11.40.

(Recess taken at 11.08 a.m.)

(Upon resuming in open session at 11.43 a.m.)

THE COURT USHER: [11:43:14] All rise.

Please be seated.

PRESIDING JUDGE FREMR: [11:43:34] We will now continue with the next part of cross-examination of our witness, but since the witness is protected one and there is a risk that his identity could be revealed, we will have to move into private session. Am I right, Mr Bourgon? Yes.

MR BOURGON: [11:44:04] Yes, Mr President.

PRESIDING JUDGE FREMR: [11:44:05] So, court officer, let's move into private session.

(Private session at 11.44 a.m.)

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THE COURT OFFICER: [13:02:40] We are in open session, Mr President.

PRESIDING JUDGE FREMR: [13:02:44] Thank you.

Mr Witness, at this moment I would like to thank you. I can imagine it was not easy for you to answer all those questions. We unfortunately have to break your testimony because of some logistic reasons and we will have to continue either Monday, ideally Monday afternoon or Tuesday morning. So as usual, you know it, I have to instruct you that you must not discuss your testimony with anybody else. Otherwise, I wish you some rest and we will see you on Monday.

And now, court usher, please assist Mr Witness to leave the courtroom.

THE WITNESS: [13:03:31] (Interpretation) Thank you very much.

(The witness stands down)

PRESIDING JUDGE FREMR: [13:03:46] Now brief update on timing. Mr Bourgon, so far according our measuring you have used 4 hours 21 minutes, so you still have 1 hour 39 for Monday.

And as we already announced, now we will break and we will continue at 2.30 with testimony of our expert witness, P-810.

THE COURT OFFICER: [13:04:17] All rise.

(Recess taken at 1.04 p.m.)

(Upon resuming in open session at 14.33 p.m.)

THE COURT USHER: All rise.

Please be seated.

PRESIDING JUDGE FREMR: [14:33:54] Good afternoon, everyone.

Since I see difference in composition, I will ask for update on appearances, starting with Prosecution.

MS LUPING: [14:34:07] Good afternoon, Mr President, your Honours. Appearing this afternoon on behalf of the Prosecution are myself, Dianne Luping, trial lawyer, Ms Nicole Samson, senior trial lawyer, Ms Paola Sacchi, assistant legal officer and Ms Selam Yirgou, case manager.

PRESIDING JUDGE FREMR: [14:34:25] Thank you, Ms Luping.

Defence now please.

MS YAHYA: Good afternoon, Mr President. Mr Bosco Ntaganda is present with us today, as well as Maître Stéphane Bourgon, Sandrine De Sena, Maria-Kim Vasconi and myself Ms Marlene Yahya. Thank you.

PRESIDING JUDGE FREMR: [14:34:42] Thank you, Ms Yahya.
And Legal Representative of Victims to be complete.
MR ABDOU: [14:34:48] Good afternoon, your Honours, Mohamed Abdou for the former child soldiers.
MR SUPRUN: [14:34:57] (Interpretation) For the victims of the attacks, no change, your Honour.
PRESIDING JUDGE FREMR: [14:35:01] Thank you, Mr Abdou. Thank you, Mr Suprun.
As decided this morning, we will now first start the testimony of Mr Bromley - good afternoon, Mr Bromley - who is already with us in the courtroom and will testify without protective measures and can therefore be referred to by name.
Mr Bromley, I would like to welcome you to the courtroom. And before we start your testimony, we will have to address an issue raised by the parties.
And I will now turn to Defence. Defence, we have taken note of your objections to certain of the items the Prosecution intends to use with this witness, conveyed to the Chamber by email on 7 December. Normally we address such objections during the testimony, but as one of the objections concerns Mr Bromley's report, we will deal with this matter now.
The Chamber has taken note of the Prosecution's response provided by way of two emails received yesterday. So now, probably Ms Yahya it will be you, do you have any further submissions on this issue? And please be brief.
MS YAHYA: [14:36:31] Yes, your Honour, the Defence just generally maintains its objection as to the final report. The Defence submits that the Prosecution has not demonstrated good cause for the report only being disclosed on 17 November 2016. Contrary to the Prosecution's assertions, the final report does not consist minor

changes, it is two satellite images as well as GPS coordinates that require investigation and time for the Defence to prepare. The Prosecution acknowledges that these changes are relevant to the charges in this case and, therefore, we maintain or objection towards that; as well as we submit that there was no information provided by the Prosecution as to why the Defence was not informed that there was a second report been prepared since 28 July 2015. The Defence was not informed of this letter of instruction, and that a report was being prepared, and the Defence also submits that there was no good cause explaining a delay of over a year and three months to prepare this updated report.

Concerning the preliminary report that the Defence submitted in its second email yesterday night saying that they wished to confirm that now it should be tendered, the Defence submits that this should not be the case, because the Defence has been preparing with the final report that has been submitted on 17 November 2016 and requires additional time to adjust if there a second report submitted.

There are, as the Prosecution acknowledges, there are defence satellite images, including some infrared versions of the satellite images, that is a topic that has come up in light of the Defence's questions during the meeting with the witness yesterday. We leave this in the hands of your Honours, but this is the Defence's position, we maintain our position.

PRESIDING JUDGE FREMR: [14:38:37] Thank you, Ms Yahya.

Ms Luping, we do have Prosecution's response. Do you want to add anything to the written response?

MS LUPING: [14:38:45] Yes, Mr President, your Honours, briefly. I won't repeat the submissions that the Prosecution has already made by way of email with the explanations as provided, but just simply to provide a supplementary explanation in

response to the Defence counsel's submissions just made as to why the Defence was not notified of the possibility of a new report.

We'd indicate that we had provided Mr Bromley with nine new obtained coordinates as indicated in the email -- sorry, eight, five new, three revised. And the Prosecution was simply wanting to ensure that we had confirmation as to whether there would be even any satellite images available before taking the next step of determining whether a further report would be needed or not.

The new satellite images, the confirmation of the existence of new satellite images was also very recent, and the analysis that was conducted was recent. So it's both the purchase of new satellite images that relate to the imagery, plus the report itself, this happened recently, your Honours.

As I indicate or as we indicated, the Prosecution indicated in the emailed submissions, we believe that there is good cause in this instance in the sense that Mr Bromley as the principal analyst dealing with humanitarian and human rights monitoring for the UN had clearly other urgent work over this last year. There are obviously a number of crisis that have hit the headlines. There won't be any surprises to your Honours. Mr Bromley is here, he can also explain the urgent work that he was required to do to explain to your Honours why there was this delay.

However, and finally, your Honours, in terms of the prejudice to the accused, in our submission there the changes that the final report reflects are not substantive in the sense that the main conclusions remain essentially the same. We have what are simply better quality images in the new report. We have a tidier version, if you like. We have indeed a new analysis relating to one location, that is relating to a place called Ngogo/Ngogo, which is approximately 1 kilometre away from Lipri. Indeed, it does relate to the charges regarding destruction of property in relation to the

accused.

However, in our submission, this one limited addition relating to simply one location does not constitute a significant change or update that should cause any undue prejudice. Indeed the Defence has had this updated report since 17 November, and they have also had the related imagery. So in our submission there are good reasons to ensure both the final report and the preliminary report should be used with this witness and able to be subsequently admitted. Thank you, your Honours.

PRESIDING JUDGE FREMR: [14:41:49] Thank you, Ms Luping.

I will now silently deliberate with my colleagues in the courtroom.

(Trial Chamber confer)

PRESIDING JUDGE FREMR: [14:42:31] So after brief silent deliberation in the courtroom, our ruling is following: We have to say that even earlier the Chamber already deliberated based on your objections, I mean Defence objections and the Prosecution response.

The Chamber agrees with the Defence that both the provision of the courtesy copy and the official disclosure of the updated report, which is the version the Prosecution intends to use and seek admission of, took place at a very late stage.

While the Prosecution has explained that the witness was not in a position to finalise the report sooner, it has not in fact explained why the testimony was scheduled to take place during this evidentiary block when the report was not even available.

The Chamber considers it rather problematic that the main item related to the testimony of an expert witness, namely the expert report is provided to the Defence so close to the testimony and strongly directs the Prosecution to better organise its scheduling in this regard.

However, the Chamber has compared the initial report, which was disclosed to

the Defence on 21 April 2015, and the updated report and has noted that, while additional information is added, the scope of the additions is, according our view, limited.

The witness' methodology and explanation of findings have remained unchanged, and in the view of the Chamber the three weeks the Defence has had since the provision of the courtesy copy of the updated report is sufficient to analyse the updated report.

