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<p>1 Thursday, 13 December 2012 2 (10.00 am) 3 THE CHAIRMAN: Yes, Mr Shieh. 4 MR SHIEH: Mr Chairman, the documents that were handed up 5 yesterday have been arranged to be inserted into the 6 Commission's bundles. 7 THE CHAIRMAN: Where do we find them? 8 MR SHIEH: The handouts by the Department of Justice can be 9 found in marine bundle 8, page 1877-1 to page 1877-5. 10 THE CHAIRMAN: Thank you very much. 11 MR SHIEH: That is the display of the various alerts. 12 THE CHAIRMAN: Yes. 13 MR SHIEH: The logbook produced by this witness has been 14 copied, and the copied pages can be found in the same 15 bundle, marine bundle 8, page 1885-1 to page 1885-6, and 16 I'm going to turn straight to these copies because that 17 is the subject matter of his testimony. 18 THE CHAIRMAN: Thank you very much. 19 MR SHIEH: Perhaps the witness may be reminded of his 20 affirmation. 21 THE CHAIRMAN: Yes. May I remind you, before you continue 22 your evidence, that you do so according to the 23 affirmation that you took yesterday. 24 Yes, Mr Shieh. 25</p>	<p>1 A. Because we want to have a written record for the 2 information received from the VTC so that it was written 3 on the IIR and then faxed to two places, namely PMO and 4 MRCC. The purpose of such procedure is to facilitate 5 the confirmation and follow-up action. 6 Q. Thank you. Can I move on to the next log. It's the 7 harbour station log. In the new pagination, it is 8 marine bundle 8, page 1885-3. The relevant part of this 9 log is at the bottom of page 1885-3, and it goes to the 10 next page at 1885-4. Do you see that? 11 A. Yes. 12 Q. The maker of the log, according to the document in the 13 original bundle that's attached to your statement, is 14 said to be Mr Luk Kwok-wah, who is assistant marine 15 controller of harbour station in the VTC. 16 A. Yes, correct. 17 Q. The entry reads: 18 "An accident report received from "[Hoi Tai]" 19 declared a collision happened at north Lamma, on channel 20 14, MC noted. HPS FSCC were then informed to 21 investigate." 22 A. Yes. 23 Q. Are you aware of the basis of the information or the 24 source of the information which led to the entry of this 25 log?</p>
<p>1 MR MA CHI-TAK (on former affirmation in Punti) 2 (All answers via interpreter unless otherwise indicated) 3 Examination by MR SHIEH (continued) 4 MR SHIEH: Mr Ma, good morning. I have been reminded to ask 5 you one question about yourself before we move on to 6 deal with the logs. 7 Have you got any qualifications, seamanship 8 qualifications? 9 A. Yes. I have obtained a deck officer class 2 10 certificate. 11 Q. When did you obtain that? 12 A. I don't remember clearly, but it should be around 1982 13 or 1984. 14 Q. Thank you. Can I now come back to the subject matter of 15 the logbooks. Yesterday we were looking at the Port 16 Management Office log when the abbreviation IIR 17 appeared. In that log, there was an abbreviation "IIR", 18 and you explained what IIR means. Do you remember that? 19 A. Yes. 20 Q. There's one question I want to ask you about the Port 21 Management Office log, and then I'll move on. It is 22 said to have been based on a fax received from VTC. 23 Just as a matter of completeness, why were 24 communications between different sections on the same 25 floor conducted by fax?</p>	<p>1 A. The source was from the information that he received, he 2 heard directly. 3 Q. So the compiler of this note on this log was the 4 gentleman who actually spoke to the master of the Sea 5 Smooth? 6 A. Correct. 7 Q. So the abbreviation "MC" would be "marine controller"? 8 A. Correct. 9 Q. Over the page. "HPS", I think we discussed this 10 abbreviation yesterday. Do you remember that, in the 11 context of the first -- 12 A. Yes. 13 Q. -- log that we looked at? How about "FSCC"? 14 A. It is an abbreviation commonly used by the Fire 15 Services. I think it means "Fire Services Control 16 Centre". 17 Q. Right. How about the words immediately after the word 18 "investigate"? 19 A. It is the initial for Mr Luk Kwok-wah, and then the 20 characters underneath "KWL", which reads "VTR17", means 21 the vessel traffic regulator number 17. Each officer in 22 the section, in the VTC, has a code for themselves. 23 MR SHIEH: Thank you very much, Mr Ma. 24 Subject to any questions that the Commission may 25 have, I have no further questions for this witness.</p>

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<p>1 THE CHAIRMAN: Thank you, Mr Shieh. 2 Mr Mok? 3 MR MOK: I wish to clarify one point, because there is 4 a name used of Hoi Tai, which in fact was not made clear 5 at the beginning that it was Lamma IV. I wish to 6 clarify that point. 7 Examination by MR MOK 8 MR MOK: Mr Ma, can I invite you back to the supervisor 9 station log, please. In the second column, against the 10 time 20:25, there is a reference of "Tug Hai Tai"; do 11 you see that? 12 A. Yes. 13 Q. I believe that at the time when the call was first 14 received, the caller did not make clear which Hai Tai it 15 was, because there were two Hai Tais. Can you explain 16 that reference, please? 17 A. Because when the caller made the call through the high 18 frequency 14, my colleague had asked whether there's 19 a code for that vessel. But he didn't give any answer. 20 But there is a tug boat with the same name travelling in 21 the Hong Kong waters, and the last record of it was that 22 it was in Yau Luen shipyard. So I asked whether it was 23 a local tug boat. He answered that it was a Puntí -- it 24 was in Puntí. So there was a misunderstanding. 25 THE CHAIRMAN: This is apparent, is it not, Mr Mok, from the</p>	<p>1 MR SHIEH: Officer, could I ask you to look at the statement 2 that you made on 19 November, which is in police 3 bundle E, page 1255-97. It's a statement totalling five 4 pages. Do you see that? 5 A. Yes. 6 Q. Before coming to give evidence today, have you had 7 a chance of reviewing this statement and familiarising 8 yourself with its content? 9 A. Yes. 10 Q. Essentially you identified certain items of evidence and 11 materials, and you explained how they came about. 12 A. Yes. 13 Q. I'm going to ask you to go to some of the individual 14 items of evidence and ask you a few questions about 15 their content. Before I do so, is there anything in 16 this statement that you wish to correct or amend? 17 A. Yes. 18 Q. Can you tell us what they are? 19 A. On line 15 on page 4, it reads "Ship ID: 8038 or 8023". 20 And also, on line 17, it reads "8038 or 8023". That's 21 all. 22 Q. Thank you. Apart from that, you would confirm the 23 correctness of the content of this statement? 24 A. Yes. 25 Q. Can I ask you a few questions arising out of this</p>
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<p>1 transcript of the VHF communication? 2 MR MOK: Exactly, Mr Chairman. 3 THE CHAIRMAN: The Marine Department officer refused to 4 accept that it was another vessel. 5 MR MOK: Yes, and -- 6 THE CHAIRMAN: It went on and on and on. 7 MR MOK: For a bit, at the beginning. 8 MR SUSSEX: Mr Mok incorrectly said that the Hai Tai was the 9 Lamma IV. In fact it's the Sea Smooth. 10 MR MOK: Yes. I'm sorry about that. That's the only point. 11 MR SHIEH: Nothing arises. 12 THE CHAIRMAN: Mr Ma, thank you very much for coming back to 13 continue your evidence. It's now finished and you're 14 free to go, but of course you're equally free to sit in 15 the back of the hearing room and listen to the evidence 16 that comes back. Thank you. 17 (The witness withdrew) 18 THE CHAIRMAN: Yes, Mr Shieh. 19 MR SHIEH: May I now call the Commission's next witness, who 20 is Mr Yau Wing-hang from the Police. 21 THE CHAIRMAN: Where do we find his statement? 22 MR SHIEH: Police bundle E, page 1255-97. 23 OFFICER YAU WING-HANG (sworn in Puntí) 24 (All answers via interpreter unless otherwise indicated) 25 Examination by MR SHIEH</p>	<p>1 statement. In this statement, you have referred to 2 several items of materials. I think you refer to them 3 as materials 1 to 10. 4 A. Yes. 5 Q. Material 1 consists of some video recordings. 6 A. Yes. 7 Q. You explain how the video recordings came about at 8 page 2 of your statement. 9 A. Yes. 10 Q. You mentioned this concept of "a long-range daylight 11 camera and a thermal imager of 7 remote site stations". 12 A. Yes. 13 Q. The particular video images that we will be seeing in 14 due course which are included in material 1, according 15 to you were captured by the Kau Yi Chau remote site 16 station? 17 A. Yes. 18 Q. There are also radars located in Kau Yi Chau? 19 A. Yes. 20 Q. The radars are operated by the Marine Department? 21 A. No. 22 Q. Who operates the radars? 23 A. They are operated by the officers on shift on that day. 24 Q. I know. Officers of the Hong Kong Police? 25 A. Yes.</p>

<p style="text-align: right;">Page 9</p> <p>1 Q. Right. The RSS at Kau Yi Chau which included the 2 cameras and the images, were they part of the same 3 system as the radars? 4 A. No. 5 Q. They are separate systems? The radars and the cameras, 6 they are separate systems? 7 A. Yes. 8 Q. The imager and the camera, they were also operated by 9 officers of the Police? 10 A. Yes. 11 Q. So they are not of the same system, but it so happened 12 that Kau Yi Chau was regarded to be an appropriate 13 location for observing, so both systems were located in 14 Kau Yi Chau? 15 A. Yes. 16 Q. Thank you. I think we should now look at the first two 17 videos which were recorded by the Kau Yi Chau RSS. 18 Perhaps we should first show video 1. 19 (Video played) 20 This, according to your witness statement, depicts 21 Victoria Harbour. 22 A. Yes. 23 Q. If you play that for 15 minutes, it pans to Lamma 24 Island. 25 A. Yes.</p>	<p style="text-align: right;">Page 11</p> <p>1 THE CHAIRMAN: And that's the chimneys of the power station 2 that we could see there, the three chimneys? 3 A. Yes. 4 MR SHIEH: So the panning to Lamma Island was as a result of 5 reports having been received? It's not part of a kind 6 of routine or regular monitoring? 7 A. Yes. 8 MR SHIEH: Could I ask the second video be shown. 9 (Video played) 10 This is a continuation of the first video? 11 A. Yes. 12 MR SHIEH: Thank you. I think we can pause here and move 13 on. 14 Do you have any comments, particularly, that you 15 wish to make of this video before we move on? 16 A. No. 17 Q. Is there a start and finish time for these two videos? 18 Video 1 and video 2. 19 A. The length of the videos depends on the period of time 20 we choose to take. But no matter the length of the 21 video we choose, for example five minutes or 15 minutes, 22 the time slot of the video is still 15 minutes. 23 THE CHAIRMAN: I think the question really is this: what was 24 the real time when the film that we've been watching 25 began and ended?</p>
<p style="text-align: right;">Page 10</p> <p>1 Q. This is video 2. No, it's still video 1. This is 2 video 1. 3 A. Yes. 4 Q. It was fast-forwarded to the end, and we can see what 5 appears to be the bow of the Lamma IV. 6 A. Yes. 7 Q. Could you tell us the manner in which the cameras and 8 the thermal imagers operate or they revolve? Is it 9 simply a random cycle, or is it timed to rotate at 10 a particular rate? 11 A. It was not a random rotation. Because on that night, it 12 happened to be 1 October, which was National Day, which 13 was the day when the fireworks were going to be shown. 14 That is why the camera was focused towards Victoria 15 Harbour, with a view to taking the images of the 16 fireworks. Because in the past, when there is any 17 event, we have also made use of this camera to take 18 images. 19 When our colleagues received news that an incident 20 has occurred in Lamma Island, the camera was panned 21 towards Lamma Island. So basically the camera was fully 22 operated manually. 23 MR SHIEH: Can the video be played from 11:40. 24 This was actually when the camera was panning? 25 A. Yes.</p>	<p style="text-align: right;">Page 12</p> <p>1 A. The time was not shown by the system, but when 2 I retrieved the video, the system says 15 minutes for 3 the first video, and also 15 minutes for the second 4 video. But the time when I retrieved the video from the 5 camera shows the time was 20:27. 6 MR SHIEH: Sorry, can I follow up on that. What showed 7 20:27? Is it the case that when you were notified of 8 the incident and when you panned to Lamma, you looked at 9 your watch and it was 20:27? What showed the time of 10 20:27? 11 A. I was not the Police officer on duty on that night, but 12 when I tried to retrieve the videos for the ship 13 collision which took place at 20:20, what I got from the 14 system was these two videos. 15 I would like to add one point. You cannot tell the 16 time just by watching the video, but there is another 17 screen which shows the ship, the location of the 18 vessels, and that video shows the time when the camera 19 was panned towards the vessels. 20 Q. Sorry, I don't wish to belabour this particular point, 21 but you were trying to explain to us the manner in which 22 your suggestion of 20:27 came about. But let me just 23 try to get this right. The time of 20:27 was, what, the 24 time when you panned to Lamma, the start time of 25 video 1, or what?</p>

<p style="text-align: right;">Page 13</p> <p>1 A. It was the time when the camera was panned to Lamma. 2 Q. Right. But you were not the officer handling the camera 3 that night; correct? 4 A. Not on that night. 5 Q. So you were able to reconstruct this time of 20:27 by 6 reference to some data or information that you have seen 7 somewhere? 8 A. Yes. 9 Q. Let's take it step by step. The video itself that we 10 have just seen did not actually have a timestamp on 11 display? 12 A. Yes, in this case, in this video. 13 Q. But you said there was another system displaying the 14 location of ships or vessels which would have shown the 15 time? 16 A. It's not another system but the same system. 17 Q. Right. Why don't you explain to us the steps, one by 18 one, assuming that we know absolutely nothing that goes 19 on in the particular room in question, how you managed 20 to look at this video and say to yourself, "Ah, I can 21 match this with that and I come up with the conclusion 22 that this image is 20:27". 23 A. There are three screens on each console in the system. 24 The middle screen shows the full map of Hong Kong, and 25 the ones on the left and on the right are -- one of them</p>	<p style="text-align: right;">Page 15</p> <p>1 Officer, I know you have described this video in 2 your witness statement but in short, this is a depiction 3 of radar images that were obtained of the two vessels; 4 is that correct? 5 A. Yes. 6 Q. Can you tell us where, as far as you are aware, the 7 particular radar or radars were located which captured 8 the signals? 9 A. In Kau Yi Chau. 10 Q. Jumping slightly ahead, in your witness statement in the 11 subsequent parts you commented on certain radar track 12 records of the vessels Lamma IV and Sea Smooth. You 13 know that? We haven't actually gone to that yet, but 14 you remember that you have produced and commented on 15 some radar track records of the Sea Smooth and of 16 Lamma IV? 17 A. Yes. 18 Q. There is a series of data about course and positioning, 19 and there is a label attached to each vessel; you 20 remember that? 21 A. Yes. 22 Q. So that data was generated on the basis of certain radar 23 signals? 24 A. Not all of them. 25 Q. Right. But now that we're on this question, which parts</p>
<p style="text-align: right;">Page 14</p> <p>1 is the thermal imager and the other one is a long-range 2 daylight camera. During the routine operation of the 3 camera, the view would be shown on the map. 4 When the camera moves, the monitor in the middle 5 would show the movement. A timestamp is also shown in 6 the middle, shown in the map in the middle. So when 7 I need to get some information and to get a video, 8 I would choose a video with a length of 15 minutes. The 9 system will capture a long-range daylight camera video 10 and a thermal imager video, which were the ones we saw 11 just now. That is why the time can only be seen in the 12 monitor in the middle when we panned the camera towards 13 Lamma Island. And that is why the timestamp is not 14 shown on the thermal imager. 15 Q. Thank you. So basically there is actually a separate 16 recording of the way the map changed in the middle 17 monitor, but which you looked at but was not included in 18 the materials in front of us? 19 A. Yes, it was not in front of us. 20 Q. But you had reference to that recording in order to put 21 the time on the thermal imaging video? 22 A. Yes. 23 MR SHIEH: Thank you. Can I now move on to the third video. 24 (Video played) 25 Could we pause here.</p>	<p style="text-align: right;">Page 16</p> <p>1 of that data were not based on radar signals? 2 A. The green signals we see on the screen were derived from 3 an AIS system. The white ones were generated from our 4 DRSS system. 5 Q. The DRSS system meaning the radar system? 6 A. Yes. 7 Q. Yes, I know, but I'm jumping slightly ahead, as I say, 8 because later on in your witness statement you produced 9 and commented on a series of print-outs, track reports 10 headed "Hong Kong Marine Police", where there will be 11 a number of labels attached to each vessel. I'm talking 12 about those print-outs. Those print-outs would be based 13 on the radar signals, is that correct? The DRSS system? 14 A. Yes. 15 Q. Right. But then on this screen, you mentioned certain 16 green parts. I don't think we can see the green parts, 17 but I think I can -- you say there is certain 18 information on the screen which comes from the AIS 19 system? 20 A. Yes. 21 Q. Are you able to identify those parts on the screen which 22 come from the AIS system? 23 A. The green patch shown on the upper right-hand corner 24 where the cursor points at, we call it track. When it 25 is green, we know that it is from the AIS system.</p>

