ENRICA LEXIE: Technical Analysis

by Luigi Di Stefano

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(transl. Dr. Phil. Alfonsina Scarinzi)
In spite of the large amount of information about the events occurred on 15th February 2012 off the coast of Southern India the fragmented and unverifiable data coming from various sources make very difficult to carry out technical surveys having legal validity.

It is obvious that both the expert of each party and the assessor need to have access to all documents and exhibits.

In the Italian judicial system and legal proceedings both assessors and experts of the claimant and of the defendant take part in the technical survey process because the technical survey can have probative force and tend to prove a matter at issue.

In the case of the jailed Italian marines issue, the unilateral decision of the Indian authorities not to allow the Italian forensic experts (the experts of the defendant) to take part in the technical survey process preventing them in this way from carrying out the technical survey together with the Indian
experts (the experts of the claimant) violates the principles of a fair process.

The Italian forensic experts were allowed to be just “observers” of the survey and were excluded from decision-making. Against this background, I think that it is useful to carry out a technical analysis of the events based on the available information reported in the press, being aware that some elements may have been misrepresented and misreported in the available sources.

In spite of the mentioned shortcoming, the method I used for the analysis is valid. This means that if one day you have access to verifiable evidences and exhibits coming from reliable sources other than those I took into consideration, it will be possible to replace the ones I used with the more reliable ones and repeat the analysis and the survey without changing the methodological structure of my analysis.

Each technical survey follows a reliable method of inquiry and analysis. In the following we will do so with the purpose of analysing the nature of the facts and where they happened.

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- Assessor in the Prosecution of Ancona (passengers on the flight Cairo (Egypt) – Bologna (Italy) sighted an alleged missile aiming at the flight over the Adriatic Sea, 2005).
- Expert of the party in the reopened case of an air crash in the Gulf of Genova (Italy) (2008).
As the event (the Italian marines issue) involves two States (Italy and India), International best practice requires the creation of an Italo-Indian board of inquiry with the purpose of verifying the sequence of the events, of determining the field of inquiry and of examining the criminal offence.

A bilateral board of inquiry prejudices neither the rights nor the power of national judiciaries. Such a board is not allowed to pronounce sentence and provides each side with the same version of the events.

This would have been the fairest dispute settlement procedure in obedience to the reason of State of both sides and without prejudicing the State sovereignty of each side.

Italy chose this solution in the case of the crash of the Libian fighter aircraft MiG 23 into the Sila mountain in Calabria (Southern Italy) in 1980.

In the case of the Italian jailed marines issue, India unilaterally decided to grant Indian authorities alone power over the case excluding blatantly Italian authorities from the decision-making.

This is an arbitrary action from Indian side against a country, with which India has always had friendly relationships and which had no reason to commit the punishable offence it is accused of.

The whole affair got off to a bad start. Surely, the reason was not the lack of the intention for cooperation of the Italian authorities.
On 15th February 2012, between 16.00h and 17.00h local time, the Italian oil tanker “Enrica Lexie”, which navigated 22 miles off the Indian coast of Kerala following a direction of 330° with a speed of 14 knots, was approached by a vessel in a manner considered to be aggressive.

The on-board radar picked up such a vessel on a collision course at 2.8 NM (nautical miles) away from the Italian tanker. After giving the alarm, the Italian tanker increased its speed, but the vessel kept nearing, at which point the Italian marines prepared to react. (They were part of a detail of six embarked on anti-pirates protection service on board of the Italian oil tanker “Enrica Lexie”).

They carried out the prescribed procedures for such cases. When the vessel was 500 metres away, the first warning shots were fired. Another warning burst was fired at 300 metres and a third one at 100 metres without striking the vessel. The vessel changed direction and turned away. The marines reported that the vessel, which according to their description was a blue twelve meters boat, was not hit.
THE ACCIDENT REPORT TRANSMITTED BY THE ITALIAN SOLDIERS

15TH FEBR. 16:00 LOCAL TIME. - WHILE THE NAVY UNITY M/T (MOTOR TANKER, NDR) ENRICA LEXIE WAS SAILING AT THE COORDINATES 091°02N - 076°18OE 20 NM OFF THE COAST OF ALLEPEY (INDIA) THE OFFICER ON GUARD ON THE BRIDGE INFORMED THE ANTI-PIRACY PROTECTION TEAM OF A TARGET PICKED UP BY THE ON-BOARD RADAR WITH NO IDENTIFICATION NUMBER AT 3NM AT THE BOW OF THE UNITY ON A COLLISION COURSE.

AFTER MONITORING IT CONSTANTLY BOTH BY RADAR AND WITHOUT INSTRUMENTS THE TARGET COULD BE IDENTIFIED WITH A SMALL VESSEL.

AT A DISTANCE OF ABOUT 800 YARDS WE MADE WARNING SIGNALS USING PANERAI LIGHTS FROM THE RIGHT DECK OBTAINING NO RESULTS. AFTER HAVING GIVEN THE ALARM, WHILE THE VESSEL WAS POSITIONING, ONE OF THE TWO MEMBERS OF THE PROTECTION TEAM ON THE RIGHT DECK SHOWED THE RIFLE AR 70/90 RAISING IT. THIS WAS USELESS. THE VESSEL DID NOT CHANGE COURSE.

AT A DISTANCE OF ABOUT 500 YARDS THE FIRST WARNING SHOTS WERE FIRED INTO THE WATER. BUT AGAIN THE VESSEL DID NOT TURN BACK, IT KEPT ON APPROACHING ON A COLLISION COURSE.

AT ABOUT 300 YARDS A SECOND WARNING BURST WAS FIRED INTO THE WATER. AFTER THAT ONE OF THE MEMBERS OF THE PROTECTION TEAM HAD GIVEN THE ALARM BECAUSE ON THE NEARING VESSEL THERE WERE PERSONS WITH FIREARMS ON THEIR SHOULDERS, WHICH WERE SIGHTED USING BINOCULARS.

THE VESSEL KEPT ON NEARING. TWO OF US KEPT ON SHOOTING WARNING SHOTS INTO THE WATER TILL THE VESSEL AT LESS THAN 100 YARDS CHANGED COURSE ON OUR RIGHT SIDE TURNING BACK ASTERN.

AFTER HAVING TURNED BACK ASTERN THE VESSEL DID NOT HAVE A DEFINITIVE COURSE. MANY TIMES IT STARTED NAVIGATING AGAIN TOWARDS US. THE WHOLE PROTECTION TEAM KEPT ON SHOWING THE WEAPONS AND MAKING LIGHT SIGNALS USING PANERAI LIGHTS TILL THE VESSEL INCREASED ITS SPEED AND SAILED AWAY ON OPEN SEA.

AT 17H LOCAL TIME I CONSIDERED IT OPPORTUNE, IN VIEW OF THE CONSIDERABLE DISTANCE FROM THE AGGRESSOR, TO CEASE TO BE IN THE STATE OF ANTI-PIRACY ALARM LETTING THE CREW LEAVE THE CABIN.

THE ANTI-PIRACY PROTECTION TEAM CONTINUED ITS SERVICE ON BOARD.

 WWW.ITALIANNAVY.NET/PIRACY - LDS - Luigi di Stefano

(THE REPORT - TEXT VERSION)
The master of Enrica Lexie reported the events to the person in charge of the fitout company based in Naples (Italy), who reported the events to the Italian judiciary in Rome, in obedience to international established procedures, as the Italian tanker was in international waters (International waters start at 12 nautical miles from the coast).

At about 18.20h local time a message of the Indian Coast Guard in Mumbai tricked the Italian tanker into coming to port reporting that they had heard of an attack and that they had arrested two armed fishermen with arms on board, prospecting that the vessel could have been the one involved in the incident of the afternoon and inviting them to give statements. They invited the Italian tanker to come back to Kochi.

After consultation with the Italian authorities (Ministry of Defence and Foreign Affairs), by decision of the fitout company, the oil tanker “Enrica Lexie” changed direction at 19.15h local time and entered the Indian port of Kochi at about 23.00h local time.

Later, the two marines who had opened fire were arrested and accused of having killed two Indian fishermen embarked on the fishing boat “St. Anthony”.

THE ARREST OF THE ITALIAN SOLDIERS IN THE PORT OF KOCHI - FEBRUARY 18, 2012
15th Febr. 16:00 local time. - While the navy unity M/T (motor tanker, ndr) Enrica Lexie was sailing at the coordinates 091702N - 0760180E 20 nm off the coast of Allepey (India) the officer on guard on the bridge informed the anti-piracy protection team of a target picked up by the on-board radar with no identification number at 3nm at the bow of the unity on a collision course.

After monitoring it constantly both by radar and without instruments the target could be identified with a small vessel.

At a distance of about 800 yards we made warning signals using Panerai lights from the right deck obtaining no results. After having given the alarm, while the vessel was positioning, one of the two members of the protection team on the right deck showed the rifle AR 70/90 raising it. This was useless. The vessel did not change course.

At a distance of about 500 yards the first warning shots were fired into the water. But again the vessel did not turn back. It kept on approaching on a collision course.

At about 300 yards a second warning burst was fired into the water after that one of the members of the protection team had given the alarm because on the nearing vessel there were persons with firearms on their shoulders, which were sighted using binoculars.

The vessel kept on nearing. Two of us kept on shooting warning shots into the water till the vessel at less than 100 yards changed course on our right side turning back astern.

After having turned back astern the vessel did not have a definitive course. Many times it started navigating again towards us. The whole protection team kept on showing the weapons and making light signals
using Panerai lights till the vessel increased its speed and sailed away on open sea.

At 17h local time I considered it opportune, in view of the considerable distance from the aggressor, to cease to be in the state of anti-piracy alarm letting the crew leave the cabin.

The anti-piracy protection team continued its service on board.
At 18.20h local time, after having received an alert from the fishermen who had hastily brought the ship into port with the two colleagues shot dead on board, the Indian Coast Guard picked up the presence of 4 vessels navigating over the area and compatible with the eyewitness accounts by the fishermen who had survived the attack.

Actually, the vessels in the area were 5: Enrica Lexie, Kamome Victoria, MBA Giovanni, Ocean Breeze e Olympic Flair.

All ships except the Olympic Flair were contacted by radio and asked if they had been involved in a pirate attack. Only the Enrica Lexie responded positively and was asked by the Coast Guard to turn around and dock at Kochi.

On 16th February (the day after the event) the fishermen reported that none of them saw what was happening and where the shots came from. Moreover, they reported that they did not see how many shots were fired, because apart from their colleagues shot dead in the steering cabin the other 9 fishermen on board were sleeping. Later, they added that they had not seen any other vessels nearby.

On 21st February an Indian online newspaper reported that according to the police report the bullets found on the boat “St. Anthony” and in the body of the killed fishermen during the autopsy correspond to a 5.56mm
NATO bore, like the one used by the Italian Navy. The press article does not mention the source of such information.

KOCHI: The police, who are yet to seize the weapons used by Latorre Massimilano and Salvatore Girone to kill the two fishermen, suspect that rifle they used could be Berretta [sic!] AR-70/90. The postmortem report has confirmed that the rifle, used for firing around 20 rounds at the trawlers, had a caliber with a 5.56 mm NATO bore. Trails of 15 bullets were also found on the boat, the police said.

On 22nd February the fishermen completely changed their version. A Mr. Freddy, who said he was the owner of the boat “St. Anthony” (it has emerged that he is Mr. Freddy Bosco), suddenly remembered that the fishing boat came under fire for at least two minutes. According to Freddy, who apparently had enough time to go to the upper deck and see what was happening, the shots came from armed men on a black and red vessel. In his report also the position of the body of one of the killed fishermen was different from the one reported in the first version of the eyewitness accounts by the fishermen. According to Freddy, one of the killed fishermen was shot in the chest and was in the stern of the boat.
On 3rd March Mr. Freddy Bosco granted the newspaper “Deccan Chronicle” an interview in which among other things he indicates:

- the position of the “St. Anthony” at the moment of the shooting, off the coast of Chertala, and hence 24nm north of the Enrica Lexie.
- that after the attack he called by VHS his friend Prabhu who was at Kayankulam and told him to call the police. (see here) or (see here)

On 21st March, in an interview with the Italian journalist Fiamma Tinelli working for the weekly newspaper “OGGI”, Mr. Freddy Bosco, master and owner of the fishing boat St. Anthony, in Poothurai, the village where he lives, described what happened.
Among other things Mr. Freddy Bosco indicates

- the position of the “St. Anthony” at the moment of the shooting, off the coast of Kollam, and hence 27nm south of the Enrica Lexie.
- that after the attack he called on the phone, using his cell phone, his friend Sabu who was fishing not far away from the St Anthony and told him to call the police.

"On 15th February we were on a fishing expedition since one week. From my boat we fish mackerels, tuna, even small sharks. The catch was pretty good, it amounted to 3000 fish. But where we were, 20miles and a half off the coast of Kollam, there were no fish. Hence, we decided to head towards the west.

We had worked all night, until mid-morning. My men were tired and went to sleep. The sea was calm, the sun was strong.

Suddenly, at about 4.15 in the afternoon, I felt the need to sleep a bit. I asked Valentine, my assistant, to take the helm and I lied down beside him. It was calm around us. And an oil tanker was moving slowly."

But Freddy did not make it in time to fall asleep. When he closed his eyes, he heard a strange noise, like a thud. When he opened his eyes, Valentine lied on the floor. A few inches from him away. "I was afraid he suffered a
heart attack and I called out loudly to the others: “come soon, Valentine feels bad!”

But as soon as I was closer to him, I saw some blood coming out from his ear and nose, and he was bleeding. And Valentine had a hole in his head, right here, on the temple, a black hole and I asked myself: “Why this hole, why is he bleeding?”.

In this moment, they started shooting again. The shots came from the vessel, from the oil tanker, there were two of them. I shouted: “get down, get down!” And we took shelter, all of us except of Ajesh.

Ajesh, the youngest of the group, was going to the toilette. When he heard the shouts, he was on the side of the fishing boat that faced towards the oil tanker and tried to find shelter. He did not make it.

After having denied that they had weapons on board, he said: ...”I am familiar with the signales indicating changing course. I happened to meet some cargos and to stop to let them pass by and I have always followed the signales. But before the shots we heard no alarm. No voice. Nothing.”

“We did not read the name of the vessel, there were bullets everywhere. We were terrified. We just saw a black and red vessel. The police told us that name”.

“Those two men on the tanker were not shooting into the air, they opened fire on us. I have never used a rifle, but I know that you can not shoot a man in the head if you do not use a gunsight.”