In assessing any potential prejudice, the Chamber has taken into account that this concerns an expert report, as well as the specific content of the expert report. Noting, inter alia, that no specific persons are mentioned in the report and the type of findings made in the report which are of a technical nature, the Chamber finds that no undue prejudice arise from the late provision of the courtesy copy, so the report may, therefore, be used with the witness.

It concludes our oral ruling and now we can proceed to the testimony.

Mr Bromley, I know that it is not your first time before this Court, but still it is my duty to instruct you at the beginning of your testimony. So I will start with saying that this Chamber has been established to try the case of the Prosecutor against Mr Bosco Ntaganda, and you are called today by the Prosecution to testify as an expert to assist us in our search for the truth.

You will be soon asked questions both by the judges and lawyers in the courtroom, so please listen carefully to those questions. If the question is not clear to you, please feel free to ask for the question to be repeated or rephrased.

We want you to tell the truth about this main issue. We want you to only testify within the sphere of your expertise. You are before us as an expert of satellite imagery and will be testifying in relation to the report you submitted to the

Prosecution.

If you do not know an answer or you feel that it does not fall, such an answer does not fall within your area of professional expertise, please indicate so. Is it clear, Mr Witness?

WITNESS: DRC-OTP-P-0810

THE WITNESS: [14:47:05] Yes, sir.

PRESIDING JUDGE FREMR: [14:47:07] So now can you please read the solemn undertaking to tell the truth you have now in your hands.

THE WITNESS: [14:47:15] (Interpretation) I solemnly declare that I will speak the truth, the whole truth and nothing but the truth.

PRESIDING JUDGE FREMR: [14:47:19] Thank you, Mr Bromley, which means that you are now under oath and I am obliged to note that it is an offence within the jurisdiction of this Court to give false testimony. Do you understand that?

THE WITNESS: [14:47:32] (Interpretation) Yes.

PRESIDING JUDGE FREMR: [14:47:34] Very well. And finally, a few practical matters, but as I said I guess you are familiar with them. I understand that you will be testifying in English today and most likely you will be also questioned in English, but everything is also translated, simultaneously translated into French. It is, therefore, important to speak clearly and to speak at a slow pace, and what is most important, not to put or not to give your answer immediately but, please, it is even unnatural, but to wait at least for three seconds before you give your response in order to allow the interpreters to translate and also for type recorders to record your testimony. And I guess that's it.

The last thing, if you have any question, will you also please indicate so by raising your hand and we will then give you the opportunity to speak.

So my final question is: Have you understood all this, Mr Bromley?

THE WITNESS: [14:48:56] (Interpretation) Yes.

PRESIDING JUDGE FREMR: [14:48:57] Fine. So now we can proceed with your testimony.

And now I give floor to the Prosecution.

MS LUPING: [14:49:04] Thank you, Mr President.

QUESTIONED BY MS LUPING:

Q. [14:49:05] Good afternoon, Mr Bromley.

We have met before. And as you know, my name is Dianne Luping, and I will be questioning you on behalf of the Prosecution this afternoon.

Mr Bromley, just a few questions relating to your background. Could you please state your full name?

A. [14:49:23] Lars Eric Bromley.

Q. [14:49:25] And when were you born?

A. [14:49:27] December 23, 1974.

Q. [14:49:31] And where were you born?

A. [14:49:34] Quito, Ecuador.

Q. [14:49:39] And Mr Bromley, were you retained by the Office of the Prosecutor to provide an expert opinion in this case?

A. [14:49:48] Yes.

Q. [14:49:48] And on the instructions of the Office of the Prosecutor you carried out a satellite imagery analysis of a number of locations of interest in the form of coordinates that were either provided by the International Criminal Court using a global positional device in the field or by referencing maps from various sources.

In particular you were asked to first verify locations of coordinates, indicating

settlement locations, including locating areas in the Democratic Republic of the Congo using settlement names; secondly, to acquire relevant satellite images using verified coordinates for locations of interest; and, thirdly, to analyse the images and to document any potential destruction, burning or damage to structures.

Mr Bromley, have you reached an opinion based on the questions asked by the Prosecution, in particular as to whether there is potential evidence based on your analysis of satellite images of possible destruction, burning or damage to structures?

A. [14:51:04] Yes.

Q. [14:51:06] I will deal with that opinion shortly, but first I will turn to your qualifications to testify as an expert.

Mr President, your Honours, the Defence has stated that it does not challenge Mr Bromley's qualifications as an expert in light of his curriculum vitae. And in this regard I refer you to filing ICC-01/04-02/06-826 at paragraph 32.

With your leave, Mr President, I ask in the interest of time to lead Mr Bromley on the aspects relevant to his qualifications as an expert.

PRESIDING JUDGE FREMR: [14:51:44] All right. Granted.

MS LUPING: [14:51:45] And for the record I note that I am referring to the content of Mr Bromley's curriculum vitae, found at DRC-OTP-2099-0291.

Mr Bromley, since July 2010, you have been working with the United Nations Operational Satellite Applications Programme, otherwise known as UNOSAT for the United Nations Institute for Training and Research, known as UNITAR; is that correct?

A. [14:52:21] Correct.

Q. [14:52:22] And from that date, July 2010, you worked first as a consultant analyst and then from October of 2010 as a geospatial analyst at UNOSAT. And

since May 2012 to date, you have worked as the principal analyst and senior research adviser in human rights and security at UNOSAT; is that correct?

A. [14:52:47] Correct. And for a time I was also tasked with responding to natural disasters.

Q. [14:52:56] In terms of your previous positions, is it right that from 2007 to July 2010, so that's immediately before working at UNOSAT, you worked as the project director of geospatial technologies and human rights at the American Association for the Advancement of Science?

A. [14:53:16] Correct.

Q. [14:53:18] And from --

PRESIDING JUDGE FREMR: [14:53:18] Ms Luping, I think the court officer has the same message, because really it is a lot of dates, a lot of information, we need you to a little bit slow down, please. Thank you.

MS LUPING: [14:53:32] Understood. The same problem as always, Mr President, when I have the luxury of speaking in English to an English-speaking witness. I will certainly endeavour to slow down. Apologies to the interpreters.

Q. [14:53:42] From January 2001 to December 2006 you worked as a senior programme associate at the American Association for the Advancement of Science leading the development and technical implementation of geospatial and IT projects; is that correct?

A. [14:54:09] That's correct. Specifically within the international office at the American Association for the Advancement of Science.

Q. [14:54:18] And similarly, from May 1997 to December 2000, you worked as a programme assistant at the same association, acquiring and implementing geospatial and IT solutions for programmatic research, publication and

administrative needs; is that correct?

A. [14:54:44] Correct.

Q. [14:54:50] As itemised in your CV, Mr Bromley, you have worked on a number of analytical projects alongside your day-to-day work with UNOSAT, including some of the more particularly relevant examples of your projects from 1998 to 2000, working as principal researcher and lead cartographer on the atlas on population and environment?

A. [14:55:24] Correct.

Q. [14:55:25] From August to December 2007, you worked on a Darfur mapping initiative with GIS Corps volunteers to map locations of reported attacks and other events in Darfur?

A. [14:55:48] Correct.

Q. [14:55:52] Similarly, that same year you worked on a project called Eyes On Darfur?

A. [14:55:59] Correct.

Q. [14:56:03] And did that project involve analysis of satellite imagery and geospatial data?

A. [14:56:08] Yes.

Q. [14:56:11] From 2007 to 2010, you have acted as a member of the Geospatial Technologies and Human Rights Organisation; is that correct?

A. [14:56:25] Yes. That was a project of AAAS, the American Association of the Advancement of Science.

Q. [14:56:33] From September 2011 to March 2012, you have reviewed satellite imagery analysis in relation to the UN Office of the High Commissioner of Human Rights Investigations on Human Rights Violations in Libya?

A. [14:56:54] Correct.

Q. [14:56:58] From November 2013 to the present time, you have been working on Citizen Cyberlab GeoTag-X as an adviser in the analysis of photographs from humanitarian crisis to develop data sets to inform planning of emergency assistance?

A. [14:57:24] Correct.

Q. [14:57:27] From April 2014, you analysed satellite imagery and geospatial data to develop expert reports in the case of the Prosecutor and Ruto and Sang as well as the case of Prosecutor and Kenyatta. And you testified as an expert witness in the case against Mr Ruto and Mr Sang?

A. [14:57:56] Correct.

Q. [14:57:57] In terms of your qualifications, you hold a Master of Arts in geography and remote sensing, which you obtained from the University of Maryland College Park, which you attended from 2007 to 2009.

A. [14:58:24] Correct.

Q. [14:58:24] You have a Bachelor of Arts in international studies, environment and development policy, which you obtained from the American University that you attended from 1993 to 1997.