<p style="text-align: right;">Page 17</p> <p>1 Q. Right. So on this screen, it is only that green dot 2 which comes from an AIS system? 3 A. No. 4 Q. Can you explain that? 5 A. Because this image was taken manually, so there is some 6 discrepancy from the real situation. For example, when 7 this image was taken, it was taken from a distance. 8 Like, for instance, the Sea Smooth, I remember that it 9 was green and it was from AIS. 10 Q. But it doesn't show up as green on this video? 11 A. I can explain about this. The image of Sea Smooth you 12 see is in orange. It is a radar signal. 13 Q. Yes. 14 A. A track which I mentioned just now was shown on top of 15 the radar signal on this orange signal. The vessel that 16 the cursor is pointing at is one of those vessels that 17 has AIS. The reason we cannot see green on this screen 18 is because -- it was due to the taking of the image and 19 not because the green was not shown, that there's no 20 green signal. Also, if the track is not from AIS 21 system, then it will not show any name. But in the case 22 of Sea Smooth, the words "Sea Smooth" were shown, and 23 also beneath that there are the characters "93". If 24 there is no AIS or if the AIS was not turned on, then 25 the name would not be shown.</p>	<p style="text-align: right;">Page 19</p> <p>1 A. No. 2 Q. The third line: ship ID, 8038; estimated length, 3 51 metres; estimated breadth, 12 metres. Again, you say 4 "calculated and provided by system automatically". 5 A. Yes. 6 Q. Can we go back to the display monitor. Does it mean 7 that of the four rows that we can see for Sea Smooth, 8 only the identity of the vessel is derived from AIS 9 signals coming from the transponder on the Sea Smooth? 10 The rest were just calculated by the system based on 11 radar signals that it received? 12 A. As far as I know, the first row about Sea Smooth, in 13 that case, yes. But for the rest, I'm not sure. 14 Q. So you're not sure whether or not those were based on 15 transponder information from Sea Smooth, or whether they 16 were based on the system's calculation or interpretation 17 of radar signal? 18 A. Correct. 19 THE CHAIRMAN: Is it anticipated that Mr Boorsma will be 20 able to help us as to that? 21 MR SHIEH: Mr Boorsma will be assisting us on the question 22 of discrepancy. 23 THE CHAIRMAN: Is he going to be able to help us as to this 24 issue, whether or not course and speed was provided by 25 AIS or radar?</p>
<p style="text-align: right;">Page 18</p> <p>1 Q. I think let's play on, because I understand that it may 2 become clear. 3 (Video played) 4 Let's pause here. 5 Officer, we know that Lamma IV had no AIS system. 6 A. Yes. 7 Q. We know that one of the features of an AIS system is 8 that it is able to send out signals about, among other 9 things, the ship's own name and that's why we were able 10 to see the name "Sea Smooth". 11 A. Yes. 12 Q. This is, I think, something you mentioned in your 13 witness statement. So can I ask you to look at page 3 14 of your witness statement to help us interpret what we 15 have seen. You set out four rows of data when you 16 discussed Sea Smooth. 17 "The first line: 'Sea Smooth', which is a ship 18 callsign, provided by AIS [on board the Sea Smooth]." 19 A. Yes. 20 Q. The second line, you say that it consists of the course 21 in 180 degrees; speed, 24 knots; estimated length, 22 51 metres which is calculated by the system. 23 A. Yes. 24 Q. So all these were not based on the AIS signal coming 25 from the transponder?</p>	<p style="text-align: right;">Page 20</p> <p>1 MR SHIEH: I will ask him. But obviously I can also ask 2 this witness as to whether he knows of anyone involved 3 in setting the program who would be able to provide 4 assistance. 5 Officer, are you aware of any particular section or 6 division in your department who would be able to assist, 7 let's say the person designing the program, who would be 8 able to tell us the basis of the data or the information 9 which gave rise to the figures, whether it's AIS 10 information or whether it's simply interpretation of 11 radar signals? 12 A. As far as I know, nobody from our division was 13 responsible for the design of the program. But all our 14 colleagues who are responsible for operating this system 15 have to attend a course. The courses were the ones 16 I mentioned on page 1 of my witness statement. 17 The course material was a manual provided by the 18 HITT. So the data you referred to just now was derived 19 from the track record that we got by clicking on the 20 screen with our cursor. So I believe that some data 21 must have been derived from the AIS system, while the 22 rest was derived from the system. 23 THE CHAIRMAN: I don't think the officer can help us any 24 further. 25 MR SHIEH: No. It's something we can explore with the HITT</p>

<p style="text-align: right;">Page 21</p> <p>1 witness.</p> <p>2 Thank you, Officer. I know where we can direct our</p> <p>3 questions to.</p> <p>4 Officer, just to clarify one point. In respect of</p> <p>5 the Lamma IV data appearing on screen, "93", that would</p> <p>6 all be based on the system's interpretation of the radar</p> <p>7 signal, for the simple reason that Lamma IV has no AIS?</p> <p>8 A. Yes.</p> <p>9 MR SHIEH: Can we now take a look at the fourth video.</p> <p>10 (Video played)</p> <p>11 Perhaps we can pause here.</p> <p>12 Officer, do I take it that this is simply another</p> <p>13 recording of the same display based on the same</p> <p>14 information generated by the system?</p> <p>15 A. Yes.</p> <p>16 Q. I think we can now move on to the photo, that is the</p> <p>17 last item in material 1. This is a hard photo of</p> <p>18 a track, a manually plotted track; is that correct?</p> <p>19 A. Yes.</p> <p>20 Q. It is a screen capture. Did you do the plotting</p> <p>21 yourself, or did someone else within the Police do the</p> <p>22 plotting?</p> <p>23 A. It was done by somebody else.</p> <p>24 Q. So it was simply based on the data, the numerical data,</p> <p>25 longitude, latitude, course and speed, basically</p>	<p style="text-align: right;">Page 23</p> <p>1 A. Yes.</p> <p>2 Q. I would like to ask you about certain annotations or</p> <p>3 remarks on the columns in this track report. Under the</p> <p>4 "Alerts" column, from 20:18:07 to 20:18:19, there are</p> <p>5 entries of "Collision".</p> <p>6 A. Yes.</p> <p>7 Q. Can you explain to us the system whereby alerts like</p> <p>8 this were designed to appear in the system or in the</p> <p>9 track report?</p> <p>10 A. When I make the report, this alert was automatically</p> <p>11 generated by the system. That means it was not typed in</p> <p>12 manually. As far as I know, there are certain</p> <p>13 perimeters in which an alert would be generated. For</p> <p>14 example, when the distance between two vessels is too</p> <p>15 close, and in this case a collision occurs. But I have</p> <p>16 no idea as to the methodology of calculation.</p> <p>17 Q. And you have no idea yourself as to the parameters that</p> <p>18 were chosen, for example how far away the vessels had to</p> <p>19 be? Those sort of matters, you have no personal</p> <p>20 knowledge?</p> <p>21 A. No.</p> <p>22 Q. Would it be designed by somebody within the Marine</p> <p>23 Police, or would it be something that came with the</p> <p>24 system provided by HITT?</p> <p>25 A. As far as I know, the staff of the HITT should know</p>
<p style="text-align: right;">Page 22</p> <p>1 plotting on the basis of that data which the system had</p> <p>2 recorded?</p> <p>3 A. Yes.</p> <p>4 Q. Thank you. Can I now move on to look at some track</p> <p>5 records which you had commented on in your witness</p> <p>6 statement. For ease of reference for everybody, I think</p> <p>7 I should refer to the documents as they appear in the</p> <p>8 expert bundle, because I think that is where I think the</p> <p>9 involved parties may find it more convenient.</p> <p>10 It's expert bundle, page 285, corresponding to</p> <p>11 police bundle E, page 1222.</p> <p>12 This is a series of track reports bearing the</p> <p>13 heading "Hong Kong Marine Police". The file name is</p> <p>14 "IN26831_Lam_trip", so it is a record of Lamma IV.</p> <p>15 A. Yes.</p> <p>16 Q. As we've heard, it is solely based on the system's</p> <p>17 interpretation of the radar signals received by the</p> <p>18 radar, as you say, on Kau Yi Chau?</p> <p>19 A. Yes.</p> <p>20 Q. Just as a matter of record and as a matter of</p> <p>21 completeness, you are aware that the Kau Yi Chau radars,</p> <p>22 the signals were also sent to Mardep?</p> <p>23 A. As far as I know, it was the same raw signal.</p> <p>24 Q. Thank you. So the system would have assigned a label of</p> <p>25 "93" to Lamma IV?</p>	<p style="text-align: right;">Page 24</p> <p>1 about this.</p> <p>2 Q. So, likewise, if you turn to page 286, again under the</p> <p>3 "Alerts" section, starting from 20:19:32 all the way</p> <p>4 down, we see an alert of "InZone".</p> <p>5 A. Yes.</p> <p>6 Q. You say that the appearance or the programming for the</p> <p>7 in-zone alert is also something automatically generated</p> <p>8 by the system when you called up this track report?</p> <p>9 A. Yes.</p> <p>10 Q. Do you have any idea as to the meaning of in-zone, the</p> <p>11 in-zone?</p> <p>12 A. I have no idea.</p> <p>13 Q. But these reports are generated after the event, when</p> <p>14 an officer decides to retrieve the track reports of</p> <p>15 a particular vessel, right? So these would necessarily</p> <p>16 be generated after the incident?</p> <p>17 A. Yes.</p> <p>18 Q. Contemporaneously with the event, is there any system or</p> <p>19 equipment in the Marine Police which would show up</p> <p>20 alerts of this nature?</p> <p>21 A. As far as I know, there isn't.</p> <p>22 Q. Thank you. Can I now move on to the Sea Smooth track</p> <p>23 report which you can find in the same expert bundle at</p> <p>24 page 286. Page 288 in the expert reports bundle.</p> <p>25 In the police bundle E, the entire extract of the</p>

<p style="text-align: right;">Page 25</p> <p>1 Sea Smooth trip starts at page 1231, but the page which 2 corresponds with expert bundle page 288 is in police 3 bundle E, page 1239. 4 It starts from 20:15:22. Do you see that? 5 A. Yes. 6 Q. This is in a similar format as the track report that we 7 have seen for Lamma IV. 8 A. Yes. 9 Q. What I want to ask you, and you have in fact told us 10 that already, but I simply wish to confirm with you, and 11 that is even though Sea Smooth is equipped with AIS, but 12 then for track reports generated in the system under 13 this format, it is still based on the system's 14 interpretation of radar signals alone; correct? 15 A. Yes. 16 Q. Thank you. Again, some questions about the alerts 17 appearing in the Sea Smooth track report. Here, we see 18 "SpeedHigh"; do you see that? 19 A. Yes. 20 Q. Are you aware of the meaning of a "SpeedHigh" alert? 21 A. No. 22 Q. Again, it is something that was input into the system 23 and which automatically comes out when you call up the 24 relevant data after the event? 25 A. Yes.</p>	<p style="text-align: right;">Page 27</p> <p>1 this track report, the position, the course and the 2 speed, was all based on the radar signals that were 3 received rather than AIS? 4 A. Yes, it is derived from the system. 5 Q. Again in respect of the entries appearing under the 6 "Alerts" column, we have seen "Collision", we have seen 7 "SpeedHigh" before. I think there is one additional 8 alert that we have not seen before, and that is 9 "AnchorProhibited" at page 1255-5. 10 A. Yes. 11 Q. Do you have any idea as to the significance or meaning 12 of "AnchorProhibited"? 13 A. I have no idea. 14 Q. Do you have any idea as to the thinking behind the 15 selection of these 16 vessels to be incorporated in this 16 report, and what use do you think the incorporation of 17 the information about these 16 vessels might do or might 18 assist? 19 A. As far as I know, these 16 vessels passed by the 20 north-western part of Lamma Island which was in the 21 track of Sea Smooth. I believe that by incorporating 22 the data into the report, it will help to find out if 23 they have affected the track of Sea Smooth. 24 Q. Thank you. Can I now move on to some other materials 25 that you produced. Let's move away from these track</p>
<p style="text-align: right;">Page 26</p> <p>1 MR SHIEH: Thank you, Officer. 2 Mr Chairman, I'm going to move on to a slightly 3 different topic. It may be an appropriate moment to 4 take the mid-morning break. 5 THE CHAIRMAN: Very well. 6 Officer, we're going to take a 20-minute break now. 7 We'll come back and you can resume your evidence at 8 11.45 by that clock. 9 (11.26 am) 10 (A short break) 11 (11.44 am) 12 THE CHAIRMAN: Officer, may I remind you that you continue 13 to give your testimony according to your original oath. 14 Yes, Mr Shieh. 15 MR SHIEH: Officer, could I ask you to look at another set 16 of track reports which is not in the expert bundle but 17 which is in police bundle E, page 1255-3. You can see 18 that in front of you? It is a print-out with a file 19 name "IN26831_Expert_5_mins_b4". 20 A. Yes. 21 Q. According to your witness statement at internal page 5, 22 it is a set of track record of Lamma IV, Sea Smooth and 23 16 other vessels near the scene. 24 A. Yes. 25 Q. Again, could I just confirm that the data reflected in</p>	<p style="text-align: right;">Page 28</p> <p>1 reports. 2 In your witness statement, internal page 4, 3 paragraph 6, which is marine bundle 8, page 1255-100 -- 4 A. Yes. 5 Q. In paragraph 6 you refer to materials 3 to 9 -- 6 A. Yes. 7 Q. -- being radar plot charts. 8 A. Yes. 9 Q. Could I trouble you to look at police bundle E, 10 page 1249. 11 A. Yes. 12 Q. As I understand, page 1249 going straight to page 1255 13 represent materials 3 to 9, which you commented on. 14 A. Yes. 15 Q. There are one or two questions that I would like to ask 16 you arising out of these. First of all, page 1249; that 17 is what you call material 3? 18 A. Yes. 19 Q. This is displayed in 2.91 nautical miles range. It 20 shows the track of Sea Smooth. 21 A. Yes. 22 Q. In your statement, you mention three labels or three 23 ship IDs: 93, 8023 and 8038. 24 A. Yes. 25 Q. You say all these were labels given to Sea Smooth?</p>