Maybe you were approaching the tanker? “No, we were not approaching the vessel, we were sailing parallel to the ship in the opposite direction. Valentine was a prudent man: he would have never run such a risk. We were just fishing and they kept shooting.”

Freddy and his men described one and a half minute of pure terror. The shouts, the blood, the explosions. Finally, the fisherman could take the helm and give power to the engines.

**EVIDENCES**

Five vessels in the area (Enrica Lexie, Kamome Victoria, MBA Giovanni, Ocean Breeze and Olympic Flair) have the same colours and the same structure.
Under these premises, any court would consider irrelevant the information about the colour (black and red) of the vessel for the identification of the vessel which attacked the fishing boat “St. Anthony”. It was the Indian Coast Guard that indicated the vessels that according to their position were compatible with the eyewitness accounts by the fishermen.

Mr. Freddy Bosco’s interview contains new and important elements we will analyze later.

**INCONGRUENCIES**

In the interview with the weekly newspaper "OGGI" Mr. Freddy Bosco says:

“Valentine was first shot in the head. And we were 250 metres away”.

We can read in the article:

"Freddy and his men described a minute and a half of pure terror. The shouts, the blood, the explosions".

The rifle **Beretta AR 70/90** used by the two Italian marines has a firing rate of 670 shots each minute and they have fired 20 shots. Hence, all in all they would have fired for less than 2 seconds if they had blasted away.

One and a half minute is plausible only if the men who opened fire did this in single shots, a sort of target shooting that could be only intentional.
Mr. Freddy Bosco says in the interview:

"It was calm around us and there was an oil tanker that moved slowly".

As Bosco said that they sailed parallel to the tanker and in the opposite direction, because of the airspeed he could not have the impression that the tanker moved slowly.

When you travel by car the cars travelling in your same direction seem to be slower or stopped. On the contrary, the cars travelling in the opposite direction seem to be much faster than they really are.

Bosco's report is plausible only if the tanker was anchored. Bosco, a professional master of fishing boats, has probably developed over time an instinctive perception of the speed at sea and hence for him to consider a movement of a ship as slow means that the ship does not near when he expects it to do so.

This can give us a first indication about the fact that the black and red oil tanker was anchored with the prow towards the east.

When we will have access to the satellite data of that day we could check them for confirmation.
In each technical survey it is fundamental to reconstruct time, navigation times, movements, speed, etc. with the purpose of trying to give the contextual frame within which the events occurred. We will rebuild a puzzle putting together its pieces. Only the right pieces will go together, while the wrong ones will not fit the puzzle.

The aim is twofold:

- to verify the adequacy of the events in relation to covered distances and navigation times.
- to uncover discrepancies in relation to covered distances and navigation times.

What you see below is the position and the motions of the vessels obtained using the programme “Google Earth”. Beyond the advantage of having a global reference system, using such a system we can also profit from the verifiablety of the data the system provides us with. Each of you at home can enter time and geographic coordinates and verify the elements we are going to keep a close eye on below.

The phase of “verification” is crucial in a survey. Every elements must be reproducible.

THE OIL TANKER “ENRICA LEXIE”

At 16.00h local time, according to the report of the master, the "aggressor" was 100 metres away from the tanker, after having ignored the first two warning bursts and the fact that the marines on board had shown their weapons. It was high time to open fire.
We know that the oil tanker navigated at a speed of 14 kts (14 NM/h) following a direction of 330° (to Egypt).

We know at what time it changed course to turn back to Kochi (19.15h local time) and we know at what time it entered the port of Kochi (23.00h local time). We know that at the moment of the pirate ship sighting the tanker increased its speed (according to the data 1 kts faster).

We do not know how much time the tanker needed to change course and turn back to Kochi (it is not like riding back on a bike). These two elements correspond to a degree of uncertainty.

But the distance indicated by the line and covered at a constant speed of 14 kts ends precisely at 23.00h local time in the harbour of Kochi.

Therefore, we can say that the report of the master, of the marine officer and of the fitout company about the time of the phone calls fits in with the ascertained speed and covered distance.
In this case the pieces of our puzzle go together.

**THE FISHING BOAT “ST. ANTHONY”**

The Indian Coast Guard reports that the fishing boat “St. Antony” entered the port at 18.20h (at 18.20h local time, after having received an alert of the fishermen who had hastily brought the ship to port with their colleagues shot dead on board).

At Neendakara on 15th February 2012 the sun set at 18.35h local time, while the twilight lasted till 19.47h local time.

![The fishing boat St. Anthony entering the port of Neendakara](image)

It seems to be clear that the “St. Anthony” did not enter the port (where it was awaited, for the master had probably sent a message to the Coast Guard by radio) in the twilight between 18.20h local time and 19.47h. Instead, it was late at night. Therefore, it entered the port after 19.47h local time.
This picture too confirms that when the “St. Anthony” entered the port it was late at night. Some press reports point out that the fishing boat arrived at Kochi at 22.30h local time. The youtube video shows the arrival of the fishing boat and the recovery of the bodies of the killed fishermen.

Against this background, we can say that the message of the Indian Coast Guard in Mumbai in which they invited the Italian tanker to come back to Kochi and in which they said that they had arrested two armed fishermen with arms on board, prospecting that the vessel could have been the one involved in the pirate attack of the afternoon was a subterfuge by the local police to trick the Italian tanker to coming to port, as also the press has oft pointed out.

**SOME CLARIFICATIONS**

Later, the Indian Coast Guard indicated the arrival time of the “St. Anthony” at Neendakara: 22.25h local time and the distance covered by the fishing boat from the stretch where it was attacked to Neendakara: 33.5miles. Of course, the Indian Coast Guard could indicate the position of the “St. Anthony” following directly the geographical coordinates, instead of creating the conditions in which we
have to and can use trigonometry only. One could remark that once indicated the geographical coordinates remain the same. On the contrary, when one indicates just a distance, this can be changed as each case requires.

Be that as it may, and apart from any trickeries, when the “St. Anthony” was in the position indicated by the Indian Coast Guard, the “Enrica Lexie” at the moment of the attack was 5nm (9km) more northerly.

Are the data and evidences indicated by Mr. Freddy Bosco and by the Indian Coast Guard reliable?

After having ascertained the unreliability of the report of the Indian Coast Guard (if they are used to resort to subterfuges, they can resort to them whenever they decide to do so), we have to find out the position of the fishing boat “St. Anthony” at 16.00h local time on 15th February. We have to verify if:

- it was 100 metres away from the “Enrica Lexie”, as the Coast Guard reports
- in another position

Considering Mr. Bosco’s contradictions and the subterfuges of the Indian Coast Guard we can say that we should verify what can be verified: locations and navigation times.

THE ST. ANTHONY POSITION

Mr. Freddy Bosco, owner and master of the fishing boat, provides us with the “ship location” of the “St. Anthony”.

[version #1]

In his interview with the Deccan Chronicle on 3rd March:

"... Our boat, the St. Anthony, was off the coast of Chertala, some 35km south of Kochi ..."

In the picture POINT "A" at the top of the image indicates this position of the St. Anthony.

It does not correspond to the stretch where the Enrica Lexie was at 16.00h local time, rather, it is 24nm northerly (44km).

[version #2]

Mr Freddy Bosco gives us a completely different position in his interview given on 23rd March 2012 to the weekly newspaper “Oggi”: 
"... but where we were, 20 miles and a half off the coast of Kollam ..." (at 16.15h local time)

In the picture this position is represented by POINT "B" at the bottom, exactly 20.5 miles (NM) off the coast of Kollam.

This location does not correspond to the stretch where the “Enrica Lexie” was at 16.00h local time, but it is 27 miles (50 km) more southerly.

**THE BOARDING**

Of course, it is necessary to understand what a boarding is. We are talking about pirates, masters, vessels...

The technical term “boarding” (as the word itself indicates) means to allow people on board, to go aboard, from a vessel to another one. It refers to the insertion on to a ship’s deck of individuals.
This is quite easy when one of the vessels does not move and the other one is rigging. But it becomes more difficult when one of the vessels (we can say the target) takes some evasive actions, and so on.

Therefore, a boarding is possible only when the conditions concerning the positions of the ships, the speed of both vessels and the times are favourable.

It is necessary now to identify such elements, for the data concerning the motions of the oil tanker “Enrica Lexie” will determine the verification of the data concerning the motions of the aggressor and hence will allow us to verify if the fishing boat “St. Anthony” was able to board the tanker or at least to give the impression to the crew of the “Enrica Lexie” that it was going to do so.

The on-board radar of the “Enrica Lexie” picked up the vessel on a collision course at 2,8 NM (nautical miles) away from the Italian tanker. We do not know if the aggressor was in front of the tanker, on the right side or on the left side. Therefore, we will take all three scenarios into account.

At that moment, the “Enrica Lexie” was navigating at a speed of 14kts.
Now, we are going to determine the speed of the aggressor. This is the minimal speed the fishing boat needed in order to be able to board the “Enrica Lexie”.

- **Scenario A**: the fishing boat is 2.8 NM away from the oil tanker. It approaches the tanker from one of the sides and has to follow the tanker along the red line in our picture in order to be able to board the “Enrica Lexie” parallel to the tanker after 12 minutes. Distance: 4.4 NM; speed: 22kts.
- **Scenario B**: it approaches the tanker with an angle of 45° convergent with the tanker and covering a little distance, it boards the “Enrica Lexie” parallel to the tanker after 12 minutes. Distance: 3.96 NM; speed: 20kts.
- **Scenario C**: the fishing boat approaches the tanker frontally and changes course for the boarding parallel to the tanker after 12 minutes. Distance: 4.4 NM; speed: 20kts.

Of course, there are numerous variables in each scenario, but we can say that when the speed of the fishing boat decreases, the time required to approach the tanker increases.

When the speed of the fishing boat is equal to the speed of the tanker the time becomes infinite (it means that in this case the boat can not board the tanker).

We can exclude that the fishing boat was navigating at a speed of 14 kts like the tanker, for in that case the crew could not see it approaching 100 metres away from the tanker and see it later turnig back and disappearing astern.

It is plausible that the boarding action the Italian marines report took place at a speed of 20 kts or more. In other words, the aggressor was sailing at a speed of 20kts or faster. The fact that the time could not correspond to 12 minutes and that it could be longer or shorter could be verified by analysing the data tracked by the on-board radar of the “Enrica Lexie”. But for our concern here this is not relevant.

### ANALYSIS OF THE ARRIVAL TIME OF THE FISHING BOAT ST. ANTHONY AT NEENDAKARA

We have one reliable element. This is the arrival time of the fishing boat indicated by the Indian Coast Guard to the press and confirmed in the Youtube videos.

- at 22.25h local time: arrival at Neendakara

We also have the time of the attack indicated by the master of the “St. Anthony”, Mr. Freddy Bosco.
• at 16.15h local time the fishing boat was attacked

Hence:

• Departure time: 16:15h local time
• Arrival time: 22:25h local time

Navigation time from the stretch where the fishing boat was attacked to Neendakara: 6h 10min.

We also have two distance from Neenkandara indicated by the master of the “St. Anthony”:

• in the interview to Deccan Cronichle March 3, 2012. Distance 58 NM (off Cherthala)
• in the interview to Fiamma Tinelli of "OGGI" weekly magazine, March 23, 2012. Distance 21,3 NM (20,5 NM off Kollam)
The “St. Anthony” turned back to Neendakara from the point indicated by
the master of the “St. Anthony” in the interview to Deccan Cronichle
March 3, 2012 (Position "A")

- Distance 58 NM – time 6h 10’ - speed 9.4 kts

The “St. Anthony” turned back to Neendakara from the point indicated by
the master of the “St. Anthony” in the interview to Fiamma Tinelli of
"Oggi" magazine, March 23, 2012 (Position "B"):

- Distance 21,3 NM - time 6h 10’ – speed 3,45 kts

Is it likely that the St. Anthony, after having been hit and with two men
shot dead on board, turned back to Neendakara at a snail’s pace, which
took it 6h10 min?

No, it is not.

The navigation time matches more or less the position indicated in the
interview of 3rd March (24 NM north of the Enrica Lexie), but it does not
match the position indicated in the interview of the 21st March (27 NM
south of the Enrica Lexie)

In both cases we can exclude the fact that the fishermen were hit by the
Italian marines

Summing up:

The positions of the St Anthony indicated by the Indian Coast Guard and
by the master of the fishing boat are completely unreliable (in my opinion,
they made the whole thing up). The only reliable element is the arrival
time of the “St. Anthony”, because it has been shown in the youtube
videos.

(last updated on 6 April 2012)

**SPEED OF THE FISHING BOAT ST ANTHONY ACCORDING TO THE
INDIAN COAST GUARD**

A new element about the speed of the fishing boat St. Anthony has been
added to the updated version of the english wikipedia site:

http://en.wikipedia.org/wiki/2012_Italian_shooting_in_the_Arabian_sea#I
ndian_Coast_Guard_intervention
Hence, we consider to be necessary to reconsider the data about the motions of the St. Anthony against the background of this new element by citing the text passage below:

Speaking for the Coast Guard, Vice-Admiral K.N. Sushil, Flag Officer Commanding-in-Chief of the Southern Naval Command and Commander-in-Chief (Coastal Defence) of the Southern Zone.... He hadded that: - What are you talking about the fishing vessel giving you a chase when the maximum speed it can attain is just about eight knots?

Hence, we will analyze again the possibility that the fishing boat St Anthony was the boat that approached the Enrica Lexie with whatever intention.

In the previous analysis of time and space we have indicated that in order to board the Enrica Lexie the fishing boat had to sail at a speed of 20kts (6kts faster than the Enrica Lexie in order to be able to board it in 12 minutes).

Longer boarding times correspond to slower speed, till the boarding becomes impossible.
The fishing boat St Anthony is picked up by the on-board radar of the Enrica Lexie at a distance of 2.8nm. We do not know the positions of the two vessels (if the St Anthony was approaching the tanker from one of the sides, at stern or at prow) and hence in this image we take into consideration the two possible positions allowing the St Anthony to board the tanker:

- Position from one of the sides, convergent with the target (this is the shorter course)
- Position at the front of the ship, convergent with the Enrica Lexie

If the St Anthony is at 2.8nm from the Enrica Lexie away, which is navigating at a speed of 14 nm, it covers 2.8nm in 12 mintues. This leads us to the the following:

Position of the St Anthony and of the Enrica Lexie at T0 (time zero) and position of the St Anthony and of the Enrica Lexie at T0 + 12 (time zero plus 12 minutes).

