

## Protocol

### VIEWING OF THE VIDEO TAPES SHOWING THE WRECK AND THE VISOR OF THE „ESTONIA“ AND DEBRIS ON THE SEA BOTTOM FILMED ON 2ND AND 9/10TH OCTOBER 1994 AND 18<sup>TH</sup> OCTOBER 1994

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1. Henrik Gahmberg inquired with Kari Lethola whether viewing of the original video tapes made between 2<sup>nd</sup> and 18<sup>th</sup> October 1994 from onboard of Finnish vessels would be possible.
2. Permission was granted by Kari Lethola and details of the video tapes wished to be shown were requested.
3. By fax of 01.06.00 – see Enclosure 1 - these details were sent to the office of Henrik Gahmberg and further transferred to the office of Kari Lethola.
4. In detail the following videos were requested:
  - (1) the videos produced on 02.10.94.
  - (2) the videos produced after the 2<sup>nd</sup> but before 9<sup>th</sup> October 1994.
  - (3) the videos produced on 09./10.10.94.
  - (4) the videos produced on 18.10.94 between 14.30 and 18.45 hrs. (alleged search and find of visor).
5. The German side suggested weeks 32 or 33, always the first 3 days while the Finnish side could only make it on 31.07./01.08./02.08. or alternatively 17/18/19<sup>th</sup> August and the first alternative 31.07./01.08./02. was agreed upon.

6. Due to other commitments coming up on very short notice neither Dr. Ho. nor the video expert from Disengage could travel to Helsinki, thus WH had to go alone accompanied by Martin Roolvink (MR), a consultant to the German 'Group of Experts'.
7. The first meeting took place on 31.7.2000 at 10.00 hours at the headquarters of the Central Criminal Police at Vantaa near Helsinki in the National Bureau of Investigation to which the following persons attended:
- |                             |   |  |
|-----------------------------|---|--|
| Pirjo Valkama-Joutsen (PVJ) | - | Administrative Director of the Finnish Accident Investigation Board                  |
| Heikki Seppänen (HS)        | - | Detective Sergeant of the National Bureau of Investigation and video operator/expert |
| Herman Ljungberg (HL)       | - | Lawyer from Gahmberg, Hästö & Co. (only on first day from 10.00-12.00 hrs.)          |
| Mirko Pennanen (MP)         | - | Lawyer from Gahmberg, Hästö & Co. (all the time)                                     |
| Martin Roolvink (MR)        | - | Consultant to the German 'Group of Experts'  |
| Werner Hummel (WH)          | - | Member of the German 'Group of Experts'  |
8. The first day – 10:00 hrs.
- PVJ: *"The purpose of this meeting is to show you the videos you wanted to see."*
- WH: *"What we have asked for are the originals of these videos which I got from Tuomo Karppinen in March 1995 which are Video I, Jutta 2, 2. October 1994; Video II, Jutta 1, 2. October; Video IV, Simo 1, 2. October and Video III of the second ROV Op. Estonia/Est. from 9. and 10. October 94."*
- The cassettes were shown by WH to the participants.

*"These videos were analysed by an expert from the UK. He found out – what everybody can see in fact – that the videos were cut at different stages and/or manipulated. You may have the list about that, Appendix 2 [gives the Disengage list to PVJ]. It is also an enclosure to our report." – See Enclosure 2 - .*

HL: *"The yellow marked are the interesting parts of it."*

WH: *"The first one is Jutta 1. It starts directly at the navigation bridge, so I think it is not the original beginning. But I don't know your sequences."*

PVJ: *"Mr Holtappels is not coming?"*

WH: *"Mr Holtappeis has got a new job only last Friday and sends his apologies."*

8.1 The 1<sup>st</sup> video tape shown ran from 18.54.50 to 20.07 hrs. and had identical interruptions to the copies received by the Germans, i.e. the picture turned to blue (on our copy to snow) while the time kept running and after a while the picture came back.

