International Criminal Court
Trial Chamber I
Situation: Republic of Côte d'Ivoire
In the case of The Prosecutor v. Laurent Gbagbo and Charles Blé Goudé - ICC-02/11-01/15
Presiding Judge Cuno Tarfusser, Judge Olga Herrera Carbuccia and Judge Geoffrey Henderson
Trial Hearing - Courtroom 1
Monday, 29 May 2017
(The hearing starts in open session at 9.24 a.m.)
THE COURT USHER: [9:24:40] All rise.
The International Criminal Court is now in session.
Please be seated.
PRESIDING JUDGE TARFUSSER: [9:25:02] Good morning.
Before calling the witness on the stand, I think we need to know how we go forward, because next week is basically nothing because we have problems with 607 and with 156. And so one solution which is very much suggested by the Chamber, well, it's not a solution, but it's at least to have somebody on the stand next week, is the following, that expert witness 626, which should have been, meant to be here today and, therefore, was for sure prepared, and following the email of Mr MacDonald of 22 May, was somehow suggested to be postponed to put him close to 583, just to anticipate 583 for next week together with 626, which should not be a big problem, I would say, if he's a forensic expert in the research unit of the OTP. So it should not be a big problem.
Therefore in any case, in order to have somebody next week, I would very much

suggest - when I say "very much suggest," I hope this rings a bell, like the interpreters always say - to have as soon as possible also this week here 583 and 626. And then we'll see, because I've asked also the VWU to try to find out how the next witnesses after 607, 156, how is the stand of those witnesses.

Mr MacDonald.

MR MACDONALD: [9:27:36] Good morning, your Honour. Indeed, I think 516 is the more uncertain of the two between 607 and 156, so therefore we're still working on having the Witness 607 appear. Now, the only solution would be by video link on the week of the 5th.

What I can inform the Chamber is yes, 583 being an expert of the OTP, we can always call him to be present and testify on Monday. It will not be possible, I think, for 626 to follow immediately after 583 because of his schedule so I think that would be impossible.

Now, just to inform --

PRESIDING JUDGE TARFUSSER: [9:28:32] That would be to be explored, I would say. Not impossible, it's to be explored, because we have a week. I think if we start today suggesting this, I would say that it could be possible.

MR MACDONALD: [9:28:51] We, of course, will verify with him, your Honour, but I know that all three experts had prior engagements in the next three weeks which made the scheduling also more complicated than usual.

What I can tell your Honour is that for the week of the 5th also, is that Witness 164 is available but would have to be done by video link. And also under the control of my colleagues of the legal representatives if they're dual status crime-base witnesses P-237 and P-172 could also be possible. So one option, your Honour, to contemplate --

PRESIDING JUDGE TARFUSSER: 237?

MR MACDONALD: 172. So I'll repeat that just to get the numbers straight. Insider witness 164, who was already planned after 156 and before the summer recess, and then two crime-base witnesses of the 3 March incident, Witnesses 237 and 172, but that were scheduled later, I understand.

Now, today this scenario of certainly 164 in the week of the 5 June by video link could be also an opportunity to slot him in there. I will come back to the Chamber the second session today. We're still liaising, of course, ourselves with VWU, your Honour, that's what we're doing. Also, we will immediately verify with 583 if ever he was to go on any missions or not. Thank you.

PRESIDING JUDGE TARFUSSER: [9:31:29] Thank you.

Maître Altit.

MR ALTIT: [9:31:36] (Interpretation) Thank you, Mr President. Mr President, ladies and gentlemen of the Court, it's a little bit difficult for the Defence to adapt permanently, and of course we need a minimum amount of time in order to prepare ourselves. With your leave, I would like to check that we are at least in agreement for some of the witnesses under the reservation of the information to be provided by Mr MacDonald at a later stage.

Can we say that P-626 and P-583, as you just suggested a moment ago, Mr President, are to testify next week and, if so, this does solve partially the issue of next week, because the only alternative solution that we would suggest or that Mr MacDonald suggests in fact is video links and you know how problematic video links are for us, because they are not entirely testimony in due form because we like the physical and interactive aspect of a testimony, which we believe is fundamental.

So, Mr President, may we ask or may we hope, rather, that we have a decision from

the Chamber during the day so that we are in a position to prepare ourselves? These are important witnesses that we are talking about here.

Now, P-626 and P-583, if that is the decision of the Chamber, we will prepare ourselves to question them next week. P-516 and P-6164 will not be able to come, and we are opposed to that. And as for P-103, I'm not sure that I understood what was being said. And once again we might have some further information, but I note, for things to be clear, is that P-607 is not coming. We need to know that because this is a big witness, and if that witness does not come, then we can prepare the others. But if we remain in uncertainty, we can't prepare things at the very last moment because we have meagre means. We need to know things, at least as far as I'm concerned, Mr President.

We are available to you to discuss the matter. If anything is to be discussed as for the obligations that the Prosecution has, of course we understand that, and things that might have been unplanned, we also understand that.

MR MACDONALD: [9:34:38] Additional information, your Honour -- sorry to cut in, it's in relation to 626, so the sound expert. He is on vacation abroad from 2 to 12 June, just to inform you. Now, in relation to 607, the only way it would be possible again is by video link. So the only witness that could be here, and we're trying to reach him as we speak in person, would indeed be OTP expert 583.

PRESIDING JUDGE TARFUSSER: [9:35:20] Well, which I suppose could be here also this week to fill up this week.

MR MACDONALD: [9:35:25] Yes, this week, your Honour, of course.

PRESIDING JUDGE TARFUSSER: [9:35:27] Yes.

MR MACDONALD: [9:35:28] After the current two experts.

PRESIDING JUDGE TARFUSSER: [9:35:30] Yes, yes.

Mr Knoops.

MR KNOOPS: [9:35:34] Good morning, Mr President. We would appreciate to be informed today by the definite schedule in order to prepare our team. We are flexible but I think it's fair that ultimately, at the end of the day, it is clear for our team what witness is to be expected next week. For the rest, I refer to my comments of last week. Thank you.

PRESIDING JUDGE TARFUSSER: [9:36:04] Well, what we have to do this week for sure is to find out what is possible before the week of break, which is the week from the 12th to the 16th. This has to be obviously done today and we will for sure come out with a decision today what relates to the witnesses in the next week. But the Chamber wants also to come up with a more structured decision which goes following the list filed by the Prosecutor, the last list filed by the Prosecutor of witnesses, which will go to the end of the Prosecutor's case, so that we know at least we have a deadline, an end deadline. But this will be done not before Wednesday, because it has also implication with the Rule 68 decisions and has some other implications and, of course, all this without prejudice to what can't be foreseen. But I think that as of today we should know more or less where we end from a timely point of view the case of the Prosecution, and this will be done by Friday. And I can also say that we will re-start after the summer recess on 28 August, Monday, 28 August.

MR MACDONALD: [9:37:52] Thank you very much. That's what I was going to ask.

Your Honour, just one last thing since we're on the schedule. The Prosecution has a number of witnesses left, some of which, some of whom we will not be calling, and that's why some witnesses had been pushed back. So our list of witnesses will again

be reduced.

Now, just to make it clear, the case evolves. Evidence, witnesses testify, and then some witnesses are not necessary to call anymore when they're testifying on similar or same topics. So this is why some witnesses will not be called.

Now, again, I'm sorry for my colleagues for what happened recently. It is certainly out of our control, your Honour. Some witnesses have certain needs, certain requests, certain positions, and also we've been struggling, and I'm saying this openly, with our point persons in country, which impacts then on VWU, who work with the same point persons. And we're trying to address this issue so that the response time is much faster, because the requests for legal assistance in the matter of these witnesses was sent weeks ago, if not four weeks ago. It was usually -- it's much faster, but for some reason, it's been stalling a little bit, as we can see. Thank you.

PRESIDING JUDGE TARFUSSER: [9:39:58] Thank you.

Legal representative.

MS MASSIDDA: [9:40:04] Thank you. Good morning, your Honour. We are quite flexible on the schedule. As already told to the Chamber last week, our only problem is for 5 June. It's the only day in which I will be unable to sit in the courtroom, and this, of course, refers only to dual status individuals 172 and 237. Thank you very much.

PRESIDING JUDGE TARFUSSER: [9:40:27] Thank you. I said what I had to say, and I think it's time now to call the witness. And I'm referring to Witness 601, which was authorised to have his expertise with him in order to be able to consult his own expertise.

(The witness enters the courtroom)

PRESIDING JUDGE TARFUSSER: [9:42:13] Good morning. Good morning,

Mr Kloosterman. You have to switch.

WITNESS: CIV-OTP-P-0601

THE WITNESS: [9:42:21] Good morning.

PRESIDING JUDGE TARFUSSER: [9:42:24] Thank you. Before starting the examination by the parties, I have to give you some information and do some things we're obliged to, like identifying you completely with name, date of birth and occupation and things like that.

Can you please tell us this, give us this information. Thank you.

THE WITNESS: [9:42:57] My name is Ate D. Kloosterman. I was born 25 September 1951 in Surhuisterveen in The Netherlands. My occupation since 1979 is a forensic DNA scientist at the Netherlands Forensic Institute in The Hague.

PRESIDING JUDGE TARFUSSER: [9:43:23] And you're a Dutch citizen.

THE WITNESS: [9:43:25] And I'm a Dutch citizen, yes.

PRESIDING JUDGE TARFUSSER: [9:43:28] Now, since you will be speaking English, like I do, and these proceedings are conducted both in French and in English simultaneously, it is important for us to speak slowly in order to allow a sound interpretation and recording of what we say. This is quite easy if we speak two different languages, but which will then be with the Defence teams who will speak French, but as long as we speak English, it's a bit difficult to comply with it. But in case you go too fast, I will give you a sign just for the benefit of our people in the booth. Thank you.

This Chamber has been established to try the case of the Prosecutor against Mr Gbagbo and Mr Blé Goudé. And you as an expert are called to do your part for the search of the truth. And this obviously within the area of your expertise and within the area you were asked to give your expertise. Obviously, you will be asked

questions by the lawyers in here, the Office of the Prosecutor and the Defence teams, and maybe also by the Judges, if something is not clear or for us not clear. And your only duty, what I am sure you know, is you have to tell the truth. And to this effect, I would ask you to read the formula you have in front of you. Thank you.

THE WITNESS: [9:45:30] I solemnly declare that I will speak the truth, the whole truth, and nothing but the truth.

PRESIDING JUDGE TARFUSSER: [9:45:39] Thank you very much.

Now I think we are ready for the questions by the Office of the Prosecutor, Mr Demirdjian.

If you at any point in time you have some concerns to raise, raise them with me.

Okay.

Mr Demirdjian.

MR DEMIRDJIAN: [9:45:59] Thank you, Mr President. Good morning, your Honours. Good morning to everyone in and around the courtroom.

QUESTIONED BY MR DEMIRDJIAN:

Q. [9:46:08] And to you, Mr Kloosterman, good morning.

You've already explained to the Court that you were working at the NFI since 1979, therefore, I would like to begin with your educational background. We also have your resume, which we will look at in a moment. Is it correct to say that in 1976 you obtained a university degree in biochemistry, clinical chemistry, and clinical immunology at Utrecht University?

A. [9:46:45] That is correct.

Q. [9:46:46] Very well. Following this, is it correct to say that you were a research fellow?

A. [9:46:57] Yes. After my study, I went to the central blood -- Blood Transfusion

Centre in Amsterdam, where I was for more than three years a research fellow.

PRESIDING JUDGE TARFUSSER: [9:47:07] Excuse me. Could we not just, if there would be an agreement, just take the curriculum vitae and put it in the record of the case?

MR O'SHEA: [9:47:29] We have no objection to that, your Honour.

MR KNOOPS: [9:47:32] We have no objection.

MS MASSIDDA: [9:47:34] We have no objection.

MR DEMIRDJIAN: [9:47:37] Very well, your Honours. The curriculum vitae before us will be CIV-OTP-0098-0608. Now we see it on our screen.

Do you see it before you, Mr Kloosterman?

PRESIDING JUDGE TARFUSSER: [9:47:54] Yes. We have it. We know it. It's submitted.

MR DEMIRDJIAN: [9:47:57]

Q. [9:47:58] And is the curriculum vitae you provided to us, Mr Kloosterman; is that right?

PRESIDING JUDGE TARFUSSER: [9:48:14] Well, it is submitted.

THE WITNESS: [9:48:17] This was my version of the CV that was sent by email to ICC.

MR DEMIRDJIAN: [9:48:23]

Q. [9:48:23] Very well.

Your Honours, I was going to go through the witness's expertise and professional background. I understand we want to fast track the proceedings a bit. However, you do have to accept the witness as an expert before we launch into his report. Therefore, do you wish for me to go through his experience before we hear about the report?

PRESIDING JUDGE TARFUSSER: [9:48:50] Well, it's in here.

MR DEMIRDJIAN: [9:48:52] Yes.

PRESIDING JUDGE TARFUSSER: [9:48:52] Yes, that's it. I would go to the report.

MR DEMIRDJIAN: [9:49:05] Very well. So before I launch into the report, Mr President, I would move to have the Trial Chamber recognise Dr Kloosterman as an expert, and I will use the terms in his report as an expert in forensic investigation of biological traces and DNA and DNA kinship analysis.

PRESIDING JUDGE TARFUSSER: [9:49:25] Okay. Please go ahead.

MR DEMIRDJIAN: [9:49:28] Thank you, Mr President.

Q. [9:49:34] Mr Kloosterman, could you tell us a little bit about your workplace, the Netherlands Forensic Institute. I will refer to it as NFI.

A. [9:49:45] My workplace is both at the NFI, Netherlands Forensic Institute, and the University of Amsterdam, the UVA, the Universiteit van Amsterdam, where I lecture forensic science, and my specialty there is DNA science, of course. A little bit on the department of DNA at the NFI. I started my career in 1989. Looking back, we were with five, six employees then. At the moment, we are with over 120 people at the department of biology and DNA analysis at the NFI.