- **In the Scenario D** if the St Anthony sails at a speed of 8kts, in 12 minutes it covers 1.60nm and at T0 + 12 it is at 2.36nm from the Enrica Lexie away
- **In the Scenario E** if the St Anthony has a speed of 8kts, in 12 minutes it covers 1.60nm and at T0 + 12 is at 2.02nm from the Enrica Lexie away

In both cases sailing at T0 + 12 the fishing boat is astern and sailing away and can not be considered to be an aggressor by the crew of the Enrica Lexie.
This section aims at showing that on 15th February 2012 the Indian authorities were well aware of two alleged pirate attacks:

- against the Italian oil tanker Enrica Lexie, which was invited to come back to port escorted by the most powerful warships of the Indian Coast Guard
- against the Greek oil tanker Olympic Flair, which was not contacted by radio and could hence leave the Indian waters undisturbed

This decision of the Indian authorities seems to show a certain negligence - voluntary or not - in conducting the investigation having as a consequence the invalidity of the whole structure of the Indian judicial proceeding in the prosecution of the Italian marines.

As a matter of fact, it is obvious that in the case of different alleged guilty parties of a criminal offence (the death of two fishermen) the authorities have to look into all alleged culprits. It is unacceptable that only one of the alleged guilty parties is invited to come back escorted by warships, and the other one pretends to have nothing to do with the event.
This report of the IMO (International Maritime Organization) confirms that in addition to all authorities also the Indian Coast Guard was informed, at about 16:50 UTC (at 22:20 local time), that the Greek oil tanker Olympic Flair had been attacked by alleged pirates.

At 22:20 local time the two Indian warships Shamar and Lakshimi Bahi and a Dornier 228 of the Indian Coast Guard, a utility aircraft for the maritime surveillance, were escorting the Enrica Lexie to the port.

All of them were at about 10NM off the port of Kochi and were very close (about 3 NM) to the area the Olympic Flair indicated as the point where it was attacked by pirates.

The Indian authorities had to alert their warships and aircraft in the area and following the on-board radar signals they had to draw their attention to the Olympic Flair, for they were already in the area of the attack, where the Olympic Flair declared to be anchored.

They had to do exactly the same they did a few hours before in the case of the Enrica Lexie.

But they did not.
Whatever the reason for this decision may be (negligence or malice), the structure of the judicial proceeding in the prosecution of the two Italian marines does not take into account one of the possible alleged guilty parties. It is hence partial.

Given this premise, the whole judicial proceeding would be considered to be invalid by any court.

THE CASE OF THE OLYMPIC FLAIR

During the days after the event, Italian sources reported that the Olympic Flair had been attacked by alleged pirates in the same area as well.

The consequence was the beginning of debates and criticism against the Italian sources, which were accused of inventing the episode of the Olympic Flair with the purpose of clearing the marines of all charges. This criticism was reported also by Italian media, which did not inform the public opinion and began to cling to the Indian partial version of the events considering the Italian marines to be guilty.

(ANSAl- ROMA, 21 FEB - l'International Maritime Bureau (IMB) della Camera di commercio internazionale (icc) conferma, in una comunicazione alla Marina militare italiana, che il 15 febbraio - lo stesso giorno del presunto tentativo di abbordaggio alla petroliera italiana Enrica Lexie - è stato attaccato dai pirati un cargo che si trovava a circa 2 miglia e mezzo dalla costa indiana e che il mercantile in questione è l'Olympic Flair, battente bandiera greca. L'organismo internazionale, che si occupa del fenomeno della pirateria, conferma dunque il suo rapporto, che era stato reso noto e pubblicato due giorni fa: in esso si parla di un attacco da parte di pirati avvenuto alle ore 16.50 locali, a circa due miglia e mezzo dal porto di Kochi (dove si trova attualmente la Enrica Lexie).

Nel report dell'icc, in particolare, si fa riferimento a circa 20 persone che, a bordo di due imbarcazioni, avrebbero tentato l'abbordaggio di un tanker, rinunciando dopo che il personale della sicurezza della petroliera aveva fatto scattare le procedure d'allarme.

Nella segnalazione dell'icc non compare il nome della nave coinvolta, che ieri però è stata identificata - sulla base di informazioni raccolte dallo stesso organismo e girate alle autorità italiane - nel cargo greco Olympic Flair.

Stamane un portavoce della Marina mercantile ellenica ha fatto sapere che nessuna nave mercantile battente bandiera greca è stata attaccata da pirati al largo delle coste meridionali dell'india negli ultimi giorni, ma l'icc - in una comunicazione alla Marina militare italiana - ha confermato poco fa che la nave coinvolta nel tentativo di attacco di cui si parla nel rapporto è proprio la "Olympic Flair, battente bandiera greca". Della nave viene dato anche il numero IMO, International Maritime Organization (8913966), cioè il codice che identifica univocamente ogni tipo di natante superiore alle 100 tonnellate. (ANSAl)
On 21st February the international authorities confirmed the pirates attack against the Greek oil tanker, while a spokesperson of the Greek Mercantile Marine denied it.

Between 15th and 21st February the Indian authorities did nothing against the media campaign against the Italian marines. Even if they were informed about the pirate attack against the Olympic Flair, they did not confirm the information given by the Italian sources. In this way, the disdain for the Italians increased in the Indian society.

* Crisi marò/ Armatore nave greca conferma: subito attacco pirati

Guardia costiera e autorità indiane sono state informate

Roma, 21 feb. (TMNews) - L'armatore Olympic Shipping & Management S.A. - proprietario del mercantile greco Olympic Flair - ha confermato ufficialmente alla Marina militare italiana che la nave battente bandiera ellenica ha subito un attacco di pirateria il 15 febbraio scorso, non lontano dalla costa indiana, nello stesso giorno in cui sono stati uccisi due pescatori indiani. Lo riferiscono a Tmnews fonti qualificate. L'informazione è stata confermata anche dall'Icc Commercial Crime Services, sezione anti-crimine dell'International Chamber of Commerce.

"La Guardia costiera indiana, l'autorità portuale di Kochi e l'autorità coordinatrice del Search and Rescue la MRCC (Maritime Rescue Coordination Centre) di Mumbai erano stati allertati e informati, ma quando è stato chiesto loro se avessero ricevuto informazioni di attacchi di pirati avvenuti nella loro area (in India) hanno assolutamente negato e detto che mai in India si erano verificati attacchi di pirateria", è stato riferito.

On the same day on which the Greek Mercantile Marine stated insincerely that there has been no pirate attack against the Olympic Flair and the Indian authorities concealed what they knew about the attack, the ship owner of the Olympic Flair told the Italian Navy that the attack did occur.

The Indian release according to which "in Indian waters pirate attacks have never occurred" seems to be odd, as the ICC-IMB (International Chamber of Commerce - International Maritime Bureau) in its report...
"Piracy and armed robbery against ship" about the period from 1st January to 30th September 2011 indicated 6 attacks, 4 of which occurred in the harbor of Kochi.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Ship</th>
<th>Country</th>
<th>Crew Presence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.02.2011</td>
<td>2000 – 2359 LT</td>
<td>Serpentine</td>
<td>Bulk Carrier</td>
<td>Norway</td>
<td>Unnoticed by ship’s crew robbers boarded the ship at anchor and stole ship’s stores. The incident was noticed when cadet was unsuccessful in opening the padlock to the paint store. On examination it was noticed that the padlock had been replaced by a similar looking lock.</td>
</tr>
<tr>
<td>14.03.2011</td>
<td>0830 LT</td>
<td>Splendour</td>
<td>Bulk Carrier</td>
<td>Panama</td>
<td>Robbers boarded the ship at anchor using grappling hooks. They broke open the paint store and forward life raft and stole ship's stores and escaped. Port authority informed security message broadcasted to all vessels in the vicinity.</td>
</tr>
<tr>
<td>26.03.2011</td>
<td>0345 LT</td>
<td>Star Express</td>
<td>Product Tanker</td>
<td>Panama</td>
<td>Five robbers boarded an anchored tanker through anchor chain. Duty crew saw the robbers at forecastle deck and raised the alarm. The robbers escaped with ship’s stores by jumping into the water. Incident reported to port control.</td>
</tr>
<tr>
<td>23.04.2011</td>
<td>0300 LT</td>
<td>Tridonawati</td>
<td>Tanker</td>
<td>Liberia</td>
<td>2/O onboard an anchored tanker observed some movements on the forecastle deck and asked the duty A/B to check. The duty A/B noticed three robbers and reported to 2/O who raised the alarm. Upon seeing the alert crew, the robbers escaped in their boat with the stolen stores.</td>
</tr>
<tr>
<td>26.05.2011</td>
<td>0145 LT</td>
<td>Stadt Aachen</td>
<td>Container</td>
<td>Germany</td>
<td>About ten robbers boarded the ship at anchor. Master spotted the robbers and directed the search light towards them. The robbers jumped over board and escaped with stolen ship’s stores.</td>
</tr>
<tr>
<td>20.09.2011</td>
<td>2345 LT</td>
<td>Ocean Crescent</td>
<td>General Cargo</td>
<td>USA</td>
<td>Robbers boarded an anchored ship unnoticed, stole ship’s stores and escaped.</td>
</tr>
</tbody>
</table>

The attack against the Olympic Flair is mentioned in the report with the title "Piracy and armed robbery against ship" released on 16th June 2012 (see attached file 2 on page 4).
OLYMPIC FLAIR, THE MISSING VESSEL

It is evident that the report of the Olympic Flair about date, time and position of the pirate attack can not be true.

At the same time the Enrica Lexie and the warships of the Indian Coast Guard were sailing in the same area. If the Olympic Flair had sent an alarm, they would have intervened.

TIMELINE OF THE POSITION OF THE ENRICA LEXIE AFTER THE ATTACK

It is also evident that the attack occurred during day-time. According to the report the look-out caught sight of two vessels with 20 armed men on board and that the pirates gave up when they saw the crew crying havoc.

How could they (pirates and crew) have seen each other if it was 22:20 local time and hence late at night?

It is also strange that the alleged pirates attacked the Greek vessel in spite of the presence of the Enrica Lexie, of two Indian warships and of an aircraft for maritime surveillance in the area.
Even a layman would find the story under these circumstances not credible.

Everything has to be verified. An inquiry would be necessary. But the Indian authorities were not interested in conducting it.

Actually, the Olympic Flair has a one-week time gap.

The Greek vessel disappeared from the AIS attendance monitoring system on 13th February 2012 at 00:29 UTM local time while it was sailing to Kochi where it was awaited on 15th February at 08:00 UTM.

It appeared again in the same area on 20th February at 05:36 UTM sailing to Arzew (Orano, Marocco, where it had to arrive on 1st December, 10 months later!).
A few hours later at 19:14 UTM it changed course and sailed to Khahg Island, where it arrived on 23rd February at 23:59 local time.

This is a time gap of 7 days during which we do not know where the Olympic Flair exactly was and what it did. We just know that it was attacked by pirates, which was confirmed by the international authorities and by the ship owner.

It is evident that the day, the time and the place of such an attack are false and hence the attack occurred elsewhere and at a different time on a different day.

**CONCLUSIONS:**

Apart from any other possible remarks, the Indian authorities should take on the responsibility to verify the events in which the Olympic Flair was involved as well as to verify if some persons belonging to the crew of the Olympic Flair are guilty of the murder of the two Indian fishermen.

The negligence of the Indian authorities is certain, as it shows both the report of the ICC and IMO and the report of the ship owner of the Olympic Flair.

The premise of the Indian judicial proceeding in the prosecution against the two Italian marines is questionable, for it is compromised by the negligence (intentional or not) and by a lack of investigation.

*(update on 26 may 2012)*

Amazingly, a few hours after the attempted boarding against the "Enrica Lexie" (16:00h - 16:30h local time) also the Greek oil tanker "Olympic Flair", which was 2.5 miles south of the oil terminal, 10 NM off the harbor of Kochi, fled an initial boarding attempt (22:20h local time).

Actually, the "Olympic Flair" after the boarding attempt raised the anchor and disappeared without reporting the attack to the Indian authorities (even if it was near the Indian territorial waters) and the event is reported by Italian sources:

- Italian sources report that a Greek oil tanker was anchored in the area and that it was attacked by alleged pirates.
- On 21st February the Greek merchant marine reports that no Greek ship was attacked by pirates in the South of India recently.
- The ICC (Commercial Crime Service) contradicts the Greek merchant marine: the oil tanker "Olympic Flair" denounced an attack the day after the 15th February at 16.50 UTC (and hence at 22:20h local time), in the position of **09:57N-076:02E** (about 10 miles off the coast of Kochi).
The ICC (the Commercial Crime Service of International Chamber of Commerce in London) published the map illustrating the context of the event.

(ICC-CSS REPORT)

(ndr.: A **Single-point mooring** (SPM) is a loading buoy anchored offshore, that serves as a mooring point and interconnect for tankers loading or offloading gas or liquid product. The Single Point Mooring of Kochi Port [1] [2] is located in position Latitude 09° 59' 49.93" N; Longitude 076° 02' 30.73".)
Before we proceed, it is important to remember that:

At this point it should be remarked that:
- the "Olympic Flair" has never contacted by radio the Indian Coast Guard even if the event occurred near Indian territorial waters;
- the Greek merchant marine denies the incident, but the ICC contradicts it;
- according to the report of the ICC, the attack against the "Olympic Flair" happened late at night and the pirates were on two distinct vessels.

**EVIDENCES**

The "Enrica Lexie" escorted by the unities Samar and Lakshimi Bhai of the Indian Coast Guard sails to the port of Kochi at a speed of 14kts. It arrived there at 23:00 local time.

![Image of the "Enrica Lexie" escorted by ICG "Samar"](image)

It seems that the pirate attack against the "Olympic Flair" happened while the oil tanker "Enrica Lexie" and the warships Samar and Lakshimi Bhai of the Indian Coast Guard were nearby. Not only they were not far away from the "Olympic Flair", but all of them had an on-board radar. And none of them noticed the attack.

"Incredible!"

In the sense that it is not credible, it is not plausible.

![Diagram](image)

The position of the "Olympic Flair" and "Enrica Lexie" at the time of the boarding attempt.

Summing up: the whole story and the role of the "Olympic Flair" has to be verified.
We do not want to easily find an alternative culprit, but it is necessary to verify, using the radar and the satellite data, the identity of the vessel, more precisely of the black and red oil tanker, which was at 16:15h local time 20.5nm off the coast of Kollam and within sight of the fishing boat "St. Anthony".

**FEEDBACK**

The boarding attempt against the Greek oil tanker Olympic Flair is considered to be controversial.