This occurred 3 times, viz. when the ROV was moving over the seabed viewing different debris from the wreck when the interruption (breaks) occurred:

- 19.36.34 - something like rails on seabed – break to 19.37.49 - 75 seconds missing
- 19.38.02 - unknown white metal on seabed – break to 19.38.19 - 17 seconds missing
- 19.38.25 - bow ramp rail on seabed – break to 19.39.09 - 44 seconds missing
- 19.41.07 - possible rail on seabed – break to 19.41.45 - 38 seconds missing.

This was apparently Video I (*Jutta 2*) - No. 1 on the Disengage List.

HS: *"This tape ends here."*

WH: *"No, our tape starts again."*

HS: *"Original ends here."*

8.2 The 2<sup>nd</sup> video tape shown ran from 12.26 hrs. to 18.59.19 and covered both the time at the first and at the 2<sup>nd</sup> anchor position of "Hall". It showed identical interruptions to the copies received by the Germans – viz. between 13.11 and 13.41 hrs., 7 breaks of 4 seconds each, but thereafter much longer breaks, viz.

- 13.58.29 - 14.51.03 =	52 min. / 34 sec.
- 14.54.28 - 14.55.32 =	1 min. / 4 sec.
- 15.01.46 - 15.07.33 =	5 min. / 47 sec.
- 15.14.33 - 17.28.40 =	2 hrs. / 14 min. / 7 sec.
- 17.36.16 - 17.36.21 =	5 sec.
- 17.58.54 - 18.00.37 =	1 min. / 43 sec.
- 18.42.17 - 18.49.50 =	7 min. / 33 sec.

This was apparently Video III (*Jutta 1*) and No. 2 on the Disengage List.

### 8.3 At lunch

HS explained that the ROVs used were working with the old analogue system, nowadays it is all digital. The reasons for the interruptions when the picture turned blue were created by pressing the bottom of the recorder on board, e.g. when something uninteresting should not be recorded, then there would be no recording but the time of the ROV would keep running and when the picture comes back after some time there is a respective jump in time, always ahead, never back.

HS: *"So, if you stop the recorder and then start recording again half an hour later, the time will show a jump of 30 minutes. And the "blue spaces" result from recording from one to the other Panasonic-recorder. If there is another recorder used than a Panasonic, then the pauses will not be blue but "snow". All this just depends on the equipment one uses."*

WH: *"We are noting down your explanations without commenting them, shall discuss subsequently with our video expert and, if necessary, revert to you."*

HS: *"That is ok."*

8.4 31.7.2000 – afternoon

WH: *"Is it correct that the ROV has two different cameras?"*

HS: *"At least 2, sometimes more."*

WH: *"And each camera is producing 1 tape?"*

HS: *"No, there is only one single tape with this old analogue system. They select the camera from the ship and this camera gives the space picture information. But the text like water depth, heading, time, date and so on always comes automatically. The camera and the data image are combined as 1 video signal. It is an analogue system which is used. You cannot divide it: Time, depth and so on are always included. I think it is possible today to separate the data with a digital system. You can compare it with a camera which uses the police for traffic control. The data like speed and time is always given and always in the picture. In this analogue model you cannot remove the data from the picture anymore. After recording it is always there."*

WH: *"By the way, do you have these VHS videos secured on digital tapes?"*

HS: *"No, why?"*

WH: *"Because the VHS tapes are losing their quality with time and your so-called originals are partly pretty bad already. We have transferred all the videos received from the JAIC on to digital tapes, which are secured in a bank safe."*