<p style="text-align: right;">Page 29</p> <p>1 A. Yes.</p> <p>2 Q. First of all, I have two questions for you. Why would</p> <p>3 three labels be given to one vessel? Secondly,</p> <p>4 I thought in the previous set of track reports we saw</p> <p>5 that 93 is the label given to Lamma IV.</p> <p>6 A. From this chart, the red line denotes the path, the</p> <p>7 track of Sea Smooth from Central Pier to the</p> <p>8 north-western part of Lamma Island. And the label was</p> <p>9 "ID8038". The reason the label was changed to "8023" is</p> <p>10 because there was a period of time when the track was</p> <p>11 lost, and this label, "8023", was given Sea Smooth again</p> <p>12 at 20:19:43.</p> <p>13 The reason why the label "93", which was originally</p> <p>14 given to Lamma IV, came to be the label of Sea Smooth,</p> <p>15 the reason was after the collision, the track signal of</p> <p>16 these two vessels might have merged together. Also, the</p> <p>17 ID number 93 was assigned to Sea Smooth again by the</p> <p>18 system. So I believe that the number 93 might not be</p> <p>19 a number which was assigned to only one vessel.</p> <p>20 Q. I understand that. Because as I understand from the</p> <p>21 Marine Department's evidence, the same label can only</p> <p>22 belong to one ship at any one time. So at different</p> <p>23 points in time, one label could well go to different</p> <p>24 vessels?</p> <p>25 A. Yes.</p>	<p style="text-align: right;">Page 31</p> <p>1 a time jumped to a different place. When it jumped to</p> <p>2 a different place, the system assigned a new label,</p> <p>3 "8023", to Sea Smooth.</p> <p>4 So when you said whether there is a loss in the</p> <p>5 track, I don't believe that it has been lost and then</p> <p>6 assigned again, but rather a new label has been assigned</p> <p>7 to Sea Smooth. The reason why 8038 still existed was,</p> <p>8 when we clicked on 8038, we couldn't stop 8038 on the</p> <p>9 screen. Until the system recognised that 8038 did not</p> <p>10 belong to Sea Smooth, then it would disappear from the</p> <p>11 report.</p> <p>12 Q. Thank you. I think the video can be paused.</p> <p>13 Can I ask you to go on to the next material, which</p> <p>14 is material 4. In police bundle E, it is page 1250.</p> <p>15 A. Yes.</p> <p>16 Q. Here, it is 1.7 nautical miles range showing the track</p> <p>17 of Lamma IV. This time Lamma IV had the ID of "8038",</p> <p>18 I suppose you would say or "8032", would you?</p> <p>19 THE CHAIRMAN: I think that must be a reference to Sea</p> <p>20 Smooth.</p> <p>21 MR SHIEH: Yes. So you want to correct that as well? It's</p> <p>22 not Lamma IV; it's Sea Smooth?</p> <p>23 A. I would like to explain. Actually "8038", which is in</p> <p>24 the north part of this map, it is in fact Sea Smooth.</p> <p>25 Also, the "8023" which I amended earlier was also Sea</p>
<p style="text-align: right;">Page 30</p> <p>1 Q. The phenomenon that you talked about just now, about the</p> <p>2 signal for Sea Smooth suddenly being lost and then</p> <p>3 reappearing and 8023 being given to it, it's something</p> <p>4 that we can see at expert bundle page 290. Can I just</p> <p>5 ask you to look at it.</p> <p>6 A. Yes.</p> <p>7 Q. If you look at the label, under the label, it's 8038 all</p> <p>8 the way down to 20:19:43.</p> <p>9 A. Yes.</p> <p>10 Q. And then it changed to 8023.</p> <p>11 A. Yes.</p> <p>12 Q. There is then a period when they alternated.</p> <p>13 A. Yes.</p> <p>14 Q. Actually if you go on, 20:19 all the way down to</p> <p>15 20:20:31 --</p> <p>16 A. Yes.</p> <p>17 Q. -- they kept alternating during this period?</p> <p>18 A. Yes.</p> <p>19 Q. So signals kept being lost and found again, lost and</p> <p>20 found again? And labelled, assigned and reassigned,</p> <p>21 assigned and reassigned?</p> <p>22 A. No.</p> <p>23 Q. Can you explain that?</p> <p>24 A. In fact if you refer to video 3, you can see that when</p> <p>25 the track moved downwards, the white track had for</p>	<p style="text-align: right;">Page 32</p> <p>1 Smooth. And "93" belongs to Lamma IV.</p> <p>2 Q. So you would wish to correct this part of your statement</p> <p>3 to actually swap the places of the two ship names; is</p> <p>4 that correct?</p> <p>5 A. (Chinese spoken).</p> <p>6 Q. In paragraph 6 of your witness statement, police</p> <p>7 bundle E, page 1255-100 -- because I was operating on</p> <p>8 your written statement and that's one of the things</p> <p>9 I want to clarify, because in your witness statement,</p> <p>10 paragraph 6, the fifth line, when you discuss this</p> <p>11 material, you actually say it shows the trajectory of</p> <p>12 track of Lamma IV, and then you gave the two IDs which</p> <p>13 we have now seen to belong to Sea Smooth.</p> <p>14 A. (In English) Yes.</p> <p>15 Q. So you basically wish to correct that as well, so it now</p> <p>16 reads:</p> <p>17 "... track of Sea Smooth (Ship ID: 8038 or 8023) and</p> <p>18 Lamma IV (Ship ID: 93) ..."</p> <p>19 Correct?</p> <p>20 A. Yes.</p> <p>21 Q. Thank you. Could I now move on to the next, which is</p> <p>22 your material 6, and that is page 1251.</p> <p>23 A. Yes.</p> <p>24 Q. Here, it shows the track of Lamma IV with three IDs at</p> <p>25 different points in time.</p>

<p style="text-align: right;">Page 33</p> <p>1 A. Yes. 2 Q. Would it be fair to say that it was because it started 3 off as 93 but, as a result of either signal loss or the 4 collision, labels were reassigned to Lamma IV as 5 a result? 6 A. Yes. 7 Q. Thank you. Can I ask you to assist us on this. If you 8 look at the top label, "20:26" -- 9 A. Yes. 10 Q. I would ask for your assistance for the top part of the 11 chart where the label of "3075" was given. 12 A. Yes. 13 Q. That was, we know, one of the labels that had been given 14 to Lamma IV. 15 A. Yes. 16 Q. But we can see -- the two red lines, what are they? 17 A. Yes. 18 Q. We can see a green line in between the two red lines? 19 A. Yes. 20 Q. And that group of lines was disconnected from the blue 21 cluster of lines, of tracks that we see further down? 22 A. Yes. 23 Q. What would you say to be your interpretation of this 24 phenomenon? 25 A. In the same way, I believe that it was due to the</p>	<p style="text-align: right;">Page 35</p> <p>1 A. Yes. 2 Q. The red line we see at the top, going all the way down, 3 was Sea Smooth? 4 A. Yes. 5 Q. On this Lamma IV you say would be 8023, according to 6 your statement? If you look at your witness statement, 7 internal page 5, in the police bundle E, page 1255. 8 A. Yes. 9 Q. At the top of that, you say this material, material 8, 10 showed the track of Lamma IV with ID 8023. 11 A. Yes. 12 THE CHAIRMAN: Doesn't that show Lamma IV as north of the 13 light at Shek Kok Tsui -- 14 MR SHIEH: I was trying to ascertain -- 15 THE CHAIRMAN: -- at 20:19 -- it's clearly wrong? 16 MR SHIEH: -- from him why that would be the case. 17 THE CHAIRMAN: It's wrong, isn't it? 18 MR SHIEH: I was asking him to clarify. 19 THE CHAIRMAN: Yes, very well. 20 MR SHIEH: Officer, can you tell us why this does not appear 21 to depict what we have understood to be the position of 22 Lamma IV? Is that a mistake? 23 A. Yes. I'm sorry, there is a mistake. 24 Q. So "8023" is the label for Sea Smooth? 25 A. Yes.</p>
<p style="text-align: right;">Page 34</p> <p>1 collision or due to the weakness or strength of the 2 ships' signal that led to the new ID being assigned to 3 them by the system. 4 Q. Thank you. Can I now ask you to move on to the next 5 material, and that is material 6, which is page 1252. 6 A. Yes. 7 Q. 0.36 nautical miles range? 8 A. Yes. 9 Q. We see the track of Sea Smooth, with 8038? 10 A. Yes. 11 Q. And two unnamed vessels with IDs 2021 and 5622? 12 A. Yes. 13 Q. This really is not to do with what took place in the 14 vicinity of Lamma Island; right? This is an earlier 15 part of its journey? 16 A. Yes. 17 THE CHAIRMAN: What's its relevance to us, Mr Shieh? Why 18 are we being troubled by this? 19 MR SHIEH: I was just asking him to clarify that this is not 20 about the Lamma collision, that we can actually safely 21 put it away. 22 THE CHAIRMAN: Let's move on to what is relevant. 23 MR SHIEH: Yes. 24 Can we move on to page 1254 then. This, as 25 I understand it, is material 8. 2.92 nautical miles.</p>	<p style="text-align: right;">Page 36</p> <p>1 Q. As far as I can see, this does not appear to contain any 2 track for Lamma IV. Can you tell us whether this 3 actually relates to Lamma IV at all? 4 A. Yes, the track of Lamma IV is not shown here. 5 Q. Right. So we can take this as purely relating to, 6 materially, Sea Smooth; yes? 7 A. Yes. 8 Q. Thank you. Finally, your last material in this respect, 9 the next page, 1255. That is your material 9. 10 A. Yes. 11 Q. This appears to be much neater, because it's "93" versus 12 "8023", and it's Lamma IV and Sea Smooth. 13 A. Yes. 14 Q. Thank you. So you've made the corrections that you have 15 made just now in respect of these plots; right? 16 A. Yes. 17 Q. Just for identification purposes, the next paragraph in 18 your witness statement, paragraph 7, you refer to 19 material 10. 20 A. Yes. 21 Q. You say it was a DRSS screen capture. 22 A. Yes. 23 Q. The file name was IN26831_Expert_5_mins_b4. 24 A. Yes. 25 Q. "In terms of graphic", you say "in terms of graphic".</p>

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<p>1 That's what he says in the witness statement. He 2 used the words. 3 A. Yes. 4 Q. Can I ask you to look at police bundle E, page 1255-1. 5 A. Yes. 6 Q. Look at page 1255-2. 7 A. Yes. 8 Q. I just wish you to help us. Material 10 actually refers 9 to the table that we have seen at page 1255-3; is that 10 correct? 11 A. Yes. 12 Q. How does that relate to page 1255-1 and page 1255-2? 13 A. One of them was a graphic capture of the image which was 14 meant to facilitate the officers or colleagues in our 15 department to understand the situation at the north-west 16 part of Lamma Island at the time. 17 THE CHAIRMAN: These are two snapshots, are they not, one at 18 the being of the time period, one at the end, showing 19 the vessel? 20 A. (In English) Yes. 21 MR SHIEH: Because you mentioned one is 20:15 and one is 22 20:20. The one at 20:15 is page 1255-1, and the one at 23 20:20 is page 1255-2; correct? 24 A. Yes. 25 MR SHIEH: Thank you very much, Officer. I have no further</p>	<p>1 is it not? When it comes to changing numbers on 2 vessels -- we can nevertheless, because we know the 3 basic facts of this case, find our way through it 4 without going down rabbit holes that might illustrate 5 the chaos theory. 6 MR MCGOWAN: I wasn't actually attempting to demonstrate the 7 chaos theory. There are just one or two matters I've 8 had difficulty with his evidence on. 9 THE CHAIRMAN: I'm surprised there are only one or two 10 matters. 11 MR MCGOWAN: I was shortening it a bit. 12 THE CHAIRMAN: If you feel it will help us decide these 13 events, by all means ask the questions. 14 MR MCGOWAN: I hope it might. It's obviously up to you 15 whether it does or not. 16 Examination by MR MCGOWAN 17 Q. Can I just start by asking about track 6191, which is 18 down in the vicinity of the harbour at Lamma. Do you 19 see that, Officer? 20 A. Yes. 21 Q. Do you know what vessel that is? 22 A. No. 23 Q. The other track numbers on this screenshot and the 24 previous one, were those track numbers which were 25 allocated on the night of 1 October or allocated later?</p>
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<p>1 questions for you. 2 MR MCGOWAN: I'm sorry, could the first of those two 3 screenshots just be brought back onto the screen, 4 please? Thank you. 5 MR SHIEH: Just for the sake of clarification, from time to 6 time my learned friends have asked me whether they have 7 been given these. These are all materials in the disc 8 which are part of the materials that had been supplied 9 to Captain Pryke and which had already been supplied to 10 the involved parties some time ago. 11 THE CHAIRMAN: Thank you. 12 Mr McGowan, these are available in hard-copy form at 13 page 1255-1 and page 1255-2. 14 MR MCGOWAN: We are suffering a little bit, sir, from the 15 lack of pagination of some of the materials we have. 16 I would like to ask this witness some questions, please. 17 THE CHAIRMAN: How does that arise in the interests that you 18 are representing? 19 MR MCGOWAN: Well, I'm somewhat confused exactly what 20 information is available to the Police on that night in 21 their RCCC, which is where this material came from, what 22 the Police in there were seeing on their screens that 23 night, and a great deal of this officer's evidence 24 I found very difficult to follow. 25 THE CHAIRMAN: It's a good illustration of the chaos theory,</p>	<p>1 A. On 1 October. 2 Q. Right. Is there any record kept of the identity of the 3 vessels, or just a track number? 4 A. The system records the number and also the data below. 5 Q. At a particular time? 6 A. Yes. 7 Q. You have spoken in your witness statement of getting 8 information from the Regional Command and Control Centre 9 Marine; that's RCCC MAR. 10 A. Yes. 11 Q. That's in the Marine building in Central? 12 A. No. 13 Q. So Marine Headquarters, MHQ, is where? 14 A. It is in Sai Wan Ho. 15 Q. Okay. So that's actually the Marine Police 16 headquarters? 17 A. Yes, the Marine Police headquarters. 18 Q. The Marine Police headquarters, as opposed to anything 19 to do with the Marine Department? 20 A. The one in Sai Wan Ho is the Marine Police headquarters. 21 Q. Right. So where is the RCCC Marine, ie the Marine 22 Police division, situated? 23 A. The RCCC is in Sai Wan Ho, which is within the 24 headquarters that I mentioned just now -- 25 Q. Okay. Thanks for clearing that up.</p>

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<p>1 A. -- marine Headquarters. 2 Q. This is essentially an operations room, is it, with 3 these radars and equipment? 4 A. Yes. 5 Q. Is it just one set of displays, as you've described, 6 with the screen and the video on one side and -- sorry, 7 the camera on one side and the infrared on the other? 8 A. I would like to explain. In each division of the 9 RCCC MAR, there are a set of DRSS and CCS on each desk. 10 So the colleagues make use of these two sets of system 11 in daily operation. And there's not only one set. 12 THE CHAIRMAN: Thank you, Officer. This is not relevant to 13 this Commission's Inquiry. 14 MR McGOWAN: But it's being watched all the time, is it? 15 A. Yes. 16 Q. Thank you. We saw some screenshots of the period 17 leading up to the collision as part of the material that 18 was produced as an annex to your statement. 19 A. Yes. 20 Q. I just ask if those could be called up. I think it's 21 the fourth one which shows the point of collision. 22 THE CHAIRMAN: Which page number are you asking for? 23 MR McGOWAN: Well, it's actually in the video itself. 24 THE CHAIRMAN: The fourth video? 25 MR McGOWAN: Yes.</p>	<p>1 A. I can only say that these two vessels have collided into 2 each other, but I cannot be sure that it was the 3 starboard of these, on the right side of these vessels 4 that were collided. 5 Q. That's what the radar depicts, isn't it? 6 THE CHAIRMAN: Mr McGowan, we have your point. 7 MR McGOWAN: Thank you very much. 8 Could you look at the exhibit bundle -- no, I won't 9 ask that. 10 On the night in question, can you tell us from your 11 experience what would have been on the screen observable 12 by the policeman on watch, looking at these pictures? 13 A. As far as I know, my colleagues at that time were paying 14 attention to the fireworks display at Victoria Harbour 15 and it was possible that they were not paying attention 16 to the collision that was shown from the radar. 17 Q. I wasn't actually asking that question. He would be 18 looking at the picture which included Victoria Harbour 19 down to Lamma, the Lamma Channel? 20 A. In fact our colleagues were able to see all the tracks 21 of the vessels in the whole of Hong Kong but colleagues 22 in different divisions would be looking at different 23 locations in the Hong Kong waters. That is why 24 I believe that our colleagues would not be able to spot 25 the movement, the track of the vessels at Victoria</p>
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<p>1 THE CHAIRMAN: Thank you. 2 MR McGOWAN: Item 4. I wonder if that could be run on 3 through the video and to -- it can be certainly 4 fast-forwarded to near the time of the collision 5 occurring. 6 I think you need to go back a bit. Yes, another two 7 minutes, perhaps. 8 That's it. Can you just let it run on, please. 9 (Video played) 10 Can you stop it there. That's on the video timing 11 04:59, from the timing in the little box on the 12 left-hand side. 13 You've seen that track or those two tracks? 14 A. Yes. 15 Q. This is now paused at effectively the moment of 16 collision, or very shortly afterwards. 17 A. Yes. 18 Q. That picture appears to show the starboard bow of the 19 Sea Smooth coming into collision with the starboard bow 20 of the Lamma IV; do you agree with that? 21 A. I cannot be certain about this. 22 Q. You've completed these courses, Officer, haven't you? 23 And you're a qualified Marine Police coxswain? 24 A. Yes. 25 Q. Doesn't that show what I've just described to you?</p>	<p>1 Harbour and at the same time spot the collision of these 2 two vessels. 3 Q. Are they just looking at radar blobs, if I can call it 4 that, or do they have information about each contact 5 displayed at the same time? 6 A. I don't quite understand your question. 7 MR SHIEH: I think the question was whether or not they did 8 so simply by looking at the radar blobs or whether or 9 not there would be other further data displayed. 10 MR McGOWAN: Yes. Your pictures which you've created for 11 the purpose of this investigation have quite a lot of 12 information about contacts. 13 A. Yes. 14 Q. As I understand it, you called up that information for 15 the purposes of the investigation, from the database? 16 A. Yes. 17 Q. The person on watch on the night of 1 October wouldn't 18 have had that information displayed on the screen? 19 A. The colleagues may not have -- 20 THE INTERPRETER: (Chinese spoken). 21 A. The colleagues can see all these signals, but they may 22 not be looking at Lamma Island. 23 MR SHIEH: The question is, is it displayed all the time or 24 just available if they want to look for it, like 25 clicking on to a particular contact?</p>