Italian sources reported the event, the Greek merchant marine denied it, but then the ICC confirmed the boarding attempt and published the report that we have seen above, and which was forwarded to the ICC by the Olympic Flair.

In spite of the fact that there are no doubts - the boarding attempt against the Olympic Flair did happen - the Italian side was accused to have invented the attack to clear itself. And such an insinuation came also from Italian side, from people who are not careful enough and who rallied around the Indian side.

**Gian Micalessin**, a journalist of the newspaper "IL GIORNALE" had the adroitness to call the fitout company of the "Olympic Flair" and in a phone call he led the person in charge of the company to confirm that the attack really happened.

And he recorded the conversation. You can listen to the call:

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ITALIAN JOURNALIST G.MICALESSIN CALLS THE FITOUT COMPANY OF THE OLYMPIC FLAIR IN ATENE

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After having formally requested the report to the ICC, I also received it. It contains the confirmation that on 15th February 2012 at 15:50 UTC 10 NM off Kochi (Cochin) aggressors attacked a vessel anchored there.

Evidently the event has not been invented and it is clear that it could not be the "Enrica Lexie".

I could download the report of the ICC after formal request and after having received a password. I am not allowed to publish it here, but if Italian judiciary asks for it I will be happy to provide it.
LA PETROLIERA GRECA OLYMPIC FLAIR
(TIMELINE)
It was further contended that the Coast Guard was alerted about the incident by the third respondent at 17.40 hours on 15.2.2012. Accordingly, the Coast Guard passed urgent messages to three Coast Guard Ships - ICGS Samar, CGAE Kochi and ICGS Lakshmi, which identified MT ENRICA LEXIE as the suspected ship.

At about 1825 h on 15 Feb 12, MRCC (Mumbai) analysed space based AIS (AIS (AIS-SB) plot and identified four probable merchant ships which could have transited from the incident position.

The updated position of the suspected vessel was immediately passed to ships at sea and CG Dornier. The vessel was in position 243 Kochi 37 n miles, about 44 n miles from the incident position and directed to alter course and proceed to Kochi anchorage for further investigation.

It was further stated that after the incident, the vessel traversed almost 3 hours and made good a distance of 25 n miles towards the incident position. and only after interception by the Indian Coast Guard the vessel sent an e-mail to her owner at about 19.17 hours on 15.2.2012 reporting the incident.

On receipt of information, ICGS Samar on patrol off Vizhinjam coast was diverted and ICGS Lakshmi was sailed from Kochi at 1735 h on 15 Feb 12 (with 04 police personnel embarked) to the most probable area for search and interdiction of the suspected merchant vessel.

At 1950 h on 15 Feb 12, CG Dornier located MT Enrica Lexie and vectored ICG ships for interception. CG Dornier also directed the vessel to proceed to Kochi anchorage for investigation.

ICGS Lakshmi intercepted MT Enrica Lexie at about 2045 h on 15 Feb 12 and escorted the vessel till Kochi anchorage.

Meanwhile, the III fated fishing vessel St Antony entered Neendakara harbour, Quillon at about 2315 h on 15 Feb 12 and it was confirmed by the police that the boat had a total crew of eleven fishermen and two were killed during the firing incident.

It was alleged that while fishing at 33 Nautical Miles (NM) away from the police station, without any
REFERENCES

(1) WWW.COCHINPORT.COM

(2) FROM IL GIORNALE (21.02.2012)

(3) SAFE WATERS - NR.4 2012 (AN INDIAN COAST GUARD PUBLICATION)

(4) ICC-IMB REPORT # 054-12

(5) W.P. (C) NO. 4542 OF 2012 - MASSIMILANO LATORRE VS. UNION OF INDIA, (2012) 252 KLR 794
In order to shed light on the above mentioned evidences, it would be enough to have access to the radar data of the Harbor Master Office of Kochi (Cochin), and to compare them with the radar data of the tanker, of the warships and with the satellite images.

One could verify the positions and the courses of all actors of this complicated issue without any denials.

One could also verify the attacks against the "Enrica Lexie" and the "Olympic Flair" and examine the courses and motions of all actors after the attacks.

Years ago, during the survey about the case of Ancona, when the passengers on the flight Cairo (Egypt) – Bologna (Italy) sighted an alleged missile aiming at the flight over the Adriatic Sea I requested for the records all data registered by civilian and military radars (till Ciampino Airport) and also the ones registered by the Harbor Master Office of Vieste and Ancona.

The event occurred four days after the terrorist attack in Sharm el Shiek, in which some Italian citizens lost their life. The civilian aircraft was taking Italian tourists back home from Cairo to Bologna.

I had to verify if there were on the sea in a position coinciding with the airway any suspect vessels from which a surface-to-air missile could have been launched. It is true that such missiles can not reach the altitude of civilian aircrafts, but sometime they can. Some time before there had been an attack against an Italian military aircraft G222, which was hit and all members of the crew lost their lives.
On the basis of the radar images of the Harbor Master Office the positions and the motions of all vessels which were off the coast from Vieste to Ancona in a position corresponding to the airway of the aircraft were analyzed.

In the issue of Ustica the analysis of the radar images made possible the reconstruction of the position, the speed and the direction of the involved aircrafts. This procedure is nothing exceptional, rather it is in line with established best practice in reliable inquiries.

In other words, we are not at the time of the police commissioner Maigret. Italy has the flower of technical advisors who are able to contribute to carrying out the necessary survey in the jailed Italian marines issue. Without mistaking a 7,62 bore for the bore of Sandokan's arquebus.


"Enrica Lexie: Technical Analysis" - Luigi Di Stefano - (credits) - www.seeninside.net/piracy
The unilateral decision of the Indian judiciary not to admit the two officers of the Carabinieri, the ballistic experts sent by the Italian government, gave a bad impression. (They were admitted just as "observers", hence they were excluded from decision-making. They were just spectators of the decisions of another, without having the possibility of asking for tests and analyses or of signing any documents).
The ballistic expertise is essential to understand whether the rifles of the two Italian marines fired the shots that hit the "St. Anthony" and the two men on board or not.

In the case of the Italian marines the results should leave no doubt considering the specificity of the firearms used by them. Nevertheless, we will see that the first results of the Indian ballistic expertise are completely unreliable from a technical point of view. Still, in the preliminary investigation they would have already cleared our two marines of the murder they are accused of.

I have some experience in the field of ballistics for two reasons. For years (1984/90) I produced periscopes for tanks and ballistic visors for armoured cars for the Italian Army and I also took part in some judicial inquiries in which this field was present. I will try to analyze the quite spare elements we have thanks to the useful work of the journalists.

In our case we are talking about "terminal ballistics". This is the science that studies the phenomena related to the impacts of the bullets on the targets, which can be of two sorts:

- Hard impact on hard targets such as metal, armour, walls, etc.
- Soft impact on soft targets such as human bodies and animals

With reference to these two sorts of impact and to the bore of the bullets found in the bodies of the victims, the Indian authorities made official statements reported both by officers and by the press.

The field is endless, but in general we can say that a bullet found in a human body allows the ballistic expert to find the bore, the cartridge and the type of firearm used to shoot.

In our case, the Italian marines were equipped with "Beretta SC 70/90" assault rifles and FN Minimi light machine gun, having a 5.56 x 45 NATO bore.
It follows that the bullets shot from this kind of rifle should be found in the bodies of the victims and on the "St. Anthony", or at least the signatures of them.

Generally speaking, we can say that from the Napoleonic wars on the bore of military rifles has shrunk both thanks to technological development and to the development of military strategies. While at the beginning of the 19th century one could find bullets with a bore of 12 or 13mm, nowadays we have bores of 5,56mm with a wide range of different sizes in between.

The bore is the diameter of the bullet and can be indicated in mm (millimeters) according to the European continental practice or in inches according to the English practice. "Bore 22" means that it has a diameter of a hundredth of an inch, where one inch is 25,4mm.

As the sub-machine guns of our marines shoot a cartridge having a 5,56x45 NATO bore, we can analyze it in details:
As we can see in the picture above, the diameter of the bullet (the cartridge includes it) is a bit bigger (5.70 mm) than the actual bore (5.56 mm).

This is normal, for the friction against the rifling of the barrel determines the rotation of the bullet and during the shooting it avoids motions such as nutation, precession, etc. The video below illustrates this.

Those who are interested in the mechanism of the impact can open this link and have a look at how the bullet impacts slides of aluminium and steel. As you can see, the effects of the impact are very different according to the material of the target.

Aluminium is perforated with a local fusion and a crater on the side of the bullet entrance, while the impact on steel determines the destruction and the partial fusion of the bullet. In this case it depends on the fact that this bullet is subsonic (slower than the speed of the sound when it penetrates aluminium and steel), hence the pressure waves are faster than the bullet. They convey energy which changes into warmth.

When the bullet perforates the target, aluminium fuses at 500°C, while steel fuses at 1,700°C. In the latter case, it is the bullet that fuses first (it is subjected to the same pressure waves).
The case in which the bullet is supersonic is completely different. In this case, penetration takes place by ablation (the bullet hits the target and shoots it away while the target destroys itself).

In our case, as the speed of the sound in the water is 1.480 mt/sec, the bullet is subsonic against the target "human body". Therefore, when the pressure waves are generated, they change into warmth and lead to an increase in temperature.

This warmth is the cause of typical signs: the hole, phenomena of vaporization of water contained in the tissue, hypertension in the tissue near the entrance hole, etc. (of course, we will find all this in the report of the expert in charge of the Indian judiciary, who carried out the postmortem examination.)

All this to say that a ballistic expertise can not be reduced to the analysis of a bullet. It is a more complicated study which has to be carried out by experts and should take the postmortem examination into consideration.

**The Cartridges: 5.56x45 and 7.62x39**

According to the press, it seems that the fact that the bullet found in the body of the victims has a 5.56mm bore is considered to be "the proof "that the Italian marines are guilty.

It is nothing of the sort.

As a matter of fact, while a bullet different from a 5.56mm bore would completely clear them of the accuse of murder, we have to consider the fact that the 5.56x45 cartridge is one of the most widespread cartridges in the world, which can be shot from one of the most widespread firearms in the world with russian AK47. This is the American rifle M16 (in the image below it is the first one from the top):
The use and diffusion of these two firearms are indicated in these images from: [Comparison_of_the_AK-47_and_M16](#).

As one can easily verify, both of them are used in India and in the neighbouring Sri Lanka. Conflict is brewing between India and Sri Lanka because of the fishermen issue. Indian fishermen enter the waters of Sri Lanka crossing the sea boundary into Sri Lanka looking for a good catch. Indian fishermen are oft attacked by the Sri Lanka Navy (the last attack occurred on 13th March. 16 people were hit). According to the Indian press, in such attacks 530 Indian fishermen, who were used to go on fishing expeditions in the Palk Strait, lost their lives over time. The fishing boat "St. Anthony" put to sea on 7th February to go to fish tunes and was coming back on 15th February after a one week fishing expedition.
The picture above shows the diffusion in the world of the ex soviet rifle AK47 which shoots the cartridge 7,62x39 (produced under licence in different countries).
The picture above shows the diffusion in the world of the rifle M16 which shoots the cartridge 5,56x45 (produced under licence in different countries).

Hence, in spite of the fact that a 5,56mm bore was found in the bodies of the victims, only a scientific analysis of the bullet could lead to identify the manufacturer, the batch, the firearm used, and finally, verify if the same bullet was used by the Italian Navy.

This scientific analysis of the bullet is a basic rule in an inquiry and it takes all factors into account (physical, chemical, geometrical, signatures etc.) that allow to identify the needed elements.

And as the "St Anthony" went on a fishing expedition in an area where there are numerous attacks by the Sri Lanka Navy against the Indian fishermen and this uses a 5,56mm bore (which is also used in India), it is obvious that it is not enough to measure the diameter of the bullet using the bore in order to get the proof of the culpability of Italy.

This would be the case if one wants to carry out a real inquiry and survey.

In the picture below we can see the area where the facts occurred and the Palk Strait.
At the bottom, highlighted by the red pointer, we can see the town of Pookur, which is the hometown of the fishing boat "St. Anthony" and of its master and crew. The stretch of the attack is 80 NM more northerly, off the coast of Kollam. 27 NM more northerly we can see the position of the Enrica Lexie and 50 NM northerly the stretch where the boarding attempt against the Olympic Flair took place (pale blue pointer).

**THE FIRST INDIAN NEWS: THE 5.56 NATO BORE**

**THE RIFLE COULD BE BERRETTA AR-70/90**

LAST UPDATED: 21 Feb 2012 11:56:12 AM IST

(IBNLive) KOCHI: The police, who are yet to seize the weapons used by Latorre Massimilano and Salvatore Girone to kill the two fishermen, suspect that rifle they used could be Berretta AR-70/90. The postmortem report has confirmed that the rifle, used for firing around 20 rounds at the trawlers, had a caliber with a 5.56 mm NATO bore. Trails of 15 bullets were also found on the boat, the police said. (...)

[CLICK FOR ENLARGE]
According to Indian online newspaper and television, which cites police sources, during the autopsy bullets with a 5.56mm bore, like the ones used by the Italian Navy, were found in the bodies of the victims.

Moreover, 20 shots are supposed to have been fired. 15 of them were found on the fishing boat "St. Anthony".

This information has never been confirmed. The sources of the police (the names of the officers who gave it) have never been indicated, the bullets have not been shown, the pictures of the fishing boat show only 5 holes.

The first indication of the Indians: the .54 bore

In the following a passage from the Italian newspaper "Il Corriere della Sera" published on 24/2/2012, p. 17, World:

Yesterday the "Corriere della Sera" published the statement of the assistant of the police commissioner Shajadan Firoz (verified many times) at the court of Kollam. It is worth citing the most important passage: "In the bodies of the fishermen we found two bullets having a 0.54 inch bore (.54 is the technical term) compatible with different firearms."

http://www.corriere.it/esteri/12_febbraio_24/india-maro-arrestati_4036beee-5ebd-11e1-9f4b-893d7a56e4a4.shtml

http://www.difesa.it/Sala_Stampa/rassegna_stampa_online/Pagine/PdfNavigator.aspx?d=25-02-2012&pdfIndex=9

The information was confirmed by La Repubblica
http://www.difesa.it/Sala_Stampa/rassegna_stampa_online/Pagine/PdfNavigator.aspx?d=25-02-2012&pdfIndex=10

Let's see what a ballistic expert can do with this information. The .54 bore corresponds to a 13.7mm bore and does not exist as a NATO bore. The .54 bore can be found at present in the replica of muzzle-loading rifles. (replica of firearms of the 19th century).
At this point we can exclude that the Italian marines were equipped with their grandfather's rifle and we can hence go on with our survey.