We have a team of reporting scientists, and we have a team, different team, of people who take care of the evidence, who search the evidence, who extract the evidence for DNA, who analyse the DNA, and who are responsible for getting the profiles. At the end of the process is the DNA scientist, the reporting officer, and I'm one example of them.

Q. [9:51:14] Thank you for that clarification, Dr Kloosterman. Before we look at your report, there are some terminologies I would like to establish so that we get an understanding of some of the field-specific terms that are used in it.

First of all, we will see the term ISO 17025 standards, and that the NFI follows those standards. Could you tell us a little bit about these standards.

A. [9:51:55] Yeah, the ISO 17025 standard is a standard for laboratories, not only forensic laboratories, but all kinds of laboratories can have this standard. Especially in the forensic world it's important, especially for DNA scientists, that the analysis is undertaken by an accredited laboratory, that you know the procedures of that laboratory, and that you know those procedures are checked, and that the laboratory which has the accreditation is tested every 12 months by an independent party, as in The Netherlands, the counsel for accreditation.

PRESIDING JUDGE TARFUSSER: [9:52:39] May I say that also the ISO certificate is something which is known, what is an ISO, the quality, the quality certification. I think we should go to the report.

MR DEMIRDJIAN: [9:52:58] very well, your Honours.

Q. [9:53:16] Now, Mr Kloosterman, could you explain to us when the NFI receives a request for DNA identification, what is the process within the NFI?

A. [9:53:30] Are you referring to report number, because here we have quite a few reports here.

Q. [9:53:39] I'm talking about the general process before looking at the specific, when you receive a request --

A. [9:53:45] Yes.

Q. [9:53:45] -- from an external agency or like ourselves, the Court, when a request for DNA identification is received, what is the process within the NFI?

A. [9:53:56] Yes.

Q. [9:53:56] From the moment you receive the request until you produce the report.

A. [9:54:00] Yeah, in this case we had I think telephonic conversation that this case

will be brought to the NFI for DNA research and DNA identification work. So we make an appointment with the people who bring in the case that we sit ready to hear their stories and to take receipt of the items they have with them.

So we got some explanation about the case and about the materials which are brought to the NFI for DNA analysis. All the items have a unique identity seal both from the ICC as well as from the NFI. Those unique NFI seals were given when the case was brought in at the NFI and were immediately given these unique identity seals.

This seal is a crucial element in our DNA analysis because every step in the analysis is done under this specific number. So that's the first step, provide everything with unique identity seals.

The next step is, in this case we got both reference samples and items, reference samples from the bodies, get those separated, do them in separate analysis, important for our quality assured laboratories to have the possibility for contamination as low as possible, and we take care of that process.

So the next step actually is get the DNA out of the items and the reference samples. And for a reference sample, that's quite an easy process. In this case, we had to do with bone and teeth, which is a much more tedious process because you have to grind the bones and the teeth before you can get -- before you can extract the DNA from the bone or the teeth.

Can I continue?

Q. [9:56:40] Please do so, yes.

A. [9:56:44] Then we have the DNA in an extract in a watery solution. An important next step is that you know how much DNA is in that extract, so we quantify the amount of DNA in the extract. If the DNA concentration is extremely low, we report this with a few items. Then the possibility that you get a DNA

problem with that sample is extremely low. When the DNA concentration is high, we expect to get a DNA profile from that extract.

So, after knowing all the DNA concentrations, the next step in the process is the DNA amplification. Before we can analyse the DNA, it's so little amount of DNA, we have to amplify the DNA first, which is a routine process in every forensic laboratory, but not only in forensic laboratories but also in laboratory that deal with clinical genetics. After we amplify the DNA, we analyse the DNA. We have enough DNA then to get the specific information on the areas of DNA where we are interested in. In the forensic world, interested in areas of the DNA that are definitely called those areas loci that are different between different individuals. They have a high probability to be different. Because that's our work, at the end of the process, we would like to say, okay, this item belongs to that individual. You can only achieve that by looking to stretches of DNA that differ among different people.

We did it also in this case by using a routine method, our routine system looking at 15 DNA loci at the same time, those loci that are variable, variable between humans. One important locus is a so-called sex locus, which look to a marker, sex chromosomes. Women have two X chromosomes, males have an X and a Y chromosome. So this is extremely helpful in these identification cases that you know that the individual, looking at the unknown, is a male or a female, an important first step in the identification process.

Q. [9:59:45] Before you continue, Mr Kloosterman, can I ask you very briefly, for the Chamber's understanding, when you mention "loci."

A. [9:59:51] Yes.

Q. [9:59:51] Yes, what are we talking about exactly?

A. [9:59:55] We are talking about specific spot on the DNA, a spot that we know,

that we have identified, we know exactly where it is and we know exactly how it behaves. The DNA, the human DNA has millions of different loci, and I told you we are interested in those loci that are variable between different people. We have hundreds of thousands, so like millions of those area, as in the forensic world we selected between 15 and 25 of those specific loci, that we compare DNA profiles over borders, between different countries, and even between different continents. So we harmonise on that.

Q. [10:00:45] Now, you spoke about, in this specific case, having to grind a tooth. Just one question on this issue, is DNA found in particular parts of the body or can you find it in any parts of the body?

A. [10:01:05] You can find in every part of the body. Every part of the body that carries cells has DNA in the nucleus. So every part of the body contains DNA, but some parts have a much higher concentration than other parts. And the bones and the teeth are known for they have a very low DNA concentration, but the good news about these bones and teeth is that the DNA is well conserved there, that we can also get a DNA profile from those bones and teeth even after many, many years.

Q. [10:01:41] Now, you mentioned to us the terms "cells" and "nucleus." I'd like to focus on nucleus for a moment.

A. [10:01:59] Yes.

Q. [10:01:59] First of all, are there different times of DNA?

A. [10:02:04] There are different types of DNA. In this aspect in respect to this case only, the autosomal DNA is relevant. But apart from the DNA in the cells, we also have DNA -- separate from the DNA in a cell nucleus, we also have DNA mitochondrial DNA outside a nucleus which can also be important in identification cases, but not in this case.

Q. [10:02:34] So for the purposes of this case, it was the autosomal DNA?

A. [10:02:44] Yeah, it was the DNA from the nucleus which was relevant.

Q. [10:02:52] Now, can you explain to us how DNA was extracted? You were talking about grinding the samples that you had. How was the sample then analysed to obtain a DNA profile?

A. [10:03:07] What I tried to explain, the first step is the amplification process so you know how much DNA you've got in your extract. You know the optimal amount of DNA that you need for amplification. And those steps are done in little closed laboratory tubes. The extract is in a tube.

Summary agents are added. The tube goes into a thermocycle and that thermocycle does the work. And after an hour or so, the DNA is amplified millions of times so we can analyse it easier. Is all the DNA amplified? No, only the parts of the DNA we're interested in, the loci we're interested in are amplified and analysed.

Q. [10:04:00] Now, we will look at the report in a moment, but just before that point I would like to ask you, with respect to DNA of a specific individual, how does that, the DNA of that person, relate to relatives or parents?

A. [10:04:21] Yeah. Important about DNA is that you inherit it: Half of the DNA you get from your mother and the other half of the DNA you get from your father. So that makes DNA also an extremely useful instrument in identification cases, because when you have a father or a mother, or a son or a daughter available, you can identify such a person because you can recognise the pieces of the DNA that were inherited from the parents from that certain individual. So that makes DNA such a powerful means for identifying individuals, and that's also what we used in our laboratory.

PRESIDING JUDGE TARFUSSER: [10:05:14] Can we, excuse me, can we go to the

specific points, because there are lots of things known. I would go to the samples and the results and the --

MR DEMIRDJIAN: [10:05:31] Very well, your Honour.

PRESIDING JUDGE TARFUSSER: [10:05:32] Yes.

MR DEMIRDJIAN: [10:05:33] Yes, your Honours. I just wanted to make sure that DNA terminology has been established before we launch into the report. I have one last term and I will get to the report.

Q. [10:05:42] Mr Kloosterman, we also see the term "allele" in the report.

A. [10:05:47] Yes.

Q. [10:05:48] So could you explain to us what that is?

A. [10:05:50] Yeah, so I explained about loci, that in the loci of the forensic community, they have variable. So that means you have different alternative, alternatives like a blood group. Some people have blood group A; other have blood group B; other have blood group O. Those A, B and O are what we call alleles. The same is true on the stretches of DNA that we investigate, when you look in the population, you see for every loci between 8 and 20 different alleles. 8, and people can be different at that specific locus, and we have to have a name for it, and those names are the alleles.

Q. [10:06:56] I think there is also "allele frequency" is a term?

A. [10:06:59] Yes.

Q. [10:06:59] Can you specify what that is?

A. [10:07:03] Yes. After we have made the comparisons between the different profiles, for example, between a putative father and his son and we see those profiles give a familial match, the next question is of course, yes, what does it say, this match? How strong is the scientific evidence in this case? Before we can say something

about that, we have to see to the allele that transferred from that person to the child and we must have information, yeah, how rare is that allele that was transferred from parent to offspring.

So we take a population sample and we measure the alleles in that population sample. Those population samples can be hundreds of different individuals, non-related individuals. We analyse those individuals and we see how frequent is the allele then. You can compare it to how frequently is the blood group A. How frequent is the blood group B? How frequent is the blood group O in that specific population? You can only do that by testing a lot of different individuals. So we need that information to be able to say something about the evidential strengths of the familial match.

Q. [10:08:39] The report that I would like us to look at is the one dated 13 May. For the record, it is CIV-OTP-0084-3930. For your purposes, Professor Kloosterman, the NFI case number is 2014-0523159.

A. [10:09:11] It has request number?

Q. [10:09:14] Three.

A. [10:09:15] Request number 3. I've got it in front of me.

Q. [10:09:25] Okay. It's the one that says amended report, is that right?

A. [10:09:29] Yes.

Q. [10:09:32] I do not see it on the screen yet. Yes. If we can go to the cover page, please. Thank you.

The report is confidential, as it contains the names of protected witnesses.

Very well. Now, before we go into the substance, Professor Kloosterman, can you tell us, at the bottom of the page we see the term "amended report." Could you just explain why the term "amended" is added here?

A. [10:10:15] Yeah, because we had another report in this case a month earlier or so, which was from 27 March 2015. And we saw after this was sent that -- we saw that we made some typographical errors in this report. So we brought out a new report, which we called "amended report," and that is from 13 May 2015.

Q. [10:10:51] Okay.

A. [10:10:51] And what has been corrected is in the report from May 2015.

Q. [10:10:59] Very well. So if I could ask you to turn the page to the page which is entitled "case information," so it's the next page. Thank you very much. We can zoom it a little bit for everyone in the courtroom. Now, it indicates here in the upper part of the report where you see the word "samples" that "reference samples from 16 victims, unidentified persons," and then we see "reference samples from 12 relatives of six missing persons."

And just before that it is written "the remaining DNA extracts of human remains and the reference samples will be retained by The Netherlands Forensic Institute." Can I just ask you if this is still the case? Are they still maintained at the NFI?

A. [10:12:02] They're still maintained at the NFI, yes, yes, and will stay there until notice from the requesting authority.

Q. [10:12:10] Very well. Now, below that we see additional information where, as you just said a moment ago, you explain which typographical errors were corrected. Now, I have no questions about that, and I would like to turn to the next page, which has "title 1 samples received." Very well.

So in a nutshell, Dr Kloosterman, could you explain to us what we have in this table?

A. [10:12:51] Yeah. For the chain of evidence, it's important to see when we received it in January 2015. These items were received by the NFI from the International Court through Mr Baccard. And these are the items that we received at

the NFI from Mr Baccard. And the first column, column to the left, is what we call the DNA identity seal which is given by the NFI. So I told you the whole process at the NFI is dependent on this crucial number. When I want a reanalysis of a sample, I have to give this number. When I want a quantification, I have to give this number. So this is extremely important for the process at the NFI. But it also carries an original ICC number. This item is known through this number by the end ICC. So this gives a little translation between the numbers of the ICC and the numbers that were given by the NFI.

And then we have the description. It was a container with four teeth from victim 1, which is also ICC information. And that goes, the same story is true for all these different items numbers given by the ICC and the respective numbers given by the NFI.

Q. [10:14:44] Very well. You explained to us earlier the importance of the NFI ID number. Just below that, we see a section entitled "information and instructions received." Here you explain what instructions you received from the ICC. Now, there is a term here which says "previously established DNA profiles from reference samples." So do we understand from this that the DNA profiles of the relatives had already been established at that moment?

A. [10:15:23] Yeah. We had -- you're asking at the moment questions from request number 3. But there is also request number 1, in this case. This is not a report from my hand but from a colleague of mine, and in relation to request number 1, we received the items which are also mentioned in this table.

And that request number 1 is from 24 May 2014. That report is from 8 July 2014 that has been signed by a colleague of mine. So that's also the moment we received the reference sample from the family members.

Q. [10:16:19] So in January 2015 with respect to this report, you received new samples from victims?

A. [10:16:29] From other victims, yes.

Q. [10:16:30] Yes?

A. [10:16:31] Yeah.

Q. [10:16:31] And at that stage what you were requested was to compare their DNA profile to previously already established profiles from relatives?

A. [10:16:40] Yeah.

Q. [10:16:40] Do we understand that?

A. [10:16:41] Yeah. So we had the profiles of the relatives available. We had to analyse the new samples, get DNA profiles from those new samples, and make the comparison between the existing profiles from the reference samples.

Q. [10:16:58] And if we turn the page, please, to the next page, we see table number 2 -- in a moment. Very well. So is it right that this is the table where we find the previously-established DNA profiles from the relatives?