A. [14:58:39] Correct.

Q. [14:58:41] Amongst your various areas of expertise, you have an expertise in remote sensing, in geographic information systems, also known as GIS, in geomatics, spatial analysis, in the use of ArcMap, in geospatial data, in cartography and in environmental science; is that correct?

A. [14:59:19] Correct.

Q. [14:59:22] You have published a number of relevant academic publications, including on 17 May 2010 an article in the International Journal of Remote Sensing

entitled "Relating Violence to MODIS," that is spelt M-O-D-I-S, "Fire Detections in Darfur, Sudan," end of quote.

In 2009, an article entitled "Eye in the Sky: Monitoring Human Rights Abuses Using Geospatial Technology."

And in 2007 an article entitled "Towards a Human Rights Observing System;" is that correct?

A. [15:00:23] Correct.

Q. [15:00:31] And in your CV, Mr Bromley, it is explained that you are the principal analyst at UNOSAT responsible for the analysis of satellite imagery and geospatial data. For the Judges, would you please be able to explain what is an analyst in satellite imagery and geospatial data, as briefly as possible. Thank you.

A. [15:00:59] Certainly. What we do at UNOSAT is we are essentially an on-call satellite imagery analysis centre available to the UN system and other organisations. We generally receive requests from UN partners to understand issues that are going on in certain parts of the world which may be inaccessible or too dangerous to visit. This could include populations of displaced persons or areas of combat or refugee camps or similar issues where we essentially locate the event in question or the town or city in question.

We acquire satellite imagery once we know what is available and we develop analytical products in response to the requests that we receive. So we are very often verifying reports of destruction, verifying reports of displacement, verifying the existence of remote displaced populations, to more esoteric things, like understanding changes in agricultural production, understanding the potential for flood risk for refugee camps and a variety of related issues.

Q. [15:02:37] Mr Bromley, if I could ask you and the parties and the Chamber to

turn to tab 4 of your binders. I refer to your curriculum vitae. I have already stated the ERN, referring again to 2099-0291.

Do you have your CV in front of you, Mr Bromley, tab 4?

A. [15:03:05] Yes.

Q. [15:03:08] And briefly looking at that, is that the curriculum vitae that you provided to the Office of the Prosecutor.

A. [15:03:28] Yes.

Q. [15:03:31] And does it accurately reflect your educational and professional experience to date?

A. [15:03:40] Yes.

Q. [15:03:41] Is there any correction that you wish to make?

A. [15:03:46] No.

MS LUPING: [15:03:51] Mr President, your Honours, the Prosecution ask that Mr Bromley's curriculum vitae be admitted as evidence at this point.

PRESIDING JUDGE FREMR: [15:04:01] Ms Yahya, any objections?

MS YAHYA: No objections.

PRESIDING JUDGE FREMR: [15:04:04] So the CV specified by Ms Luping is admitted into evidence as a further Prosecution exhibit.

MS LUPING: [15:04:16] Mr President, your Honours, as stated before, the Defence has not challenged Mr Bromley's status or qualifications as an expert. And with your leave I would now like to seek to tender Mr Bromley as an expert witness and question him as such.

PRESIDING JUDGE FREMR: [15:04:31] Just to confirm, Ms Yahya, no objections to that?

MS YAHYA: That's correct.

PRESIDING JUDGE FREMR: [15:04:35] So now this request is granted.

MS LUPING: [15:04:39] Thank you, Mr President.

Q. [15:04:41] Mr Bromley, could I ask you please to turn to tab 2 in your binder. And I refer the parties and the participants and the Chamber to DRC-OTP-2099-0216. And I refer in particular -- do you have it in front of you, Mr Bromley?

A. [15:05:12] Yes.

Q. [15:05:15] I would ask that you first turn to pages 0216 to 0224 and ask if you can confirm that those are the letter of instruction that the Prosecution provided to you on 18 October 2013?

A. [15:05:34] Yes.

Q. [15:05:35] And I ask you now to turn to pages 0225 to 0229. Were these the updated instructions provided to you on 18 November 2014?

A. [15:05:52] Yes.

Q. [15:05:55] And looking at pages 0230 to 0247, were these the instructions provided with updated again for all of these updated coordinates provided on 24 March 2015?

A. [15:06:11] Yes.

Q. [15:06:12] And on 15 April 2015, were these the instructions provided to you that you find at page 0248 to 0265.

A. [15:06:29] Yes.

Q. [15:06:30] And finally, if you turn to pages 0266 to 0283, are these the final -- is this the final letter of instruction and updated coordinates provided to you on 28 July 2015?

A. [15:06:56] Yes.

Q. [15:06:57] And all of these letters of instruction and the updated, various

updated tables of geocoordinates, do you confirm that you received these and these provided the basis for the preparation of your expert reports?

A. [15:07:11] Yes.

MS LUPING: [15:07:17] Mr President, your Honours, just to clarify that procedurally what I propose to do is ask the questions relating to various documents and seek admission at the end once I have conducted my questioning.

PRESIDING JUDGE FREMR: [15:07:30] Fine with the Chamber.

MS LUPING: [15:07:32] So Mr Witness, I'm going to now turn -- sorry, Mr Witness, Mr Bromley, I now turn to your respective expert reports. I will be asking you questions in relation to both the preliminary report and the final report. I first ask you to turn to tab 5 of your preliminary report which is dated 17 April 2015, and I note for the record DRC-OTP-2084-0443. I also refer you to tab 1 of your binder, a final report dated 14 November 2016; again the ERN for the record, DRC-OTP-2099-0166.

Mr Bromley, have you had a chance to see both these reports in your binder?

A. [15:08:40] Yes.

Q. [15:08:41] And can you please confirm who wrote these two reports?

A. [15:08:46] I wrote both reports.

Q. [15:08:50] Now, in relation to both these reports I will be asking you if you have any clarifications or corrections but before I do, I just wanted to briefly cover three topics that you dealt with in some detail in both the reports: Firstly, the verification process for the verification of geocoordinates, secondly, I will have questions related to the acquisition of satellite images and, finally, some questions regarding the methodology for the actual analysis of those images.

Starting first, Mr Bromley, with the issue of the verification process for the

geocoordinates, I am going to refer here to pages 1 to 5 of the final report, this is just for the record, pages 1 to 2, and pages 8 to 10 of the preliminary report.

Now, you have already confirmed that for the purposes of both of these reports, that you were asked to verify geocoordinates used to obtain satellite imagery. My first question, Mr Bromley, is can you explain where, from where you obtained the geocoordinates for specific locations of interest that you used for your analysis, imagery analysis?

A. [15:10:18] So some of the coordinates were taken directly from the document sent to me by the ICC. Within that document I was asked to essentially verify some of the locations, which is very, very common in our work. We are very often trying to locate remote areas in remote towns. So I used, for this project, I used two different publicly available data sets. The first is the GEONet Names Server, GNS, which comes from the US government; the second one is called RGC, which comes from the DR Congo government.

Q. [15:11:05] And to clarify, the RGC, is that the référentiel géographique commun?

A. [15:11:15] Correct.

Q. [15:11:15] But just going back to my initial question as to where you obtained the geocoordinates from, you explained that you received them from the ICC. First, in terms of geocoordinates that were obtained from the field, do you know in general terms what type of equipment was used and how coordinates were obtained?

A. [15:11:38] I know some of them were collected with a hand-held GPS unit out in the field.

Q. [15:11:49] And could you explain to the Judges to what extent there can be certainly inaccuracies that can impact on positional accuracy, first of all?

A. [15:12:02] Certainly. With any GPS unit, it basically is an antenna receiving

a signal from a set of satellites in orbit. Depending on the size of the unit, the antenna might be relatively large or relatively small. Smaller antennas might need a little bit more time to effectively collect the signals from the satellites. A larger unit, for example, one worn as a backpack where the antenna sticks above the user's head, will need a little bit less time and be, be more accurate. In addition, things like tree canopy or tall buildings or issues like that can essentially either block the signals or cause them to bounce around a little bit. Generally, the GPS units don't report a location until they have it verified. However, each type of unit will have a certain what we call circular error so, if you have a three metre circular error, then you can picture a circle extending around you for 3 metres in all directions, which is the potential variation in your actual location versus the coordinates that you receive.

Q. [15:13:32] And just to clarify that response, when you say that there could, for example, be a circular error of three metres, do you mean that this can be the degree of inaccuracy in the system?

A. [15:13:48] Yes, it will vary from unit to unit and then, depending on the environmental conditions, but I would say three to five metres is a normal error margin.

Q. [15:14:01] And when, just again we are talking about this first step, the verification of geocoordinates, in the course of this process, is there something that is able to be done by the analyst to take into account this slight degree of error? You gave an example of 3 metres. What process, if any, can be used to take that into account?