The .54 bore indicated by the assistant of the police commissioner Shajadan Firoz can be compared with the .55 bore (13.9mm) (the difference is a hundredth of an inch, two tenths of a millimeter) which does exist (in the picture below the one with the red point).

![Bullet Comparison](http://en.wikipedia.org/wiki/Rifle,_Anti-Tank,.55_in.,Boys)

Just one rifle in the world can shoot this cartridge and this is the Boys MK1 AT Rifle, which was used during World War II by the British Army. The production of this rifle stopped in 1940 and it was returned in 1943.

It is a big antitank rifle and the metal bullet with a heart made of hard metal (of tungsten carbide I think) is able to perforate a 20mm deep steel plate at a distance of 100mt.

This is hence a British firearm left over from World War II, which in obvious ways might have landed up on the black market of war surplus and in the hands of criminal organizations, which might have used it in pirate attacks (it can perforate the metal sheet of vessels if one opens fire from a working distance).

As its cartridge is armor-piercing and very powerful and it can be retained by a human body only if the shot is fired from a far distance, summing up we can say that it was fired at the limit of the shooting range (let's say 1km away, maybe more). As it is an antitank rifle developed with the purpose of hitting a tank at a distance of 100mt, the shooter who manages to hit a man at a distance of 1km could win the Olympic games of target shooting.

In this picture you can see the difference between the size of the cartridge of the Italian rifles (left) and the anti-tank rifle.

Those who feel like to deepen their knowledge about this firearm and its cartridge can have a look here:
http://www.rifleman.org.uk/Enfield_Boys_Anti-Tank_Rifle.htm

However, even supposing that this is the bullet that was fired, we can exclude again that it was fired by our marines. They are equipped neither with the arquebus of Garibaldi nor with the British big antitank rifle from World War II.

The second Indian indication is the "circumference 24"

In the following I will cite a passage from an article by Giuseppe Sarcina of the "Corriere della Sera" published on 4th March 2012. The article is about the postmortem report about one of the victims and about the found bullet.

Even the reading of the postmortem report about the autopsy of the body of Valentine carried out on 16th February can leave one puzzled. The document (consultation thanks to an Indian source) contains two interesting passages, which hardly match with one another. First: we can read that the bullets have followed a trajectory from the top to the bottom (and this could indicate that the shots came from the Enrica Lexie, fired from a far distance against the fishing boat with a shooting range of 9 metres). Second: according to the report, signed by K. Sasikala, professor of medicine and pathology at Trivandrum, the metal pointy bullet found in the skull of the fisherman is 3.1 cm long, 2 cm round on the head and 2.4 on the bottom. According to Italian ballistic experts, these sizes could indicate a bigger bore than the 5.56 NATO bore (the one used by our marines). But the experts point out that such a bullet would have had more devastating effects on Valentine's head than the ones found during the autopsy, unless the shot was fired at a distance of 1000 – 1500 metres (such a hypothesis has not been considered during the investigation). As we can see, in spite of the efforts one can make, without the ballistic expertise we can not get out of it.

http://archiviostorico.corriere.it/2012/marzo/04/Maro_doppia_verita_anche_dall_co_8_120304026.shtml

At first sight, it seems that Prof. Sasikala's report indicates a huge bullet having a 20mm bore. In the picture below, such a bullet is the bullet on the left, where it is compared with a 12.7mm bore (which is a bullet of an antiaircraft machine gun!).
In the pictures that follow we can better see the difference between the size of a 5.56mm bore and a 20mm bore.
On the left you can see the 5.56 NATO bore our marines are equipped with, on the right the very powerful 20mm bore, which is considered as artillery ammunition. For a cannon! It is inconceivable that such a bullet could have been retained in the skull of the poor victim. Can the survey of Prof. Sasikala be considered to be unreliable? We should keep a closer eye on it because maybe something has escaped our attention.

Evidences
Prof. Sasikala, who carried out the autopsy, is a pathologist. He is not a ballistic expert and he uses hence criteria that characterize his discipline. But as we are investigating, we should take into consideration all possible ideas for carrying out our survey. (Patience is the most important talent of a detective).

Let's re-read the above cited passage: "according to the report, signed by K. Sasikala, professor of medicine and pathology at Trivandrum, the metal pointy bullet found in the skull of the fisherman is 3,1 cm long, 2 cm round on the head and 2,4 on the bottom. He indicates the circumference not the diameter.

In other words, Prof. Sasikala describes a classical rifle bullet. Taking the circumference C (24mm) as the starting-point it is easy to calculate the radius R using the formula R=C/2 \( \pi \) and hence the diameter of our bullet will correspond to -7,64mm.

This measure can be easily identified with a nominal bore of +7,62mm, a classical bore that exists both in the NATO version and in the ex USSR version, a typical example is the AK47. Therefore, the bore of the bullet is only the result of the autopsy carried out by the pathologist Sasikala, the person in charge of the Indian judiciary, and of his personal measurements alone. And this completely clears.

And that completely exonerates our military.

Even the length of the bullet is completely different:
- 31mm is bullet length in the victim's body
- 24mm is bullet length of 5.56x45 NATO

Cartridge 7,62x54R
Now, let's have a look at one of the possible bullets involved in the whole story: the ex USSR 7.62 x54R cartridge.

Sasikala indicates that it is 3,1cm long, hence 31mm. The most common bullet is 32mm long, 1 millimeter longer than the size indicated by Sasikala.
The picture above shows some 7,62x54R cartridges. Each of them has a different bullet from left to right:

7.62mm x 54R Ball Type L (7,62 LGL) (Russia)
7.62mm x 54R Ball Type L (7,62 LGL) (Russia)
7.62mm x 54R Ball Type L (7,62 LGJ) (Russia)
7.62mm x 54R Ball Type D (7,62 DGL) (Russia)
7.62mm x 54R Ball Type D (7,62 DGJ) (Russia)
7.62mm x 54R Ball Type D (7,62 DGS) (Russia)
7.62mm x 54R Ball Type LPS (7,62 LPSGJ) (Russia)
7.62mm x 54R Ball Type LPS (7,62 LPSGJ) (Russia)

Some remarks about firearms with a 7,62x54R cartridge

It is well-known that this old cartridge (it was developed at the beginning of the 20th century) is used in many countries and in many firearms. But recently it has been used in the soviet precision rifle Dragunov sniper rifle, (and in its Chinese replica) (see below).

And also in the soviet machine gun PK (below)
This machine gun is placed on the small boat "Arrow Boat" of the Coast Guard of Sri Lanka (below).

This small boat (designed and assembled in Sri Lanka) is used to patrol territorial waters in the fight against illegal fishing. And it surely has one of the main roles in the attacks against the Indian fishermen who enter the territorial waters of Sri Lanka and go to fish tunes in the Palk Strait.
We can note that
- At prow it has a 23mm cannon
- Astern it has a machine gun. The model is unknown
- In the middle it has a PK 7,62X54R machine gun
In the picture above we can see in the foreground the machine gun PK, 7,62x54R.

http://www.dailynews.lk/2006/12/08/fea03.asp

In the image above you can see the attacks of the Coast Guard of Sri Lanka in 2006. Even if it is believed that they all correspond to clashes between the Coast Guard of Sri Lanka and the Tamil separatists (LTTE), it is clear that they all occurred on the boundary line between the territorial waters of Sri Lanka and India.

Cartridge 7,62x51 NATO
Now, let's have a look at another cartridge probably involved in this issue: the 7.62 x51 NATO cartridge. In this case the bullet is shorter than the one indicated by Sasikala (28mm vs. 31mm). But in this case too there are many different bullets that can constitute this cartridge.

The ballistic experts who have found the bullet will have to say to what kind of cartridge it corresponds. For our concern here it is enough to point out that the two Italian marines were equipped with 5.56mm bores only both for the 6 Beretta AR70/90 rifles and for the two FN machine guns.
Just one last remark to support the explained position can be made making a visual test of one of the two bodies of the victims, using a youtube video, in which during the recovery of the bodies (the corpse is covered by a blanket) just for a short moment we can see the bullet entrance hole.

As you can see, the hole is not the hole of a 5,56mm bore, but the one of a bigger bullet.

http://www.youtube.com/watch?v=HPdvQ0q5oXk

Updated on 11th April 2012
The third Indian indication: the compatibility of the rifling
Italian marines, according to the survey the firearms are compatible. "Those rifles have killed the fishermen"
The investigators: compatible bullets

...........
Speaking on the phone with ANSA, the head of the department of ballistics NG Nisha has confirmed the results of tests conducted on eight weapons (in addition to the six Beretta rifles, two machine guns manufactured Belgian FN Minimi) and stated that the report on tests of shooting, ballistics and fingerprints was presented to the judiciary. "After examining the bullets recovered from the corpses of the victims we have verified that they are compatible with the rifling of the barrels of two rifles," he said.
http://www3.lastampa.it/esteri/sezioni/articolo/lstp/449578/
As, like in the previous cases, the name of an Indian officer is cited (hence the information is official and was presented by the press as the proof of the culpability of the Italian marines) we have to analyze the statements of Dr. N. G. Nisha.

"After having analyzed the bullets found in the bodies of the victims we could establish that they are compatible with the rifling of the two rifles."

The rifling corresponds to the signatures the gun barrel leaves on the bullets when they are shot and go through it. (click here)

The statement of Dr. N. G. Nisha leads the reader with no experience in ballistics to believe that identifying the compatibility of the signature with the rifling means indentifying the bullet
found in the body of the victims with the bullet fired from one of the rifles the Italian marines were equipped with.

But this would be just a deduction of the reader, and a completely wrong one!

Unfortunately, on the basis of similar deductions made possible thanks to the misinformation spread by the Indian side, about 1 billion people believe that the Italian marines are guilty. After all, there is the proof!
Considering all this, after having analyzed the .54 bore, it is necessary to analyze also the compatibility of the rifling.

**Discussion**

As the helicoidal rifling of the barrel gives the bullet a rotating motion and has the function of stabilizing the speed of rotation of the bullet, it is each time different according to the features of the bullet and of the firearm from which it is shot.
The rifling of the barrel has a pitch, a signature that indicates how long the helicoid is, this is the distance along which the bullet going through the barrel makes one complete rotation (for example, if we say pitch 1:10, it means that the bullet makes a rotation of 360° along a length of 10 inches (254mm).
The following table (from the journal *Tiro Pratico*) allows to observe that a bullet (e. g. the 223 Remington, the civilian version of the 5.56x45 NATO bore our marines are equipped with) can be shot from a rifle barrel having different pitches and hence a different rifling.

<table>
<thead>
<tr>
<th>.223 Remington</th>
<th>Colt; Ruger Mini-14; Eagle Arms Eagle Eye; H&amp;K SL8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 in 7&quot;</td>
<td>Eagle Arms Golden Eagle, Armalite</td>
</tr>
<tr>
<td>1 in 8&quot;</td>
<td>Colt; Win. 70 HBV; Savage 110, 112, 116; Steyr Aug-SA; Eagle Arms standard models; Savago; Winchester 70</td>
</tr>
<tr>
<td>1 in 9&quot;</td>
<td>Ruger Mini-14 &amp; #1</td>
</tr>
<tr>
<td>1 in 10&quot;</td>
<td>Colt Bolt Action, AR-15; Remington 760, 700, 788; H&amp;R; Sako; Savage 340; Winchester 70; Thompson/Center Contender, Encore and Rifle; Ruger #1, 77; NEA Handi-Rifle, Howa; CZ</td>
</tr>
<tr>
<td>1 in 12&quot;</td>
<td>Remington 40-XB; Husqvarna; Savage 24-F+V, 340; Wichita; Weatherby Vanguard; Cooper</td>
</tr>
</tbody>
</table>

But in the same way in the following table we can verify that bullets with different bores (e. g. the .223 Remington, the civilian version of the 5.56x45 NATO bore or also the .308 Winchester civilian version of the 7.62x51 NATO bore) can be shot from barrel rifles having the same pitch and hence the same rifling.
For example, in the following image we can see that even if we find the same pitch of rifling both on the bullet on the left (5.56x45 NATO) and on the bullet on the right (7.62x51 NATO), the bore is completely different.
Therefore, we can say that a correct report should not just indicate some vague elements concerning the compatibility of the rifling. Rather, it should indicate the size of the bullet, the bore, the length (and if one wants to be professional, the weight in grain, the cartridge, etc.).

Also in the following image we can verify that the same bore corresponds to bullets having different length and weight!
In his postmortem report Prof. Sasikala indicates a 24mm circumference with a 31mm length.
As a bullet that hits a target can become only shorter and not longer, the only bullet which could be compatible with what is reported in the postmortem report is the 7.62 X54R cartridge of a PK machine gun. This brings us back to the circumference and length.

Keeping on misinforming, about 1 billion persons are led to believe in the culpability of the Italian marines, misled by statements which begin to be too many to be casual.

**Beretta SC 70/90 or Beretta ARX 160?**

In the announcement of the Indian authorities, in which they say that they have established the compatibility of the rifling of two rifles of the Italian marines among the ones seized, the type of rifle has been indicated. They have indicated the Beretta ARX 160. [http://www.ilsole24ore.com/art/notizie/2012-04-10/indiscrezioni-esami-balistici-mar-195424.shtml?uuid=Ab07H6LF](http://www.ilsole24ore.com/art/notizie/2012-04-10/indiscrezioni-esami-balistici-mar-195424.shtml?uuid=Ab07H6LF)

Actually, the Italian marines were equipped with the Beretta SC 70/90 rifle and in an announcement of the Italian Navy it has been explained that the marines in anti-piracy operations are not equipped with the Beretta rifle AX 160. Hence, such rifles were not on the Enrica Lexie. The Beretta rifle AX 160 is a novel firearm that the Italian Army is just evaluating, but the detachments are not equipped with it. Hence, it could not be seized on the Enrica Lexie by the Indian authorities.
Summing up: the bullet found in the bodies of the victims does not correspond to the bullet of the Beretta rifle Italian marines are equipped with, whereas according to the person in charge of the Indian authorities the opposite is the case.
It is necessary to raise a question

The Indian authorities conducted some shooting tests on the Beretta rifles seized from the Italian tanker. Evidently with the purpose of recovering the bullets to compare them with the one found in the body of one of the two victims.

We do not know if the Italian authorities can control such bullets (they belong to the Italian State). Judging from the compliant position chosen by the Italian authorities they can not.

It was not necessary to conduct shooting tests on the rifles of our marines. It was sufficient to read the bore marked on the rifle and to put a corresponding bullet in the barrel as counter-check. If they found the same bore in the body of the victims the shooting tests could be conducted.