A. [10:17:27] Yes.

Q. [10:17:28] This was the list?

A. [10:17:30] This was copied from that other report, yes.

Q. [10:17:32] Okay. So below this table you explain the methods used to extract the DNA profile. And on the next page at 3.1, we see "DNA extraction and quantification." Now, here you explain that from the 16 victims, the following bodily material was used -- sorry, and pulverised, and the table lists for each victim what material was used.

A. [10:18:17] Yes.

Q. [10:18:18] Can you clarify to us one aspect of this. Below the table, there is a

sentence which reads "The concentration of total human and male DNA in the extracts were quantified using a duplex realtime PCR assay."

Now, my first question is, well, out of curiosity, why does it say only male DNA?

A. [10:18:49] Thank you for this question. I told you before that females have two X chromosomes and males have an X and a Y chromosome. This quantification method looks to whole amount of DNA but also to a certain -- to a certain locus of the Y chromosome. From the Y chromosome, we get the amount of male DNA. This is important when you are dealing with mixes, and because we have reference samples here, we do not expect to get mixes here. But in mixed analysis -- which is irrelevant in kinship analysis -- we perform, this information is important, that you know in a mixture I have so much male DNA and so much female DNA. So this is more or less a standard way of describing the quantification method at the NFI.

So from this information also you can get immediately if it's a male or a female individual, which you also get from the DNA profile which is done in a later stage after the quantification.

Q. [10:20:21] Very well. For a layman like myself, what does a duplex realtime PCR assay do at this stage of the process?

A. [10:20:32] Also, it also contains a very, very small amount of DNA. You can't analyse it directly for the concentration of DNA, also in this case. You have to amplify the DNA first before you can quantify the DNA.

And yeah, this is the name of the technology, it's realtime PCR, that you measure the concentration of the DNA during the amplification process. This is what is called realtime PCR.

So you follow the process through all these amplification cycles to get your information you're interested in, the concentration of the DNA. It's a process well

known to the scientists at the laboratories. I understand that laymen have difficulties in understanding this, yes.

Q. [10:21:41] It's all part of our everyday business. But thank you for that explanation.

A. [10:21:44] Yes.

Q. [10:21:45] So at the end of that process, what do you obtain?

A. [10:21:48] What we obtain is, we obtain only the information how much DNA is in your extract and how much male DNA is in your extract. That's the information we get, very important information for the next step in the process, that we know how much DNA we have to take for a successful amplification process. And we also know, okay, this sample has extremely low possibility of getting a DNA profile from because the amount of DNA is too small. And that sample has too much DNA for amplification, so we have to dilute that sample before we can amplify it. We didn't have that problem with these samples. They all contained a low amount of DNA, but in most cases, enough to get a DNA information from.

Q. [10:22:48] Very well. Then let's look at the DNA information on the next page at item 3.2, DNA profiling. Here, you explain the process in the first paragraph and the systems and the kits that were used.

A. [10:23:09] Yes.

Q. [10:23:09] And under 3.3 you explain how you compared the DNA profiles of victims and those of relatives of missing persons. Now, I'd like to look at this, under 3.3. The second paragraph begins with: "The Bonaparte Disaster Victim DNA identification software tool was used to compare the ante-mortem DNA profiling data from missing persons with the DNA profiles from the post-mortem reference samples from unidentified persons -- victims," sorry.

So just to understand this sentence, this is where you compare ante-mortem DNA. That's the one of relatives?

A. [10:24:04] Yes.

Q. [10:24:04] Okay. The next sentence begins with "The Dutch allele frequency was used." You can explained to us what a allele frequency was a moment ago. Can you explain to us why was the Dutch allele frequency used in this case?

A. [10:24:25] Yes. So we have the profiles from the victims, from the bone and the teeth samples, and we have the profiles from the living family members who provided their DNA, and they have to be compared, because there could be familial relationship between a victim and a family member.

You can do that by hand, but a much better idea is to do it electronically, which is done by this Bonaparte software. The profiles are transferred electronically to this software, and the software compares the profiles between victims and living family members, to call a relationship yes or no between a certain victim and a family member.

In case of a non-match, it's a non-match. There can't be any familial relationship, there can't be a familial relationship. As said, on the information from the ICC, a mother-child relationship, a father-child relationship, a kinship relationship, we have a non-match. End of story. We can't call a familial relationship.

But in case of familial match, what I said is, what you want to know, what is the strength of the evidence. Is it strong or is it weak evidence? We want to know that. The DNA also gives the possibilities that you can answer these questions.

And I told you also that for estimating the frequency of a certain allele that you find in a case, that you have to measure that allele within the population. In the ideal case, within the relevant population, but sometimes you don't have that relevant

population available.

We had a big database from The Netherlands available, a population genetic database. All people in that database volunteered to have their DNA sample analysed for this purpose. So that was the related database that we had available. And that was used in this case.

That is what we tried to explain here.

Q. [10:27:09] And just for everyone's understanding here, is there any impact in using the Dutch allele frequency data to a non-Dutch population such as the one in Côte d'Ivoire?

A. [10:27:21] We haven't done this because also we lack a population genetic database from the country that you mentioned. That can have an effect. But in this case the likely ratio, which was mentioned, was extremely high. There was extremely strong evidence using the Dutch database. We expect that the evidential value, the likelihood ratio will be also high, extremely high, when you use a different DNA database; for example, the DNA database from this particular country, Côte d'Ivoire. But it has effect.

Q. [10:28:23] So could you explain to us a little bit how the likelihood ratio is calculated?

A. [10:28:31] Yeah. We have mathematical formulas, quite simple mathematical formulas for every possible familial relationship, a child and a parent, two brothers, two sisters, also half siblings. We can make calculations, and these calculations are made electronically. So we use a computer programme to make these calculations, and Bonaparte can make these calculations for us. So it can not only call the familial matches, but it also comes with a likelihood ratio. It's the likelihood ratio that we report, and we also reported in this case. But you must feed Bonaparte with

appropriate population genetic sample. In this case, we use Dutch allele frequency data which is used in all our standard identification cases.

Q. [10:29:33] Very well. So you're saying that in your experience, this has been used in other cases in Holland?

A. [10:29:48] Yes, yes.

Q. [10:29:49] Actually, since we're on this point, this is something that we hadn't covered in your CV because I don't think it is there, how frequently have you testified on DNA evidence in the past?

A. [10:30:00] Around 250 times in The Netherlands in the Dutch situation, yeah. This is my first international appearance.

Q. [10:30:15] And just the last question on this, and what type of cases did you give evidence?

A. [10:30:24] Most of the cases were criminal cases from The Netherlands where we had to compare a stain with a reference sample from a suspect with a DNA profile that matched, gotten from the DNA database, that kind of cases. And maybe in 10 of those 250, a kinship analysis played a role.

Q. [10:30:49] Very well. Now, you explained to us that when there was no match, that was the end of the story?

A. [10:30:58] Yeah.

Q. [10:30:58] And then when there's a match, you establish this likelihood ratio?

A. [10:31:02] Yes, you make your calculations, yes.

Q. [10:31:04] So at this stage, do I understand that the match is more of the result of the scientific analysis, and then you have a more statistical aspect to your conclusions? Do we have to understand it in that way?

A. [10:31:19] Yeah, but those always go together. Also, when you are dealing with

a straightforward DNA case, the DNA profile from a cigarette end, we have a suspect and we see that their profiles match, they always, they always want to know how strong is the evidence that you got in this particular case. We can make these calculations with the DNA profiles you get from the evidence.

Q. [10:31:50] So if we can look now at the results --

A. [10:31:55] Yes.

Q. [10:31:55] -- which is section 4 of your report. So you begin with, here, victim number 13, no DNA profile was obtained, but you're able to obtain profiles for the remaining 15 victims. And you established that 14 of them had a female genotype. Now, I have no questions about this segment of your result.

I would like you to go to the next page, section 5, "DNA identification results." Okay. Now, here you explain that the DNA profiles from the unidentified victims were compared with the DNA profiles from the relatives mentioned in table 2 and likelihood ratios were calculated.

Under item number 1, we see here that the DNA profiling results of remains -- there is a number here.

A. [10:33:05] Yes.

Q. [10:33:05] AAHJ2574NL of victim 3 show a familial match with the relatives of Gnon Rokia Ouattara. Then, here you express a number "Given the family tree, the DNA typing results are more than one thousand million times more likely if the tooth originated from Gnon Rokia Ouattara than if this tooth originated from an unrelated random female."

Now, this ratio of one thousand million times more, can you explain to us how we're supposed to understand it?

A. [10:33:57] What is exactly your question?

Q. [10:34:14] Perhaps to be more specific --

PRESIDING JUDGE TARFUSSER: [10:34:18] Can you explain to us number 1, the result which you indicate in number 1.

THE WITNESS: [10:34:24] Yes. So in this case we had a match. Having reviewed familial relationship number 3 and family members, we had here an unidentified person which fitted in that picture. So it could be a possible positive identification. Next question is how strong is the evidence? How we can answer that question. And we do this through our likelihood ratio calculation. In the old days, it was also called a paternity index, when we looked at paternal investigation to say somebody was the father, yes or no.

And the outcome, before you do a likelihood ratio calculation, you must have two scenarios and see which scenario fits your analysis results best. So we have here a scenario number 1, they are related; number 2, they are not related. It's an unrelated individual.

So under both scenarios, we calculated the strength of the evidence. What is the probability of getting these DNA typing results under this scenario and under that scenario? And we divide the two.

In this case, we came out to a factor of a billion, which is called a thousand million, which is extremely strong evidence. This is also our threshold value. We don't report values above a thousand million. I can't tell you the exact figure now, but significantly higher than that thousand million.

So this is our scale for calculating the strength of the evidence in familial relationships in kinship testing.

Q. [10:36:43] So you answered my next question, which is that this is indeed the highest level you ever report even if the strength is higher?

A. [10:37:01] Yes, yes.

Q. [10:37:02] So from this conclusion, Professor Kloosterman, would it be fair to say that it would be very unlikely for anyone else with a similar DNA profile to have a familial match with the relatives who provided a DNA sample?

A. [10:37:25] Yeah, the only thing I can say is that the probability that an unrelated person would fit this is extremely low. That's all in this figure of a thousand million. So when I would, for example, take my own profile and see if I could fit this picture, the possibility that it would fit is extremely low.

Q. [10:37:57] And the same conclusion we see under number items 2 and 3 --

A. [10:38:04] Yes.

Q. [10:38:05] -- with respect to the familial match to the relatives of Malem Sylla and under number 3 with the relatives of the missing Moyamau Koné?

A. [10:38:19]. So in all these cases we got this factor of more than a thousand million, which is our threshold value.

Q. [10:38:29] Okay. And the numbers we see here, the remains which starts with AHJ, these are the numbers given to the samples received like the tooth; is that what this number refers to?

A. [10:38:44] Yeah. These are the NFI numbers, unique seal numbers that were given by the NFI in the identification process in the analysis process.
So you need the other table again on page under 3.1.

Q. [10:39:15] Yes.

A. [10:39:17] To get all the information about that specific NFI number.

Q. [10:39:21] Right. So reference, it is page 0084-3934 where your Honours can find the table containing these NFI reference numbers.
This is table you are referring to, Professor; is that right?

A. [10:39:44] Yes, yes.

Q. [10:39:45] Very well. And the last page of your report under item number 6, Additional DNA Analysis, you mention here that on request of Dr Baccard, the femur from victim 8 will also be analysed. The reason for this request is the possibility of commingling of remains, teeth and femur in this case.

So I understand that the outcome of this was reported in a separate report.

A. [10:40:24] Yes.

Q. [10:40:24] Okay. Now, at the bottom of the page we see your name, and is that your signature?

A. [10:40:30] That's my signature, yes.

Q. [10:40:31] Very well.

Your Honours, I would move for the report to be considered submitted at this stage.

PRESIDING JUDGE TARFUSSER: [10:40:38] Yes.

MR DEMIRDJIAN: [10:40:40] Your Honours, I see we have five minutes left. I do have to go through the second report. Would this be an appropriate time to pause?

PRESIDING JUDGE TARFUSSER: [10:41:02] Okay. Let's pause half an hour and then we'll be back at 11.15. That's okay with you?

THE WITNESS: [10:41:08] That's okay with me. Thank you.

PRESIDING JUDGE TARFUSSER: [10:41:10] Thank you very much.

So the hearing is adjourned to 11.15. Thank you.

THE COURT USHER: [10:41:16] All rise.

(Recess taken at 10.41 a.m.)

(Upon resuming in open session at 11.19 a.m.)

THE COURT USHER: [11:19:04] All rise.

Please be seated.

PRESIDING JUDGE TARFUSSER: [11:19:29] Good morning again.

Good morning, Mr Kloosterman.

The floor is immediately to the Office of the Prosecutor for its questioning.

MR DEMIRDJIAN: [11:19:36] Thank you, Mr President.

Q. [11:19:38] Professor Kloosterman, I only have a few questions on the second report, which we will show on the screen. Could I pull up CIV-OTP-0083-1482? It's, for your reference, it is 23 June 2015, request number 4.

So, Professor, let me know when you have it in your hands.

Very well.

So we see the cover page, similar to the previous one. If we could go to the next page, Case Information, I see again the same information that we've seen in the first report. So no questions on this one.

Let's go to the next page, please. So for you it would be the third page, with item number 1, Samples Received.

Now, Professor, from a glance at this page, I understand from section 2, Information and Instruction, that there was a request for an additional DNA analysis on the femur from victim 8.

Now, victim 8 from the first report was one of the three victims for which there was a match; is that correct?

A. [11:21:34] Yes.

Q. [11:21:34] Please turn on your microphone so we can hear your answer.

A. [11:21:38] That is correct.

Q. [11:21:38] Thank you. And the reason for this additional request is a possibility of commingling of remains. Now, I mean, "commingling," is this a scientific term or is there anything special about this term?