<p style="text-align: right;">Page 45</p> <p>1 A. Yes, it is always there in the system. 2 MR SHIEH: Mr Chairman, I'm not sure what this goes to 3 because the system stores the information. I'm not sure 4 the relevance as to whether or not those in charge on 5 that particular night would be able to see 6 instantaneously that data. 7 THE CHAIRMAN: Yes. 8 Mr McGowan, can you move to something that's 9 relevant. 10 MR McGOWAN: Yes, I'm about to do that. 11 Could you go to what is in the expert bundle at 12 pages 290 and 291. 13 A. Yes. 14 Q. You were asked some questions about this by my learned 15 friend Mr Shieh. 16 A. Yes. 17 Q. About two-thirds of the way down page 290, we see the 18 emergence of track 8023. 19 A. Yes. 20 Q. At 20:19:43. 21 A. Yes. 22 Q. That track number persists. It appears on each occasion 23 together with track 8038? 24 A. Yes. 25 Q. So the sweep of the radar at 20:19:43 produces two</p>	<p style="text-align: right;">Page 47</p> <p>1 uncommon. There are two reasons. Firstly, it depends 2 largely on the strength of the signal. Secondly, when 3 two vessels are very close to each other, then swapping 4 of the labels could occur. 5 Q. Well, yes, but that's not what happened here, is it, 6 Officer? 7 A. On this occasion, I think it is not because there are 8 two vessels, but it could be due to the first reason 9 that I mentioned just now. 10 Q. These two contacts appear to be moving in completely 11 different directions at different speeds, and yet 12 they're both Sea Smooth. 13 A. I won't put it that way. As I have said just now, the 14 system has assigned 8023 to Sea Smooth again at 15 20:19:43. The reason why the number 8038 still existed 16 was because it was when we plotted this vessel, and then 17 until we end the report. It could also be due to the 18 fact that the system has taken away the 8038 and so it 19 would not appear in the report. 20 Q. But it does, doesn't it? It continues to appear in the 21 report. 22 A. Yes, it appeared until 20:20:31. 23 Q. Just one last thing, Officer. Do you keep watches 24 yourself in the RCCC? 25 A. No.</p>
<p style="text-align: right;">Page 46</p> <p>1 separate contacts? 2 A. Yes. 3 Q. With two different geographical locations? 4 A. Yes. 5 Q. Two different courses and speeds? 6 A. Yes. 7 Q. On each occasion that there are those two contacts, the 8 same thing happens; the data is being recorded as 9 totally different contacts doing different things in 10 different locations at the same time? 11 A. Yes. 12 Q. That continues through to 20:20:31, which is about 10 or 13 12 seconds after the collision? 14 A. Yes. 15 Q. And after that, 8038 just disappears? 16 A. Yes. 17 Q. Do you have any idea how that could have happened or why 18 that happened? 19 A. In fact I have explained about this a little bit 20 previously, and the situation was that the ID 8038 was 21 assigned to Sea Smooth earlier on. But then, when it 22 came to 20:19:43, the track of Sea Smooth moved to 23 a different place. The emergence of 8023 was because 24 the system had assigned it to Sea Smooth again. As far 25 as my experience is concerned, such a phenomenon is not</p>	<p style="text-align: right;">Page 48</p> <p>1 Q. Are you able to help, from either your experience or 2 your training, to tell us when you see on these 3 print-outs "SpeedHigh" or "Collision" or similar 4 warnings, "InZone", appear on the track reports, does 5 that appear on the radar or the system that the officer 6 on watch is watching at the time, in realtime probably 7 is the best way to put it? 8 A. No. As far as I know, no. 9 MR McGOWAN: Right, thank you. Thanks very much, Officer. 10 Thank you, sir. 11 MR MOK: Mr Chairman, one or two questions. I am not sure 12 the witness has said this, so may I ask him this 13 question. 14 Examination by MR MOK 15 Q. On page 290 of the expert bundle, at 20:19:43 -- have 16 you got that? 17 A. Yes. 18 Q. You said that the new label, "8023", became assigned to 19 Sea Smooth. 20 A. Yes. 21 Q. Would it be correct to say that at the same time, the 22 label "8038" then became assigned to another vessel from 23 that time? 24 A. You can put it that way. 25 MR MOK: No more questions.</p>

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1 THE CHAIRMAN: Thank you. 2 Mr Shieh? 3 MR SHIEH: Can I follow up. 4 Further examination by MR SHIEH 5 Q. Let's look at expert bundle page 290. 6 A. Yes. 7 Q. From 20:19:43 onwards, 8023 began to co-exist with 8038. 8 A. Yes. 9 Q. This lasted until 20:20:31? 10 A. Yes. 11 Q. If one were to attempt to do a plot based on the 12 longitude, latitude, course and various items of data, 13 one would choose the information or data by the row of 14 8023; is that correct? 15 THE CHAIRMAN: As reflecting what? 16 MR SHIEH: As reflecting Sea Smooth. 17 A. Yes. 18 Q. You may or not be able to answer my next question. If 19 you are not able to, by all means tell us. 20 8038, according to your answer to Mr Mok's question, 21 you said had been assigned to some other vessel. 22 A. Just now I said it was possible. 23 Q. It was possible. But apart from the possibility that it 24 might have been actually assigned to some other vessel, 25 were there other possibilities as to why some longitude	1 A. Yes. 2 MR SHIEH: Thank you very much. I have no further 3 questions. 4 THE CHAIRMAN: Thank you, Officer. Your evidence is 5 complete and you are free to go. Thank you for 6 attending to help us. 7 A. (In English) Thank you. 8 (The witness withdrew) 9 MR SHIEH: Mr Chairman, the next witness is obviously going 10 to be the HITT witness, Mr Boorsma, followed by Captain 11 Pryke, hopefully both in the afternoon. 12 THE CHAIRMAN: Very well. If Mr Boorsma is to be asked to 13 deal with these matters, there's no reason why he should 14 not be given advance notice now. 15 MR SHIEH: We shall be telling him. 16 THE CHAIRMAN: Please do. 17 We will adjourn now until 2.30. 18 (1.00 pm) 19 (The luncheon adjournment) 20 (2.30 pm) 21 THE CHAIRMAN: Yes, Mr Shieh. 22 MR SHIEH: Mr Commissioner, may I now call Mr Boorsma. 23 THE CHAIRMAN: Yes. 24 Mr Boorsma, good afternoon. If you feel more 25 comfortable, do take your jacket off. I'm going to ask
Page 50	Page 52
1 and latitude positions and things like that appear next 2 to this number which used to belong to Sea Smooth? 3 THE INTERPRETER: (Chinese spoken). 4 MR SHIEH: Can I put my question again. 5 You raise one possibility, and that is 8038 might 6 have been assigned to some other vessel. Are there any 7 other possibilities which may explain the appearance of 8 8038 here with the appearance of longitude, latitude, 9 course and speed and entries of that nature, which makes 10 it look as though it represents some other ship? 11 THE INTERPRETER: (Chinese spoken). 12 MR SHIEH: Perhaps I'll put it one more time in a more 13 straightforward way. 14 Are there any other possibilities to explain the 15 continued existence of 8038 on this track report? 16 A. Yes. 17 Q. What other possibilities can you think of? 18 A. As I have said just now, due to the strength or the 19 weakness, the track might be lost at certain times. And 20 then when the signal comes back again, the system may 21 assign another label to Sea Smooth. As to why 8038 22 continued to exist and not disappear as soon as 8023 23 appeared, it is something decided by the system. 24 Q. You think somebody from HITT may be able to assist us on 25 that?	1 you in a moment to take the oath or affirmation before 2 you give your evidence. It's your choice. 3 MR HARM JELLE BOORSMA (affirmed) 4 Examination by MR SHIEH 5 MR SHIEH: Mr Boorsma, I hope you have a copy of your 6 witness statement in front of you which was made on 7 11 December. The bundle reference, Mr Chairman and 8 Mr Commissioner, is the miscellaneous bundle, pages 73 9 and 74. 10 THE CHAIRMAN: Thank you. 11 MR SHIEH: Do you have a copy of that document in front of 12 you, Mr Boorsma? 13 A. Yes. 14 Q. Before you came to give evidence, have you had a chance 15 to review this statement and familiarise yourself with 16 its contents? 17 A. Yes, I did. 18 Q. Do you put this forward as your evidence for this 19 Commission? 20 A. I do. 21 Q. There are a number of questions that I would like to ask 22 you and ask for your elaboration on. First of all, can 23 you give a brief description as to your involvement in 24 the setting up of the respective systems for Mardep and 25 for the Marine Police? The Mardep, I think it is the

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<p>1 VTS system; for the Marine Police, I think it is the 2 DRSS system. 3 A. Yes, I can. In 2001 up to 2003, I was part of the team 4 here in Hong Kong that installed and set up the system 5 as well for indeed the VTS system for Mardep and the 6 DRSS system for Marine Police. My job was mostly the 7 tuning of the radar and setting up of the tracking 8 program. 9 Q. Please go ahead. Continue. 10 A. There was not much more. 11 Q. Right. In your witness statement -- first of all, let's 12 get the groundwork established. In terms of the 13 physical radar receivers, both -- 14 THE CHAIRMAN: Before we get to that, Mr Shieh, might 15 I invite you to establish some of his curriculum 16 vitae -- 17 MR SHIEH: Yes, they are not contained in -- 18 THE CHAIRMAN: -- as far as this issue is concerned. 19 MR SHIEH: Could I have your educational background, please? 20 A. My educational background is an electrical engineer with 21 specification to computer programming, and later I have 22 become a project manager and project engineer. 23 Q. How long have you been in this particular area of your 24 work? 25 A. I have been working with radar and programming for it</p>	<p>1 requirements of the Marine Police and of Mardep. This 2 is at paragraph 5: 3 "Separate data processes are used because the Marine 4 Department deals with co-operative targets, while the 5 Marine Police deals with evasive, non-co-operative 6 targets." 7 A. Yes. 8 Q. It simply means that the Marine Police are interested in 9 maybe smaller matters? 10 A. Smaller targets, yes. That means that we have more 11 sensitivity in that system for Marine Police than for 12 the Marine Department system. So it would mean that 13 it's easier to see very small vessels, but that includes 14 also that it's easier to see waves and debris in the 15 water. 16 Q. The purpose originally of obtaining your witness 17 statement was to explain certain discrepancies in 18 figures that were generated from the respective systems 19 of the Marine Department on the one hand, and the Marine 20 Police on the other. Let me give you an illustration of 21 that. 22 Can the witness be shown the expert evidence bundle, 23 and turn to page 285. 24 A. Yes. 25 Q. This is a track report for the vessel Lamma IV produced</p>
Page 54	Page 56
<p>1 from 1984 up to about 2000. And from 2000, I have been 2 an installation engineer and setting up and installing 3 systems, tuning the systems, well, for example, like the 4 system for VTS and DRSS. 5 Q. When was your first involvement with the Marine Police 6 and with the Marine Department in respect of their 7 systems? 8 A. That would have been March 2001. 9 Q. Right. In terms of your education, I presume you have 10 degrees in engineering? 11 A. Yes. 12 THE CHAIRMAN: From which universities? 13 A. The technical university in the Netherlands, in 14 Enschede. 15 MR SHIEH: Thank you. In terms of the actual set-up, am 16 I correct in saying that both the Marine Department and 17 the Marine Police systems rely on the same signals 18 received by the same set of radars? 19 A. Yes, that's correct. 20 Q. But to put it very broadly, the radars, having received 21 the signals, would basically send them out through -- in 22 a way you can say a wire that is split, one going to 23 Mardep and one going to the Police? 24 A. Correct. 25 Q. In your witness statement, you talked about different</p>	<p>1 by the Marine Police system. 2 A. (Witness nods). 3 Q. We can actually see your company name on the top 4 right-hand corner, HITT? 5 A. Yes. 6 Q. If you look at the first entry, 20:17:38, you see 7 certain positions, longitude and latitude and course and 8 speed given? 9 A. Yes. 10 Q. You can see that? 11 A. Yes. 12 Q. If you turn to page 335 in the same bundle. Against the 13 same time, 20:17:38, you see the position -- let's take 14 the position. 20 13.456 114, then 6.218, which is 15 slightly different from the information given for the 16 same time at page 285. The course and speed also 17 differed slightly. 18 A. Yes. 19 Q. Could you offer any explanation as to why, coming from 20 the same raw data, from the same radar receiver, the 21 systems in Mardep and Marine Police would generate 22 different data? 23 A. Yes. The output of the radar is an analogue signal. So 24 it is interpreted in different computers with different 25 hardware. This analogue signal is made into a digital</p>

<p style="text-align: right;">Page 57</p> <p>1 signal. Then there is a difference in tuning. So it's 2 even not to be expected that these values are the same. 3 Q. But in your witness statement at paragraph 6, you said: 4 "... there will be a slight difference in the data 5 generated, eg time, position, course and speed ... which 6 fall within the accuracy specifications of the system." 7 A. Yes. 8 Q. Can you explain what you mean by falling within the 9 accuracy specifications of the system? 10 A. For this system, the specified accuracy is for the 11 position at 10 metres, for the course 2 degrees, and for 12 the speed 1 knot. Average position accuracy. 13 Q. When you say "for this system", for which system? 14 A. For both, actually. 15 Q. For both? 16 A. Yes. They had both the same requirements with regard to 17 position, speed and course. 18 Q. Can I now ask you to deal with a slightly different 19 subject matter. 20 Before I move on, how do you operate that in 21 practice? Because, for example, if you look at the two 22 entries that I've asked you to look at, 20:17:38 at 23 page 285, the course is said to be 348 degrees -- 24 A. Yes. 25 Q. For the same time, at 20:17:38 at page 335, the course</p>	<p style="text-align: right;">Page 59</p> <p>1 see -- in the "Alerts" section we see the alert 2 "Collision". 3 A. Yes. 4 Q. Can you give us some assistance as to the significance 5 of an alert of "Collision", and what parameters dictate 6 or are entered or input into the system to generate such 7 an alert? 8 A. Yes. 9 Q. Whether or not your company did it or whether or not you 10 educated the user, so that they could input it 11 themselves. 12 A. Okay. I'll first start with what it is. The word 13 "Collision" there in the "Alert" column indicates that 14 the system has calculated a potential collision based on 15 CPA measurements and if you allow me to look at my 16 notes, then I can tell you the parameters. 17 THE CHAIRMAN: Yes, if that helps you give your evidence. 18 By "CPA", you mean closest point of approach? 19 A. Closest point of approach, yes. 20 I've dropped it somewhere. 21 THE CHAIRMAN: Take your time. 22 MR SHIEH: We are trying to locate it. 23 A. I must have left it somewhere. 24 Q. But before you actually get to see your notes containing 25 the data, can you help us with some preliminaries. That</p>
<p style="text-align: right;">Page 58</p> <p>1 is 352. 2 A. Yes. 3 Q. How would you explain whether that falls within the 4 accuracy specifications of the system? 5 A. What was the real -- now you take one sample, and what 6 I said was "average". 7 Q. Right. 8 A. So taking one sample doesn't mean it's exactly within 9 those -- well, this case it was about course 2 degrees. 10 The average accuracy is within 2 degrees. 11 THE CHAIRMAN: Average over what period? 12 A. Over a -- well, we measure this over a period of a few 13 minutes. So, say, five minutes. And not for one ship, 14 but for more than one ship. 15 THE CHAIRMAN: Thank you. 16 MR SHIEH: So you mean when you set up the respective 17 systems, you would conduct trials and tests? 18 A. Yes. Yes, of course. 19 Q. To make sure that the results generated by the two 20 systems averaged out over that particular period would 21 be within the accuracy specification that you just 22 described? 23 A. Yes. 24 Q. Thank you. If you look at the Police print-out at 25 page 285 in the expert bundle in front of you, you will</p>	<p style="text-align: right;">Page 60</p> <p>1 is to say, as far as the Marine Police system is 2 concerned, were the parameters for the collision alert 3 something which you had educated the Police users so 4 that they could decide, or whether or not it actually 5 came with the system by way of some default? 6 A. I found it. 7 No, this has -- the parameters that are in are still 8 the default parameters that have been in since the 9 beginning. 10 Q. So they were programmed by your company? 11 A. Yes. They were set up like this for us to be able to 12 demonstrate that this alert is working. 13 Q. And what were the parameters? 14 A. The parameters in the area we are talking about is that 15 it will give an alert if in the next 10 minutes, the 16 path of the ships will be closer to each other than 17 360 metres. 18 Q. So, CPA 360 metres; and time to CPA, 10 minutes? 19 A. Yes, correct. 20 Q. What area would that be? 21 A. That is the area south and actually also east of Hong 22 Kong. We have different parameters for the harbour 23 area. 24 Q. What would that be, for the harbour area? 25 A. That would be 290 metres, within five minutes.</p>