Therefore, the Indian authorities have the proof of the culpability of the Italian marines on hand to flaunt, as they got hold of it. (In other words, they went on board and took what they needed to manufacture the proof).

Under such premises, as the expert of the defendant I could ask any judiciary to invalidate a proof obtained in such a way.
It is important to explain that the bullet is not the one found on 16th February corresponding to a ‘circumference 24’. Rather, it is miraculously one of our bullets. Any judiciary would invalidate such a proof, unless one can show the judiciary (and the public opinion) that the bullets in the shooting tests were controlled by the Italian authorities (they belong to the State. They can be sold only according to rules available under the law).

We are not going to make the hypothesis of conspiracy against Italy here, but by judging from what has emerged so far, it seems that we are faced with a huge error of the Indian Coast Guard made on 15th February. The version of the facts based on such an error has been maintained to cover up the error for one reason or another. It is not the aim of this work to find out the possible reasons. This is a technical analysis.

But, considering all elements, we hope that we will not be faced with other misjudgements.

As there are many other technical elements which could not be analyzed so far, it is possible that they could contain the proof that it was not an error.

In the case of an error, Italy can appeal to the UN and ask for an international board of inquiry, to which technical elements and the results of the surveys should be given.

Suffice it to say that the US put Libya under embargo for more than 10 years, after having given the UN the results of the inquiry about the terrorist attack against an aircraft at Lokerbie, in which the proof was just some fragments of a detonator, until Gaddafi’s regime handed over the attacker, took the blame of the attack and indemnified the victims.

Here we are just appealing to the good sense in order to have the possibility to refer to the analysis of the technical elements, which should be verified by both parties, like in any process.
CRATES WITH THE WEAPONS SEIZED FROM THE ENRICA LEXIE (26TH FEBRUARY 2012)
The main evidence of the event is the fishing boat “St. Anthony”.

On it there are the bullet holes, the bullets themselves, and above all it lends itself better than the bodies of the victims to reconstruct the scene of the crime by detecting the trajectories of the bullets (you can reconstruct them taking into account the bullet entrance holes), the shooting distance. The point in the space from which the shots were fired.

Probably I myself was the first one in the world in 1995 who used a 3D reconstruction in a complicated judicial survey which had important technical aspects: I am talking of the airdisaster of Ustica. And I got relevant results.

The fishing boat “St. Anthony” should be reconstructed in 3D (on a 1:1 scale). The bullet holes as well as the trajectories of the bullets should be identified, in order to get the point in the space from which the shots were fired.

Such a reconstruction could solve some legitimate doubts and allow to be confirmed or not out of the available eyewitness accounts. According to the report of Mr. Freddy Bosco, the master of the fishing boat, Mr Valentine, the victim, was standing in the steering cabin when he was shot in the temple, and as the images show, we can say that it was the right temple.

But as the same images show, the windows of the “St. Anthony” are not damaged. Hence, we have to exclude as possible trajectories of the bullets the following ones: from the bottom to the top; through the windows; through the board cover of the fishing boat and hence the points under the line of the trajectory leading to the temple of the victim have to be
excluded. Only few points from which the bullet which hit the victim could have gone through are left over.

By using a 3D reconstruction we will have another important element supporting the survey. I have no doubt that such a reconstruction will be used in the case of a real process.

**ANALYSIS OF THE IMAGES**

As I cannot analyse a 3D vectorial design, let’s simply analyse the pictures with the purpose of looking for some logical clues. Of course, I can formulate but a hypothesis. The real work could be done only if the fishing boat “St. Anthony” was on hand and using a good CAD programme.

(The pictures I will analyse in the following are from this video)

In the first image we can see two elements:

- a bore hole indicated by the fisherman
- the windows of the cabin of the St. Anthony which are not damaged.

As the fishing boat has been hit by the shots that killed two persons, and 9 persons escaped unjured (they were sleeping. Hence, they were laying down on the deck of the boat), we will first try to verify if the window has been hit. The blue points indicate the undamaged windows.
We can see that no window has been hit.

Now, let’s have a closer look at the bore holes. The first one is the one indicated by the fisherman.
At the bottom we can see a yellow tag which marks another bore hole.

Here is the bore hole marked by the yellow tag.
Now, we have to try to understand if it is an entrance or an exit hole.

Let’s have a look at these pictures which show a Yemeni vessel hit by mistake by the Indian Coast Guard short time before the case of the Enrica Lexie (fortunately there were no victims).

At the bottom on the right the bore entrance holes of the Yemeni fishing boat. At the bottom on the right a hole of a passing bullet. In blue the entrance hole (the cratering is small), in red the exit hole (the cratering is bigger with visible extroflexed lips)
Note – In this case the material is fiberglass. Hence, we can compare it with the wood of the St. Anthony, without expecting identical results.

In order to better illustrate what I mean, I will use an image from the war time. It shows an old helmet hit by a bullet. In this case the material is a plate of steel. The difference between the entrance hole on the left and the exit hole on the right is clear.
Here we see the exit hole on wooden table. We can see delaminations also far away from the point the bullet went through.
Here an entrance hole on wood. The hole is clean with some traces of chipping.

Summing up we can say that the two holes on the St. Anthony, where there was a victim, are bore entrance holes.
Here we can see the bore holes indicated by a journalist in some pictures of the fishing boat. Picture from “Corriere della Sera”.

Bore number 1 is the one we had a look at above, with the yellow tag.
We have then 2, 3, 4.

The 3 and the 4 are under the deck.

Here we see the same hole on the roofing of the boat indicated in the picture from “Corriere della Sera”. The buttonhole form indicates that the bullet went through the roofing following an oblique trajectory. The picture was taken from the bottom and shows an entrance hole (we could see the top of the roofing to be sure).

The mark at the top on the left does not seem to be the mark of a bullet. The wood is not splintered and it seems to be prior to the other one.
We can hypothesize a trajectory now.

The man is standing on the deck of the fishing boat. In order to hit the temple and the side of the boat the bullet should have followed the red line (geometrical rule: two points are crossed by one straight line)

The clue leads us to say that according to the trajectory the bullet was moving more or less parallel to the surface of the sea. Hence, it was shot from a vessel being as high as the St. Anthony.

Please note that with respect to the prow the bullet hole is after the fourth windows, on the right side of the steering cabin.
The one marked with the yellow tag is too low, it is at the same height as the leg of the fisherman. It could not hit the right temple.

It is in correspondence with the centre line of the third window

We can make the attempt at reconstructing in 3D the fishing boat "St. Anthony" putting into focus the position of the found bullet holes, three in all, which are marked in yellow (in order to be able to show the interior of the cabin, the top was removed)
• Bullet hole on the top (the buttonhole form)
• Bullet hole behind the fourth window of the cabin (the one indicated by the fisherman)
• Bullet hole at the bottom in correspondence to the centre line of the third window (the one with the yellow tag)

In red we can see the position in the space of the head of the dummy, which is in front of the helm in the same position which likely Mr. Valentine, the victim, was in.

Of course, this is but an exercise, for we are not able to be more precise than this, as we can not examine the fishing boat itself. But the example is suitable to describe the method according to which the fishing boat "St. Anthony" becomes "the evidence".


In the many and diverse statements of the master and owner of the fishing boat St. Anthony Mr Freddy Bosco appeared in the press only in the interview given on 21st March 2012 to an Italian weekly newspaper where he describes the position of the fishing boat with regard to the black and red vessel which the shots came from.

Although in this interview Mr. Bosco says that the St. Anthony was at 27nm south of the Italian tanker "Enrica Lexie" at the moment of the shooting (this would clear the Italians completely), the Indian press was not puzzled about this element (the Italian press was).

In any case, it is appropriate to carry out a tridimensional analysis in order to verify the times, the positions and the trajectories.

NOTE

The door of the steering cabin is open in our reconstruction. Actually, we do not know whether it was open or closed, but in our reconstruction it is not relevant.

FIRST POSITION: NAVIGATION TOWARDS THE WEST

In an interview given on the 21st March 2012 to the Italian journalist Fiamma Tinelli working for the weekly newspaper "OGGI" the master of the fishing boat "St. Anthony" describes the position and the motion of his vessel with respect to the black and red vessel the shots came from.

(Article from the weekly newspaper Oggi published on 21st March 2012)
- Mr. Freddy Bosco:

"On 15th February we were on a fishing expedition since one week. From my boat we fish mackerels, tuna, even small sharks. The catch was pretty good, it amounted to 3000 fish. But where we were, 20 miles and a half off the coast of Kollam, there were no fish. Hence, we decided to head towards the west."

- we consider the position of the "St. Anthony" indicated by the commander-in-chief Latorre in his report written immediately after the event, in which we can read:

... a target picked up by the on-board radar with no identification number at about 3nm at the bow of the unity on a collision course.

(THE REPORT SENT BY THE ITALIAN MARINES TO THE THEIR HEADQUARTERS IMMEDIATELY AFTER THE EVENT)

Given that the distance picked up by the on-board radar of the Enrica Lexie was 2.8nm and the speed of the St. Anthony was 8kts navigating towards the west, this is more or less the only possible course, on which
the fishing boat can be 100 metres away from the Enrica Lexie, considering space, times and speed of both vessels.

In the 3D reconstruction we can see the St. Anthony in a position convergent to the Enrica Lexie at 100 metres away from the bow. According to the report of the Italian marines this is the moment in which the vessel (the aggressor) turns back and they stop shooting warning shots (they started shooting when the vessel was at 400 metres away).
The red line corresponds to the trajectory of the shots that were fired from the right deck on the fishing boat.

The shots come from the right deck of the bridge, at a height of 23,20 metres from the sea level (the shoulders of the dummy).

Under this premise, this is "the navigation towards the west", the shots come from the left, but there are neither bullet holes nor damaged windows on the left side of the steering cabin of the fishing boat.

SECOND POSITION: PARALLEL NAVIGATION

In an interview given on 22nd March 2012 to the Italian journalist Fiamma Tinelli of the weekly newspaper “Oggi” (click here) the master of the fishing boat St. Anthony describes position and motion of his vessel in comparison with the “black and red” vessel the shots came from.
- Mr. Freddy Bosco: “No, we were not sailing in the direction of the tanker, we were sailing parallel to the tanker in the opposite direction;"

- The journalist: "You were approaching the vessel too much maybe?"

- Mr. Freddy Bosco: "No, we were not sailing in the direction of the tanker, we were sailing parallel to the tanker in the opposite direction"

We can reconstruct both positions following Mr Freddy Bosco’s report.

- The Enrica Lexie was sailing with the prow at 330°, when the on-board radar picked up the fishing boat approaching the tanker at 2.8 NM away from the tanker itself (report by the master Vitelli)

- The St. Anthony was sailing with the prow at 150° parallel to the tanker and in the opposite direction.

The position of the St. Anthony is represented according to the report by the marine Latorre written after the event and in which we can read:

… a target on the radar without identification number at about 3nm at prow on a collision course.
We consider two positions:

- (Position 1). The "St. Anthony" 100 metres on the right and 100 metres away from the bow of the Enrica Lexie;
- (Position 2). The "St. Anthony" 100 metres on the right and in correspondence to the Enrica Lexie.

The shots were fired from the right side of the bridge deck, 23,20 m above the sea level (considering the shoulder of the dummy in the picture).
Taking position 1 (the one in which the fishing boat is far away from the tanker) into account, the shots fired from the Enrica Lexie can not hit the man in the steering cabin (red line) without going through the windows of the front side of the steering cabin.

The bullets represented by the yellow lines can not hit the man in the steering cabin.

Again, according to position 1 we can see the bore entrance points, if the shots came from the Enrica Lexie.
Of course, the red line does not represent any real bullet.

Also taking position 2 into consideration (the one in which the fishing boat is near the tanker) the shots fired from the Enrica Lexie can not hit the man in the steering cabin (red line) without going through the windows or the front side of the steering cabin.

The shots represented by the yellow lines can not hit the man in the steering cabin.
Again, in position 1 we can see the bore entrance holes, if the shots came from the Enrica Lexie.

Of course, the red line does not represent any real bullet.

This bird’s eye view allows us to verify that in order to be able to hit the man in the steering cabin the shot has to go through the front side of the cabin or the front windows.

The bore holes found on the fishing boat, even if the shots came from the Enrica Lexie (yellow lines), could not kill the man in the steering cabin.

As you can see the windows are not damaged and no bore hole was indicated on the front side of the steering cabin.
The St. Anthony entering the port are not damaged (You can clearly see the reflection of the light of the cabin).

SUMMING UP:

In both positions indicated by Mr. Bosco the shots coming from the Enrica Lexie can not have killed Mr. Valentine in the steering cabin.

- in the first case (sailing towards the west) because they would have hit the St. Anthony on the left side, while it has been hit on the right side.
- in the second case (sailing parallel to the tanker), because the shots would have gone through the front side and the windows.

THE RAMMING

By examining the single frames of the Youtube videos while looking for the reflections of the light coming from the cabin (with the purpose of highlighting the fact that the windows were not damaged when the boat entered the port) we could realize that the "St. Anthony" has been rammed.
This frame shows one of the sides of the "St. Anthony" when it entered the port.

If we devide the videos into single frames we can see the traces of a ramming.

The damage seems to be quite recent, the splitting of the wood is clear, there are no signs of streaking and it is on the side where the bullet holes were found.
Of course, Mr. Bosco should be able to say when the "St. Anthony" was damaged in this way, under what circumstances and the name of the vessel that rammed the fishing boat.

I would like to put into evidence here that this analysis of the pictures can have no probative force, but it could probably be only a circumstantial evidence, for a survey on the St. Anthony could not be conducted.

But the 3D reconstruction (a fairly good one, using the vectorial design and not simply Photoshop) can lead to definitive results, as I could verify in much more complicated surveys than this one. At least, from the point of view of the reconstruction.
USTICA - VECTORIAL RECOSTRUCTION OF THE AERONAUTICAL ACCIDENT

"Enrica Lexie: Technical Analysis" - Luigi Di Stefano - (credits) - -
www.seeninside.net/piracy
The Indian Ballistic Expertise

On 14th April 2012 the news programme TG1 (13.30 - 17.00 - 20.00) and TG2 (13.00 and 20.30) broadcasted a report by the RAI correspondent in New Delhi, in which some excerpts from the Indian ballistic expertise carried out by the Indian authorities and given to the local judiciary were shown.