HS: *"What do you think how long will this case go on?"*

WH: *"At least for another 3 years."*

HS: *"Our tapes will do for this time."*

PVJ: *"How many years are you going to continue your investigation?"*

WH: *"Until we know what really happened. Maybe another 3 years."*

- 8.5 The 3<sup>rd</sup> video tape shown ran from 13.14 to 14.50 hrs. and 17.51 to 20.22.30 and showed also the same interruption as the German copies does, viz. 1 cut at 14.43.37 for 13 seconds. It was apparently Video IV (*Simo 1*) and Disengage No. 4.
- 8.6 The 4<sup>th</sup> video tape was from 9/10<sup>th</sup> October 1994 and ran from 21.55 of the 9<sup>th</sup> to 00.52.39 of the 10<sup>th</sup> (1<sup>st</sup> part). It was apparently Video III, No. 3 on the Disengage List. This tape – as well as the German copy – jumped at 22.21.24 back in time to 19.17.33, kept running on this new time until 19.17.51, i.e. for 18 seconds, and then jumped forward to 22.22.49, i.e. 1 min., 25 sec. This was the only irregularity in this tape. Thereafter the viewing was ended at 17.20 hours.
9. 1.8.2000 – 10.00 hrs.  
The meeting was resumed with the same participants.
- 9.1 The 2<sup>nd</sup> part of Video III running from 00.57.33 to 02.18.55 hrs. was shown of which the last 12 minutes just show the seabed without any objects, where after the ROV was rising up. This tape was not interrupted or cut.
- 9.2 The next video shows the ROV inspecting the visor on 18.10.94 from 15.27.33 to 18.30 which the German Group of Experts had not seen before and thus had not been analysed.
- 9.3 Thereafter HS declared that this was all, he had no further tapes in his archive which was confirmed by PVJ, where after WH drew their attention to the video of 02.10.94 commencing at 14.16 hrs. and running to 18.46 of which WH had received a copy in March 1995 from Tuomo Karppinen together with the other copies and PVJ declared now that WH would have to ask Dr. Nuorteva whether there is more material from "TURSAS" in his office (actually this particular video was made from

onboard "HALLI"), but he was on leave now. This was accepted for the time being.

- 9.4 Subsequently WH explained that a further tape from the 9<sup>th</sup> was missing, which was made at the beginning after the "TURSAS" had dropped anchor at 17.30 until 21.15 hrs. when the anchor position was changed. WH also quoted from the fax Kari Lethola had sent to Olaf Forssberg on 09.10.94 where it is stated:

*»Message: Good morning! Due to bad weather the search for the visor was discontinued during the whole day, but now Nuorteva has further analysed the pictures. At the location on the sea bottom, where "Estonia" on basis of the object did capsize, there is a 10 m long and 5-7 m broad object on the bottom. It is probably of metal. The form fits well with the visor. Depth is 70 m, the bottom is hard.*

*Karppinen, Aarnio and the ROV I team go onboard of "Tursas" at Nagu at 11.00 (Finnish time) and the work starts at ca. 13.00 hrs. They shall video film at first the "large object". Attached please find a sonar picture including an enlargement of it.«*

The attached sonar picture turned out to be part of the sonar recordings with print-outs at the right side indicating latitude and longitude and possibly course and speed every 30 seconds commencing at 22.47.01 and ending 22.49.31. The big object is visible on the recording between 24.47.31 and 22.49.01. Latitude (y) and longitude (x) are stated by code groups of 6 or 7 digits which were found to be based on the Finnish geodetic system. The corresponding position was found to be very close to the wreck.

Subsequently the following discussion developed:

HS: *"We are through now."*

WH: *"But 'Jutta 2' in the afternoon is missing and there must be numerous more video tapes."*

HS: *"I don't know from where you have this information."*

- WH: *"We have these video tapes here [shows the tapes] , and we got them from you."*
- HS: *"You have them, but we don't have them here. We have nothing more. We have shown you all originals."*
- WH: *"But there must be more."*
- PVJ: *"No, nothing."*
- HS: *"Where should the other videos be?"*
- WH: *"There is really nothing more?"*
- PVJ: *"No."*
- WH: *"Nothing? Can I write that down?"*
- PVJ: *"No, there are no more videos here."*
- WH: *"Not here? But where are they?"*
- PVJ: *"I don't know."*
- WH: *"Where are the videos from the 5<sup>th</sup>?"*
- PVJ: *"I can't remember all the videos, but do you have one of the 5<sup>th</sup>?"*
- WH: *"I have got faxes from Kari Lethola to Olof Forssberg where he states that they made videos when searching the visor."*
- PVJ: *"No, we only made sonar pictures."*
- WH: *"Yes, and there was an object which at first is described to be the visor. Afterwards it's only a steel plate and later it disappears at all."*
- (Silence)*
- WH: *"OK, there must be more videos because I saw them in Kari Lethola's office, there were many tapes in the board."*
- PVJ: *"Perhaps these tapes were not all tapes about "Estonia".*
- WH: *"I think they were about "Estonia".*
- PVJ: *"I don't know. The problem is that it is so much material. And the rest of the material is in Doctor Nuorteva's hobby archive. I don't know, I think he is on holiday and so it is not available for you. We have shown you what we have now and I can't discuss because I don't have any lists here of the material and I can't remember 'cause I have not everything in my mind."*