<p style="text-align: right;">Page 61</p> <p>1 Q. 290? CPA 290. 2 A. 290, within five minutes. 3 THE CHAIRMAN: When you say south and east of Hong Kong, do 4 you mean Hong Kong Island? 5 A. No, the Hong Kong SAR area. 6 THE CHAIRMAN: South and eastern parts of the area? 7 A. Yes. 8 THE CHAIRMAN: Thank you. 9 MR SHIEH: Can I now ask you to look at certain features in 10 the Police print-out. Again, that clip in front of you. 11 Could you please turn to page -- the expert bundle, I'm 12 sorry. 13 I've been reminded -- you said it was still the 14 default system as supplied by your company, the one used 15 by the Police? 16 A. Yes. 17 Q. Were you aware of any intended use that the Police were 18 to use the alerts in this system for? 19 A. I am not aware of that. 20 Q. Did they ask for any particular parameters to be input 21 or were they simply content for you to -- 22 A. Not related to this alert. 23 Q. Sorry? 24 A. Not related to this alert. 25 Q. For other matters --</p>	<p style="text-align: right;">Page 63</p> <p>1 Smooth. If you read down this page up to 20:19:43, you 2 will see a new label being given to the Sea Smooth, and 3 then it continued on and then both 8038 and 8023 4 co-existed for a certain period of time. In fact, for 5 every time, you see signals for 8038 and 8023 being 6 generated. That went on for a while until page 291. At 7 20:20:34 onwards it is only 8023. 8 I'm going to show you a video of a recording taken 9 from the Police system. 10 (Video played) 11 While we're at this point, can I have this paused. 12 Can I ask you one question that deals with a point that 13 has arisen this morning. You can see that patch under 14 the name "Sea Smooth" at the top of the screen? 15 A. Yes. 16 Q. We understand that whenever we look at these displays, 17 if we can see the name of a ship, that would have come 18 from an AIS system installed on the ship, which would 19 have come from a transponder? Is that correct? 20 A. Yes. There is one other possibility: that it's manually 21 added. 22 Q. Right. But in this case -- 23 A. There is a way of giving tracks a name in a manual way 24 as well. 25 Q. Right, okay. But in this case, we know that this came</p>
<p style="text-align: right;">Page 62</p> <p>1 A. Of course, they have provided requests for 2 implementation of certain parameters for alerts, but not 3 for this one. 4 Q. Not for collision alerts? 5 A. Not for collision. 6 Q. Not for collision alerts. Were there other alerts, as 7 a matter of interest, that they requested specific 8 parameters for? 9 A. Yes. There is an alert for -- well, we call it "track 10 guarding", protecting a vessel that no other vessel will 11 come too close. You can imagine that you want to do 12 this for a tanker, where you want to make sure that all 13 other vessels stay away at least 1 mile. 14 Q. Right. Okay. So basically they simply left it to you 15 to design whatever you thought sufficient? 16 A. Yes. They didn't have a purpose for it at that moment. 17 Q. They didn't have a purpose for it? 18 A. Yes. 19 Q. Thank you. 20 Can I ask you to look at the expert bundle, the 21 Police print-out, and turn to pages 290 and 291. This 22 relates to the vessel Sea Smooth. At page 290, you can 23 see it starts at 20:18:31. Can you see that? 24 A. Yes, I can. 25 Q. 8038 was the label given by the system to the vessel Sea</p>	<p style="text-align: right;">Page 64</p> <p>1 from the AIS system. 2 A. Yes. 3 Q. What I'm interested in is the next few rows, because we 4 know that they represent course and speed and length and 5 breadth of the vessel. 6 A. Mm'hm. 7 Q. But when you designed the system for the Police, and 8 obviously you designed the source of information for the 9 display in that patch that we are talking about -- now, 10 what I'm interested in is -- can I have that magnified? 11 It's not possible to magnify? Okay. 12 I think the last row represents the number 8038. 13 A. Yes. 14 Q. You can see the ID in the previous row is also 8038, and 15 then you can see length and breadth. You can see that? 16 Then on top I think would be the course and speed and 17 matters like that. What I want to know from you is when 18 you designed the system, did you design the system to 19 utilise the radar information to generate this display, 20 or did you design the system to utilise AIS information 21 to generate this display? 22 A. Here, for this display, for this information you show, 23 the name of the ship will come from AIS. 24 Q. The name of the ship from AIS, yes? 25 A. All the other information will come from radar.</p>

<p style="text-align: right;">Page 65</p> <p>1 Q. Other information from radar? 2 A. Yes. 3 Q. Generally speaking, what would you say to be the use or 4 reliability of AIS information as compared to radar? 5 A. That would be a very long discussion if we start that. 6 Let's put it like this. In many cases, AIS is quite 7 reliable. But also in some cases, it's very unreliable. 8 If it's unreliable, it's consistently unreliable. It's 9 consistently wrong. 10 Q. How about in the specific context of the use that we are 11 talking about? 12 A. I cannot tell you, because then I should analyse the AIS 13 information of this vessel. 14 Q. Okay. But in terms of the actual display of data, you 15 had designed the system so as to display the data 16 obtained from the radar? 17 A. Certainly, because in 2001, or actually in 2000, when we 18 started designing this system, AIS was something that 19 was just beginning. Even we started, the AIS is a later 20 addition to the system. 21 MR SHIEH: Can we continue with the video. 22 (Video played) 23 Can I pause it here. 24 You can see that the original track disappeared from 25 this point onwards.</p>	<p style="text-align: right;">Page 67</p> <p>1 lost. It will predict for a while longer, depending on 2 radar detections it can see in its vicinity, but the 3 actual vessel is followed by another track now. It 4 looks like there is a wake behind the ship that throws 5 off the track. You have to go back even a bit more, 6 when it just passes the other vessel due north of this 7 one. 8 MR SHIEH: Can we go back. 9 A. Yes, around here. 10 MR SHIEH: Start from here, yes. 11 (Video played) 12 A. Here there is a wake behind the vessel, and that throws 13 off the track. 14 Q. A wake? 15 A. A wake. 16 Q. Tell us when the wake appears. 17 A. No, it was already there. 18 Q. Yes? The white U-shaped -- yes. 19 A. Yes, it's already off now. 20 MR SHIEH: Pause. 21 A. This is the moment where it becomes very visual, but the 22 actual losing the target already happened before here. 23 Sorry, if you go back a bit more, then-- I expect that 24 losing the target happens around here. 25 Q. "Losing the target" means what?</p>
<p style="text-align: right;">Page 66</p> <p>1 A. Yes. 2 MR SHIEH: Can I continue the video. 3 (Video played) 4 It now becomes 8023. 5 Please stop it here. 6 And then I think the collision occurred, but up to 7 this moment, and having considered -- if you want time 8 to look at the figures, you can. It's at pages 290 and 9 291. 10 Are you able to assist us as to the possible reason 11 why there was a change in the label being attached to 12 the Sea Smooth -- 13 A. Yes. 14 Q. -- and as to the continued existence of two sets of 15 figures up to 20:20:31? 16 A. Yes. 17 Q. If you want us to replay the video or play it back for 18 a particular point, we can certainly do it. 19 A. Well, if you could go back about 30 seconds ago. 20 MR SHIEH: Go back to 30 seconds ago. 21 (Video played) 22 A. Yes, okay. About here. 23 Q. This is after the original track? 24 A. Yes, has -- well, it has lost the -- it doesn't follow 25 the ship any more at this moment. It is what we call</p>	<p style="text-align: right;">Page 68</p> <p>1 A. It means that the track at that moment follows the wrong 2 update of the ship. 3 Q. Follows the wrong? 4 A. Wrong update. There is a radar update of the ship and 5 of something else, and it chooses to follow the wrong 6 one. 7 Q. And what might that wrong one be? 8 A. Well, when I look at this, it looks like the wake, 9 because up to here, at a number of times you see behind 10 the vessel small targets pop up, little yellow spots. 11 If you go back, here it's quite severe. Here you see 12 a bit. There. More further away. Something. There. 13 Q. Yes. 14 A. Yes, so there is -- there seems to be a wake behind the 15 vessel, and that throws off, misguides the track to 16 follow the wake and not the vessel anymore. 17 Q. Physically, the wake could be something in the sea or -- 18 A. Yes. It can happen due to the bow of a ship, but that's 19 I think not the case in this one, if I see the radar 20 video. This seems more the wake just behind the ship. 21 How shall I call it -- disturbance in the water? 22 Q. So the radar let's say scanned that wake? 23 A. Yes. 24 Q. And you mean for some time the radar mistook that wake 25 to be 8038?</p>

<p style="text-align: right;">Page 69</p> <p>1 A. Yes. 2 Q. So you mean at some stage, at some stage prior to the 3 appearance of 8023 -- because if you look at page 290, 4 8023 first appeared at 20:19:43. 5 A. Yes. 6 Q. That would be when the system realised that the vessel 7 should be given a new number? 8 A. Yes, and there was another target, there was something 9 else on the radar visible that was not tracked at that 10 moment. There was probably an indication from AIS that 11 something was there. And both these things lead to the 12 start of a new track with the correct label. So it's 13 feasible that AIS is there as well. 14 Q. But according to what you have just said, the first 15 appearance of 8023 at 20:19:43 was the time when the 16 system finally realised that it had to give a new 17 label -- 18 A. Yes. 19 Q. -- to this vessel. But the erroneous tracking had been 20 going on for -- 21 A. For a few scans before, yes. 22 Q. Right. Were you able to -- 23 A. Because starting up a new track takes time. 24 Q. Because it takes time to realise that you've made 25 a mistake, in a way?</p>	<p style="text-align: right;">Page 71</p> <p>1 Q. You mean the wake? 2 A. Yes. 3 Q. Yes. 4 A. Now the wake is very clear. 5 Q. Sorry? 6 A. Now the wake was very clear for a while. 7 Q. Yes. So for a few scans prior to the first appearance 8 of 8023, your view or your suggestion is that 8023 or 9 the course and the position of 8023 was actually no 10 longer that of the vessel -- 11 A. Yes. 12 Q. -- but of a wrong object that it was tracking -- 13 A. Yes. 14 Q. -- which it mistook to be Sea Smooth? 15 A. That is correct. 16 Q. Which, if you look at this video display, you would 17 suggest possibly to have been the wake? 18 A. Yes. If we go back, that moment -- back again in the 19 video, yes, sorry. 20 Yes, stop. Here it already took away the AIS 21 information from the target. Because that's the main 22 reason that the track has lost his label, I hope. So it 23 lost its AIS. So here it's already starting up a new 24 one. 25 Q. It's going after something which has no AIS, which is</p>
<p style="text-align: right;">Page 70</p> <p>1 A. Yes, but also the general start-up of a track takes 2 time. 3 Q. Right, okay. 4 A. It's not, I see one item on the radar and immediately we 5 have a track. 6 Q. You need several scans to establish it? 7 A. Yes, yes. 8 Q. Let's take an illustration. The first appearance of 9 8023 at 20:19:43 puts the course at 176 degrees. 10 A. Yes. 11 Q. If you follow the 8023 entries, it follows a general -- 12 A. 176, 175 -- 13 Q. 174, et cetera. 14 A. Yes. 15 Q. Whereas if you look at the entry for 8038 immediately 16 prior to 8023, it's actually entirely different. 17 A. Yes. 18 Q. 154 and then 158, with 162, et cetera. 19 A. That's correct. That's also what you see in the video. 20 If we can have the video. 21 Q. Yes. 22 A. You'll see now that the track is more or less stopped on 23 that position. It doesn't move anymore. If you 24 continue -- yes. See? It moves in a different 25 direction than where the ship is moving.</p>	<p style="text-align: right;">Page 72</p> <p>1 taking -- 2 A. Which has no AIS, so already the program has established 3 that there is something going wrong; this is not the 4 track anymore that the AIS belongs to. So already from 5 this moment on, it does not follow the vessel anymore. 6 Q. Yes, the old label continued to be attached to the wake, 7 and after a few scans, after the system had done its job 8 or identified, re-established the position of the Sea 9 Smooth, it gave the new label of 8023 to it? 10 A. Yes. 11 Q. And the reason why eventually we could link 8023 to Sea 12 Smooth is because of the identification of Sea Smooth by 13 its AIS; is that correct? 14 A. Yes. 15 Q. Thank you. We have looked at the equivalent print-out 16 from the Marine Department and I can show you the 17 print-out from the Marine Department. It's in the same 18 bundle. If you turn to page 323. 786 is Sea Smooth. 19 A. Yes. 20 Q. If you carry on, this starts at 20:04 and goes all the 21 way to page 334. There's no need to look at any item in 22 particular, because it's all straight 786, without any 23 of the phenomenon that we have just seen, namely the 24 changeover of the label. 25 A. Yes.</p>

<p style="text-align: right;">Page 73</p> <p>1 Q. From your knowledge of the way the two systems were 2 designed, were you able to offer any possible 3 explanation as to why this phenomenon happened for the 4 Police system and did not happen for the Mardep system? 5 A. Yes. The tuning of the Marine Police system is made in 6 such a way that it's more sensitive to -- more sensitive 7 in general, so it will detect easier smaller vessels, 8 but also easier waves and wake of a ship. 9 MR SHIEH: Thank you very much, Mr Boorsma. 10 I have no further questions for this witness, 11 Mr Chairman. 12 THE CHAIRMAN: Thank you, Mr Shieh. 13 Mr McGowan, do you have any application? 14 MR McGOWAN: No, I don't, thank you. 15 THE CHAIRMAN: Mr Boorsma, thank you very much for coming to 16 assist us at relatively short notice and shining some 17 light in the dark for us. Thank you. You are free to 18 go now. 19 (The witness withdrew) 20 THE CHAIRMAN: If you wish to, of course, you may sit in the 21 back of the proceedings and watch as a member of the 22 public. It's entirely up to you. 23 MR SHIEH: Mr Chairman, I now call the expert, Captain Nigel 24 Pryke. 25 THE CHAIRMAN: Yes. Would Captain Pryke come forward.</p>	<p style="text-align: right;">Page 75</p> <p>1 identify the two reports. I am going to take you 2 through the key opinions and conclusions that you have 3 made in your reports by going to particular paragraphs. 4 Then I'm going to ask you to identify the plots you have 5 made in your reports. I'm going to ask you to identify 6 the source materials upon which you have done your 7 plotting. And then I will ask you to comment on the 8 significance of the slightly different figures given by 9 the Marine Police and Mardep. 10 Then I will ask you to comment very briefly on use 11 of radar data as opposed to AIS data in doing your 12 plotting. Then some questions arising out of certain 13 issue arising out of yesterday's evidence about the 14 radar's ability to detect heading, course or speed or 15 about changes in heading, course and speed. Then 16 I would take you to a few of the Collision Regulations 17 which you have mentioned in your report and ask you to 18 expand or explain your views on those regulations. Then 19 I'm going to ask for your opinions on any possible 20 effect or lack of effect of the presence of anchored 21 vessels that evening, and also of weather conditions 22 that evening. 23 That gives you a roadmap of where I'm going. 24 First of all, in terms of your first report, the 25 report runs in the bundle to page 12, and that is</p>
<p style="text-align: right;">Page 74</p> <p>1 CAPTAIN NIGEL ROBERT PRYKE (sworn) 2 Examination by MR SHIEH 3 MR SHIEH: Captain Pryke, good afternoon. 4 A. Good afternoon. 5 Q. You have made two reports for the purpose of this 6 Inquiry. Perhaps I should ask you to identify those 7 reports first. Can you be shown the expert report 8 bundle. 9 A. Do you mean -- (indicates). 10 Q. We have compiled a separate bundle called the expert 11 evidence bundle, because I think that would facilitate 12 ease of reference in terms of page numbering. But if 13 you have already worked on your own report, that's fine, 14 because I can give you the internal page numbering of 15 your report, if that helps you. 16 A. Okay. 17 THE CHAIRMAN: You work on the numbers that you've 18 familiarised yourself with, and we'll work around you, 19 Captain. 20 A. I'd prefer to work with these. 21 MR SHIEH: Use your own marked-up copy, fine. 22 In the expert report bundle, the covering page is 23 page 1. 24 Let me tell you the way I intend to discuss your 25 evidence with you. I'm going to ask you to obviously</p>	<p style="text-align: right;">Page 76</p> <p>1 internal page number 12 as well. The rest is your 2 declaration. But the text goes up to page 12. Your 3 signature appears at page 15? 4 A. (Witness nods). 5 Q. Then you set out your curriculum vitae from page 16 6 onwards. I don't think I need to read that out. 7 Page 16 onwards is the Captain's curriculum vitae. 8 Then you attached numerous documents that you 9 expressly referred to in your report. 10 A. Yes. 11 Q. Then at page 284 of the bundle, the expert bundle, we 12 can see a plot that you have done in your first report. 13 I will ask you some questions about it later. 14 Let's move on for the time being to your 15 supplemental report which starts in the expert bundle at 16 page 300, but you obviously have it separately bound. 17 It says "Supplemental expert report prepared by Captain 18 Nigel Pryke, 8 December". Do you see that? 19 A. Yes. 20 Q. The opinion is actually at page 303 of the bundle. It's 21 one page, where you set out what you have done 22 consequential upon receipt of new materials from the 23 Department of Justice. At the back of this supplemental 24 report, again, you have attached the materials that you 25 refer to. Then at page 360 there is a plot which</p>