I myself had already put into evidence that the document that had been shown, a small excerpt from the whole expertise, was limited to show the "conclusions" alone without any verification of the technical elements the conclusions were based on. Moreover, I also pointed out that it was criticizable that such excerpts were released without explaining that they were biased without any other verification.

But as "few" is better than "nothing", which characterized the press reports during the four days before, it is worth analyzing the mentioned documents.
One of the users of this website observed some clear and rough falsifications of the expertise just there where in the expertise the Italian marines embarked on the "Enrica Lexie" are charged with the murder.

In the following the falsified passages.

**FALSIFICATION**

6. The bullet contained in item no. 1.4 is fired from the firearm contained in item no. 14.

7. The bullet contained in item no. 2.3 is fired from the firearm contained in item no. 11.

8. The bullets contained in item no. 1.4 and item no. 2.3 and the fragments of bullets contained in item no. 31.1 and item no. 31.2 could be fired from a distant range.

9. The fragmented bullet jacket contained in item no. 31.1 is similar to the jacket of the ordinary bullet contained in item no. 22.1. It is not possible to opine whether the fragmented jacket piece is discharged through any of the firearms or spare barrels involved in this case or not.

10. The steel core contained in item no. 31.2 is similar to the steel core of the ordinary bullet contained in item no. 22.1. It is not possible to opine whether the steel core is discharged through the firearm or spare barrel involved in this case or not.

Item 6 and 7 indicate that the bullets in item 1.4 and 2.3 were fired from the rifles indicated in item 14 and 11, which correspond to the two Beretta rifles S C 70/90 seized from the tanker "Enrica Lexie".

In the description of the content the compiler (who has written using a typewriter and not a computer) has begun a new paragraph at the beginning of each item, indicating the item itself starting from the LEFT margin of the page.
If we compare the reference numbers and the name of the fisherman Mr. Ajeesh Pink, as they appear in item 1.4 and 1.5, it seems to be clear that they have been written with two different typewriters, after having deleted the previous text whose traces are still visible on the left side of the page.

The falsification is repeated also in the case of the fisherman Mr. Valentine Jelestine in the item 2.3;
The enlargement below highlights that the two texts have been written with two different typewriters.

These enlargements highlight the fact that the two texts have been written with two different typewriters.
Of course it would be interesting to answer the question whether the falsification was made after the draft of the document, or before the document left the institute that issued it.

On the title page we can see the stamp by hand, which has the date 4-4-2012 and probably a signature or an acronym.
These pictures where the stamp is highlighted do not allow to verify if the document was stamped before or after the falsification of the passage about Mr. Ajseeh Pink.

These ones, on the other hand, seem to show that the document was stamped after the falsification of the passage about Mr. Valentine Jalestine.
CONCLUSIONS

In the document released by TG1 and TG2 and presented as an excerpt from the "Ballistic Expertise" carried out by the Indian authorities some traces of falsification of the results are evident.

Such falsification consists in the modification of the elements indicating the guilt of the Italians charged with the murders.

Evidently such elements were different in the first version. Otherwise, it would not have been necessary to modify them.
The Indian Ballistic - The Expertise

TG1 - 2012, 14th April - 13.30 (GMT+1)

Office of the Director of Forensic Science Laboratory, Thiruvananthapuram.

No: 81-1001/FSU/2012

From
The Director:

To
The Chief Judicial Magistrate,
Kollam.

Sub: Examination of M.O.s in Cr.No. 02/2012 at Coastal P.S.
Neendakara - Report forwarding of - Reg.

Ref: 1. Letter No. T 34/12, No.2/02/Coastal/D857/12 dated
23.2.2012 of that Court.
2. Sec.293 of the Cr.P.C.1973 (Act 2 of 1974) r/w amendments
contained in the Act 45 of 1978.

Dated 04.04.2012 signed by Smt. Nisha N.G., Scientific Assistant (Physics)
i/c Assistant Director (Ballistics) on the examination of M.O.s sent with
the reference cited is forwarded herewith. If evidence is required,
summons may please be issued in the name of Smt. Nisha N.G., Scientific
Assistant (Physics) i/c Assistant Director (Ballistics) & Sr. Thomas Alexander,
Assistant Director (SEROLOGY), State Forensic Science Laboratory,
Thiruvananthapuram.

Necessary arrangement may please be made to take
remnants of M.O.s at an early date with Letter of Authority.

[IMG. 1-1 FRAME 429+640 - CLICK FOR ENLARGE]
It contained 100.5 cm long rifle with folding stock. It bore the inscriptions MADE IN ITALY PB PATENTED, 04-03-320-A-01, BERETTA, SC 70/90, Cal.356 x 45 NATO, B 18898 H, PB 04 1005-15-114-7280, PB 03 1005-15-114-7278, PB 03-1005-15-114-7240 and proof mark of its maker. Also it contained a magazine bearing an inscription PB 93 1005-115-108-2741 M filled with thirty ammunition: twenty two ordinary ammunition with head stamp 'O.P.L. 02' and eight tracer ammunition with head stamp 'SML 98'. It was found packed in a sealed polythene cover. A white paper bearing label was as follows was found pasted on it.

<table>
<thead>
<tr>
<th>Police Station</th>
<th>Coastal PSI Nebulakerna</th>
<th>District</th>
<th>Endiam Chrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime No.</td>
<td>Feb 12</td>
<td>Section of Law</td>
<td>302.34</td>
</tr>
<tr>
<td>Date of Seizure</td>
<td>25.02.12</td>
<td>Time of seizure</td>
<td>7:15 pm</td>
</tr>
</tbody>
</table>

RESULTS OF EXAMINATION

1. The holes found on the skin pieces contained in item no. 1, 3, 16 and 2.2 and the severance found on the T shirt in item no. 4 could be caused due to a firearm projectile whereas the severances found on the shirt in item no. 3 are not due to it.

2. The firearms contained in item no. 4, item no. 8, item no. 11 to item no. 14 are 5.56 mm calibre 'Beretta' make rifles and that contained in item no. 9 and 10 are 'Herstal' make 5.56 mm calibre light machine guns.

3. The ordinary and tracer ammunitions involved in this case are 5.56x45mm calibre NATO ammunitions made in Italy.

4. Signs of firing detected on the firearms contained in item no. 6, 11, 13 and 14 and the spare barrel contained in item no. 15.1.

5. The bullets contained in item no. 1.4 and item no. 2.3 are similar to the bullet of 5.56 x 45mm calibre ordinary and tracer ammunitions contained in item no. 22.1 and item no. 22.2 respectively.

6. The bullet contained in item no. 1.1 is fired from the firearm contained in item no. 14.
6. The bullet contained in item no. 1.4 is fired from the firearm contained in item no. 14.

7. The bullet contained in item no. 2.3 is fired from the firearm contained in item no. 11.

8. The bullets contained in item no. 1.4 and item no. 2.3 and the fragments of bullets contained in item no. 31.1 and item no. 31.2 could be fired from a distant range.

9. The fragmented bullet jacket contained in item no. 31.1 is similar to the jacket of the ordinary bullet contained in item no. 22.1. It is not possible to opine whether the fragmented jacket piece is discharged through any of the firearms or spare barrels involved in this case or not.

10. The steel core contained in item no. 31.2 is similar to the steel core of the ordinary bullet contained in item no. 22.1. It is not possible to opine whether the steel core is discharged through the firearm or spare barrels involved in this case or not.

---

Date of Seizure: 25.02.12
Time of seizure: 8.30 pm

Description of items: (6) Firearm bearing SN: PN 061400 HERSTAL MINIMI 5.56 (with magazine (fully loaded) in detached condition)

Witness 1: E.V. Babyohan, Tahalidar, Kothi
ID:
29.05.2012

Witness 2: M.O. Ramachandran, Tahalidar (Kal), Kanayannoor
ID:
25.02.2012

Name and Signature of Investigating Officer:
Sd/-
R. Jayaraj
C.I. Coastal
25.02.12

It was also found sealed with a blue colour seal bearing label as follows:

CARABINIERI
REPARTO INVESTIGAZIONI SCIENTIFICHE
ROMA
Nr. 16698

Item No: 11
It contained 100.4 cm long rifle with folding stock. It bore the inscriptions "MADE IN ITALY PB PATENTED, 04-03-520-S01, BER 70/90, Cal. 5.56 x 45 NATO, P: 185841, PB 04-1005-15-114-725, 1005-15-114-7278, PB 04-1005-15-114-7240" and the proof mark of its make. Also it contained a magazine bearing the inscription "P1 95-1005-15-...."
The plastic packet was packed inside a white paper packet bearing label

PM No. 449/12

Dated 16/02/12

Name: Ajeesh Pink, 21 years, Male

Crime No. 2/2012 of Coastal Police Station, Neendakara

Specimen: Skin and subcutaneous tissue from the site of injury on the front of chest on right side.

Preservative: Nil

Air dried

Sd
16/2/12

It was found packed in a sealed white paper packet bearing label

Ajeesh Pink

It was found packed in a sealed white paper packet bearing label

(2) PM No. 449/12

Item No. 2.3

It contained a partially disfigured bullet wrapped in cotton packed in a sealed brown paper packet bearing label

PM No. 449/12

Cr. No. 02/12

Valentine @ Jealatine

(Rt) Nail clippings

It was found packed in a sealed white paper packet bearing label

PM No. 449/12

Cr. No. 02/12

Valentine @ Jealatine

(Rt) Nail clippings

Item No. 2.5

It contained nail clippings packed in a plastic cover bearing label

PM No: 448/12

Cr No. 02/12 (Coastal P S)

Valentine @ Jealatine

(Rt) Nail clippings

It was found packed in a sealed white paper packet bearing label

PM No: 448/12

Cr. No. 02/12 (Coastal P S) (4)

Valentine @ Jealatine

(Rt) Nail clippings

TG2 - 2012, 14TH APRIL - 13.00 (GMT+1)
RESULTS OF EXAMINATION

1. The holes found on the skin pieces contained in item no. 1, 3, 5 and 7 and the severance found on the shirt in item no. 4 could be caused due to a firearm projectile whereas the severance found on the shirt in item no. 3 are not due to it.

2. The firearms contained in item no. 6, item no. 8, item no. 11 to item no. 14 are 5.56 mm calibre ‘Beretta’ make rifles and that contained in item no. 9 and 10 are ‘Herstal’ make 5.56mm calibre light machine guns.

3. The ordinary and tracer ammunitions involved in this case are 5.56x45mm calibre NATO ammunitions made in Italy.

4. Signs of firing detected on the firearms contained in item no. 6, 11, 13 and 14 and the spare barrel contained in item no. 18.1.

5. The bullets contained in item no. 1, 4 and item no. 2, 3 are similar to the bullet of 5.56 x 45mm calibre ordinary and tracer ammunitions contained in item no. 22.1 and item no. 22.2 respectively.

6. The bullet contained in item no. 1, 4 is fired from the firearm contained in item no. 14.

7. The bullet contained in item no. 2, 3 is fired from the firearm contained in item no. 11.

8. The bullets contained in item no. 1, 4 and item no. 2, 3 and the fragments of bullets contained in item no. 31.1 and item no.31.2 could be fired from a distant range.

9. The fragmented bullet jacket contained in item no. 31.1 is similar to the jacket of the ordinary bullet contained in item no. 22.1. It is not possible to opine whether the fragmented jacket piece is discharged through any of the firearms or spare barrels involved in this case or not.

10. The steel core contained in item no. 31.2 is similar to the steel core of the ordinary bullet contained in item no. 22.1. It is not possible to opine whether the steel core is discharged through the firearm or spare barrels involved in this case or not.
<table>
<thead>
<tr>
<th>Date of Seizure</th>
<th>25.02.12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of Seizure</td>
<td>6.30 pm</td>
</tr>
<tr>
<td>Description of Items</td>
<td>(6) Firearm bearing Sl No: PN 051400 HERSTAL MINIMI 5.56 (with magazine (fully loaded) in detached condition)</td>
</tr>
<tr>
<td>Witness 1</td>
<td>S.V. Babychan, Tahsildar, Kochi</td>
</tr>
<tr>
<td>Date</td>
<td>25.02.2012</td>
</tr>
<tr>
<td>Witness 2</td>
<td>M. G. Ramachandran Nair, Tahsildar, Kochi</td>
</tr>
<tr>
<td>Date</td>
<td>25.02.2012</td>
</tr>
<tr>
<td>Name and Signature of Investigating Officer</td>
<td>Sd/ - E. Jayara</td>
</tr>
<tr>
<td>G:1 Coasta</td>
<td>25.02.12</td>
</tr>
</tbody>
</table>

It was also found sealed with a blue colour seal bearing label as follows:

CARABINIERI
REPARTO INVESTIGAZIONI SCIENTIFICHE
ROMA
Nr. 16698

Item No. 1.1
It contained 100.4 cm long rifle with folding stock. It's inscriptions: MADE IN ITALY FD PATENTED, 04-03-8500, BER 7.66/99, CAL 5.56 x 45 NATO. P 1833814, FD 04/2003 15 12 21 21

It contained a partially disfigured bullet wrapped in cotton packed in a white paper packet bearing label
Cr. No. 02/12
Ajeesh Pink
Bullet

Item No. 1.5
It contained a piece of dried skin fixed on a card board, packed in a white paper packet bearing label
PM No. 449/12 Dated 16/02/12
Name Ajeesh Pink, 21 years, Male
Crime No. 2/2012 of coastal Police Station, Neendakara
Specimen Skin and subcutaneous tissues from the site of injury on the front of chest on right side
Preservative Air dried
Sd 16/2/12
<table>
<thead>
<tr>
<th>Item No. 2.3</th>
<th>It contained a partially disfigured bullet wrapped in a plastic covered paper packet bearing label.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM No. 448/12</td>
<td></td>
</tr>
</tbody>
</table>
| Cr. No. 02/12 | Valentine @ Jeilestone (Rt) 
| Nail clippings | 50/M' |

<table>
<thead>
<tr>
<th>Item No. 2.4</th>
<th>It contained nail clippings packed in a plastic cover bearing label.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM No.: 448/12</td>
<td></td>
</tr>
</tbody>
</table>
| Cr. No. 02/12 | (Costal P S) Valentine @ Jeilestone (Rt) 
| Nail clippings | 50/M' |

<table>
<thead>
<tr>
<th>Item No. 2.5</th>
<th>It was found packed in a sealed white paper packet bearing label.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM No.: 448/12</td>
<td></td>
</tr>
<tr>
<td>Cr. No. 02/12</td>
<td>(Costal P S) (4) Valentine @ Jeilestone</td>
</tr>
</tbody>
</table>

It was found packed in a sealed white paper packet bearing label.
On 6th and 7th April 2013 the Italian newspaper La Repubblica exclusively published a summary of the report written by the rear admiral Alessandro Piroli, a thumbnail survey about the case of the Italian marines Latorre and Girone accused of the murder of two fishermen embarked on the fishing boat St Anthony and dated on 11th May 2012.