A. [11:21:56] Yes, we use it in identification cases especially when people come from mass graves, that you do not know if all the bones that you see are from the same body or from more bodies. So then we talk about commingling, something always -- should always keep in mind when you are dealing in case scenarios like this where you have more victims which can be from more individuals in a mass grave, like we possibly had here.

Q. [11:22:26] Very well. So I see under item 3, Methods, again, it's the same as in the first report. So I have no questions about that.

I would ask you to turn to page 2, item 3.1. Here again we see that what was pulverised is a femur sample which was given a specific NFI item ID number; is that right?

A. [11:22:57] Yes, that's right.

Q. [11:22:58] So the question that I have for you is under number 4. You explain that from the femur, and you have the ID number here, a partial DNA profile from a woman has been obtained and the partial DNA profile of the femur was compared to a DNA profile from the tooth.

First of all, what is a partial DNA profile, Professor?

A. [11:23:29] What I tried to explain you before is, using the MGM kit, the MGM analysis kit, commercially available kit, we can get typing results of 16 different loci and the sex locus. Sometimes when your amount of DNA is limited, all your DNA is degraded, you can't get a full DNA profile. You don't see all the results that you expect to get.

Then we're talking about the partial DNA profile does not contain all the information but can contain still very valuable information. That was in this case that you only had a partial DNA profile from this femur extract.

Q. [11:24:21] And do I understand that a partial DNA profile does not prevent you from doing a comparison between two profiles?

A. [11:24:28] No. Only when the DNA profile is too partial that you get too little information from it. You can also expect that the scientific evidence that you get from it will be extremely low. So you expect to get a lower scientific evidence value, a lower likely ratio. So we want always as much information as possible. It's not always possible.

Q. [11:24:58] Very well. And if we look at the identification results on the next page, section 5, here you explain that the partial profile of the femur matches the DNA profile from the tooth. So this still relates to the same victim number 8?

A. [11:25:20] This relates to the same victim, yes.

Q. [11:25:22] And you expressed the results in the same formulation as we saw in the same -- in the earlier report, which is that the results are a billion times more likely if the femur and the tooth are from the same person than if these remains are from two different non-related females. So is it again the same type of likelihood ratio we're talking about here?

A. [11:25:47] This is a little different. What we have here is a partial DNA profile from the femur and we have a DNA profile from the tooth.

The question they had: Are these two items from the same individual? That was the first question that was asked. Or did commingling take place? What we see here is the partial DNA profile from the femur matches all the information from the DNA profile from the tooth.

So that's important information if you want to conclude are these two items from the same individual, yes or no. We've got extremely strong evidence here that they are from the same victim.

Q. [11:26:29] Very well. And again, at the bottom, we see your name and your signature?

A. [11:26:39] Yes.

Q. [11:26:39] Is that right?

A. [11:26:40] Yes.

Q. [11:26:40] Very well.

MR DEMIRDJIAN: Your Honours, just as the first one, I would submit this to be considered as submitted.

That would conclude my questions for this witness, your Honours.

PRESIDING JUDGE TARFUSSER: [11:26:54] Thank you very much. Before, just before reverting to the Defence, I would like just for my clarification to pose you a question. So did you receive -- I put them in not leading but in direct. From whom did you receive all the samples you analysed?

THE WITNESS: [11:27:24] Yeah, I didn't receive them myself.

PRESIDING JUDGE TARFUSSER: [11:27:27] Well, you or the NFI, yes.

THE WITNESS: Yes.

PRESIDING JUDGE TARFUSSER: Well, the institute.

THE WITNESS: [11:27:31] Yes. And the information I got is in my report.

PRESIDING JUDGE TARFUSSER: [11:27:37] Yes.

THE WITNESS: Brought by the ICC.

PRESIDING JUDGE TARFUSSER: Okay. So did the NFI do any further autonomous investigation on this, on the origin of these samples?

THE WITNESS: [11:27:44] No, no. We only provided the samples with the unique identification number and that was it, and then it went straight through DNA testing.

PRESIDING JUDGE TARFUSSER: [11:27:58] So you were never confronted with the

facts which originated these samples themself?

THE WITNESS: [11:28:05] No.

PRESIDING JUDGE TARFUSSER: [11:28:05] No.

THE WITNESS: [11:28:07] Only that they were from teeth or from femur. That was the only information that we got.

PRESIDING JUDGE TARFUSSER: [11:28:11] So no further question.

Maître Altit, but I don't see him.

MR O'SHEA: [11:28:22] The team for Blé Goudé is beginning, yes.

PRESIDING JUDGE TARFUSSER: [11:28:25] Oh, okay, I'm sorry.

Mr Knoops, and please don't speak Dutch. Please don't speak Dutch with the witness.

QUESTIONED BY MR KNOOPS:

Q. [11:29:18] Good morning, Professor Kloosterman. My name is Geert-Jan Alexander Knoops. I'm a lawyer practicing in The Netherlands, and I'm one of the counsel of Mr Blé Goudé. Thank you for joining us this morning.

I have some additional questions on two reports. The first one is the amended report and the second one is the report on the investigation or examination on the T-shirt.

First report we would like to discuss with you is the report or amended report of 13 May, and that's request number 003.

The Prosecution already delved into this report to some extent, and I have some remaining questions.

My first question relates to the first page where you find the case information. That's, for the Court, CIV-OTP-0084-3931.

On this page, Professor, you find under the caveat Additional Information under

paragraph 2 - you have the report, I guess, before you - an adjustment which doesn't relate to the typographical errors initially reported on page 7. But we're dealing here with an error made in the ICC numbering of the samples of table 1, and the report mentions these errors have been adjusted.

Now, my first question to you is what type of errors in the numbering of the examples we are dealing with here?

A. [11:31:54] Then I should make an in-depth comparison between the two reports. I can't tell you now from which errors were -- which were the errors that were corrected.

Q. [11:32:22] I understand that these errors are different from the one mentioned under sub 1, the typographical errors. These were errors made in the numbering --

A. [11:32:32] Yes.

Q. [11:32:32] -- weren't they?

A. [11:32:33] Yes, yeah.

Q. [11:32:35] Who discovered these errors in the numbering? Can you remember who alluded to these errors?

A. [11:32:45] I think they came from ICC. When I have the whole case information with me, I can tell you, I can tell you more specific, but not from the information I have in front of me, for me now.

Q. [11:33:01] You don't have information before you to inform the Court what type of numbering these errors related to?

A. [11:33:10] No.

Q. [11:33:11] No, all right. Can you remember by whom these errors were adjusted, apart from discovering these errors? The report mentions under 2 these errors have been adjusted. By whom were these errors adjusted?

A. [11:33:32] By the NFI.

Q. [11:33:34] And can you recall which person in specific? Was it you or a colleague who --

A. [11:33:44] No, it was definitely not me, but I can't tell you who discovered it.

Q. [11:33:51] And can you enlighten us on the time frame when these errors were discovered?

A. [11:33:57] Not without the information I have available, but not here.

Q. [11:34:04] Were you yourself being put in a position to check whether the previous errors were indeed corrected with the correct numbering, or was this information being brought to you by a colleague and you implemented them in table 1?

A. [11:34:32] That's exactly what happened, yes, sir.

Q. [11:34:34] So you received information from a colleague from the NFI --

A. [11:34:37] Yes.

Q. [11:34:37] -- saying there were errors?

A. [11:34:40] Yes.

Q. [11:34:41] And you implemented?

A. [11:34:42] Yeah.

Q. [11:34:43] So you are not in a position to verify whether indeed the numbers in table 1, you have the left column, NFI ID number and the right column ICC number, you were not able to verify these numbers yourself, were you?

A. [11:35:00] No. We have an electronic system at the NFI containing the case number but also the items and the numbers that were given to the respective items. So I check that, if that information was corrected, electronic information, and that was also the information that was in my report; I checked that.

Q. [11:35:21] In relation to the question of the Presiding Judge, can you remember how the samples were delivered at the NFI, the samples we're speaking of in table 1? You mentioned, for instance, one container. Were you yourself able to verify how these samples were delivered? Or you relied on information of a colleague?

A. [11:35:52] I relied on the information of the front office at the NFI and I also relied on the information that was taken from photographs. Every item that we received is photographed.

Q. [11:36:04] Yes.

A. [11:36:04] So I looked to that information.

Q. [11:36:05] Yes. Can you remember, Professor, whether the sending party, i.e. the ICC, provided to you a written chain of custody form which related to these samples?

A. [11:36:27] Yes. From the moment it was brought by the ICC and then a transfer moment to the NFI, that was documented very well.

Q. [11:36:35] Were the specific chain of custody documents available for every item? Can you recall that?

A. [11:36:43] Yeah. What I recall is also a table with signatures of the transfer moment of the specific items to the NFI.

Q. [11:36:54] Could it be the formula which is titled transfer -- Transmission/Reception Form?

A. [11:37:04] Not here.

MR KNOOPS: [11:37:05] Can we perhaps call up document, sorry, that's attached to the mission report of Dr Baccard, CIV-OTP-0084-3939, and then page number 3945.

Q. If you look at the screen, Professor, you see a document on letterhead of NFI called Transmission/Reception Form. You see on the left column a list of items

transferred?

A. [11:38:02] Yes.

Q. [11:38:02] With numbers, description in the middle and at the right-column remarks.

Is this the chain of custody form you referred to?

A. [11:38:12] This is an example of a chain of custody form, yeah, refers to another item than the item we just discussed. This refers to a T-shirt.

Q. [11:38:19] Yes.

A. [11:38:20] Yes.

Q. [11:38:20] I will return to the T-shirt in a minute. This is a chain of custody form drafted by the NFI. What I meant was whether these type of forms were also transmitted by the investigators of the ICC to NFI?

A. [11:38:43] I have to go to the case file to look for the information.

Q. [11:38:48] Looking at this document, Professor, it mentions at the top in writing, "incident women demonstration 3rd March 2011."

A. [11:39:03] Yeah.

Q. [11:39:04] Who wrote this qualification? Can you remember that? Was it NFI itself or was it somebody who presented this information to NFI?

A. [11:39:24] Perhaps this information was presented to the NFI but I don't know by whom and who wrote it down.

Q. [11:39:29] It's not your handwriting?

A. [11:39:30] It's definitely not my handwriting, no.

Q. [11:39:33] And with respect to the right column of the first part of the table, you see on the right side "DNA tears/bullet hole; composition, black material."

Was this the information which was given to NFI by the ICC investigators? Can you

remember that?

A. [11:40:01] Yeah, but I don't know who wrote it down.

Q. [11:40:03] Okay.

A. [11:40:03] Of course it's related to the investigation needs from the ICC, but I don't know who wrote this down.

Q. [11:40:09] Yes. You -- and that's transcript page 14, line 21 of this morning's hearing, you said to the Chamber that you received some explanation about the case and about the materials.

Can you remember, Professor, what information you were given by the ICC prior to your investigation, to your examination about the case itself, the facts of the case? How was the case presented to you by the ICC investigators?

A. [11:40:52] I never spoke to the people from the ICC. But the people who spoke to the ICC were the people from our front office, Mrs Eerhart and Mrs O'Sullivan. They are the contacts between the ICC and the NFI.

Q. [11:41:10] What was the information you had prior to your DNA examination? What, if any, was the information you had on the facts of the case? How was the case being presented to you by those intermediaries?

A. [11:41:28] That the most important thing was that they had a number of bones and teeth from a mass grave. They had to be compared with reference sample and to look for any matches. That, I didn't have a name of suspects also, and I had no detailed information on the case. I know it was from the Ivory Coast, but that was more or less it.

Q. [11:41:53] Was it prior to your examination, Professor, known to you that the samples which were presented to NFI allegedly related to an incident in Côte d'Ivoire which had to do with a demonstration by women on the 3rd of March? Was this

known to you before your DNA examination start?

A. [11:42:20] On the T-shirt, you mean?

Q. [11:42:22] Yes.

A. [11:42:24] I think, yeah. I know, I knew that information, yes, yeah.

Q. [11:42:28] And was the information also presented to you that this T-shirt allegedly had a bullet hole, such as demonstrated by the transmission reception form I just showed you?

A. [11:42:47] I know that the T-shirt was the topic for multidisciplinary investigation, so that more people had to look at the T-shirt, not only from the DNA, but also other forensic disciplines. So that was the important part of the information, that we had to be careful with the T-shirt and that it required a special approach.

Q. [11:43:11] Right. Professor, without going into much detail of the ISO 17025 standard norms, requirements for the competence and testing of testing and calibration laboratories, in footnote 6 of your amended report, you refer to an article of Dr Gjerston, but you didn't refer in footnote 6 of your amended report to the article, and that's where my question comes in, of Professor Niels Morling. He was a member of the paternity testing commission, as you know, Dr Niels Morling, Department of Forensic Genetics, Institute of Forensic Medicine in Copenhagen, Denmark, who issued an article in Forensic Sciences International in 2002, together with Professor Robert Allen, et al. So all the members of the Paternity Testing Commission wrote this article.

And I've uploaded this article, it's CIV-D25-0039-0017. Maybe you can look at the screen. Whether you recognise the article, that's my first question, whether you are familiar with the findings of Dr Morling, et al., in Forensic Sciences International of 2002, published 15 July 2002 to be more specific. That will be my first question. If

correct, you have the article in front of you.

A. [11:45:20] I have the article in front of me now, yeah.

Q. [11:45:23] Yeah. You are familiar with this publication, Professor?

A. [11:45:28] Yes, yeah.

Q. [11:45:29] In short, the Paternity Testing Commission in which Professor Morling was participating recommends that genetic testing, including sampling, be performed according to the already-mentioned ISO standards. And interesting part of this article is that this commission, part of the International Society for Forensic Sciences: Genetics, offers several explanations to the -- or recommendations to these ISO paragraphs.