<p style="text-align: right;">Page 77</p> <p>1 I believe to have been subsequently replaced by another 2 plot, and that is the plot at page 361. There are two 3 plots at the back. You replaced the first one with the 4 second one? 5 A. Yes, I did. Yes. Do you want me to say why? 6 Q. Yes, I will ask you to say why in due course, but it's 7 only for the purpose of identifying the various 8 documents. 9 Could I ask you to confirm whether or not you put 10 forward the contents of both your expert reports as 11 evidence in this Inquiry? 12 A. Yes. 13 Q. Are there any matters that you wish to -- I will ask you 14 to explain or amplify in due course, but are there any 15 matters that you wish to correct or amend in terms of 16 the content of your two reports? 17 A. No. 18 Q. Fine. Can I go through your first report with you. At 19 page 4, it sets out the background of the incident; at 20 page 5, what you knew about the Sea Smooth and the 21 Lamma IV. 22 The contents are now projected on to the screen for 23 the benefit of the public. 24 Page 6, you set out what you understood to be the 25 weather and tidal conditions.</p>	<p style="text-align: right;">Page 79</p> <p>1 it's sensible that we put that up so that everyone can 2 follow what this regulation relating to radar is. Can 3 we have 7(b). Thank you. 4 MR SHIEH: It would be my intention at the appropriate 5 juncture to take the Captain through the individual 6 regulations. 7 THE CHAIRMAN: By all means, do so, Mr Shieh. 8 Just leave it there for a moment so that we can all 9 look at it. 10 MR SHIEH: "Proper use shall be made of radar equipment if 11 fitted and operational, including long-range scanning to 12 obtain early warning of risk of collision and radar 13 plotting or equivalent systematic observation of 14 detected objects." 15 Do you confirm that's your opinion? 16 A. (Witness nods). 17 Q. Thank you. 18 At paragraphs 17 and 18, you set out what you have 19 understood to be the nature of the evidence about 20 lookout. 21 A. I picked out two bits of evidence which I think summed 22 up quite clearly to me that there wasn't a rigid routine 23 about keeping a lookout, other than presumably the 24 coxswain was keeping his own lookout. But whether there 25 was another individual designated to keep a lookout, the</p>
<p style="text-align: right;">Page 78</p> <p>1 Your opinion is at page 12: neither weather nor 2 tide -- 3 THE CHAIRMAN: If we could perhaps just slow this down 4 a bit. We, certainly you, are familiar with this 5 document. 6 MR SHIEH: I'm sorry. We have to take account of -- 7 THE CHAIRMAN: This is a public hearing, and I want everyone 8 to be able to follow this. 9 MR SHIEH: Yes. 10 Paragraph 12, you set out your opinion as to the 11 weather conditions. You said: 12 "According to the evidence available, neither the 13 weather nor the tide has any material effect on the 14 navigation of the two vessels prior to the collision." 15 A. Yes, that's correct. 16 Q. As far as radar is concerned, you dealt with it in the 17 next section. Your conclusion, your opinion, is at 18 paragraph 16: 19 "... both vessels were fitted with radar and in both 20 cases the radar was operational." 21 A. Yes, that's correct. 22 Q. You refer to COLREGs, Collision Regulations, 7(b). 23 THE CHAIRMAN: I wonder if we might just pause there. I've 24 asked that there be available -- I think you've been 25 informed -- a bilingual version of this, and I think</p>	<p style="text-align: right;">Page 80</p> <p>1 evidence appears that there wasn't in either case. 2 Q. The evidence as far as it is available at this stage? 3 A. Yes. 4 Q. Thank you. Then the next section deals with navigation 5 lights. 6 A. Yes. 7 Q. You refer to Rule 23(b), but I do not believe that you 8 are suggesting that there had been any infringement or 9 violation in that regard? 10 A. No. I do go on further to elaborate about the yellow 11 flashing light later on. 12 Q. Yes, yes. 13 The next paragraph deals with whistle and horn. You 14 said near the end that you were not aware whether 15 a signal which was said to have been given, one short 16 blast by the captain of Lamma IV, "was heard on the 17 bridge of Sea Smooth where the wheelhouse doors were 18 probably closed". 19 "In any event, I do not believe that, at this late 20 stage, the sound signal of one short blast would have 21 had any effect on preventing the collision." 22 A. That's what I think, yes. 23 THE CHAIRMAN: Just so that we can follow that, what's the 24 significance to be attached to a vessel sounding its 25 whistle with one short blast? What does that mean it's</p>

<p style="text-align: right;">Page 81</p> <p>1 doing?</p> <p>2 A. Well, it means it's turning its course to starboard.</p> <p>3 MR SHIEH: Could I ask you, Captain, to actually look at the</p> <p>4 Collision Regulations Rule 34(a), which says:</p> <p>5 "When vessels are in sight of one another, a</p> <p>6 power-driven vessel underway, when manoeuvring as</p> <p>7 authorised or required by these Rules, shall indicate</p> <p>8 that manoeuvre by the following signals on her whistle:</p> <p>9 -- one short blast to mean 'I am altering my course</p> <p>10 to starboard'."</p> <p>11 Is that what you have in mind?</p> <p>12 A. Yes.</p> <p>13 Q. Thank you.</p> <p>14 "Action to avoid collision", next section. You</p> <p>15 recited your understanding of the evidence. You</p> <p>16 concluded by saying:</p> <p>17 "The digital radar track records indicate that Sea</p> <p>18 Smooth altered course to port at 20:19:29 hours which is</p> <p>19 a serious contravention of Rule 14(a) of the Collision</p> <p>20 Regulations."</p> <p>21 Could Rule 14(a) be shown, which deals with head-on</p> <p>22 collision, head-on situation.</p> <p>23 "When 2 power-driven vessels are meeting on</p> <p>24 reciprocal or nearly reciprocal courses so as to involve</p> <p>25 risk of collision each shall alter her course to</p>	<p style="text-align: right;">Page 83</p> <p>1 Q. At paragraph 24:</p> <p>2 "When Lamma IV had cleared the berth in the typhoon</p> <p>3 shelter at 20:16 hrs she was under way. Between</p> <p>4 20:16 hrs and 20:19 hrs, both vessels could have been</p> <p>5 very clearly seen by each other on radar and visually at</p> <p>6 about two miles distant. Coxswain Chow on Lamma IV</p> <p>7 states that the lights of vessels at anchor affected his</p> <p>8 ability to observe the approach of Sea Smooth. I have</p> <p>9 reviewed the information supplied by the Marine</p> <p>10 Department on the positions of the anchored vessels in</p> <p>11 north Lamma anchorage. In my opinion, the lights</p> <p>12 exhibited by the three vessels in the north Lamma</p> <p>13 anchorage would have appeared behind the lights of the</p> <p>14 Sea Smooth between 20:18 hrs and 20:20 hrs and may well</p> <p>15 have caused a slight delay in the sighting of Sea</p> <p>16 Smooth. Nevertheless the fast approach of Sea Smooth</p> <p>17 and in particular the flashing yellow light at her</p> <p>18 masthead would have made her approach very clear. The</p> <p>19 radar picture would have given a very clear indication</p> <p>20 of Sea Smooth from around 20:15 hrs. I do not consider</p> <p>21 that the presence of the anchored vessels should have</p> <p>22 contributed to the collision. A hazardous</p> <p>23 close-quarters situation developed primarily because</p> <p>24 neither vessel was fully aware of the other's</p> <p>25 intentions, and the combined speed of approach allowed</p>
<p style="text-align: right;">Page 82</p> <p>1 starboard so that each shall pass on the port side of</p> <p>2 the other."</p> <p>3 A. That's correct.</p> <p>4 Q. That is what you refer to?</p> <p>5 A. Yes.</p> <p>6 THE CHAIRMAN: So the serious contravention was not going to</p> <p>7 starboard but rather going to port?</p> <p>8 A. Yes, which is even worse than doing nothing, of course.</p> <p>9 MR SHIEH: Paragraph 22 sets out the enquiry and what you</p> <p>10 have done, where you have visited.</p> <p>11 At the end of this paragraph, you said:</p> <p>12 "It is worth pointing out that the raw radar data</p> <p>13 used by the Marine Department Vessel Traffic Centre and</p> <p>14 the Marine Police Radar Centre is the same derivation."</p> <p>15 A. Yes.</p> <p>16 Q. You've been in the Inquiry for the past day and today.</p> <p>17 The evidence that you have heard so far is consistent</p> <p>18 with this understanding of yours?</p> <p>19 A. Absolutely.</p> <p>20 Q. At paragraph 23 you set out the materials on which you</p> <p>21 have relied heavily. For this report, you relied on the</p> <p>22 track data supplied by the Marine Police. Later, you</p> <p>23 compiled your supplemental report where you also took</p> <p>24 into account the data supplied by the Marine Department.</p> <p>25 A. Correct.</p>	<p style="text-align: right;">Page 84</p> <p>1 little time for appraisal and to take action. The</p> <p>2 closing speed was around 36 knots ... At this speed, one</p> <p>3 cable (a tenth of a nautical mile or 608 feet) is</p> <p>4 covered in 10 seconds."</p> <p>5 I will come back to the evidence about the anchored</p> <p>6 vessels at a later stage of your evidence, but at this</p> <p>7 stage you confirm paragraph 24 represents your opinion?</p> <p>8 A. Yes, I do. I'd just like to say a bit more.</p> <p>9 Q. Yes.</p> <p>10 A. I mean, yes, when you're looking from the bridge of</p> <p>11 a ship and there is a lot of background light, of course</p> <p>12 it's more difficult to pick something out. But that's</p> <p>13 the very reason that navigators use radar. I have been</p> <p>14 involved in ferry ships since about 1970, and it is</p> <p>15 always the case that somebody who is conning a ferry</p> <p>16 looks at his radar. Even before he leaves the quay, he</p> <p>17 checks the radar to see what's in the vicinity.</p> <p>18 The reason I say here it should have made no</p> <p>19 difference is he should have been looking at his radar.</p> <p>20 It's as simple as that.</p> <p>21 THE CHAIRMAN: The term "conning", could you just define</p> <p>22 that?</p> <p>23 A. I beg your pardon: in charge of the navigation.</p> <p>24 THE CHAIRMAN: Thank you.</p> <p>25 MR SHIEH: Thank you, Captain.</p>

<p style="text-align: right;">Page 85</p> <p>1 At paragraph 25, you set out the wording of Rule 2 2 of the Collision Regulations, and perhaps I can have 3 that on the screen. Rule 2(a) of the Collision 4 Regulations. 5 THE CHAIRMAN: I think there might be a lacuna in our 6 system. Do we not have these somewhere else? 7 MR SHIEH: It's actually in the bundle. It's in the report 8 itself, but it only contains the English version. But 9 I would simply give the reference. It is in the same 10 bundle, page 216. 11 THE CHAIRMAN: There we are. 12 MR SHIEH: "Nothing in these Rules shall exonerate any 13 vessel, or the owner, master or crew thereof, from the 14 consequences of any neglect to comply with these Rules 15 or of the neglect of any precaution which may be 16 required by the ordinary practice of seamen, or by the 17 special circumstances of the case." 18 Paragraph 26: 19 "It could be argued that the owners of both vessels 20 could have done more" -- 21 THE CHAIRMAN: Just pause, Mr Shieh, so we can put that up 22 on the screen. 23 MR SHIEH: The expert report, paragraph 26, bundle of expert 24 evidence, page 11. 25 "It could be argued that the owners of both vessels</p>	<p style="text-align: right;">Page 87</p> <p>1 Again in paragraph 27: 2 "... Sea Smooth apparently did not make proper use 3 of her radar", which is in breach of Rule 7(b) which we 4 have looked at. 5 "(d) did not take action to avoid collision 6 (Rule 8)." 7 Rule 8 is: 8 "Any action taken to avoid collision shall, if the 9 circumstances of the case admit, be positive, made in 10 ample time and with due regard to the observance of good 11 seamanship." 12 In fact, Captain Pryke, you rely on the entirety of 13 Rule 8, do you? 14 A. Yes. 15 THE CHAIRMAN: Perhaps we could trouble you to read through 16 the rest of the rule. 17 MR SHIEH: Yes: 18 "(b) Any alteration of course and/or speed to avoid 19 collision shall, if the circumstances of the case admit, 20 be large enough to be readily apparent to another vessel 21 observing visually or by radar; a succession of small 22 alterations of course and/or speed should be avoided. 23 (c) If there is sufficient sea room, alteration of 24 course alone may be the most effective action to avoid a 25 close-quarters situation provided that it is made in</p>
<p style="text-align: right;">Page 86</p> <p>1 could have done more to encourage the proper use of 2 radar and were therefore in breach of Rule 2(a). 3 Without access to the documented safety policies and 4 safety management systems of the two companies and 5 without interviewing the relevant ship and shore staff, 6 I cannot be more definite on this point." 7 Then we come to a series of the Collision 8 Regulations which I would ask you to assist us perhaps 9 in greater detail in due course when I come to 10 an appropriate juncture. But let's go through the 11 relevant rules at this stage and look at the wording. 12 Rule 5. This is again Sea Smooth, that she failed 13 to keep a proper lookout, in breach of Rule 5: 14 "Every vessel shall at all times maintain a proper 15 lookout by sight and hearing as well as by all available 16 means appropriate in the prevailing circumstances and 17 conditions so as to make a full appraisal of the 18 situation and of the risk of collision." 19 Next, the sea smooth did not proceed at a safe 20 speed; that is rule 6: 21 "Every vessel shall at all times proceed at a safe 22 speed so that she can take proper and effective action 23 to avoid collision and be stopped within a distance 24 appropriate to the prevailing circumstances and 25 conditions."</p>	<p style="text-align: right;">Page 88</p> <p>1 good time, is substantial and does not result in another 2 close-quarters situation. 3 (d) Action taken to avoid collision with another 4 vessel shall be such as to result in passing at a safe 5 distance. The effectiveness of the action shall be 6 carefully checked until the other vessel is finally past 7 and clear." 8 Captain Pryke, you rely on all these subrules within 9 Rule 8? 10 A. Yes, indeed. 11 Q. Thank you. Specifically, you say: 12 "... Sea Smooth did not alter course to starboard", 13 which is in breach of Rule 14. 14 We have Rule 14 of the Collision Regulations. 15 A. Yes, that's correct. 16 Q. "(a) When 2 power-driven vessels are meeting on 17 reciprocal or nearly reciprocal courses so as to involve 18 risk of collision each shall alter her course to 19 starboard so that each shall pass on the port side of 20 the other. 21 (b) Such a situation shall be deemed to exist when 22 a vessel sees the other ahead or nearly ahead and by 23 night she could see the masthead lights of the other in 24 a line or nearly in a line and/or both sidelights and by 25 day she observes the corresponding aspect of the other</p>