A. [15:14:25] Within, within the software you would -- you would locate the point and you would project a circle around it of 3 metres, essentially, to understand where, where the user may have been standing when the coordinate was collected. If

you are then comparing it to a satellite image you can essentially do processes that we call orthorectification to refine the position of the satellite image to minimum Miss The error of the GPS versus the potential error of the satellite image.

Q. [15:15:07] And again, just in layperson's terms, could you explain to us what orthorectification means?

A. [15:15:15] So any satellite images collected from a satellite in orbit, it is moving at a relatively high speed, it is imaging an area of the ground. The ground itself has certain terrain characteristics, maybe it is a mountainside or a, a long slope extending upwards away from the satellite or some other factor.

Through a lot of calculus - spherical trigonometry, to be precise - which is built into the software that we use, generally, you can remove the inconsistencies that occur when you are collecting a flat image of a round surface with significant terrain distortion and essentially bring that image closer to where it should actually be on the surface of the earth. It is a standard process. There are standard modules within the software that we use that do this.

Q. [15:16:27] And again, just to understand this process of orthorectification, does that involve any kind of distortion or change to the image?

A. [15:16:39] It doesn't change what we are interested in in this case. The appearance of the image when we are looking for structures or roads or things like that is not going to be fundamentally altered. It will be moved in space by a distance of maybe 10 or 20 metres or more. It is a particular issue on this project because the satellites that we use at this time between 2002 and 2003, these were relatively new, new technologies at the time. So we used two different satellites, and each different satellite had its own orthorectification characteristics. So in order to bring those images closer together on your screen, you apply an orthorectification process.

Q. [15:17:43] I will be later on asking you about the satellites but just for now remaining with the topic of verification. Can you clarify who did the process of verification of the geocoordinates of the location of interest for the two reports that you wrote?

A. [15:18:01] Myself.

Q. [15:18:04] And you have explained, for example, that you used two different databases, you have mentioned the GNS and the RGC. Just to understand a little bit more about these two databases, starting first with the US government database, the GNS, can you explain what it is usually used for, what its purposes are?

A. [15:18:28] It comes -- it is produced by a US defence department organisation called the National Geospatial Intelligence Agency. It is made publicly available for any type of geospatial cartography mapping sort of application.

It includes probably millions of points for the entire world. For this project I used it, obviously, for DR Congo, and so it includes town names, whether large or small, and then a lot of environmental factors. Anything with a name, basically, any named hilltop, a crossroads, anything like that should be included in the database.

Obviously, with very rural areas or areas that change a lot, it is not going to have everything in there. However, it is one of the best publicly available data sets that we would have access to for something like this.

Q. [15:19:42] And do you know roughly how many users there are? You may not know the answer to that.

A. [15:19:48] No, that's not something I would know.

Q. [15:19:50] And turning now to the RGC database that you mentioned, it is the DRC government and other partners. Could you explain what the purpose of that database is?

A. [15:20:03] For a developing country like DR Congo, developing these sorts of datasets is a common initial or early step in developing what we would call a nationwide cadastral dataset, a dataset explaining where everything is in a particular country.

For developed countries like the US or Netherlands, every town has specific boundaries. Every, you know, street has a particular position within this dataset. It is all very, very recorded.

The RGC dataset, as far as I recall, includes primarily town, town names, whether large or small. It was developed out of a collaboration between the government and then a lot of environmental NGOs and then commercial organisations like mining and forestry corporations contributed as well.

Q. [15:21:09] And you have mentioned the names. Obviously, there were specific names, locations of interest that were provided to you alongside with various GO coordinates. How did you take into account, if at all, any differences in spelling of place names? Could you explain what that procedure is?

A. [15:21:34] Yes, this is a very common issue that we deal with in my office and in, in previous work, when we are looking at relatively remote, unmapped or undocumented areas.

If there is different languages or ethnic groups in use, a single town might have multiple names, for example. The spelling of the names of the town or the location is also not standardised very often. And so you can imagine if someone is, is communicating the location of a town over a sat phone or a radio link to somebody far away who comes from another country, the spelling that they give may be garbled in transmission, it may be their best approximation, but essentially there is no single standard spelling like you would find in developed countries with, you know,

a nationwide geospatial database.

Q. [15:22:44] Now, turning to the actual verification results, if I could ask if you could turn to, it's at tab -- this is tab 1 for the first report, if you could turn to pages 3 to 4, table 1, which states location verification results, and the equivalent information, just for the record, is also found in the preliminary report at table 2, at pages 9 to 10. Do you have that table in front of you, Mr Bromley?

A. [15:23:18] Yes.

Q. [15:23:21] I am just going to refer to some of the conclusions or results that you have here so perhaps you can explain what some of the standard results are. You have "unable to locate," which appears straightforward. You have "location confirmed in GNS and RGC," "location unconfirmed." Could you explain what you mean by location unconfirmed in this part of your report?

A. [15:23:51] So when we are given the name of a location, what I then do is I search those two databases to see if that, that same location appears at roughly the same location. And to get past the differences in spelling, you will see a reference to the Levenshtein approximation algorithm, which is a relatively ancient computing tool. If you use a spell checker in a word processor, you are also using that tool. My standard example is the words "cat" and "hat" have one letter difference between them, so that is a Levenshtein score of one. So you are basically looking for locations spelled in a similar fashion, meaning they would have a Levenshtein score of one or maybe two as the coordinates that we were given by the ICC.

So, when we confirm a location in RGC and GNS, that essentially means we find the location at the same location in those datasets as we were given by the ICC with the same or very similar spelling.

Q. [15:25:11] And the reference in your report, your results to "location

unconfirmed," could you just clarify what that would mean?

A. [15:25:19] So that would mean we received the coordinates from the ICC but we found no corresponding entry in the GNS and the RGC.

Q. [15:25:34] And to clarify, if you had a result that was not confirmed in those two databases, were you still able to use those coordinates for the purposes of your reports and the satellite imagery analysis?

A. [15:25:49] Yes, if the ICC coordinates included -- if the ICC location included the coordinates, we used them as they were.

Q. [15:25:58] And there is also language in terms of results of possible matches and then you have, for example, in relation to Gutsi, you have a possible match and then you have specific coordinates that are set out there. This is still at page 3. Would you be able to explain what was meant here in terms of a possible match?

A. [15:26:21] So that would have been a location with a spelling similar to what we were given by ICC occurring within kind of the general administrative region that the rest of the coordinates occurred in. And as far as I recall, we then transmitted it back to ICC in the report, the preliminary report, to indicate, hey, this might be the location in question.

Q. [15:26:56] And when you had a possible match, did you use those results in your analysis and acquisition of images or not?

A. [15:27:05] As far as I can see, we did not and I -- I would have to go back on my notes to see what our discussion was about those possible matches, but essentially we excluded them and moved on with the more certain locations.

Q. [15:27:19] And in terms of the coordinates that you received, could you explain what those coordinates related to? And what I mean is, for example, was it a centre point for a location of interest? Was it a general area? Was it both? If you could

just clarify what those coordinates related to.

A. [15:27:37] So, a coordinate by definition is a single point, so these were single points describing the location of towns. It is important to remember that it is a single point simply because in some areas like perhaps Bunia, it is a nice, you know, consolidated city. If you looked at it on a map, it is essentially a round city and the point for that city fell right in the middle of it. However, it exists, you know, it crossed at least a few kilometres of space so a single point is just basically, you know, capturing the location but not the extent of the city.

Other towns, the point might essentially describe an area of dispersed settlements, a relatively rural area, so it is an approximate location for a relatively distributed settlement. The last thing is, the points within GNS and RGC, we don't usually know how they were collected. You can imagine, you know, perhaps someone drove there in a vehicle and stopped at one edge of the town and took the point. Perhaps they were able to drive into the centre of town and collect the point. Some of them may also simply be collected as an aircraft flew overhead. So there is some variation about where this point would be in relation to each town.

Q. [15:29:23] And just finally on the topic of verification, can you confirm, Mr Bromley, that the various conclusions that you made in your report relating to location verification are as set out in table 1 and at pages 3 to 4 of the final report and pages 9 to 10 of the preliminary report?

A. [15:29:49] Yes, those were the conclusions that were used.

Q. [15:29:53] So turning now to the second topic that I wanted to cover with you, which is the acquisition of the satellite images, and just for the record I just want to refer to pages 5 to 10 of the final report, pages 2 to 7 of the preliminary report and appendix B, which is entitled "Satellite Imagery Available for ICC Areas of Interest in

the DRC," ERN DRC-OTP-2099-0284.