In this article, which was as mentioned not included by you in your footnote 6, it's being said in paragraph 5.7, and I kindly ask you to look at this paragraph, that's CIV-D25-0039-0023. You see the ISFG recommendation drafted by the PTS, the Paternity Testing Commission, the additional recommendation, and that's also in relation to maybe the question of the Presiding Judge, procedures guaranteeing the identity of the individual from which the sample was taken and the traceability of the sample shall be covered by the contracts with the clients.

Now, my question is I assume that the ICC was in a way your client, a client of the NFI to use the words of the PTS. How was, if any, a procedure being put in place to guarantee that the samples which you received from ICC indeed reflected the real identities of the alleged family members in accordance with paragraph 5.7, the ISFG recommendation?

A. [11:48:04] I think the answer to this question is with the ICC and not with the NFI, because we were not involved in the sampling of the reference material for living members or with the sampling of the bone and the teeth from the deceased ones.

Q. [11:48:27] To be clear to you, Professor, that also counts for the report 001, because you yourself mentioned the report drafted by your colleague, Professor or Dr van Dongen of 24 May 2014 and the paragraph 1, "samples received," but also here, isn't it, it holds true that your colleague van Dongen didn't verify the veracity, authenticity of the samples received from ICC; is that a true reflection of the --

A. [11:49:09] Yes.

Q. [11:49:10] -- variety? Thank you.

MR DEMIRDJIAN: [11:49:10] Your Honour.

PRESIDING JUDGE TARFUSSER: [11:49:11] Mr Prosecutor.

MR DEMIRDJIAN: [11:49:11] Your Honours, Mr Knoops has just made reference to a report without giving us the reference; number one. Number two, the expert cannot give any explanations about the substance of another person's report. So I think this question is irrelevant.

MR KNOOPS: [11:49:28] Well, it was the expert who raised this report himself to, what I understand, to substantiate his answer as to the origin of the samples.

PRESIDING JUDGE TARFUSSER: [11:49:42] I just realised that you made a very long question obtaining the same result as I did with a short question.

MR KNOOPS: [11:49:49] That's true, Mr President. As Defence, we don't have the luxury that we can say things without foundation. I'm sorry.

It's tab 21 of our Defence materials, Mr Prosecutor. That's the report I mentioned, the report 001, tab 21 of our list of materials.

Q. [11:50:11] On this very topic, Professor, could you please look at the next page of the article we just delved into by Dr Morling, et al. That's paragraph 5.10.3.2, CIV-D25-0039-0024. You find, Professor, at the bottom of that page of this article, 5.10.3.2, "the test reports containing results of sampling shall include the following

were necessary for the obtaining of test results." And then you see an enumeration of in total six points, "date sampling, unambiguous identity of substance, location sampling," et cetera.

I take it that also here you relied on the information of the ICC in order to verify whether this recommendation was met, isn't it?

A. [11:51:29] Yeah, but we did not refer to this recommendation. We referred to the recommendation of Gjerston.

Q. [11:51:37] Yes?

A. [11:51:38] This is the Morling article.

Q. [11:51:39] Yes, correct.

A. [11:51:40] Yeah, yeah.

Q. [11:51:41] I understand. I understand you referred to the article of Gjerston. But the recommendations made by the PTC, you mentioned in your amended report that you followed those recommendations. I take it that you refer to these recommendations?

A. [11:52:03] Yeah. In the way, how we call, how we calculate likelihood ratio and what to do with the conclusions.

Q. [11:52:10] Right.

A. [11:52:11] Because this is specific for paternity testing. Here we have a living putative father and living family members. This is a completely different situation than digging up the items from the ground, get the teeth and the bones, and bring them to a laboratory. You can't compare that situation with the situation given here.

Q. [11:52:33] So are you saying that, in this specific case, NFI could not apply these recommendations? That's your statement?

A. [11:52:42] Not with respect to the identity of the sampling.

Q. [11:52:46] Okay. Right.

A. [11:52:53] But we have no doubt on this.

Q. [11:52:54] Right. What about paragraph 5.10.6, "When the test report contains results of tests performed by subcontractors, these results shall be clearly identified." Is it your testimony that this paragraph 5.10.6 or this recommendation doesn't apply to the instant case?

A. [11:53:26] No, not with respect to the DNA analysis. All the analysis were done at the NFI and there was no --

Q. [11:53:34] Okay.

A. [11:53:35] -- matter of subcontraction of DNA tied to the results also.

Q. [11:53:39] Right. My last question on this report, Professor, relates to your statement this morning, that's transcript page, English transcript page 28, line 5, you said, "All samples contained a low amount of DNA."

Was it --

A. [11:54:01] Meaning the samples from the femur and the tooth.

Q. [11:54:04] Yes, exactly, exactly, yes.

A. [11:54:06] Yes.

Q. [11:54:06] Was ever considered to, because you used the traditional PCR technique, was ever considered in this regard to use the technique known by Low Copy Number method, LCN, which has been applied by NFI before, which is adjusted for low amounts of DNA?

A. [11:54:35] Yeah, I think also without the LCN -- LCN, we use none from the tissues, when we can't get any typing results from a certain sample and we're extremely interested to get a typing sample from that. In this case from most of the samples we had informative DNA profiles. So LCN analysis was not necessary here.

Q. [11:55:03] Right. Thank you.

Those were my questions, Professor, for the first report, the amended report. The second report which was not touched upon by the Prosecution is the report drafted by you, that's request number 005.

MR KNOOPS: [11:55:46] Mr President, the report has not been released but we have hard copies, and I'm sure that Professor Kloosterman has himself the report.

PRESIDING JUDGE TARFUSSER: [11:55:54] Yes, because he was authorised to have it.

MR KNOOPS: Okay.

PRESIDING JUDGE TARFUSSER: So I have it as well. 12 August 2015, right?

THE WITNESS: [11:56:00] 2005?

PRESIDING JUDGE TARFUSSER: Yes.

MR KNOOPS: [11:56:03]

Q. [11:56:03] Yes, it's from 3 August 2015, multidisciplinary forensic examination in the ICC, et cetera.

A. [11:56:10] I've got it in front of me, yes.

Q. [11:56:13] ICC-OTP-0086-0568. That's the report you just mentioned?

A. [11:56:21] But this is not the report on the screen.

Q. [11:56:24] No, not yet. It's the report on the T-shirt?

A. [11:56:41] Yes. It's not on the screen yet. I've got a T-shirt in front of me.

Q. [11:56:50] Yes.

A. [11:56:52] Yes.

MR KNOOPS: [11:56:52] It's not on the screen but I can proceed, Mr President?

PRESIDING JUDGE TARFUSSER: [11:56:55] Yes.

MR KNOOPS: [11:56:56] Thank you.

Q. [11:56:57] Professor, with respect to this report, you find under paragraph 2, actually also in paragraph 1, under the title Exhibits: Description according to request form, T-shirt victim. That's the first table. And then you see in the second paragraph, Background Information. Second paragraph, Evidence Description: T-shirt worn by the victim.

My question was who gave you this information that this T-shirt related to a victim and that it was actually worn by a victim related to the incident of the women's demonstration on 3 March? That's the first paragraph of the background information at paragraph 2.

A. I don't know who wrote it on the evidence bag, if that was the NFI or the ICC.

Q. Yes.

A. It was definitely not me.

Q. [11:58:14] So you took actually from the evidence bag this information and put it in your report?

A. [11:58:17] This report is signed by more people?

Q. [11:58:24] Yes, of course.

A. Yeah.

Q. I'm sorry. Of course.

A. So I don't know who took that information.

Q. [11:58:28] One of the three of you?

PRESIDING JUDGE TARFUSSER: [11:58:30] Please do not overlap.

MR KNOOPS: Sorry.

PRESIDING JUDGE TARFUSSER: Please don't overlap.

THE WITNESS: [11:58:36] So this report is written by three people. I didn't put this information in.

MR KNOOPS: [11:58:50]

Q. [11:58:50] Were you yourself able to inspect the evidence bag you referred to?

A. [11:58:57] I have not inspected the evidence bag.

Q. [11:59:02] Okay. Since this is a multiple -- multidisciplinary forensic examination drafted by three experts, one of them being you, did you discuss with your two colleagues, Dr van der Weerd and Dr Knijndenberg, the results of their examination on their respective disciplines, Mr van der Weerd, fibres and textile, and Dr Knijndenberg, gunshot residue, was it discussed after the three of you completed your respective analysis?

A. [12:00:02] Yeah, of course, at a certain moment you get a report.

Q. [12:00:07] Yes.

A. [12:00:07] And there you have the whole report in front of you. So yeah, I knew of their findings, yes.

Q. [12:00:14] Can you perhaps enlighten us on the conclusion by Mr van der Weerd on the fibres and textiles, where he mentions in the report, and that's page 5 of the report, under paragraph 5, Results: "The T-shirt is in a remarkably good condition given the information received, i.e., that it had been buried for a number of years"? In connection with his finding in paragraph 6.2, that's page 6 of the report at the very end, you see, "The overall good condition of the T-shirt excludes wear and tear." So on two occasions your colleague van der Weerd referred to the remarkably good condition of the T-shirt given the fact that it had to be buried allegedly for a number of years.

PRESIDING JUDGE TARFUSSER: [12:01:27] Well, how can he answer the question which is not -- things not written by the witness himself?

MR KNOOPS: [12:01:33] That's true, Mr President, but he, the professor just

informed us that at the end of the examination they spoke. That's my understanding.

Q. [12:01:44] My question is, did you speak with Mr van der Weerd about this finding?

A. [12:01:49] No, I did not speak with him about this finding.

Q. [12:01:52] All right. In the part of the report which was drafted by you, that's paragraph 6.1, that's on page 6, Professor, of this report, Biological Traces and DNA Analysis, you first of all examined this T-shirt for the presence of blood, and you say, "This investigation gave no indication for the presence of blood."

That's the first line of paragraph 6.1 of the report.

A. [12:02:36] Yes.

Q. [12:02:36] Now, my question is what is the forensic qualification we should give to this term "no indication"? Is this within your discipline a high evidentiary qualification? Is it of a moderate degree, or low degree?

A. [12:03:00] I'll explain it a little bit further. We tested stains that we saw on the T-shirt, suspicious stains. We used an extremely sensitive test for the presence of blood. All the spots that we tested on the T-shirt, we tested negative. So the test was negative.

Q. [12:03:29] All right.

A. [12:03:29] So this is important information.

Q. [12:03:30] My second question relating to this paragraph, Professor, is the investigation, examination of the potential hairs, the presence of possible hairs were observed. You say these possible hairs were not yet examined but are stored together with the T-shirt.

What was the reason not to test those potential hairs?

A. [12:03:54] We could only test info mitochondrial DNA analysis and compare to something. There are no databases for mitochondrial DNA. So you must have a suspect or a victim or a witness to compare the mitochondrial DNA profiles with. So we choose here to save the hair for future, possible future analysis.

Q. [12:04:17] So you were not able to retrieve an autosomal DNA sample?

A. [12:04:22] No. By looking at the hair, you could predict already.

Q. Yes.

A. And that investigation is -- will damage the hair. It will consume the material of the hair so we could see this is of extremely low probability that we get an autosomal DNA profile from this hair.

Q. Yes.

A. So we didn't do that.

Q. [12:04:42] And your reason not to conduct a mitochondrial examination was?

A. [12:04:49] Mostly that nobody to compare it with.

Q. [12:04:52] Okay. Thank you.

A. [12:04:54] And no order from the ICC also yet.

Q. [12:04:56] Exactly.

A. [12:04:57] Yeah.

Q. [12:04:58] Yeah. Thank you, Professor. Last remark relating to this paragraph 6.1 is that no conclusion can be drawn on the question regarding the putative persons that have been -- or have worn the T-shirt.

That's indeed the conclusion you can confirm?

A. [12:05:22] Yes. It needs maybe a little explanation when you state it like this. So we looked for blood stains on the T-shirt, but we also took a few samples from inside the T-shirt. People who wear a T-shirt, you can expect that they lose some

DNA on their own T-shirt.

We secure those areas, but it was not enough DNA from those areas to analyse the DNA. So we can't draw any conclusion on who wear the T-shirt.

Q. [12:05:55] All right. Thank you.

MR KNOOPS: We submit, we ask the Court to submit this report, Mr President.

THE WITNESS: [12:06:04] But the hair still could do, of course.

MR KNOOPS: [12:06:07]

Q. [12:06:07] Of course.

A. Yeah.

Q. That's clear. Thank you. But that would then relate to potentially a mitochondrial?

A. [12:06:13] That would, yes.

Q. Yes.

A. And somebody to compare it with.

Q. [12:06:15] Exactly. Thank you, Professor.

My last question, and for this I have to go back to the amended report, actually at the very end. It's the report of 13 May 2015, where we started with.

A. Yes.

Q. Paragraph 5, that's CIV-OTP-0084-3930, page 3936. The Prosecution confronted you with the results relating to victims 3, 8, and I believe also 15, but didn't mention your overall conclusion, which is at the very end of this paragraph, namely, that if I have calculated correctly, 12 out of the 15 alleged victims could not be matched to any of the biological relatives of the missing persons?

A. [12:07:35] That's correct, yes.

Q. [12:07:36] And now my question to you is "could not be matched," is this to be

transformed into a more forensic, forensic empirical conclusion such as "This is for me, as an expert, the highest degree of qualification I can give to certain examination"?

A. [12:08:00] This is an exclusion.

Q. [12:08:02] Exclusion.

A. [12:08:03] Yeah.

Q. [12:08:03] Thank you.

PRESIDING JUDGE TARFUSSER: [12:08:04] Mr MacDonald.

MR MACDONALD: [12:08:07] The answer, your Honour, on record is fine. I just want to qualify the use of the word "victim" here.

PRESIDING JUDGE TARFUSSER: [12:08:13] Well --

MR MACDONALD: [12:08:13] It's bodies found in a mass grave. I mean, that's what I wanted to remind the Chamber, because we're not alleging that 12 victims died on 3rd of March.

MR KNOOPS: [12:08:32] Mr President, this concludes my examination. Thank you very much.