HS: *"If we had them here we would show you."*

WH: *"If the videos we have seen until now are really the originals, they have been cut already when they were recorded."*

PJV: *"But there is no reason for that."*

WH: *"They didn't want us to see – or perhaps they even didn't want you – to see some things."*

During the further discussion WH also asked HS about the different kind of cuts, viz. the blue interferences between two time signals and the time jumps with a length of one hour or more but without any interference. WH also mentioned the peculiar cuts when the time is jumping backwards, as it has been seen on tape no. 3 from 22:21 to 19:17. HS was uncertain and admitted that he could not give an explanation for that. He repeated what he already explained the day before and added that he hadn't been onboard the vessel from which the ROV-videos were recorded.

After this discussion the participants agreed to have a look at the video tape 'Jutta 2' which WH had received from the commission in 1995. The time stated on the video starts on the Disengage list at 14:16 and ends at 18:46 hrs.

At position 20:07:17 there was a long "snow period" which HS commented with the words "this means that it has not been made here, because the pause would be blue then."

Furthermore HS admitted that this video tape contains a mixture of cuts because the time is continuously jumping forwards and also backwards.

HS: *"It's a mix of cuts and this video tape has definitely not been done by us. It also shows sequences which we have not seen on the other tapes."*

PVJ: *"That is strange because all copies which have been given out have been made here."*

WH: *"I got all these tapes in this condition from Tuomo Karppinen. Is that your handwriting on the labels ? [gives the tapes to HS and PVJ]."*

HS: *"No. Don't know."*

PVJ: *"No, this handwriting is not Tuomo's or mine or Kari's."*

*some minutes later*

PVJ: *"Will you also have a look at the Rockwater videos?"*

WH: *"We are not permitted. We will try that via the lawyer."*

PVJ: *"Do you believe that you have also received cut Swedish videos?"*

WH: *"Yes, but the cuts are more difficult to see because there is no time scale on the diver videos."*

WH asks HS to show video no. 4 again and to go forward to position 19:17.

The time on the tape jumps from 22:21:24 back to 19:17:34.

WH: *"Mr Seppänen, now the time jumps backwards. This does not fit with the explanations you gave us yesterday."*

HS: *"I'm not sure. I don't know what has happened with it, but I had not been at the site when it was recorded.. Perhaps they used some old tapes and over-recorded the old films and this picture with the time 19:17 and so on is just an old one which is under the new recordings, but I cannot exclude that this video is manipulated."*

Finally WH asked for the video tapes produced in 1996 when the Environmental Authority was taking the oil out of the wreck and when during bad weather the ROV had been used by Tuomo Karppinen and Klaus Rahka to film the wreck. According to PVJ and HS also these tapes were not available, but were presumably kept by the Environmental Authority.

In summary WH concluded that the requested video tapes had not all been shown, that the alleged originals of the tapes shown had the same interferences-breaks-cuts as the copies received from Tuomo Karppinen in March 1995, which according to HS had been created onboard by deliberately stopping the recording while the time kept

running with the exception of those parts where the time was jumping back and subsequently forward and thus a manipulation cannot be excluded. It was mutually agreed that the second part of Video No. 1 (Disengage) running from 14.16 hrs. to 18.46 hrs. was very badly cut and manipulated.

At 14:15 hrs. the participants agreed to close the meeting.

Werner Hummel

We confirm that this protocol is a correct summary of the findings and discussions on 31.7./1.8.00 at the National Bureau of Investigation.

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Pirjo Valkama-Joutsen

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Heikki Seppänen

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Mirko Pennanen

*Matti Roolink*  
Martin Roolvink