<p style="text-align: right;">Page 89</p> <p>1 vessel.</p> <p>2 (c) When a vessel is in any doubt as to whether such</p> <p>3 a situation exists she shall assume that it does exist</p> <p>4 and act accordingly."</p> <p>5 Finally in respect of the Sea Smooth, you say that</p> <p>6 she did not make any warning signals, contrary to</p> <p>7 Rules 34 and 36."</p> <p>8 Could I have Rules 34 and 36. Rule 34(a) we have</p> <p>9 looked at just now:</p> <p>10 "When vessels are in sight of one another, a</p> <p>11 power-driven vessel underway, when manoeuvring as</p> <p>12 authorised or required by these Rules, shall indicate</p> <p>13 that manoeuvre by the following signals on her whistle:</p> <p>14 -- one short blast to mean 'I am altering my course</p> <p>15 to starboard'.</p> <p>16 -- 2 short blasts to mean 'I am altering my course</p> <p>17 to port';</p> <p>18 -- 3 short blasts to mean 'I am operating astern</p> <p>19 propulsion'.</p> <p>20 (b) Any vessel may supplement the whistle signals</p> <p>21 prescribed in paragraph (a) of this Rule by light</p> <p>22 signals, repeated as appropriate, whilst the manoeuvre</p> <p>23 is being carried out:</p> <p>24 (i) these light signals shall have the following</p> <p>25 significance:</p>	<p style="text-align: right;">Page 91</p> <p>1 that he may have alerted Lamma IV to the fact that he</p> <p>2 was altering course to port. Even though it was wrong,</p> <p>3 he may well --</p> <p>4 Q. The least he could have done --</p> <p>5 A. He may well have alerted the Lamma IV that he was doing</p> <p>6 it.</p> <p>7 Q. Thank you. You also refer to Rule 36, "Signals to</p> <p>8 attract attention":</p> <p>9 "If necessary to attract the attention of another</p> <p>10 vessel ..."</p> <p>11 I'm sorry, Captain Pryke. Do you also rely on that</p> <p>12 part relating to light signals in Rule 34?</p> <p>13 A. It does apply, yes, although I think it's not</p> <p>14 compulsory.</p> <p>15 THE CHAIRMAN: I think it uses the word "supplemented"?</p> <p>16 A. Yes.</p> <p>17 THE CHAIRMAN: "May be supplemented".</p> <p>18 MR SHIEH: Rule 36, "Signals to attract attention":</p> <p>19 "If necessary to attract the attention of another</p> <p>20 vessel any vessel may make light or sound signals that</p> <p>21 cannot be mistaken for any signal authorised elsewhere</p> <p>22 in these Rules, or may direct the beam of her</p> <p>23 searchlight in the direction of the danger, in such</p> <p>24 a way as not to embarrass any vessel. Any light to</p> <p>25 attract the attention of another vessel shall be such</p>
<p style="text-align: right;">Page 90</p> <p>1 -- one flash to mean 'I am altering my course to</p> <p>2 starboard';</p> <p>3 -- 2 flashes to mean 'I am altering my course to</p> <p>4 port'; ...</p> <p>5 (ii) the duration of each flash shall be about one</p> <p>6 second, the interval between flashes shall be about one</p> <p>7 second, and the interval between successive signals</p> <p>8 shall be not less than 10 seconds;</p> <p>9 (iii) the light used for this signal shall, if</p> <p>10 fitted, be an all-round white light, visible at a</p> <p>11 minimum range of 5 miles, and shall comply with the</p> <p>12 provisions of Annex I to these Regulations."</p> <p>13 When you refer to Rule 34, which particular aspect</p> <p>14 do you have in mind?</p> <p>15 A. We have already discussed that Sea Smooth made</p> <p>16 an alteration of course to port, which meant if he was</p> <p>17 going to alert the other vessel to that fact, he should</p> <p>18 have given two short blasts on his whistle.</p> <p>19 Q. But you say turning to port is wrong in itself?</p> <p>20 A. It's wrong anyway.</p> <p>21 Q. It's got to turn starboard, in which case the correct</p> <p>22 course would have been turn to starboard --</p> <p>23 A. That's right.</p> <p>24 Q. -- and given one short blast?</p> <p>25 A. But he did alter course to port, and it could be argued</p>	<p style="text-align: right;">Page 92</p> <p>1 that it cannot be mistaken for any aid to navigation.</p> <p>2 For the purpose of this Rule the use of high intensity</p> <p>3 intermittent or revolving lights, such as strobe lights,</p> <p>4 shall be avoided."</p> <p>5 A. Yes. Typically when a vessel is coming very close to</p> <p>6 another vessel, and you want to alert the other vessel</p> <p>7 that he should be altering course, typically it's the</p> <p>8 case that you give five or more short flashes on</p> <p>9 a signal lamp.</p> <p>10 Q. Thank you. Paragraph 28, you moved on to deal with the</p> <p>11 situation of the Lamma IV. You relied on Rule 8, which</p> <p>12 I won't repeat again, taking action to avoid collision:</p> <p>13 "... did not alter her course sufficiently to</p> <p>14 starboard ..."</p> <p>15 Then you say:</p> <p>16 "... it must be borne in mind that her proximity to</p> <p>17 the rocks off Shek Kok Tsui would have been a factor in</p> <p>18 both cases. Lamma IV also did not use warning signals</p> <p>19 in compliance with Rule 34(d) and Rule 36."</p> <p>20 You mentioned the existence of rocks off Shek Kok</p> <p>21 Tsui.</p> <p>22 A. Yes.</p> <p>23 Q. Could I ask you to look at the maritime chart actually</p> <p>24 in miscellaneous bundle tab 1, page 1. It's the chart</p> <p>25 we looked at in opening yesterday. Miscellaneous</p>

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1 bundle, page 1. Could we zoom in. You mentioned the
2 existence of rocks off Shek Kok Tsui. When you say
3 "would have been a factor in both cases", what do you
4 have in mind? That it would make it difficult or
5 invidious for it to turn to starboard?
6 A. The Lamma IV had much less room to manoeuvre on his
7 starboard side. That's the point I'm trying to make.
8 There are two rocks marked just south of the lighthouse.
9 But he was running onto a shore anyway. The use of the
10 word "rocks" isn't significant.
11 Q. I think we are now trying to zoom in to enable you to
12 identify the rocks.
13 A. Yes, where your pointer is, just to the right there's
14 an asterisk.
15 Q. Yes.
16 A. And then further up and to the left, below the --
17 Q. Yes.
18 A. That asterisk just on top of your pointer.
19 Q. Move up a bit.
20 A. I think that signifies a rock.
21 Q. So the presence of a rock there would have made it more
22 difficult for Lamma IV to turn to starboard?
23 A. Yes. What I'm saying is he is very, very close to the
24 shoreline there. And of course if he made a really bold
25 alteration at full speed, he's going to be aground

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1 before he knows it. So he had much less room to
2 manoeuvre than did the Sea Smooth.
3 Q. But practically speaking, does it impact on what
4 Lamma IV ought to have done?
5 A. Well, if you're asking me what Lamma IV ought to have
6 done, Lamma IV ought to have looked at his radar before
7 he left the berth and as he was creeping out of the
8 typhoon shelter, he should not have increased to full
9 speed until he was fully aware of what this fast-moving
10 echo was doing. So Lamma IV should have been doing
11 maybe half-speed up until probably 20:19.
12 Q. In other words, ought not to have allowed herself to be
13 put into this invidious position in the first place?
14 A. Exactly right, yes.
15 Q. Can we move back to paragraph 29 of your report.
16 Page 11 of the expert bundle:
17 "In my opinion the Sea Smooth, in colliding with the
18 port quarter of Lamma IV at a speed in excess of
19 20 knots was primarily responsible for the collision.
20 The alteration of course to port at 20:19:29 hrs was
21 very significant. Even at the very last moment she
22 could have very easily avoided contact with a small
23 alteration of course to starboard. When the two vessels
24 were one mile apart just before 20:19 hrs, there was
25 a very clear Rule 14 'head-on' situation requiring both

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1 vessels to alter course to starboard. Between 20:19 hrs
2 and the point of impact at 20:20:17 hrs, according to
3 the digital track reports, Lamma IV had altered her
4 course 13 degrees to starboard. On the other hand, Sea
5 Smooth had altered her course 16 degrees to port (in
6 flagrant breach of Rule 14) in an apparent attempt to
7 cross ahead of Lamma IV. Evidence from the sailor on
8 board Sea Smooth indicates that the coxswain was alone
9 on the bridge. I think it is very likely that this
10 could be a contributory factor to the collision.
11 I therefore conclude that the most significant cause of
12 the collision was poor navigation by the coxswain of Sea
13 Smooth. There were also contributory failings by the
14 coxswain of Lamma IV."
15 Do you confirm that, Captain Pryke?
16 A. I do.
17 Q. "In this report which only seeks to advise on the direct
18 causes of the collision, I have not commented on the
19 safety management and training environment in respect of
20 the crews of these vessels. There may be failings in
21 the support system ashore which have contributed to the
22 'human error' which undoubtedly was responsible for the
23 accident."
24 Do you confirm that too, Captain Pryke?
25 A. I do.

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1 Q. Finally:
2 "Whilst this report does not seek to advise the
3 Commission in terms of items (b) and (c) of its terms of
4 reference, it is already very clear that the definition
5 of Lamma IV as a 'class 1 launch' and not a 'class 1
6 ferry vessel' makes a big difference to the safety
7 inspection regime for such vessels. In my opinion,
8 a vessel permitted to carry more than two hundred people
9 should be considered a 'high-risk' vessel regardless of
10 whether those people 'fare-paying' passengers. The
11 fitting of modern radar equipment and the implementation
12 of formal crew radar training for all passenger vessels
13 classed as launches should be an immediate priority."
14 Do you confirm that?
15 A. I do.
16 Q. Thank you.
17 A. And I would actually add to that, if I may.
18 Q. Yes.
19 A. This vessel, as I understand it, Lamma IV, was not
20 required to carry VHF radio. I believe very strongly
21 that any vessel of this type should carry VHF radio.
22 The idea that it could not communicate with the VTS on
23 channel 14 is just plain wrong.
24 Q. Could I now ask you to look at the plot that you have
25 done for the purpose of your first report, and that is

<p style="text-align: right;">Page 97</p> <p>1 at page 284 of this bundle. 2 A. Yes. 3 Q. Could I ask you to identify the source materials upon 4 which you relied in order to prepare this plot. You 5 said you relied heavily on the Marine Police track 6 report. Could I ask you to look at your expert report. 7 In the expert bundle, it's page 285 onwards. In the 8 actual report itself, I hope you'll be able to find that 9 clip of documents which is headed "Hong Kong Marine 10 Police". 11 A. Yes, indeed. 12 Q. First there is a clip which is described in terms of the 13 file name as "Lam_trip"; do you see that? 14 A. Yes. 15 Q. Which starts with label "93", and then 20:17:38 onwards; 16 do you see that? 17 A. Yes. 18 Q. You actually marked 1L, 2L, 3L, 4L? 19 A. That's correct. 20 Q. It continues up to the next page, 7L? 21 A. Yes. 22 Q. Then if you turn two pages down in the bundle, page 288, 23 we have the Sea Smooth equivalent. You see the document 24 with the file name "Sea_Smth_trip"? 25 A. Yes.</p>	<p style="text-align: right;">Page 99</p> <p>1 corresponds to the radar photograph you showed earlier. 2 Q. This is from the Police, so when you talk about the 3 radar photograph -- because we have two sets of radar 4 displays, one from Mardep and one from the Marine 5 Police. 6 A. I think it was the Marine Police. 7 Q. You mean the photograph from the Police? 8 A. Of the tracks. 9 Q. The track this morning? 10 A. Yes. 11 MR SHIEH: Could we have the photograph which is part of 12 Police Officer Yau's evidence. I think it is actually 13 part of material 1. Yes, that's it. 14 Is that the one you have in mind, Captain Pryke? 15 A. Yes, that's it, exactly. 16 THE CHAIRMAN: Is there a page reference for this? 17 MR SHIEH: There isn't, Mr Chairman, because this is 18 actually part of a DVD supplied by the Police. We can 19 actually arrange for a print-out. I think that would be 20 more convenient. 21 THE CHAIRMAN: Yes, that would be useful. 22 MR SHIEH: Maybe we can even ask for it to be arranged to be 23 printed out at the back office, if it's possible now. 24 THE CHAIRMAN: Yes, we can do that now. 25 MR SHIEH: While we are arranging for that to be done,</p>
<p style="text-align: right;">Page 98</p> <p>1 Q. Label "8038" to start with, time 20:15:22? 2 A. Yes. 3 Q. 1, 2, 3, 4, 5, 6, going all the way down to I think 4 11SS? 5 A. Yes. 6 Q. "L" for Lamma, "SS" for Sea Smooth? 7 A. That's correct. 8 Q. These are three-second scans, this data. But obviously, 9 when you did your plotting, what you did was that you 10 did not actually do a plot every three seconds? 11 A. That's right. 12 Q. You picked particular points which you had marked in the 13 particular vector? 14 A. Yes, I selected, roughly speaking, 30-second gaps. 15 Q. In your opinion, picking such gaps would still give 16 a fair presentation as to the track followed by the two 17 vessels? 18 A. Yes, absolutely. Normally plotting on a chart, you 19 would not go at any greater interval than a minute. 20 That would be a pretty accurate charting, once a minute. 21 This is even more accurate than that. And this is 22 a very, very large-scale chart. 23 Q. Looking at the way the tracks appeared, do you have any 24 comment to make in respect of their navigation? 25 A. I think the comment I would make is how exactly it</p>	<p style="text-align: right;">Page 100</p> <p>1 Captain Pryke, you were saying that the plot resembles 2 that -- 3 A. Yes. I mean, when you look at the two, they look almost 4 identical, which indicates that that pretty clearly is 5 what happened. 6 MR SHIEH: Could we have a close-up to nearer the point of 7 the collision. 8 Can you see the turn to port on the part of Sea 9 Smooth? You can see the turn to port on the part of Sea 10 Smooth? 11 A. You could, yes. 12 Q. How about Lamma IV turning to starboard on the Police 13 plot? 14 A. Well, on my plot you can see a -- 15 Q. This is the Police plot, I'm sorry. 16 A. -- you can see a small turn to starboard, but it appears 17 quite small. Whereas in the -- if you look at the 18 written detail, if you look at the pages of "Lam_trip", 19 you can see that the course actually does change, from 20 about -- 21 Q. Page 286, around about 20:20 -- 22 A. Around about 20:18:30 she's steering 349. 23 Q. 20:19? Which particular time are you looking at, 24 Captain Pryke? 25 A. If you take Lamma at 20:18:31, she's steering at 349.</p>