PRESIDING JUDGE TARFUSSER: [12:08:36] Thank you.

Now I revert to the Defence for Mr Gbagbo and to Mr O'Shea. Well, this concludes the Blé Goudé Defence as a whole?

MR KNOOPS: [12:08:57] Yes, Mr President. Thank you very much.

Thank you, Professor, for your time.

THE WITNESS: [12:09:02] Thank you.

MR O'SHEA: [12:09:03] It would be surprising if it concluded their Defence as a whole. Sorry.

QUESTIONED BY MR O'SHEA

Q. [12:09:16] Professor Kloosterman, is the correct pronunciation?

A. [12:09:20] Yes.

Q. [12:09:21] Really?

A. [12:09:21] Yes.

Q. [12:09:22] Okay. Now, just while we are on the subject of titles, when you were giving evidence, you referred to Mr Baccard, which is referred to as Dr Baccard in the report. Is he a doctor, Baccard?

A. [12:09:44] I haven't checked it, no.

Q. [12:09:46] Okay.

A. [12:09:46] So I take that information from other sources.

Q. [12:09:48] I see, okay.

PRESIDING JUDGE TARFUSSER: [12:09:49] But we know him.

MR O'SHEA: [12:09:51] Thank you, your Honour.

Q. [12:09:53] Now, obviously, you have a lot of experience with regard to the general subject of DNA and you're a university professor, so you've published a number of articles, which we have listed in your CV. I note that many of these articles are co-authored. Are any of these articles written by you alone?

A. [12:10:36] I don't think so. Most of them are co-authored, yes, if not all.

Q. [12:10:47] Yes. And which proportion of these articles are in accredited journals?

A. [12:10:59] These are all peer-reviewed journals.

Q. [12:11:02] Very well. And do any of these articles deal with the problem that you are dealing with in this case, which is the problem of comparing the DNA from alleged victims with the DNA from family members?

A. [12:11:29] Yeah, that's for example the article on the MH17 disaster.

Q. [12:11:38] These are the plane crashes?

A. [12:11:42] Yes.

Q. [12:11:42] Yes.

A. [12:11:43] But we also wrote a peer-reviewed article on that in a Dutch journal.

Q. [12:11:47] Yes.

A. [12:11:50] But it was peer reviewed.

Q. [12:11:52] You mentioned that you had 10 cases in the Dutch courts which you said were --

A. [12:12:07] Kinship analysis played a role.

Q. [12:12:08] Were those air crash cases?

A. [12:12:12] No.

Q. [12:12:12] What were those cases about? Were any of those similar to this case?

A. [12:12:16] No, I can't say that. Mainly, question on, okay, we got a suspect who matches the evidence, and then the question could a brother of him, of the suspect, who we couldn't sample also be the source of the DNA, questions like that.

Q. [12:12:38] Now, while we're on your publications, there is one at number 10, that you wrote together with Mapes and Poot, The Criminal Justice System: The DNA Success Story in Perspective. Now, this article you wrote, The DNA Success Story in Perspective, what was your hypothesis and your conclusion in that article?

A. [12:13:11] This article was on the success story of DNA matches. We looked in how many cases did the DNA match really come as a surprise for the Prosecution, and we report in 50 per cent of the unsolved cases, we reported DNA matches in our laboratory, which looks quite spectacular. And then we really looked into those cases, wasn't there any other evidence, and we tried to put that in perspective. So in how many cases did the DNA really help, and there was no other clue with the police or the Prosecution.

Q. [12:13:55] I see, I see.

A. [12:13:55] That was the main message of this article.

Q. [12:13:58] Yes, I see.

A. [12:14:02] So not in every case a DNA match came as a big surprise. We suspected him already or he was already a suspect or we knew the guy. But only in a few cases did a DNA match really came as a surprise.

Q. [12:14:19] And in those, in those cases that you've been dealing with in Holland, have you been receiving information about the suspects before you conduct these DNA analysis?

A. [12:14:41] That sometimes happens, yes.

Q. [12:14:45] Yes?

A. [12:14:46] Yes. Could also be from the newspapers or the media.

Q. [12:14:53] You explained, when you were explaining the process, that there would be a telephone conversation and then an appointment would be made, and then there would be a meeting, so in this case with the ICC -- representatives from the ICC. Do you know who would have been present at that meeting with the ICC?

A. [12:15:23] There are the two persons I mentioned before, Mrs Eerhart and Mrs O'Sullivan. They were definitely there. And I think they were the main ones there in most of the meetings. So they took care of the material that was brought in by the ICC.

Q. [12:15:40] And they're not involved in the actual scientific process?

A. [12:15:48] No, they're not NFI scientists, no.

Q. [12:15:51] Now, did they produce an internal report of what the ICC told them?

A. [12:15:54] No, not an official internal report. They leave some information.

Q. [12:16:03] And do they convey that information to those who are involved in the

actual scientific process?

A. [12:16:08] Yes, yeah.

Q. [12:16:09] Okay.

A. [12:16:16] Most of the time by an email to the respective scientists.

Q. [12:16:20] And are you aware of the concept of cognitive bias?

A. [12:16:26] Yes, yeah.

Q. [12:16:30] Can you explain to the Chamber --

PRESIDING JUDGE TARFUSSER: [12:16:32] No, please. We know what that is. If he explains it to you, I'm fine.

MR O'SHEA: [12:16:45] As your Honour pleases.

PRESIDING JUDGE TARFUSSER: [12:16:50] I just repeat that we are not a jury.

MR O'SHEA: [12:16:55] Yes, your Honours are not a jury.

Q. [12:17:08] Now, in terms of the actual process of analysing the DNA, were you personally involved in that process?

A. [12:17:32] No, I was not personally involved in that process, no.

Q. [12:17:35] So what is your role?

A. [12:17:38] My role is to report writing process.

Q. [12:17:43] All right.

A. [12:17:47] These reports are mainly drafted by two scientists, me and another scientist. The other scientist drafts the report, I check the results, and signed it.

Q. [12:18:03] Now, you've explained how the DNA is extracted and then amplified and then analysed.

A. [12:18:22] Yeah, yeah.

Q. [12:18:23] Now, when you get to the stage of analysis, what part of that is human and what part of that is done by computer?

A. [12:18:40] 99 per cent of that work is done by computer. Those people have no information on the case whatsoever who do the analysis. So that they get the profile from the computers, they have no link to from which case these profiles are. They didn't even know it's from an ICC case. They don't know if it's from a murder case or a burglary. They only check the profiles. Sometimes they make adjustments to the electronic allele calling.

Q. [12:19:14] The technology that you used in this particular case, is it an old form of technology or new form?

A. [12:19:30] No. Old, old, existing technology.

Q. [12:19:35] So does the computer produce electropherograms?

A. [12:19:41] Yeah, the computer produced electropherograms, yes. And a scientist checks the EPGs, the electropherograms.

Q. [12:19:52] Now, these electropherograms are graphs?

A. [12:19:58] Yes.

Q. [12:19:59] And you --

A. [12:20:00] Big profiles, we call them. So you see the peaks which represent the alleles in front of you.

Q. [12:20:09] And does it sometimes occur that there are peaks which appear which are difficult to explain?

A. [12:20:23] That can occur, yes, yeah.

Q. [12:20:25] And since you yourself were not involved in the scientific process, I suppose you can't confirm whether any such instances happened in this case?

A. [12:20:41] No. Everything which was treated manually, I see that in the profile. So when somebody puts some extra information in the profile or takes some information out, I see that in the profile.

Q. [12:21:05] Did you examine the electropherograms yourself?

A. [12:21:10] I checked them, yes, yes.

Q. [12:21:12] When you say you checked them, is this just a sort of supervisory checking or do you look at it in detail?

A. [12:21:23] No, it was a supervisory checking, yes. If any typographical errors were made or so, that's what I check.

Q. [12:21:32] So if there were any unusual peaks in the electropherograms, you could have missed them?

A. [12:21:38] I don't exclude that, yes, yeah.

Q. [12:21:49] Is there any reason why the electropherograms were not included in the report?

A. [12:21:58] Yeah, it's typically the Dutch situation. The Dutch legislation prohibits us to add profiles to our reports, but we always will hand over those profiles when we get a court order for this.

Q. [12:22:16] Did the Office of the Prosecutor request you for these electropherograms?

A. [12:22:27] No. To my memory, not, not yet.

Q. [12:22:36] Could you assist the Chamber to understand what kind of errors can occur in DNA analysis in this type of case?

A. [12:22:58] Yes, I did quite a lot of research in errors, which you also can see from my CV, which is number 9, error raised in forensic DNA analysis. How often does a certain error occur. So I did quite a lot of research in that, and areas of contamination, what can happen, and mixing up samples.

Q. [12:23:32] So far as contamination is concerned, that error can obviously occur before you even receive the samples?

A. [12:23:58] Yeah.

Q. [12:23:58] So and you've told us that you were not involved in any way in the retrieving of the samples, only the receiving of them?

A. [12:24:10] Yes, yeah.

Q. [12:24:14] So you don't have an independent basis of being sure that there was no contamination; would that be right?

A. [12:24:24] Yeah, but I see contamination of course because I get a mixed DNA profile when I have contamination. From a tooth, from a dead body, you expect to get a one-person DNA profile, not a mixture. When I get a mixture, then I think, whoa. Can contamination explain the result I got?

Q. [12:24:57] You've explained that the DNA that one obtains from a tooth or a bone is good quality but low?

A. [12:25:08] It's a low concentration of DNA, yes.

Q. [12:25:12] Who makes the judgment as to how low is too low?

A. [12:25:18] It's from data from the past. So we know from many different DNA concentrations, samples with many different DNA concentrations, what the entries how it was. We did some scientific work in this also. So that's, for us, we can give a better explanation or a better expectations if the sample will work, yes or no, in the laboratory.

Q. [12:25:51] Now, you've explained of one instance of a suspicion of commingling, which then resulted in the process of looking into things a bit further and producing another report. How was that co-mingling noticed?

A. [12:26:21] This was information from the ICC.

Q. [12:26:24] Information from the ICC. So if information did not come from the ICC, it's possible for co-mingling to take place and not to discover it from your side?

A. [12:26:36] It depends a little bit on the scenario. If it is the case of a mass grave, you must also take that into account, that co-mingling could have taken place. Also in mass disaster co-mingling can take place, so we are aware of it.

Q. [12:27:05] Yes. Now, with regard to determining the sex of a person, you have the XX chromosomes, which is female, right?

A. [12:27:19] Yes.

Q. [12:27:19] And XY is male?

A. [12:27:21] Yes.

Q. [12:27:23] When you take a sample of DNA, do you have instances where it's difficult to find the Y or the Y may simply not be found?

A. [12:27:38] Yes, that can happen. In the quantification process, some males produce a female type. We are aware of it. It is rare but it happens. So that is why we are quite conservative in our reporting on result only from a DNA quantification.

Q. [12:28:08] Can errors in relation to the sex happen in other ways?

A. [12:28:19] Yeah, yes. People with two X chromosomes and one Y chromosome, or one X chromosome and two Y chromosomes, which makes it hard to draw conclusions. We don't see that in our DNA profiling work, but they are there.

Q. [12:28:38] Could it also result from computer error?

A. [12:28:47] No. This happens during the amplification process.

Q. [12:28:51] Could it also happen from human error?

A. [12:28:56] Mixing up samples is a human error, yes. Contamination is a human error, yes.

Q. [12:29:13] Can I just ask you to explain one possible discrepancy in the reports in relation to sex. I refer first of all to CIV-OTP-0084-3930 at page CIV-OTP-0084-3935,

under section 4 where it says, "Results." Four lines down, it states the following, "From the DNA typing results, it was determined that one of the victims, victim 1, AAHJ2572NL was male, XY." So victim 1, AAHJ2572NL was male XY.

Then in the document CIV-OTP-0086-1261, page CIV-OTP-0086-1268, there is reference four paragraphs down to a tooth. And it says, "DNA typing of the tooth AAHJ2618NL yielded a female DNA profile. The DNA profile matches the previously generated DNA profile of victim 1, AAHJ2572NL."

So is what's being said here that this tooth probably belongs to victim 1?

A. [12:32:27] Yes.

Q. [12:32:30] So is there a way of explaining why it states here that the tooth yielded a female DNA profile and in the previous report -- sentence I read out, explained that victim 1, AAHJ2572NL, was a male XY?

A. [12:32:57] No, these two reports don't match. So I must go into the original results to see what, what's the case here. But something doesn't seem to be correct. I agree with that.

Q. [12:33:20] Would this illustrate that there are times that when the reports are produced, there are errors in the reports themselves? That's something that happens from time to time, right?

A. [12:33:37] Yes.

Q. [12:33:41] And so would you accept that for an independent person, whether it's a scientist or a lawyer or a judge, to analyse these DNA results, it would be useful to have not only the final report but also the electropherograms? Your answer has to go on record. I saw the nod, but --

A. [12:34:19] What is exactly your question?

PRESIDING JUDGE TARFUSSER: [12:34:22] Well, if they can read it.

MR O'SHEA: [12:34:30]

Q. [12:34:30] My question is this, that if we accept that the final reports do sometimes contain errors, here obviously we're in a court of law so we're independent individuals looking at this from the outside. We weren't there when the experiments were conducted, not that we would understand anyway, but we weren't there when the experiments were conducted. So my question is, would you accept that really the electropherograms --

A. [12:35:02] Electropherograms, EPGs.

Q. [12:35:04] Yeah. Or really be there together with the report in order to conduct an independent analysis?

A. [12:35:09] Yeah, I agree with you that the EPGs, the electropherograms contain the key information of these identification cases. But these EPGs, electropherograms, should also be read by the appropriate persons and scientists who knows what he's dealing. And when we get a court order, we are happy to transfer our DNA profiles for second analysis, second independent analysis.