My first question, Mr Bromley, relating to the acquisition of satellite images, is who did you acquire the satellite images from?

A. [15:30:38] So we actually purchased the satellite imagery from two different companies. There is two listed in the final report and one listed in the preliminary report, simply because our vendors expanded over those years. So the vendors were European Space Imaging and then a Norwegian company called Kongsberg Satellite Applications Systems, I think. The original imagery was collected by two US companies, one called Digital Globe, which operated the QuickBird satellite, and the second company at the time of the image acquisition was called Space Imaging. They operated the IKONOS satellite space imagining, later became GOI, GOI was later bought by DigitalGlobe. So at the time of us purchasing the imagery, we purchased everything from the original DigitalGlobe through the two vendors EUSI and KSAT.

Q. [15:31:52] Could you explain just in terms of trying to acquire relevant satellite images, how available satellite imagery is for any given location? What are the factors that come into play when you assess whether satellite images are actually going to be available or not?

A. [15:32:12] So the two satellites that we used, the IKONOS satellite and the QuickBird satellite, had been operating, I think I have it since, since about 2000 and 2002. From their start of operation, their collecting imagery, both based on client orders, so anyone in this room can essentially order a satellite image to be collected through these companies. The companies themselves are also essentially doing what you can think of as strategic image gathering, so if someone is not ordering an image to be collected over a certain area, these companies are gathering imagery on their

own.

Q. [15:33:07] Mr Bromley, sorry to interrupt you, my question is just slightly different. Perhaps it is possibly even more basic than it comes across. But just to put it in even simpler terms, will there always be a satellite image every day in any location? And if you could explain what the issues are with available availability.

A. [15:33:33] No, it is going to be relatively haphazard, especially in an area like the one that concerns this case.

For high value economic areas like something like New York City or The Hague or something, you will see a lot of imagery acquired from the start of the satellite's operation.

For rural areas like Eastern DR Congo, it is really going to be a much more haphazard set of imagery collected. So if you have a certain location, you can search for imagery for that location and you may find one image back in the years that we are interested in, you may find two images, or you may find zero. Again, it is going to go back to what the companies were actually doing at that time, what their priorities and clients were will dictate essentially where they're collecting imagery. Now we are talking about the high resolution imagery which is useful for this analysis where we can actually see houses and vehicles and stuff like that. There are, of course, weather satellites and other satellites which are gathering imagery for the entire world all the time. However, those satellites don't provide the level of detail where you are going to see things like individual houses or roads or cars.

Q. [15:35:05] And I am going to just refer to your report where you summarise the various images that you were able to find available. I refer you first to pages 6 through to 10 of your final report, and in particular, the results set out at table 2, and similarly at pages 4 to 7 of the preliminary report. Could you confirm whether the

results set out here reflect the metadata of those satellite images that you were able to obtain with the indication of locations of interest?

A. [15:35:51] Yes.

Q. [15:35:53] And can you briefly explain, just in terms of the dates of these images, how are the dates recorded? If you could just explain how are the dates recorded for each of the images that are acquired.

A. [15:36:10] Every time a satellite image is acquired, it is -- it is not just a photograph of the ground. It is basically a fairly advanced data product. So you have the image itself, which is the image of the ground that you'll see in many of the figures in my report. At the same time, it is basically timestamping the image acquisition, literally down to the picosecond. Reference to Greenwich Mean Time or Zulu Time, as it is called in the industry. Then it is collecting, it is also recording a lot of other information at the same time: The satellite position, the sun position, a whole mass of additional information which most of us don't ever need to get into. But the image itself is, is timestamped at the moment of acquisition.

Q. [15:37:16] And just in terms of the satellite images that you obtained we have the metadata referred to in your reports. Now just to confirm for the record, can you confirm, Mr Bromley, because you have had a chance now to look at the satellite images that you provided that we have then shown to you by way of DVD, that the initial is 25 satellite images that we disclosed to the Defence on 1 November 2013 that are linked to three ERNs, DRC-OTP-2059-0204, 2059-0206, and 2059-0207.

Are you able to confirm that those 2013 images are the ones that is correlate to these three evidentiary numbers?

A. [15:38:16] Yes, I reviewed those and they are, they are the images that I provided. You will notice the ERN numbers are in my report and, yes, the ERN numbers in the

report are different than the ones that are, that I reviewed here.

Q. [15:38:34] And there were five satellite images disclosed on 17 April 2015 that are linked to, if you like, an image holder because the -- just for the information of the judges, the images themselves were not able to be uploaded into Ringtail or eCourt because they were simply too large, so I am just noting for the record, if you like, the placeholder ERNs, DRC-OTP-2084-0146.

Mr Bromley, can you confirm that you also reviewed those five images on DVD as well?

A. [15:39:11] Yes.

Q. [15:39:13] And finally two satellite images that are linked to 2097-0561 disclosed on 2 December 2016. Did you also view those last two images?

A. [15:39:32] Yes.

Q. [15:39:33] And can you confirm that all of these images on the DVDs as shown to you before you came to testify, are those the satellite images that were acquired by you and provided to the Office of the Prosecutor?

A. [15:39:48] Yes, definitely.

Q. And do you agree to their admission as evidence in this case?

A. Yes.

PRESIDING JUDGE FREMR: [15:39:53] Ms Luping.

MS LUPING: [15:39:57] Apologies again to the transcribers and to the interpreters. Mr President, your Honours, I would at this stage seek to have the original satellite images admitted.

PRESIDING JUDGE FREMR: Defence.

MS YAHYA: [15:40:13] Your Honour, just for clarification, are those the five CDs that the Prosecution wishes to admit?

MS LUPING: [15:40:28] I believe they were five. I apologise if I don't have the right number, but the ERNs that I stated are the ones, yes.

MS YAHYA: [15:40:36] No objections.

PRESIDING JUDGE FREMR: [15:40:39] All right. So those documents or CDs mentioned, ERN mentioned by Ms Luping are admitted into evidence as a further Prosecution exhibit.

MS LUPING: [15:40:57] Thank you, Mr President.

Now the final topic, I do obviously have a number of other supplementary questions, but the final topic that I wanted to cover with you, which is dealt with in great detail obviously in your report, is the actual analysis of the satellite imagery itself.

And for the record I want to refer to pages 10 to 17 of the final report found at tab 1, pages 11 to 14 of the preliminary report found at tab 5.

Mr Bromley, do you have the relevant analysis section of the final report in front of you, that's from page 10?

A. [15:41:40] Yes.

Q. [15:41:41] My first question is who analysed the satellite imagery contained in the reports?

A. [15:41:49] It was primarily myself. I had a colleague at UNOSAT do some preliminary reviews of the imagery, but that was quite a long time ago at this point.

Q. [15:41:58] And this colleague from UNOSAT who also assisted at the preliminary stage, could you confirm who supervised or oversaw the work of that colleague?

A. [15:42:10] That was myself.

Q. [15:42:13] And before I ask you to explain the procedure that is used for the actual analysis itself, can you explain what can impact on the quality of the satellite

images themselves, what are the types of problems in terms of the quality?

A. [15:42:32] So each satellite has a, what we call a maximum resolution of what it can image. So the QuickBird satellite, for example, is roughly imaging things 70 centimetres across. That describes how it will image the ground if it is directly overhead.

The satellite itself can essentially swivel a little bit and look off to the side, so the more it looks off to the side the more the image quality will be degraded. In addition, there is of course cloud cover. Especially in an area like DR Congo, clouds are persuasive, clouds will generally block out an area. If they are, you know, large white fluffy clouds they are going to completely block an area. Sometimes you can see through the hazy clouds and see what is on the ground, but the haze is certainly going to degrade image quality as well.

Finally, there is other factors like a ground level mist or a fog which may not be very apparent, but you will just notice that the image that you are looking at is lower quality than what you are used to. There is one other type of clouds, the very high atmospheric cirrus clouds which are essentially a, kind of a thin cloud high in the atmosphere, they can also degrade the image quality.

Before you order an image you can look at a low quality sample of that image to understand where the cloud cover is and try and minimise your purchase of clouds, basically.

Q. [15:44:30] And just to clarify, after you received the geocoordinates with locations of interest from the Office of the Prosecutor, were there any locations where there was corresponding satellite imagery but that could not be purchased due to these problems that you have described?

A. [15:44:51] Yes. I can't say off the top of my head, but there were several

locations where the imagery was just a hundred per cent cloudy over the location of interest. And then there is really no point in buying the image because you are just buying a pure white image, basically.

Q. [15:45:08] So could you briefly explain what is the analytical procedure. When you have your satellite image, what's the procedure that you use to then look to document or identify potential structures or potential destruction or damage?