<p style="text-align: right;">Page 101</p> <p>1 Q. 20:18:41? 2 A. No, 20:18:31. 3 Q. Yes, yes. 4 THE CHAIRMAN: She's steering that same course at 20:19:01, 5 is she not? 6 MR SHIEH: Yes, yes. 7 A. Yes, and then if you go over the page, at 20:19:29, 357, 8 which is 10 degrees. And then a bit further on, 358, 9 001. So you can see that she has over a period of time 10 altered course to starboard. 11 Q. Thank you. 12 A. But that's not the sort of alteration of course to 13 starboard that the Rules have in mind. The Rules have 14 in mind a bold alteration of 15, 20, 30 degrees. 15 Q. I'll come back to the data you used to prepare your plot 16 later, after I have taken you to your supplemental 17 report, which is what I now do. 18 Could I ask you to look at your supplemental report, 19 Captain Pryke, which we can find in the expert evidence 20 bundle, page 300. That's the cover page. At page 301, 21 under "Instructions", it sets out why it is that you've 22 been asked to prepare this supplemental report: 23 "On 6 December 2012, those instructing me have 24 passed to me a letter from the Department of Justice 25 together with the following enclosures:</p>	<p style="text-align: right;">Page 103</p> <p>1 2. consider whether any part of my first report 2 required revisions; and 3 3. if appropriate, provide a supplemental expert 4 report. 5 I believe it is appropriate for me to adduce this 6 short supplemental report to set out my opinion in the 7 light of the latest information provided by Mardep." 8 Your substantive opinion can be found on the next 9 page, page 303: 10 "1. When studying the hundreds of positions I have 11 now seen in print referring to 'Sea Smooth' and 12 'Lamma IV' (on the basis of the latest information 13 provided by Mardep which had not previously been 14 available), it is clear that by selecting some and not 15 others, the apparent course lines of the two vessels 16 over a few seconds can be varied. This does not change 17 the fundamental position. This is a Rule 14 ... 18 'head-on' situation: 19 'When two power-driven vessels are meeting on 20 reciprocal or nearly reciprocal courses'. 21 2. All the plots I have done show 'Sea Smooth' 22 altering her course to port when within two minutes of 23 collision. They also show 'Lamma IV' altering her 24 course to starboard within two minutes of collision. 25 3. I should clarify that in paragraph 29 of my</p>
<p style="text-align: right;">Page 102</p> <p>1 1. Data kept by ... ('Mardep') derived from the 2 radar system: 3 (a) radar track reports on the movement of Sea 4 Smooth ... and Lamma IV ... on from 20:04:36 hrs to 5 20:31:29 hrs on 1 October 2012. 6 (b) radar track reports on the movement of Sea 7 Smooth ... from 20:04:36 hrs to 20:31:29 hrs on 8 1 October 2012. 9 (c) radar track reports on the movement of Lamma IV 10 from 20:04:36 hrs to 20:20:44 on 1 October 2012. 11 2. Information and data generated from the AIS of 12 Sea Smooth from 20:03:00 hrs to 20:32:59 hrs on 13 1 October 2012. 14 3. 4 radar plots in various scales. 15 In the letter from the Department of Justice, it was 16 explained that there appeared to be some discrepancies 17 between the radar data provided by the Hong Kong Marine 18 Police ... on which I had relied on in my first report 19 and the data and information maintained by Mardep as 20 outlined above. 21 As I did not have access to the latest information 22 provided by Mardep at the time when I prepared by first 23 report, I was immediately instructed to: 24 1. review and examine the latest information 25 provided by Mardep;</p>	<p style="text-align: right;">Page 104</p> <p>1 first report, I have stated that 'Lamma IV' had altered 2 her course 13 degrees to starboard, 'Sea Smooth' had 3 altered her course 16 degrees to port. Using different 4 digital data, these figures might change slightly. The 5 principle remains absolutely the same ie, both vessels 6 should have made a bold alteration to starboard. As 7 stated in paragraph 28 of my first report, 'Lamma IV' 8 was restricted by the rocks of Shek Kok Tsui from making 9 too large an alteration to starboard. On the other 10 hand, 'Sea Smooth' had more than adequate sea room to 11 starboard. 12 4. I enclose a chartlet showing the new positions 13 on the basis of the information just received alongside 14 my previous plot." 15 So that represents your opinion as a result of 16 seeing the latest disclosure by the Department of 17 Justice, Captain Pryke? 18 A. Yes, it does. 19 Q. Can I take you to the plots that you have since 20 prepared. At page 360, I believe this is a plot that -- 21 I'm sorry, I should allow you to look up the plot in 22 your own version of the report. I'm looking at the plot 23 attached to the supplemental report initially. 24 A. Yes. 25 Q. At page 360 of the bundle we can see a chartlet which</p>

<p style="text-align: right;">Page 105</p> <p>1 was attached to your supplemental report initially. 2 A. Yes. 3 Q. Where we can actually see 1 nautical mile actually 4 marked up. 5 If you turn to page 361, I believe it is 6 a replacement chartlet that you have since prepared to 7 replace the chartlet that we have just seen; is that 8 correct? 9 A. Yes. 10 Q. Before going into the details of the parallel plot in 11 each of them, can you explain how it was that you came 12 to prepare the -- yes, the previous one at page 360, and 13 how it was that you came to decide that you needed to do 14 a further plot at page 361? 15 A. Yes. I was at home in the UK when I was asked to 16 produce this second plot, and I used a photocopy of the 17 chart because I didn't have the proper chart with me. 18 It wasn't until the day I arrived back in Hong Kong that 19 I realised the photocopy was not actually on the same 20 scale as the chart. So the information I've put on here 21 is bogus; it's not correct. It's to do with the scale 22 of the chart I was working on. 23 So consequently, I redid it on the big chart and 24 then we made another photocopy, which is what you're 25 looking at at page 361.</p>	<p style="text-align: right;">Page 107</p> <p>1 Q. Yes. Thank you. Could I ask you to identify the source 2 materials upon which you relied to prepare the new plot? 3 They would be the latest disclosure by Mardep; that's 4 right? We have seen actually certain radar plots 5 provided by Mardep. In the expert report bundle, those 6 are pages 356 up to 359. 7 A. Yes. 8 Q. In terms of numerical presentation, they are from 310 9 all the way down to 355. I think in your own report you 10 have attached the radar plots produced by Mardep, 11 immediately preceded by that small clip of radar and AIS 12 information printed out by Mardep? 13 A. Yes. The problem is that the ones, the actual ones 14 I used, I marked up, but these are not the ones in the 15 bundle. 16 Q. When you actually decided upon the -- it's a rather 17 general question. You basically again took, I think -- 18 did you take the information from the plots themselves 19 rather than from the print-out? 20 A. I took the printed ones of the Lamma IV. 21 Q. You took the printed ones of the Lamma IV? 22 A. Yes. 23 Q. Right. 24 A. From Mardep. 25 Q. Basically for Lamma IV, you took the ones from page 334</p>
<p style="text-align: right;">Page 106</p> <p>1 Q. So to cut a long story short, the one that we should now 2 work on is the one at page 361? 3 A. Page 361, that's correct. 4 Q. The one without the marking about 1 nautical mile? 5 A. It does actually have a marking of 1 nautical mile, but 6 it's not so obvious. It's on the left-hand side of 7 the -- 8 Q. Yes, yes. Not like the pink one which appeared in the 9 previous one? 10 A. That's right, yes. 11 Q. Could I ask you to look at the one at page 361. 12 A. Yes. 13 Q. Can you explain to us the appearance of the two plots 14 and how you distinguished between the two? 15 A. Well, looking at the plot of Sea Smooth, the dark lines 16 are the original and the red lines are the new plot. 17 Q. That's for Sea Smooth? 18 A. For Sea Smooth. And for Lamma IV, I'm afraid they're 19 both quite dark but one is grey, which is a pencil, and 20 the new ones are black, which is in ink. 21 Q. The new ones are black? 22 A. Yes. And the numbers, the timings alongside the new 23 ones are on the left-hand side of the sheet. 24 Q. Yes. 25 A. Whereas the old ones are on the right-hand side.</p>	<p style="text-align: right;">Page 108</p> <p>1 onwards. Could Captain Pryke be shown expert bundle 2 page 335. Those are the printed Lamma IV data. It 3 starts 20:17:35. 4 A. Yes, I have it. 5 Q. For the Lamma IV track, you took the data from these two 6 pages? 7 A. I'm pretty sure that's right, yes. Unfortunately the 8 ones I actually used, I marked. But none of these are 9 marked. So there are so many pages, it's very 10 difficult. 11 Q. But as far as you remember, for the Lamma data -- 12 A. As far as I remember. 13 Q. -- it's actually taken from a page with actual numbers 14 printed. 15 A. Yes. 16 Q. How about Sea Smooth? 17 A. For sea Smooth I used the blocks of data on page 356. 18 Q. On page 356? On page 356, they only started at 19 20:19:56. Is it page 356 or page 357 for Sea Smooth? 20 A. I started at 20:18:02, which is on page 357. 21 Q. Yes. 22 A. That's the one I started with. 23 Q. Right. So for the Lamma IV data, you took it from the 24 print-out; for the Sea Smooth data you took it from the 25 radar plot supplied by Mardep, which we can find in the</p>

<p style="text-align: right;">Page 109</p> <p>1 bundle at page 357. 2 A. Yes. 3 Q. Which started at 20:18:03. 4 A. For Lamma IV, I started at 20:17:35. 5 Q. Which we can also find actually on page 357? 20:17:35, 6 at the bottom left-hand corner. 7 A. Yes. 8 Q. Thank you. Captain Pryke, you have seen two sets of 9 figures, one set generated by Mardep, one set generated 10 by the Marine Police. 11 A. (Witness nods). 12 Q. You have been in the Inquiry room yesterday and today, 13 and you have heard evidence about possible reasons as to 14 why they differ. 15 Do these have any bearing on your opinion as to the 16 cause of the collision and as to the reliability of the 17 information that you acted upon, or as to the plottings 18 that you have done? 19 A. No, none at all. I mean, I think my original plot, as 20 we discussed, is almost identical to the photograph of 21 the radar track. And I think that is as accurate 22 a picture of this incident as you're going to get, 23 frankly. 24 Q. And the differences between the Mardep figures and the 25 Police figures, you think or don't think they are</p>	<p style="text-align: right;">Page 111</p> <p>1 among the documents disclosed by Mardep. They contain 2 AIS information sent out or transmitted from the 3 transponder on board the Sea Smooth. 4 So on top of the radar data about course and speed 5 and position, we have AIS information obviously coming 6 only from Sea Smooth, because Lamma IV has no AIS, 7 containing similar categories of information. But as 8 I understand it, when you conducted your plotting, you 9 had referred to and relying upon the radar figures, the 10 radar data? 11 A. Yes. 12 Q. And not taken into account the AIS data? 13 A. Yes. 14 Q. For Lamma IV I can understand, because it's got no AIS. 15 But for Sea Smooth, can you assist us in telling why you 16 have not chosen to use the AIS information for Sea 17 Smooth? 18 A. It is subject to more variations. We know absolutely 19 that the radar blip on the screen which has been 20 recorded is absolutely correct. Although AIS is 21 broadcasting on VHF radio positions to three decimal 22 points, that might tend to make you believe that that's 23 a fact. But it isn't necessarily a fact. It's a bit of 24 information thrown out by a computer. There are various 25 errors to do with atmospherics, to do with satellites,</p>
<p style="text-align: right;">Page 110</p> <p>1 material for your purposes? 2 A. I don't think they are. My understanding is, I think 3 from what the previous witness said, that there is 4 a tolerance in the computer arrangement that is attached 5 to the radar. Now, that would account for slight 6 variations in my second plot. Because if you remember, 7 he said that the Police computer was more accurate or 8 set to finer lines -- 9 Q. More sensitive. 10 A. -- for various reasons. And they both had a test 11 tolerance of I think 1 or 2 degrees on course, and 20 -- 12 Q. Average 2 degrees on course. 13 A. Average, yes. So you can imagine that these two 14 sequences of raw radar having information extracted by 15 different computers for different reasons, you might 16 well have a slightly different result on the page. 17 Q. There is one point I would like to explore with you, 18 Captain Pryke, and that is, if you look at the expert 19 bundle, page 337, in your own report, this clip of 20 documents came immediately before the four radar plots 21 supplied by Mardep. 22 The Mardep documents contain this -- yes, Captain 23 Pryke, have you been able to locate that? 24 A. Yes. 25 Q. It's a set of documents that appeared sideways. This is</p>	<p style="text-align: right;">Page 112</p> <p>1 to do with any number of things. As the previous 2 speaker said, you could speak about it all day. It can 3 be very, very accurate; it is also subject to errors, 4 and some errors can be input by the crew on board the 5 ship on which the device is located. 6 Q. When you said "radar is absolutely correct", in what 7 sense? Because after all, the signals come back and 8 it's always subject to interpretation by different 9 computers. Of course, it all depends on where on the 10 target a signal hits. So I wish to know what you mean 11 by radar being absolutely accurate. 12 A. That's absolutely true, you're right, and when you're 13 trying to see when the blob hit apparently on the 14 starboard side rather than the port side, it's all about 15 what is being reflected, which part of the ship is being 16 reflected. Maybe a bit of the sea. You saw very 17 clearly that the wake wash was a very good target from 18 Sea Smooth, and the data transferred to the wash because 19 it was so close and such a big target, and a very 20 sensitive system, as we heard. But given that there may 21 be a slight variation in the piece of the ship that 22 you're looking at, having said that, it is absolutely 23 correct that that's where it was, where the blob says it 24 was. 25 Q. Would there be an extra reason why you might not have</p>

<p style="text-align: right;">Page 113</p> <p>1 chosen to use the AIS information for the Sea Smooth to 2 do your plotting, and that is if you used the radar data 3 for Lamma IV, to do the plot for Lamma IV, then to 4 compare apples with apples you should actually use radar 5 data for Sea Smooth as well? 6 A. Yes, I did make that decision for that reason as well. 7 Q. Captain Pryke, can I now ask you to look at a series of 8 questions and answers which a witness gave yesterday. 9 That is the evidence of Mr Yim. I think you were in the 10 hearing room yesterday. 11 A. Yes. 12 Q. Could I ask Captain Pryke to be shown the transcript of 13 yesterday. Page 82, line 21. 14 A number of points are all rolled up in this 15 extract, but perhaps the best way is for me to read the 16 whole extract out to you and then to ask you for your 17 comments on the few points that emerge from this 18 extract. 19 Page 82, line 21. It's a question by Mr McGowan: 20 "And the computer system in the VTC centre produces 21 the course and speed over the ground using historical 22 information from previous radar sweeps?" 23 THE CHAIRMAN: Can you just pause there, because this hasn't 24 been put up on the screen. 25 MR SHIEH: I'm sorry.</p>	<p style="text-align: right;">Page 115</p> <p>1 do this anyhow. But if this was a radar upon which one 2 can lay a chart plotter, then I'd like to be told about 3 that and how it worked. 4 MR SHIEH: Perhaps we can follow up on Mr Chairman's 5 question as to the availability of the radar manual, and 6 then if it is indeed available among the papers, we will 7 make that available. 8 THE CHAIRMAN: As far as I can see, it's not. Whereas there 9 is one for Lamma IV. 10 MR SHIEH: We'll follow up with Mr Sussex as to the Sea 11 Smooth equivalent and if it's available, they will make 12 copies. 13 THE CHAIRMAN: One of the other items to look at would be 14 the radio that was carried on Lamma IV. Not one that 15 was VHF, but it had a radio. The whistle, and 16 information as to the requirement over what distance the 17 whistle was to be audible. Matters like that. 18 MR SHIEH: Yes. 19 THE CHAIRMAN: If I can invite you to follow that up. 20 MR SHIEH: We will follow that up. 21 THE CHAIRMAN: So, Captain Pryke, we're going to adjourn now 22 and resume with your testimony tomorrow, and those are 23 some of the issues I'd like to see if you can help us 24 with. 25 A. Okay.</p>
<p style="text-align: right;">Page 114</p> <p>1 Mr Chairman, since it's actually the beginning of 2 a separate topic, and since we may need time to sort out 3 putting the transcript up on the screen, could we 4 perhaps take a slightly earlier break today? 5 THE CHAIRMAN: Certainly, yes. 6 MR SHIEH: I imagine I am not going to be too long with 7 Captain Pryke tomorrow morning. 8 THE CHAIRMAN: Very well. Just let me ask you to address 9 one matter, and that is the equipment that was to be 10 found on the wheelhouses of the two vessels. 11 MR SHIEH: Yes. 12 THE CHAIRMAN: I'm looking at marine bundle 8, page 1983. 13 There's a similar layout plan for Lamma IV. You see 14 various items of equipment, and in particular item 6 is 15 the radar machine. 16 MR SHIEH: Yes. 17 THE CHAIRMAN: Item 71 is the AIS. 18 Just dealing with the radar, do we have the manual 19 for that radar? Because I'd like some assistance, 20 through Captain Pryke, as to the equipment that was 21 available to the coxswain on the Sea Smooth. If we 22 don't have the manual, may I ask, through you, 23 Mr Sussex, that that be provided. 24 MR SUSSEX: Yes, sir. 25 THE CHAIRMAN: It may be Captain Pryke is in a position to</p>	<p style="text-align: right;">Page 116</p> <p>1 THE CHAIRMAN: And other matters. Of course, you being 2 an expert witness, there's no objection to you speaking 3 to counsel during the adjournment on those matters I've 4 just outlined. 5 MR SHIEH: On those matters, yes. 6 THE CHAIRMAN: We'll resume tomorrow at 10 o'clock. 7 (4.30 pm) 8 (The hearing adjourned until 10 am on the following day) 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p>

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