Q. [12:35:44] Yes. Well, that was not your fault. There was no request. Yes. Now, in terms of the preparation of the reports in this case, if I understand you correctly, you kind of play a supervisory role. You're not an actual drafter in any sense, are you?

A. [12:36:11] No.

PRESIDING JUDGE TARFUSSER: [12:36:18] But you signing it, you're responsible for --

THE WITNESS: [12:36:20] I'm the responsible one, yes, yeah.

MR O'SHEA: [12:36:24]

Q. [12:36:25] And by signing those reports you are essentially confirming that

because you are in a supervisory role, you are taking responsibility for what's said in it?

A. [12:36:53] Yes, no doubt about it.

Q. [12:36:53] But you are not saying that you are sure there are no errors in the reports?

A. [12:36:56] Again, please, the last sentence?

Q. [12:37:03] You're not saying by putting your signature that you are sure there are no errors in the reports, are you?

A. [12:37:07] No, you can never be sure there are no errors in a report.

Q. [12:37:10] Now, you mentioned during the course of your evidence that the population sample that you took was, if I understood you correctly, from the Dutch population?

A. [12:37:43] Yes.

Q. [12:37:43] Yes. Would you accept that there might be variations in the ratios whether one is -- if one is dealing with one geographical society as opposed to another?

A. [12:38:09] That's a fact. Not only accepted, that's a fact, yeah.

Q. [12:38:13] Now, have there been any studies on close-knit small societies and the effect of DNA analysis in that context?

A. [12:38:43] Yes. Society with a high inbreeding factor produce different results.

Q. [12:38:50] Do those studies --

MR DEMIRDJIAN: [12:39:00] I apologise. Your Honours, we've moved on to another topic here, but since we are approaching the break, might it be an idea for the expert to look at the discrepancy that was raised just now by my learned friend, to have access to his material if he has them here, to be able to explain this issue of the

male versus female.

PRESIDING JUDGE TARFUSSER: [12:39:22] He can always look and request and look at his material. I mean, it's up to the witness or to the expert to answer according to what his best knowledge is.

MR DEMIRDJIAN: [12:39:38] Because we've left --

PRESIDING JUDGE TARFUSSER: [12:39:41] I don't think there is a need to tell him what he has to do.

MR DEMIRDJIAN: [12:39:44] No, no, of course not, but I think that we've left it at that and we've moved on. So the issue is lingering. And I think that it is fair for him to be able to explain that to your Honour so you have a complete picture. So if he wishes perhaps to consult during the break.

PRESIDING JUDGE TARFUSSER: [12:40:00] Yes. But, Mr Prosecutor, you know that you have later on the possibility to re-question.

MR DEMIRDJIAN: [12:40:06] Very well.

PRESIDING JUDGE TARFUSSER: [12:40:07] And there you can re-question on this topic or others. But now I think it's time for the Defence to question, and I think it's also for the Defence to question on what topic they want to question or they deem relevant.

MR DEMIRDJIAN: [12:40:27] Very well.

PRESIDING JUDGE TARFUSSER: [12:40:29] Please go ahead. The right thing is that in 5 minutes we break, or even less, for lunch.

MR O'SHEA: [12:40:35] Yes, your Honours. But I would really have appreciated that intervention to come not in the middle of my question, because it wasn't an objection to my question.

PRESIDING JUDGE TARFUSSER: [12:40:43] Yes. I already said this so there is no

need to say it again. That was also my intervention in that sense. So please.

MR O'SHEA: [12:40:54] Yes. I didn't hear your Honour say that, sorry.

PRESIDING JUDGE TARFUSSER: [12:40:57] Well ...

MR O'SHEA: [12:40:59]

Q. [12:41:00] So we were talking about studies which may have been done on close-knit societies. What I wanted to ask you is, have these studies in any way demonstrated that DNA analysis could come up as positive matches for people who are technically not relatives within those societies?

A. [12:41:37] This is only relevant when there's truly a high inbreeding in the relevant population. And I don't have any information on that. Do you have more information on that?

Q. [12:42:05] No, no, sir, I don't. I'm relying on your expertise.

A. [12:42:09] Yes. But when there is a population with a high inbreeding factor, it changes the results.

Q. [12:42:16] Yes.

A. [12:42:18] It has a dimming effect on the likelihood ratio. And we can incorporate in our formulas an inbreeding factor, if necessary. But then we must have that information.

Q. [12:42:38] If I could focus for an instant on the term "relative." One has the father, the mother and the children, which is the most direct line. Then you have sisters, brothers, uncles, aunties. So if you go to the sisters, brothers, uncles and aunties, would we have DNA matches?

A. [12:43:12] With autosomal DNA profiling, those familial relationships, as you point out, uncles are much, much harder. Then autosomal DNA profiling is not the right instrument any more. Now we must go, for example, to Y chromosomal typing

or mitochondrial DNA typing.

Autosomal DNA profiling is ideal for first degree relationships and siblings. Beyond that, you should look for another typing method to prove kinship between two individuals.

Q. [12:43:52] Can you have a DNA match between an uncle and a nephew?

A. [12:44:06] When you look at full DNA profiles, no, this is extremely unlikely. Also a DNA match between two brothers is extremely unlikely if they're not identical.

MR O'SHEA: [12:44:22] We can break there, your Honour.

PRESIDING JUDGE TARFUSSER: [12:44:24] Okay. We break for lunch. We will resume at 14.15, one hour and a half, and most likely finish then within the next hour and a half. Thank you very much.

The hearing is adjourned.

THE COURT USHER: [12:44:44] All rise.

(Recess taken at 12.44 p.m.)

(Upon resuming in open session at 2.22 p.m.)

THE COURT USHER: [14:22:23] All rise.

Please be seated.

PRESIDING JUDGE TARFUSSER: [14:22:45] Good afternoon. Good afternoon, Professor, to you as well.

I give the floor again to the Defence for Mr Gbagbo. Can we also have an estimate in terms of time, please?

MR O'SHEA: [14:23:34] Some minutes, I think.

PRESIDING JUDGE TARFUSSER: [14:23:38] Thank you.

MR O'SHEA: [14:23:59]

Q. [14:24:00] So Professor Kloosterman, I hope you had a pleasant lunch?

A. [14:24:06] Thank you.

Q. [14:24:07] Yes. When you were being questioned by the Prosecutor and you were talking about the fact that you used a Dutch database?

A. [14:24:25] Yes.

Q. [14:24:26] Dutch population database, you didn't have a population database for the Ivory Coast?

A. [14:24:32] No.

Q. [14:24:33] And you said that it does have an effect. Can you explain what kind of effect?

A. [14:24:46] It will provide you with an unlikely ratio, which I expect is closely to the likely ratio which I reported, because we see differences between, allele frequencies between different populations but those allele frequencies, those differences are not that high that you get enormous differences in the likelihood ratio calculations.

But if there is effect, yes.

Q. [14:25:17] And the expectation that you would get a similar result if you did have an Ivory Coast database, of course, until you've actually done it, it remains a hypothesis, doesn't it?

A. [14:25:39] Yes. But the Ivory Coast population for example is impossible because it's not there. It's not published. But the other population, studies from Africa which you could use in this case.

Q. [14:26:06] But you didn't in this case?

A. [14:26:08] We didn't do in this case, no. But we made transparent which populations in that example we used.

Q. [14:26:14] Now, the final matter is this. The DNA analysis which is conducted,

the result which is obtained from the analysis, would it be fair to say that that result is limited to the exclusive question is there a relationship between this sample from the alleged victim and this sample from the alleged family member; it can't actually go beyond that in terms of conclusions, can it?

A. [14:27:24] I'm --

Q. [14:27:24] It's just a simple comparison of two samples?

A. [14:27:27] It's a simple electronic comparison between another two samples, because we had more bodies here. We had more profiles from reference samples.

Q. [14:27:39] Yes?

A. [14:27:39] So we compared everything with everything electronically.

Q. [14:27:42] Yes, yes. I understand about the reference samples?

A. [14:27:46] Yes.

Q. [14:27:46] I perhaps expressed myself badly in that respect.

But then if one goes to your section in your report which your report CIV-OTP-0084-3930, section 5, it's stated here the DNA profiling results of remains AAAH12574NL of victim 3 show a familial match with the relatives of Gnon Rokia Ouattara. Given the family tree the DNA typing results are more than one thousand million, one times ten to the power of nine times more likely if the tooth AAHJ2574NL originated from Gnon Rokia Ouattara than if the tooth related from an unrelated random female.

Now, would you agree with me that, strictly speaking, that sentence should not read "originated from Gnon Rokia Ouattara" because there you are identifying a specific individual. Whereas, if I've understood your evidence correctly, all you can say is that there is a familial match between one sample and the other. So it could be Gnon Rokia Ouattara or another person in a relationship, sorry, another relative. So that

conclusion, strictly speaking, scientifically is incorrect, isn't it? You can't say from, from Gnon Rokia Ouattara?

A. [14:29:48] If the family tree is correct and complete, meaning that she doesn't have more sisters or brothers I'm not aware of, this is scientifically correct. If she has more unknown sisters or brothers --

PRESIDING JUDGE TARFUSSER: [14:30:08] Probably.

THE WITNESS: [14:30:09] -- then it's different.

PRESIDING JUDGE TARFUSSER: [14:30:10] No. I think probably, probably, maybe scientifically not correct is giving a name, because the name is not something that you ascertained; is that right?

THE WITNESS: [14:30:27] No. We were provided with a family tree --

PRESIDING JUDGE TARFUSSER: [14:30:29] Yes, yes, yes.

THE WITNESS: [14:30:31] -- from this particular person who has a name in that family tree.

PRESIDING JUDGE TARFUSSER: [14:30:34] Yes. Assuming that the name is the right one.

THE WITNESS: [14:30:37] In the family tree, yes, yes.

PRESIDING JUDGE TARFUSSER: [14:30:38] Okay, okay.

MR O'SHEA: [14:30:41]

Q. [14:30:41] Now, the difficulty that I have with that is that this family tree that you are referring to is not in this report; is that correct?

A. [14:30:56] That's information from the ICC, yes.

Q. [14:30:58] Yet we have information that this person has eight brothers and sisters. So on the basis of what we know, if there is a family tree that states that this person does not have brothers and sisters, then it's incorrect. So that's why, since we

don't have the family tree in this report, strictly speaking, that conclusion, the way it is expressed, it should not be expressed like that, should it?

A. [14:31:34] If this person has more brothers and sisters who are missing, then I cannot discriminate between one daughter or the other. That's correct. Same with a mass disaster, when I have, for example, brothers on the plane, looking at the DNA profile from the parents, I can't say which brother is who only looking at the DNA profiles.

Q. [14:32:02] Yes. Professor, thank you very much for your cooperation. You've been most helpful.

A. [14:32:11] Yes.

MR O'SHEA: [14:32:12] Your Honours, those are my questions.

THE WITNESS: [14:32:15] We had one unfinished business before lunch about male and female DNA profiles.

PRESIDING JUDGE TARFUSSER: [14:32:20] Yes. I know you have now some more documents.

THE WITNESS: [14:32:24] Yes.

PRESIDING JUDGE TARFUSSER: [14:32:24] Yes. So please, if you want to explain, I can't remember exactly the issue, but I think you wanted to explain something further on the questioning by the Defence, by the way.

MR O'SHEA: [14:32:39] I'll remain standing for now while you explain it.

PRESIDING JUDGE TARFUSSER: [14:32:43] Please, yes.

THE WITNESS: [14:32:47] Yes, I need some help with --

PRESIDING JUDGE TARFUSSER: [14:33:35] It's on evidence channel 2.

MR DEMIRDJIAN: [14:33:55] Make sure it is not being broadcast. Thank you.

PRESIDING JUDGE TARFUSSER: [14:33:58] Also if it was, I must say not very

many people would know what we are talking about.

THE WITNESS: [14:34:10] So this question from the Defence was a report, 0086, and on page 1268, where we reported on a tooth. And on that page we report that DNA typing of the tooth AAHJ2618 yielded the female DNA profile. This DNA profile matches the previously generated DNA profile of victim 1, AAHJ2572.

This is the profile of that last item and it shows you also the sex of that body, of that unidentified body, which has an X and a Y.

PRESIDING JUDGE TARFUSSER: [14:35:26] Professor, you can also move a little bit there and move the microphone, so maybe you are more comfortable, yes.

THE WITNESS: [14:35:34] Okay. Thank you. We see that this item is from a male. It is XY. And we reported in that report on page number 8 that it is a female DNA profile, which is incorrectly stated in this report. And I'm sorry about that.

MR O'SHEA: [14:36:18]

Q. [14:36:19] Thank you, Professor. Are you finished with that point?

A. [14:36:21] Yes. Then I can show you the other profile which also makes clear that this is a male DNA profile.

MR DEMIRDJIAN: [14:36:33] Your Honours, should that be captured, a snapshot? Is that possible?

PRESIDING JUDGE TARFUSSER: [14:36:38] Well, I think, I would assume it is.

MR DEMIRDJIAN: [14:36:42] If we could do it for the first page before we move to the second one.

THE COURT OFFICER: [14:36:48] It is possible. We are just encountering some technical problem. An assistant is coming soon.

PRESIDING JUDGE TARFUSSER: [14:36:55] But in any case, we will do it, of course.

THE WITNESS: [14:36:58] But we are talking about two male matching DNA

profiles.

PRESIDING JUDGE TARFUSSER: [14:37:02] Yes.

THE WITNESS: [14:37:07] Just a little further clarification, the D8 is a locus on chromosome 8. And it has alleles 12, 14. The next locus on chromosome 21, alleles 29, 30. Those data are electronically transferred, so we don't make clerical errors there, and fed to the Monopoly software to make the comparisons.

PRESIDING JUDGE TARFUSSER: [14:37:41] Okay. Thank you.

THE WITNESS: [14:37:42] Thank you.

PRESIDING JUDGE TARFUSSER: [14:37:43] Is this the clarification you wanted to give us?