A. [15:45:29] Is this where I should put it up on screen or?

Q. [15:45:35] I think not?

A. Okay.

Q. I think if you just first describe in basic terms what the process is.

Just for your Honours information, the witness has prepared a visual presentation for you, but at this stage I just wanted to get the explanation of the basic procedure?

A. [15:45:53] It's, once you acquire the imagery, it's relatively straightforward. If you have two images collected before and after the event in question, you are generally zooming into an image to a level where you can see the details like small houses, small paths and roads and things like that.

And then you are simply comparing the two images together. You want the image before the event and then the image after the event and you are then documenting the changes in structures that you see between those two images if you see them. So if you see a house in the image collected before an event and the house is not there in the image after the event, you can be very certain that the house has basically disappeared and then you are marking that with a coordinate point that is stored in a database.

In locations where you only have one image collected after the event, which was common in this analysis, you are then looking for characteristics in the imagery where

you would expect to see structures but you don't see structures. So as you analyse an area the analyst does gain some familiarity with how the geography is, where houses are positioned next to roads or next to paths, what a homestead might look like with multiple structures, and then you are identifying those locations where, in essence, you think there should be those structures but you are not seeing them. Obviously, when you use the two images, the before and the after, the results are, are much more certain than when you use the one image collected after.

With the one image after, you will see in the report that it says it's is a speculative method. Within the speculation there are some areas which are more certain and some areas which are less certain, but I didn't have time to document that range in the report.

Q. [15:48:15] And just in terms of the language that is used by satellite imagery analysis, you talked about degrees of certainty, what is the normal language that you would use?

A. [15:48:28] There is a whole, or a small kind of vocabulary which we as image analysts are known to use. We are always cognisant of the fact that we are not there on the ground, we are looking at a remote view of the area, we are not seeing all the details that you would see if you were standing there on the ground.

So if I'm doing an analysis in an area and I locate a hundred structures which I think are destroyed, you will see me use words like "possible" or "likely" and that, at a basic level, just reflects the fact that I was not there when whatever happened on the ground happened. I cannot, you know, say for certain that a destructive event took place versus some sort of, you know, town redevelopment project, for example.

In addition, if I find a hundred structures that had been destroyed in the imagery, if we were able to go back in time and actually visit that location, you are certainly

going to find, you know, five or 10 per cent of those structures where I was wrong. Perhaps a tree branch blew over the house at the time of image acquisition. So over wide areas words like "possible" and "likely" are essentially used to, you know, build in that error margin that is just basically an artefact of the fact that we are using satellite imagery versus actually standing there on the ground witnessing in full, full detail what is going on.

Q. [15:50:21] You use the term "speculative", is that a term that is ordinarily used by satellite imagery analysts?

A. [15:50:30] Yes, I think if you are using a single image to look at an area and the image is collected after the event in question, the main problem there is I cannot say that structures disappeared if I do not know that there were structures there to begin with.

Now sometimes we are seeing the remains of structures, you are seeing burned, charred, you know, structural remains and I would still use the word speculative there simply because I do not know what that location looked like. However, the burned charred remains, to me, are something that are, you know, more certain than other areas where I am seeing a cleared area which looks like it should have houses in it along a road but I see no houses.

Q. [15:51:27] And in terms of the various conclusions that you reached in terms of the satellite imagery analysis, just for the record I refer to table 3, entitled "Summarised Image Analysis Results".

And, Mr Bromley, if you could turn to pages 14 to 17 at tab 1 of your final report, and pages 11 to 14, which is at tab 5 of your preliminary report. I also refer to maps 3 to 7 at pages 18 to 22 of your final report, the various figures with the analysis set out there, figures 1 to 26 at pages 11 and 12 and pages 22 to 46 of the final report.

Figures 1 to 25 at pages 15 to 38 of the preliminary report, and the final conclusions as set out at page 47 of the final report and page 39 of the preliminary report.

My question is this, Mr Bromley: These various sections that I have just indicated, are these the parts of your reports that dealt with the actual analysis and conclusions of the data analysis?

A. [15:53:10] Yes.

Q. [15:53:14] Now I will be shortly asking you to show the Chamber the first visual presentation, but before you do, could you explain to their Honours what type or what is the software package or tool that you use for your review of the satellite imagery, what is it called?

A. [15:53:39] So the general family of the software is called Geographic Information Systems. The specific type that I used is called ArcMap.

Q. [15:53:51] And before you provide the Chamber with your presentation, can you just confirm who used the ArcMap GIS then for the analysis that was done for your reports?

A. [15:54:04] That was all myself and, again, a colleague had done some initial work under my supervision.

Q. [15:54:11] And what were the number of reviews that were undertaken of the work that was done?

A. [15:54:18] For each image it was definitely gone through, each image was analysed at least twice and I mean some of them at least half a dozen, maybe more times after that. By the time it made it into this report, the final report, each image or pair of images had been gone through multiple times.

Q. [15:54:44] At this point, Mr Bromley, I would ask if you could please show to the parties, participants and -- sorry, I should first of all ask the leave of the

Presiding Judge and their Honours.

MS LUPING: Mr President, with your leave I would ask that the expert witness be granted the possibility of using his own laptop to provide visual presentations simply from his -- from where he is sitting, simply because the resolution of these images are of much higher quality if we provide or display the imagery in that way rather than simply the hard copy documents that you all have in front of you?

PRESIDING JUDGE FREMR: [15:55:29] Defence, any objection?

MS YAHYA: [15:55:33] Is it my understanding that they will be the similar document as in the reports?

MS LUPING: [15:55:42] In terms of the ArcMap GIS presentation, that is not in the report because that is showing how the tool works and that was not visually seen in the report. I can confirm, however, and that was the reason why the PDF of the presentation was sent to all the parties and the Chamber in advance before the witness's testimony began, that the actual images, once the demonstration is -- has been done in terms of how the ArcMap GIS tool is used and zooms into the double satellite image analysis is all based on what is already in the reports and with the parties.

MS YAHYA: [15:56:22] Then there is no objection.

PRESIDING JUDGE FREMR: [15:56:24] And question to court officer: Technically, we don't see any problem with that?

THE COURT OFFICER: [15:56:32] Normally everything is set up to allow the witness to present. I am just going to clarify that the images are going to be displayed on evidence channel 2.

PRESIDING JUDGE FREMR: [15:56:43] All right. The request is granted.

Mr Suprun.

MR SUPRUN: [15:56:48] (Interpretation) Mr President, just for the record we did not receive the PowerPoint presentation and we are not able to see it from here, by the way. Thank you.

PRESIDING JUDGE FREMR: [15:57:01] Court usher.

MS LUPING: [15:57:02] Mr President, just to clarify to the Legal Representative, Mr Suprun, that indeed the images will be seen on everybody's screen. What we do have -- simply, actually, that is for the sake of your Honours so that you have also the highest resolution possible for the images, that you have the big screen in addition to your individual -- everybody having the individual screen, including the accused and parties and participants in the courtroom will all be able to see the images. My apologies to Mr Suprun, indeed there was an oversight. The participants should also have received in advance the actual PDF copy. But I understand the Chamber, the Defence and the court officer will have received it.

PRESIDING JUDGE FREMR: [15:57:51] All right. So I think the concern of Mr Suprun have been satisfied. Now the request is granted.

MS LUPING: [15:57:54] Thank you, Mr President.

Q. So, Mr Bromley, if you could, now that you've been granted leave, if you could start with your presentation of the ArcMap GIS analysis just to give an example of how this is conducted.

A. [15:58:07] Certainly. So what you should see before you is -- and on the screen here is ArcMap. This is a Geographic Information System. You can go get a PhD in using one of these if you want to. They are very, very common software systems used in many, many sectors for very many purposes. Any defence related sector will use such software, commercial sectors, et cetera, et cetera. So there are certainly thousands and thousands, if not tens of thousands of people around the world that

essentially use either this software or a similar software package pretty much every day.

So what you're seeing on the screen is obviously a map of the world. Now, I just wanted to start by saying you may look at this and you see a map, when you get into GIS work you go from seeing a basic map to seeing a dataset.

So you can see over on the left-hand side of the screen are what's called layers. One of these is global borders, which I can essentially turn on and off. This is an example of a dataset, it happens to be one that we all recognise. Within that dataset is a lot of attribute information which I can pop up as a table, giving the names of the different countries, their capitals, their status within the UN, et cetera, et cetera.

As with any database I could then, for example, do a query and query, you know, all countries which are member states or not member states of the United Nations.

The software also can do specialised things like we could calculate the square kilometres of each country and then select the countries with the greatest size or the largest size or something like, something like that.

Now this is the software that we use in our office all day every day. I've been using this software and its predecessors for almost 20 years now, so it is quite common and it is something that we use all the time.

Now obviously we are not interested in the whole world, we are interested in DRC Congo. You'll see that I can turn off the global borders and just leave DR Congo remaining. It is the same dataset but just in one, I have excluded everything except for DR Congo. Then I can zoom down to that country and then I am now turning on the ICC locations of interest so we can see our specific area. I can zoom in here, and you will start to recognise some of the locations. These are the ICC locations of interest which we were able to locate and attempted then to do satellite imagery

analysis on. Not all of these locations had imagery, but this was the initial set that we started to work with.

For the image analysis example I am going to use the location of Songolo simply because it's a visually relatively easily location to understand. And we see that is down here, so now you're seeing the orange square which is the coordinate point that I had for Songolo. So I'm going to turn that off now and then what you are seeing is a satellite image. This image was collected on 15 June 2002. If I turn that one off, the one underneath it is the one from 22 May 2003. So again, I am turning layers off and on, nothing particularly difficult about that.

Now, it's important to remember or realise that the imagery that we received is essentially a subset of the imagery that was collected on that day for this particular area. So here the green square, that's the image that we were just looking at. These purple tiles are all the images that -- or the entire strip of imagery that was collected by that satellite on that day. So you will see it extends over the border into Uganda. If we measure the distance, then we can see that that whole strip of imagery was about 92 kilometres long and then about 13 kilometres across.

For the image collected 22 May 2003, this is the entire strip that was collected by the QuickBird satellite on that particular day. Again, a relatively large image and what we did was purchase a relatively small subset of it. Now one important point is that you can see that the image that we used is right on the edge of the whole strip that was collected that particular day. So that is why we weren't able to analyse as far to the west over here as we might like to, because the image from 22 May 2003 was, was only collected for that particular area. It wasn't collected all over the region. We didn't have much choice about what we could actually get.

When we buy these, these image subsets, the smallest area that we can purchase is

25 square kilometres. That's a requirement set by the vendor and that's the smallest area that they will sell in order to maintain their profitability.

So I am going to zoom in here and we are actually start to see what's in the imagery. So down here is a road or a path and a collection of houses. So this is a relatively typical area or a relatively typical type of structure in this area and so I would ask you to imagine you're essentially flying over this area in an aircraft, you're looking out the window. These round structures are what I would call homes. If we were analysing further east in East Africa, the standard term for this would be tukals, standardised round houses common in the area. You will also see square buildings which may be homes or they may be agricultural related or something like that. I refer to all of these as structures in the report and in all my work. We don't generally try to differentiate between what somebody's home may be versus some other structure that we are seeing.

A couple of details or one detail which is important, on each of these structures you see on the bottom left side a black edge, that is literally the shadow that the structure itself is casting. So looking at these, now look where the red arrows are, so again we're flying over this area on 15 June 2002 and then say we fly over it again on 22 May 2003. So what I'm doing is I am turning the 2002 image off and on and you can then essentially see multiple structures disappearing. In some cases they are completely replaced by vegetation. In some cases you may be able to see what we would call structural remains, i.e., the walls or the roof that have collapsed. But every time we see something like this where we see a structure that is there on one date but not there on the next date, that's essentially what we are identifying as a destroyed structure and then we just put a point on each one of those, that's the red squares that you are seeing here, and that records the location of the destroyed

structure within our database and then we use it later.
To develop the report for you, for the Court, what we then do is we come up with, or I review the imagery and I look for areas which would make good examples, for lack of a better word, and then I export those examples from this software into a standard document format, a PDF format which can then be developed into the report that then is submitted to the Court.
I don't want to review all the materials within this particular software, the GIS software, simply because it is often not the friendliest or the most stable software to use and give live demonstrations on.
So at this point I would like to show you some other examples that were exported from the imagery which are the same examples as you will see in the reports that were submitted.
And then so this the same, the same area as I just showed you in the GIS, in ArcMap, but this is how I have exported it. So on the left-hand side you see that, a sample of that image from 15 June 2002, that's over here, and then on the right-hand side you see the same image from 22 May 2003. And I have added the red arrows to give you an indication of where to keep your eye and you can clearly see the difference between the two on the left versus the right. Again, the disappearing structures often replaced by vegetation, sometimes with possible structural remains visible.
If the arrows are confusing I can easily remove them and then flash them back for you.
So this particular image was figure 24 in the final report, figure 20 in the preliminary report, and in this whole area I documented 59 of these structures that had essentially disappeared between those two dates.
MS LUPING: [16:10:03]

Q. Thank you, Mr Bromley.
Before we continue, because I know that you have prepared also for the Chamber and the parties a visual presentation of other, other images where there were the double satellite images available. Before we go on to the rest of those images for the visual presentation, could I ask you, if we go back to the ArcMap GIS presentation that you gave, just briefly, and you showed a map indicating the locations of interest.
Can I ask you, if you look at map 1 contained in your final report at page 5, do the locations of interest contained in map 1 of page 5 of your final report correspond to the locations that we see indicated here that you used for your visual presentation?
A. [16:11:06] Yes, with the exception of Mambasa, and I am seeing now Eringeti, which essentially were far enough away that they made for a difficult issue to include on the map.
Q. [16:11:24] Thank you for that clarification. And just in terms of the references on the far left, what we have here is references to red, green and blue, band 3, band 2, band 1. Just very briefly and in as simple terms as possible, could you explain essentially what this means?
A. [16:11:45] so again, when a satellite like these capture an image they are not just taking a simple photograph. These are sensors that are detecting the reflected electromagnetic energy which originates from the sun, hits the surface of the earth and bounces back up into the sensor. These particular satellites are collecting this electromagnetic energy in the red, green and blue bands, which are what we would call the visual spectrum, and that's the same thing that we see when we look at these images. This is a natural colour image, this is essentially what you would see if you were flying overhead in an aircraft. These satellites are also collecting a fourth band of imagery, the near infrared which our eyes don't see but can be detected by a sensor

and by various insects and animals as well, and occasionally we use that fourth band for certain parts of the analysis.

Q. [16:12:56] And again just before we move on to the other examples that you were going to show, you have talked about this fourth band of the near infrared for the process of analysis, could you explain what this process is?

A. [16:13:12] So that sort of analysis uses what we call false colour infrared. So getting back to the red, green and blue and the near infrared, one interesting aspect of the world is how vegetation grows and absorbs energy. So vegetation is basically absorbing as much of the visible spectrum as it can to power photosynthesis and eventually grow.

However, it then, through the wonderful virtues of nature, basically reflects as much as possible of the near infrared wavelength or else it may overheat, basically. So that interesting difference in that it's absorbing as much visible energy as possible while reflecting the near infrared energy gives us a certain tool to use when we analyse imagery.

So I don't want to shock you, but if you look here the vegetation appears in green. If I basically load the near infrared into the red channel, then what you are getting is essentially a red landscape. And the more red you see, so, for example, here along what is probably a river or a stream, this vegetation is a brighter red versus the vegetation over here, essentially it means the vegetation along the stream is, whatever you want to call it, richer, healthier, more photosynthetically active at the time of image acquisition.

Now the only reason we use the colour red for this basically dates back to World War II, your eyes have the ability to see more differences in shades of red than they do in other colours. For me, as an analyst, it can get a little straining on the eye if I am

looking for, you know, brown patches of dirt versus green vegetation. As an analyst, it is easier for me if I make the vegetation appear in red and then there is a greater contrast between the vegetation and some of the other features on the ground that I might be looking for.

Q. [16:15:51] And just still remaining on the topic of the infrared examples, if you turn to tab 5 with your preliminary report and if you go to page 0466, the last figure and the heading there, figure 8 is "Kobu Centre and Kobu Wadza Features". If you look at that last figure, do you have that in front of you yet?

A. [16:16:18] What was the --

Q. [16:16:19] It's page 0466 of the --

A. [16:16:22] Yes.

Q. [16:16:23] Do you have it? It is under figure 8.

A. Yes.

Q. And if you look at the bottom figure there, what do we see there, what kind of colouring band do we see there, colour band?

A. [16:16:36] So that's the false colour infrared, the same as what you see on the screen in front of you.

Q. [16:16:43] And if we turn now to page 0475 of the same report, to figure 17. And looking at both the 14 August 2002 images here, this is for the "Bunia Area Possibly Destroyed Structures" at figure 17 again. Again, could you just confirm what colour range is used for that figure?

A. [16:17:08] Again that's the false colour infrared, which in this particular case was very, very useful.

Q. [16:17:13] And could you explain why it was so very useful in this particular case?

A. [16:17:17] Because in the imagery there is what we marked essentially as burned and destroyed structures. Again, the structures, they are burned, they are black, but they are surrounded by green and brown vegetation. As an analyst, and I will show an example of this later, but it is much easier for an analyst to discern the features when it's black versus red, versus when it's black versus green or brown.