THE WITNESS: [14:37:45] Yes.

MR O'SHEA: [14:37:46]

Q. [14:37:46] Those are the electropherograms that we were talking about earlier, aren't they?

A. [14:37:52] Yes, these are the electropherograms yes.

Q. [14:37:55] Can I just ask you, when it says 44.2 on the second section there, is that an allele?

A. [14:38:01] Yes, yeah. It's a variant allele, but it's an allele.

Q. [14:38:05] On the second bar, the second chart, the last reference.

A. [14:38:19] There is referred to this allele.

PRESIDING JUDGE TARFUSSER: [14:38:22] Okay, okay, okay.

MR O'SHEA: [14:38:25]

Q. [14:38:26] Just one last point, it may seem obvious. I don't know if it is obvious, but when a tooth has been provided by someone who is dead as opposed to someone who is alive, I suppose it's exactly the same thing, isn't it? The DNA doesn't change

when a person dies?

A. [14:38:47] No, no. It can degrade, so you can't analyse it any more.

MR O'SHEA: [14:38:52] Yes. Thank you very much.

A. [14:38:57] Thank you.

PRESIDING JUDGE TARFUSSER: [14:38:57] Can you please display both again just so that we can take screenshots.

MR MACDONALD: [14:39:08] Actually, with your permission, your Honour, why don't we just make photocopies. I think it would be better qualities because the prompter is not --

PRESIDING JUDGE TARFUSSER: [14:39:16] We can do both.

MR MACDONALD: [14:39:18] -- capturing everything it seems.

PRESIDING JUDGE TARFUSSER: [14:39:20] We can do both. But it depends on how it is.

Can you just zoom out a little bit so it captures the whole. Yes. That's it. A little bit. Yes. And then we can make also photocopies.

(Discussion off the record)

PRESIDING JUDGE TARFUSSER: [14:41:05] Does it not work?

So, Professor, we take two photocopies.

THE WITNESS: [14:41:30] Yes.

PRESIDING JUDGE TARFUSSER: [14:41:30] Because I think we have technical issues, but this is nothing new, at least once a day, technical issues. And then we'll give you back the documents.

So the questioning by the Defence for Mr Gbagbo is terminated?

MR ALTIT: [14:41:48] (Interpretation) Yes, your Honour. The cross-examination on behalf of Mr Gbagbo is completed.

PRESIDING JUDGE TARFUSSER: [14:41:58] Thank you very much.

Now I revert to the Office of the Prosecutor, asking if they want to re-question.

MR DEMIRDJIAN: [14:42:06] Yes, Mr President, just a couple of questions.

PRESIDING JUDGE TARFUSSER: [14:42:08] Okay. The floor is yours.

MR DEMIRDJIAN: [14:42:10] Thank you.

PRESIDING JUDGE TARFUSSER: [14:42:11] Now, Professor, there is the request of re-questioning by the Office of the Prosecutor for some further clarifications.

MR DEMIRDJIAN: [14:42:24] Thank you, Mr President.

PRESIDING JUDGE TARFUSSER: [14:42:25] Mr Demirdjian.

MR DEMIRDJIAN: [14:42:28] Thank you, Mr President.

Q. [14:42:29] Dr Kloosterman, just a couple of clarifications. So on this last point, the issue of the reporting of victim 1 as female in this other report, is it correct to say that the error does not lie in the DNA results but, rather, it lies in the reporting?

A. [14:42:47] Yes, yeah.

Q. [14:42:51] Now, this is --

A. [14:42:52] And not in the matching. It's in the reporting. So the match is still there.

Q. [14:43:02] And this is victim number 1. It does not relate to the three victims for whom you had a DNA match with relatives; is that correct?

A. [14:43:11] That's correct, yes.

Q. [14:43:13] Okay. So with respect to this identification of victim 1 as a female, does that in any way alter your conclusions relating to the DNA match for victims 3, 8 and 15?

A. [14:43:30] No.

Q. [14:43:34] Thank you, Professor. One last question on the issue of the Dutch

allele frequency database. The fact that you did not have access to the allele frequency of Côte d'Ivoire, does that change anything to the three victims for whom you had a DNA match of over one thousand million as reported in your report? Does that change anything?

A. [14:44:06] I don't expect that will change, but I haven't done it yet because the populations in that data to my knowledge are not available. But I expect, and I'm sure, that the evidence in this case, DNA evidence for the identification is strong and will stay strong.

Q. [14:44:34] Thank you for your answer, Professor.

Your Honours, that completes our further questioning.

PRESIDING JUDGE TARFUSSER: [14:44:39] Thank you, Mr Demirdjian.

Again I revert now to the Defence, recalling to the rule the last possibility to question. Mr Knoops.

MR KNOOPS: [14:44:52] Mr President, one question.

QUESTIONED BY MR KNOOPS:

Q. [14:44:55] Professor, going back to the question of the Prosecution regarding the database which you didn't consult, the allele database of Côte d'Ivoire, you did say in your report, in the amended report --

A. [14:45:19] Yeah.

Q. [14:45:21] -- on page 3925 -- 35, paragraph 4, the last sentence, "The misidentification rate may vary among populations but in general appears to be low." And my question is have you any foundation for this observation, in specific with respect to whether certain types of populations are more vulnerable for misidentification, the misidentification rate when it concerns the general type identification?

A. [14:46:17] Yeah, that concerns the gender of an individual.

Q. [14:46:20] Yes, yes.

A. [14:46:21] Yes. There are populations in the Far East who have a high, who give a high misidentification than populations, Caucasian populations, for example.

Q. [14:46:34] Can you be more specific when you speak about "appears to be low." It's quite a general remark. Do you have percentages or --

A. [14:46:43] It appears to be low. That's from our own data. We investigate many, many DNA samples of reference samples who we know the sex from.

Q. [14:46:55] But you couldn't --

A. [14:46:56] We occasionally see a mistyping.

Q. [14:47:00] But you're not in a position to extrapolate this to, for instance, West Africa?

A. [14:47:06] No. If there are no scientific results available on that area, I can't extrapolate it, no.

Q. [14:47:18] Thank you.

Thank you, Mr President.

PRESIDING JUDGE TARFUSSER: [14:47:21] Thank you, Mr Knoops.

Mr O'Shea.

MR O'SHEA: [14:47:22] Just one matter arising out of re-examination.

QUESTIONED BY MR O'SHEA:

Q. [14:47:25] Professor, it's just a question of the terminology you used when you answered the Prosecution a moment ago. Now, you as a scientist, you work on facts and data. So when you say "I don't expect that will change, but I haven't done it yet because the population is in that data to my knowledge not available, but I expect and I'm sure that the evidence in this case, DNA evidence for the identification is strong

and will stay strong."

Now, as a scientist, it's right, isn't it, that you can say "The evidence based on the Dutch database is strong and I will expect that it will stay strong," but you cannot as a scientist, can you, say "I am sure it will stay strong" when on your own admission you haven't done it?

A. [14:48:38] Yeah, but I have not seen any population in the world yet where those markers we're referring to, those 15 loci I've shown you results are not variable. And as long as they're variable and within the population, you will end up with a high likelihood ratio, especially when you have close family members and you have DNA typing data of 15 different loci.

Q. [14:49:14] Thank you.

A. [14:49:14] It will only have effect when every individual in that population has exactly the same typing result, which we have never seen before.

Q. [14:49:27] Yes. Like Newton never saw the theory of general relativity.

PRESIDING JUDGE TARFUSSER: [14:49:34] Of course, of course, of course. This is -- okay.

MR MACDONALD: [14:49:39] Getting argumentative.

PRESIDING JUDGE TARFUSSER: [14:49:41] Yes. We could have lived without it. But it's okay.

Thank you very much. This concludes your expertise as a witness, as an expert here before this Chamber. Thank you very much, Professor, for having been here.

THE WITNESS: [14:49:59] Thank you.

PRESIDING JUDGE TARFUSSER: [14:50:00] Well, have a nice trip home. It's not so far.

THE WITNESS: [14:50:03] Okay.

PRESIDING JUDGE TARFUSSER: [14:50:04] Normally witnesses I wish a nice trip home, they have a longer distance to go home.

THE WITNESS: Yes.

PRESIDING JUDGE TARFUSSER: Thank you very much for being here.

THE WITNESS: [14:50:13] Thank you. Yeah.

(The witness is excused)

PRESIDING JUDGE TARFUSSER: [14:50:44] Now we have finished this witness. We cannot start with the next witness because of familiarisation things, issues. We can start only tomorrow with the next witness at 9.15.

But before adjourning to tomorrow 9.15, I want to communicate how we proceed for the following weeks, and I am speaking until we break for the summer recess.

From tomorrow, on the 31st and 1st of June, we will have Witness 606 and Witness 583.

You might remember that we have no hearing on 2nd of June and we will continue on 19th of June, because we ran out of witnesses, with Witness 626, who should by then have come back from the holidays, and Witness 164. And these two witnesses in the day from 19, 20 and 21st of June, remembering that the 21st is a shorter day, meaning only two sessions instead of three.

In the week from 27 to 30 of June we will go with Witnesses 226, 239 and 411. And I'm always following as much as possible the list the Prosecutors submitted a few weeks ago.

And then in the weeks from the 3rd to the 7th and from the 10th to the 14th of July we will have the following witnesses: 607 and 156. We try together with VWU as much as possible to have them here viva voce, but if not, we will make a video link, but we will for sure try to have them here.

Then witnesses 87, 88, 172 and 237. And this is the programme from now to the summer recess.

As soon as possible I would like also to have from the Office of the Prosecutor the numbers related to the witness the office wants to withdraw or is intending to withdraw, because obviously it has an impact on the organisation of the programme.

And finally, on Wednesday, we will, I hope we really will, but I'm sure we do, on Wednesday we will come out with a few decisions, one is also the programme related to the further steps after the summer recess, which will start, as I said before, on the 28th of August.

This concludes the hearing today. The hearing is adjourned to tomorrow morning 9.15 with Witness 606.

I was trying to go fast so nobody wants to stand up, but obviously somebody stands up. Maître Altit.

MR ALTIT: [14:54:53] (Interpretation) Yes, thank you, Mr President. And sorry to get to my feet.

We're talking about 583, Witness 583 that you said would come just after 606, whom we will be hearing tomorrow, and maybe he will have finished tomorrow and maybe not. This will leave us so 583 will be, if I understand, will be on Wednesday, will be after, if I understood correctly from what you've said. That will give us one day to play with, one day to prepare it, because 583 was scheduled, if I'm not mistaken, it was scheduled for September, if I'm not mistaken, Mr President, that is to say after the judicial recess. So I do apologise, Mr President.

You might like to say something?

PRESIDING JUDGE TARFUSSER: [14:55:48] No. I just wanted to say that I expected this. But Witness 583 is an expert which worked together with 626, which

has been scheduled for today, so you should be prepared.

MR MACDONALD: [14:56:11] I just want to be very honest, your Honour, and frank, no, because he is not limited it that, your Honour.

PRESIDING JUDGE TARFUSSER: [14:56:20] Well, he might not be limited to that.

MR MACDONALD: [14:56:22] He also did a crime scene at the Lem mosque. He also did a crime scene at certain locations 16th December and 3rd of March.

PRESIDING JUDGE TARFUSSER: [14:56:33] Yes.

MR MACDONALD: [14:56:33] I think that maybe we can start on Thursday.

PRESIDING JUDGE TARFUSSER: [14:56:37] We start on Thursday.

MR MACDONALD: [14:56:38] Not Wednesday.

PRESIDING JUDGE TARFUSSER: [14:56:40] No, no, no. We start on -- well, it depends on how long we have with the witness for tomorrow.

MR MACDONALD: [14:56:45] Tomorrow the witness should take the same length that this witness today.

PRESIDING JUDGE TARFUSSER: [14:56:49] Then we see. We'll see. We go step by step. In any case we will bring 583, because 583 is the twin witness to 626, which should have been prepared for today at least for that portion because, as you cannot see, but I can tell you, that here it is written that if we do not finish with 583 by this week on 1 June we can, because he is here and there is no expenses for having postponing him, we could continue in the morning of the 19th. So I think that is -- I don't know why you always jump up.

MR MACDONALD: [14:57:35] We're trying to work together, I think, making proposal to the Chamber, which you are the obviously final arbitrator.

Your Honours, we're working on sending our list of documents that we will send as soon as we can today. What could be a proposal, because I will be taking that

witness, and I also need some time to prepare him while he was not -- because he's not only covering, your Honour, I know he's a twin of 626, but not solely on that. In order not to miss anything, the Prosecution would certainly appreciate if we could start his testimony on Thursday. And I'll guarantee you that the Prosecution's presentation will be done on Thursday for sure. And then Monday, since he's here, the Defence could start his cross-examination, and then I think it provides enough time for everyone and it would be fair and reasonable. That's my honest opinion and submission.

PRESIDING JUDGE TARFUSSER: [14:58:46] Maître Altit.

MR ALTIT: [14:58:48] (Interpretation) Yes, thank you, Mr President. Just a word. Personally I would like to thank Mr MacDonald for his suggestion. Of course we are in your hands, the hands of the Chamber.

Just a word about 583. Of course, Mr President, you are right in saying that there is an expert side that might be processed rather rapidly. But as Mr MacDonald just said, Witness 583 is not only coming to just testify from that angle. He has many things to say on a multitude of matters, and it demands true preparation and for the calling party and yet more so, but of course as much so for the non-calling party. And I humbly request that your Chamber take into account this aspect so that the questioning be prepared as best as possible. I think the Defence needs to be allowed some time. There we are, Mr President. That was why I rose to my feet.

PRESIDING JUDGE TARFUSSER: [14:59:51] Well, tomorrow we start with 606. The hearing is adjourned to tomorrow at 9.15.

THE COURT USHER: [15:00:05] All rise.

(The hearing ends in open session at 3 p.m.)