Q. [16:17:53] Now you have just shown to their Honours an example of the double image analysis for Songolo. Would you be able to show the next examples, still remaining only with the double image analysis at this stage.

A. [16:18:09] Yes. So there is Bambu on the screen now.

Q. [16:18:12] And could you please again similarly explain the procedure here?

A. [16:18:17] So again, just like we saw with the Songolo example which was a little easier because just the image characteristics are easier to see structures. What we have here is what was identified as the Bambu main thoroughfare location.

PRESIDING JUDGE FREMR: [16:18:37] Mr Witness, please hold on, because Defence is almost, yes, on her feet.

Ms Yahya.

MS YAHYA: [16:18:44] I apologise for the interruption, but these screen shots are not the same pictures, level of zoom that is in the report. And we have just been given this so I want to understand why these differ than the ones that he is referring to in the report?

MS LUPING: [16:19:03] I am happy to explain, Mr President.

PRESIDING JUDGE FREMR: [16:19:05] Please, Ms Luping.

MS LUPING: [16:19:06] Yes. The actual location and the identification of the potential points of destruction should be as reflected in the report. The resolution is different, which is the whole purpose of asking the witness to provide it. Instead of

having the PDF report version, the purpose again was just to ensure that a higher quality resolution, the highest possible resolution that we would be able to have in the courtroom was able to be provided to make sure that was visually as easy as possible to be seen.

I will refer your Honours, for Bambu, the relevant figures. If you turn to the final report -- or, first, actually, I will ask you to turn to the preliminary report, figures 1 to 2 have the -- at page 0459, at tab 5 you will see figure 1 where it says "Bambu Main Thoroughfare". What you will see is this version that you are seeing in the visual presentation is just simply a zoomed-up version, a closer zoom in at a higher resolution quality to the image that you see at figure 1 on page 0459. Similarly, you will find it again in the final report, the same images at figures 3 and 4 in the final report at tab 1.

Again, as you will see on your Honour's screens, this again is simply a zoom in, a smaller portion of the larger analysis image that you see inside the report. So it is just simply a zoom in, your Honours, indicating more detail.

PRESIDING JUDGE FREMR: [16:21:11] Ms Yahya.

MS YAHYA: [16:21:13] Your Honour, this may be a zoom in but these captions were not disclosed to the Defence until 1.44 this afternoon.

There are also, there is no scale on these images like there is in the report, they are not at the same scale. As well as, as the presentation has gone along there are some things that have not, from images that have been shown, that have not been disclosed and are not in the report.

For example, at page, around page 130 of the transcript Mr Bromley showed an infrared version of, a picture of Salongo which is not at all in his report as an infrared picture, so we submit that these have not been disclosed to the Defence and that we

should limit the presentation to the images that are in the report and that have been analysed.

PRESIDING JUDGE FREMR: [16:22:02] Ms Luping.

MS LUPING: [16:22:03] Mr President, your Honours, in our submission these are images that have been disclosed. What we are talking about are screenshot closer zoom-in images of images that have already been provided and that are contained in the report. The whole purpose of this visual presentation was to give your Honours a better sense of the, the images as close up as possible. It really is purely a visual presentation so your Honours can more clearly see. And also the purpose of this is to provide a tool for the expert witness, who is obviously here to explain in more detail the methodology used for the analytical process. So in our submission, your Honours, there should be no exclusion of this visual presentation. It is a tool, it's meant to aid the explanation being provided by the witness and it is based on images that have been disclosed. Thank you.

PRESIDING JUDGE FREMR: [16:23:00] Yes, it was my understanding that the main point behind it is the explanation of the witness about methodology he used. So it's fine with us.

MS LUPING: [16:23:13] Thank you, your Honours.

Q. [16:23:14] So, Mr Bromley, you were explaining the, the images here with Bambu, contrasting 26 January 2003 to 22 May 2003. If you can please continue.

A. [16:23:29] Certainly. So on the left over here you have 26 January 2003 and on the right 22 May 2003, a difference of about five months. One thing to note in this image is the road which kind of bends around here. In January 2003 it's actually quite green. There is relatively heavy vegetation or light vegetation growing on the road, whereas in May 2003 it is much more clear. Details like this can, you know,

cause some confusion if we're saying it's the same location, but if you look closely you will see that the road is present in both images.

The main thing again to focus in on is the rooftops, some of which are indicated by the red arrows. As an image analyst my eyes immediately snap to the rooftops, things like that, and I kind of implicitly understand that between January and May you are going to see a certain amount of environmental changes, so there is kind of a process that an analyst goes through where they train their eyeballs to basically look at the relevant details.

Again, here in January I have marked multiple rooftops with the red arrows. These are square structures. You can actually see the peak in the roof like you would on any peaked roof structure for several of these houses. If we go over to 22 May 2003, drawing your eye down to the bottom especially, all the structures that are visible along the bottom have essentially disappeared. You are no longer seeing these nice sharp, square, square structure lines, you are seeing more irregular patches of brown which are basically the ground, indicating that the structure has disappeared.

In some of the other structures, for example, over here on the right side, what you are seeing are the structural remains. For these I would say you are seeing the interior walls of the structure after the rooftop has been, has been removed for some reason. Depending on what the structure itself is made of, we would call this perhaps an indicator of burning or of explosives use or something like that, but again it could be some other factor that causes, causes that particular destruction.

Within this particular area we marked 20 structures that had been, been removed and destroyed between the two image dates.

Q. [16:26:27] And before we move on from Bambu, Mr Bromley, could you confirm that these --

PRESIDING JUDGE FREMR: [16:26:32] Sorry, Ms Luping, move on, I'm afraid I am sure we will have to break.

MS LUPING: [16:26:37] Understood, Mr President. I am just so caught up with the images I lost track of time. But I will ask Mr Bromley this final question relating to this part of the visual presentation and we can continue on Monday with the rest.

Q. So, Mr Bromley, just turning to looking first at these specific images regarding Bambu, 26 January 2003, 22 May 2003, if you turn to figures 1 and 2 in your preliminary report, that's at tab 5.

A. [16:27:10] Mm-hmm. Yes. Yes.

Q. [16:27:18] And now figures 3 and 4 in your final report at tab 1.

A. [16:27:38] Yes.

Q. [16:27:43] Can you clarify whether the images as contained in these extracts or parts of your reports are, are actually larger versions of the images that we see now in your visual presentation?

A. [16:28:03] Yes. The images on the screen are, are subsets. They're, they're smaller sections of the images that were used in the report. You can see the very characteristic bending road visible in all the images, both the ones on the screen and then the ones in the reports. And just to be certain, what is on the screen is figure 3 in the final report and figure 1 in the preliminary report.

Q. [16:28:34] Thank you, Mr Bromley.

MS LUPING: Mr President, your Honours, I think it is indeed a good opportunity -- a good opportune moment, rather, to break. I will have further questions for the witness on Monday morning.

PRESIDING JUDGE FREMR: [16:28:48] All right.

Ms Yahya.

MS YAHYA: [16:28:50] Sorry, apologies. If it would be possible to simply provide a scale for these, for these photographs so that the Defence can work from that scale.

MS LUPING: [16:29:00] I would have to turn to ask the witness if that is possible. It's certainly outside our abilities.

Q. Mr Bromley, is that possible?

A. [16:29:10] No problem.

PRESIDING JUDGE FREMR: [16:29:11] All right. So now we break.

Before we break I would like to ask court officer for the update on timing.

THE COURT OFFICER: [16:29:24] Yes, Mr President, the Prosecution so far used 1 hour and 32 minutes.

PRESIDING JUDGE FREMR: [16:29:30] So having taken into account that we allotted two hours to Prosecution, Ms Luping, you should conclude examination in 28 minutes on Monday. Do you see it feasible?

MS LUPING: [16:29:48] I believe so, Mr President.

PRESIDING JUDGE FREMR: [16:29:49] I would strongly encourage you to make it.

So before we, before we break, Mr Bromley, I would like to thank you for the initial part of your testimony and it is my legal duty, since your testimony unfortunately is divided by weekend to ask you not to discuss in the meantime till Monday your testimony with anybody else. Is it clear to you?

THE WITNESS: [16:30:22] (Interpretation) Very clear.

Thank you.

PRESIDING JUDGE FREMR: [16:30:24] Fine. So now we adjourn and we will reconvene on Monday, 9.30.

THE COURT USHER: [16:30:35] All rise.

(The hearing ends in open session at 4.30 p.m.)