**FROM THE ARTICLE PUBLISHED IN LA REPUBBLICA ON 6TH APRIL (PIROLI REPORT):**

"For the sake of completeness I will summarize the results and conclusions of the Indian authorities (...). 4 bullets were analyzed: 2 of them were found on the fishing boat and 2 of them in the bodies of the victims. It was reported that the firearms correspond to the 5,56 NATO bore manufactured in Italy. The bullet found in the body of Valentine Jelestine was fired from the rifle with the identification number corresponding to the marine Andronico. The bullet found in the body of Ajiesh Pink was fired from the rifle with the identification number corresponding to the marine Voglino".

[...]

"If the results of the Indian tests are confirmed or if, as a consequence of further investigations acknowledged also by the Italian party, the authorities will prove that the bullets belong to the Italian marines, then the competent judiciary should find out if the fire was open with the purpose of firing warning shots into the water, which wrongly or accidentally hit the fishing boat, or if it was fired on the fishing boat with intent."
Some elements contained in the article of the newspaper, which reported to have one unabridged copy of the Piroli report, are very interesting from the point of view of a technical analysis because they allow to identify some objective elements which can have probative force and which can shed light on important details of the whole case. Some examples in the following:

4 bullets manufactured in Italy were found and analyzed by the Indian authorities; they were fired from two different rifles corresponding to two of the 6 rifles belonging to the Italian marines, which according to the corresponding identification number correspond to the rifles of the marine Massimo Andronico and the marine Renato Voglino: each rifle shot and hit in the same way: one bullet on the fishing boat and the other one in the body of one of the victims.

Such evidences exclude the hypothesis that one of the marines shot dead two persons intentionally or by mistake. It is clear that there were two victims and hence there are two culprits.

This remark is in line with what the Indian Police in Kerala reported. The Indian authorities intuitively and before getting the ballistic expertise arrested not one but both marines considered to be the ones who had opened fire.

Another interesting point is the fact that according to the authorities in Kerala the rifles from which the bullets against the fishing boat and against the fishermen were fired are not the ones belonging to Latorre and Girone, who have always declared that they were the only ones who opened fire (into the air first, and then into the water). Rather, according to the identification numbers the rifles belong to two other members of the detachment embarked on anti-pirates protection service on the Enrica Lexie.

The Piroli report is the first official document in which for the first time the hypothesis that other two members of the detachment could be the ones who opened fire and not Latorre and Girone, as it was indicated in all official documents and statements so far, is formulated.

The detachment the six marines were part of was equipped with individual firearms (six Beretta assault rifles "SC 70/90") and two FN Minimi light machine guns, having a 5.56 x 45 NATO bore and standard cartridges (Fiocchi manufacturer) and tracer (SMI manufacturer) manufactured in Italy.

In other words, the Piroli report released by the influential newspaper shows once again the public opinion the results of "the Indian ballistic expertise", also broadcasted by RAI news last year on 14th April 2012.
At the same time it proposes novel elements which allow to formulate many and diverse hypotheses about the case, which are to be considered.

**ERROR OR INTENTIONALITY:**

Let's consider the hypothesis according to which **one of the two arrested marines is guilty**.

During the anti-pirates operation some of the fired warning shots fired into the water from the oil tanker could have hit by mistake the fishing boat and the marine did not become aware of it.

We can set up a hypothesis of *manslaughter* (in the case of a failure of the used firearm or of the cartridge) or of *unintentional murder* (in the case of warning shots which hit the target accidentally). This is an acceptable hypothesis, even if a tragic and fatal one.

On the other hand, it is not credible that both of them are guilty because of exactly the same error in shooting:
• because of shots fired from a distance of 500 and 100 meters. This shooting distance and the natural shot dispersion make the trajectory of the shots against a target uncertain;

• because of the shots fired from a moving target (the oil tanker Enrica Lexie while navigating) against a moving target (the small boat which was approaching) made unstable by the ocean waves.

The case in which both marines make the same mistake and get the same result hitting with one bullet the fishing boat and with one bullet one of the fishermen is impossible.

Admitting that under those conditions both of them made the same mistake and got the same results is like winning twice in succession at bingo playing the same lottery numbers.

This has never happened.

Let’s admit now for a moment reputedly that one or both of our marines shot with the purpose of hitting the target.

According to the eyeswitness accounts by the fishermen who had survived the attack, one of the victims was in the steering cabin (he had taken the helm) and the owner of the boat (Mr Freddy) layed on the floor.

Outside the steering cabin the other nine fishermen were sleeping and laying down on the upper deck of the fishing boat (point A).

In this position the sides of the vessel represent a good shelter from shots coming from a horizontal trajectory, while shots coming from a vertical trajectory are in this case
On the deck of the oil tanker (point B) at about 23 m above sea level (like on the roof of a 7 m high building) stand two marines, good trained, expert gunmen.

They were equipped with different cartridge. Each cartridge had 30 bullets. The marines took aim with rifles which fire 670 shots in a minute/more than 11 shots in a second.

On the same side of the vessel their alleged target was approaching at 60-100 mt.

Under these circumstances, if one of them or both of them had opened fire against the fishing boat with the purpose of hitting the 11 fishermen of the crew, they would have surely killed the whole crew of the fishing boat.

These are the reasons why in my opinion the intentionality is a hypothesis that can be excluded.

It is worth remembering that:

Even if the Indian authorities mention shots fired following a trajectory from the top, on the St Anthony the only fishermen shot dead are the ones who during the alleged shooting were in the cabin. The ones lying down on the upper deck were not hit and survived.

On board of the Enrica Lexie there were not only the marines, but also the crew of the oil tanker, which saw the whole operation. Most of them have the Indian citizenship. None of them saw any bullet hitting the
boat. On the contrary. Let's listen now to the interview of Antonio Iovane to the captain Carlo Noviello, who worked on the oil tanker and gave an eyewitness account.

(INTERVIEW TO CARLO NOVIELLO)

(REPPUBLICA.IT - UNABRIDGED VERSION OF THE INTERVIEW)

THE RIFLES OF THE MARINES

With reference to the Piroli report it is surprising that only one year after the incident the possible relevant role of other marines, who were part of the detachment, in the incident is mentioned.

In this case too we can formulate different hypothesis:

Hypothesis 1 - The rifles mistaken for the own ones.

With reference to what was released in the newspaper la Repubblica the most credible hypothesis is that the marines mistook the rifles of their colleagues for the own rifles unintentionally.

Two scenarios are possible:

(A) the rifles were in their arm-rack and used at random independently of their identification number at the moment of the operation;

(B) only in that case, because of the alarm and the agitation of the moment, each marine took a rifle at random, without verifying the own identification number.

The first hypothesis is hardly to be proved.

- The formal attribution of the firearm to a soldier has as a consequence not only that it has to be used only by the marine whose ID corresponds to the identification number of the firearm, but also that the marine is responsible of its care.

- The legal implications of the use of a firearm assigned to another soldier are clear both in the army and in the police. It is sure that also the detachment on board of the Enrica Lexie was well aware of them.

- The good working conditions of the individual firearms. Every soldier has to keep and take care of the own firearm by servicing and cleaning the sight according to the individual needs.
- **The training and drilling procedure** of the soldiers and marines includes practicing shooting (*also while navigating*). They have to make a statement of accounts after the training. They have to write a report in which they have to indicate date, time, place, number of fired shots, kind of fired shots. In this way each marine can get other cartridges;

- **The operation procedure.** What was said above about the training procedure is very important in the case we are analyzing, which is a real one. The use of the firearms has to be justified and explained by indicating the used firearm, the fired shots, and every detail which is useful for further investigations. This is a **compulsory procedure** for the detachment on board, the members of which have also the function of police officers.

These elements lead to exclude the hypothesis of the arms of the colleagues mistaken for their own arms.

We have to examine now just another possibility, the hypothesis of "agitation".

Actually, the **approaching vessel was detected by the on board radar of the Enrica Lexie when it was at about 2,8 NM (about 5km) away from the tanker**, when the approaching vessel could be seen by sight.

In the Piroli report released by *La Repubblica* we can read that the warning signals were carried out (*light signal, showing the arms, …*) when the approaching vessel was at about 800 m away from the tanker.

If we take into account the average speed of a fishing boat like the St Anthony, which can sail at about 8/10 max. kts. (*according to the Indian Coast Guard*) covering hence a distance of about 300m in a minute, it follows that from the moment of the sighting at 5km to the moment when
the signals were carried out at 800m away from the vessel, 14 minutes elapsed; another minute was needed (from 800 to 500 m) before the first warning shots were fired (warning shots into the water).

**From the moment in which the on board radar picked up the vessel on and for about 15 minutes till the warning shots were fired the approaching vessel was kept under observation and the marines had enough time to prepare the operation according to the procedure,** and hence they had also enough time to take aim with their own arm.

I daresay that also the *agitation* can be excluded.

**Conclusions:**

The whole hypothesis of the firearms of the colleagues mistaken for the own on board of the Enrica Lexie can be excluded. It can just be considered as a mere supposition and till further proofs.

**Hypothesis 2 - A mistake in the identification of the identification number of the rifles during the Indian shooting tests and the ballistic expertise.**

In other words, the Indian authorities made a transcription error. They mistook the identification number of the rifles while carrying out the shooting tests.

**Conclusions:**

This hypothesis can be excluded, because as we will see it is likely that the Indian authorities did not know the identification numbers of the rifles corresponding to the six Italian marines. It can just be considered as a mere supposition and till further proofs.

**Hypothesis 3 - The attribution is right and the found bullets were fired from the rifles of Voglino and Andronico.**

Also in the case of this hypothesis we have to take into account different possibilities:

(A) The Indian authorities **did not know** that the identification numbers of the rifles from which the shots were fired belong to the rifles of Andronico and Voglino;

(B) They did.

**Analyzing case A is less complicated.**
If they did not know the single correspondence between the identification numbers of the firearms and of the different members of the detachment on board, the Indian authorities suppose that the two rifles from which the shots were fired belong to Latorre and Girone, for they admitted to have been the ones who had opened fire.

They did find the bullets of two rifles and hence they took for granted that they had two quasi confessed criminals. The Indian authorities were led to think that the culprits are Latorre and Girone. They charged them with murder and they arrested them awaiting trial.

**The analysis of case B is more complicated.**

It is worth remarking here that on 30th March 2012 some police officers of Kochi got back on board of the Enrica Lexie in order to interrogate the other marines on board (Antonio Fontana, Alessandro Conte, Renato Voglino e Massimo Andronico) in the presence of the Italian consul general Giampaolo Cutillo and with the help of a questionnaire containing 15 questions. The 4 marines on board were asked details about the identification numbers and the description of the firearms they were equipped with.

It is evident that if the Indian authorities had known about the single individual identification numbers of the seized firearms they would have had the proof that Andronico and Voglino had opened fire and they would have charged them with murder when the Enrica Lexie was in the port of Kochi. Actually, under these premises they could clear Latorre and Girone of the charge of murder. They could just be charged with false statements in the first part of the investigations.

There were no reasons to charge Latorre and Girone if the Indian authorities were aware of the identification numbers of the firearms. They would not have lied to their superiors and to the public opinion.

And they had not risked to charge with murder two innocent persons and create the situation in which during or after the trial the two culprits or the other two members of the detachment could reveal the circumstances.

Also Indian sources had had the possibility to reveal such a lie, as many persons took part in the ballistic expertise in different roles.

**Conclusions:**

The hypothesis according to which the Indian authorities did not know about the attributions of the identification numbers of the rifles to the single marines is credible. If they knew about the identification numbers they could charge Andronico and Voglino with this murder.
The Piroli report leads one to the conclusion that the Italian authorities did know the attribution of the identification numbers of the rifles. This may have some consequences we can not analyze here.

**Hypothesis 4 - The Indian authorities in Kerala manufactured false evidences against the two marines.**

This is a very harsh hypothesis, but in a technical analysis it needs to be considered, especially if it is true that the authorities in Kerala did not know about the identification numbers of the rifles.

It is obvious that if Latorre and Girone admitted to have shot, the bullets which hit fishermen and fishing boat must have been fired from their rifles.

**But what are the rifles of Girone and Latorre?**

According to the Indian authorities two of the six rifles were seized from the Enrica Lexie because they do not know the single attributions of the identification numbers of the rifles.

In order to find out which ones of the six rifles are the ones from which the shots were fired they carried out the *shooting tests*.

They fired one or more shots into the water in a basin using the six Beretta rifles and some ballistic gelatine to recover the bullets afterwards.

The bullets can be recovered and analyzed under the *microscope* together with the bullets found in the bodies of the victims and on the fishing boat in order to find out if the rifling on the bullets matches with the rifling on the bullets they had recovered.

In special cases when the bullets are destroyed (as in the case of our 5.56 NATO bore) it is necessary to carry out more sophisticated chemical analyses using a *mass spectrometer* in order to find out the correspondence of the alloy (copper, lead, steel) and of the composition of other elements such as gunpowder.
ANALYSIS WITH THE USE OF A SPECTROMETER: THE PARTICLES WHICH COMPOSE A TRACE OF GREEN PAINT LEFT BY A SHOT WHICH HIT A TACTICAL WAISTCOAT CORRESPOND TO THE ONES USED TO COLOR THE POINT OF A BULLET SEIZED FROM THE ALLEGED CULPRIT.

The splintering of the cartridge 5.56 NATO bore at the moment of the impact is not a remote possibility.

The next picture shows under x-ray gaze on the left the results of different shooting tests on varying of the impact speed and hence of the distance and on the right the dispersion of the metal fragments of the bullet after the impact on the soft tissues of the human body.
In case of fragmentation it should be compatible with the features of the firearms, with the type of cartridge, the shooting distance, the kind of target and other elements.

All this to explain how during complicated forensic technical analyses it is not enough to find out the mere correspondence of the bullets if other elements are not in line with the hypothesis to be followed during the investigation and to be proved.

Only the results of the comparisons between the bullets recovered after the shooting tests and the ones recovered from the bodies of the victims by the Police of Kerala and on the fishing boat will make possible to find out from what rifles the shots were fired.
The exclusion of the Italian experts from carrying out the ballistic expertise.

Before carrying on with our observations, it is necessary to highlight and stress the fact that Major Luca Flebus and Major Paolo Fratini, the two ballistic experts of the RIS Carabinieri, who were sent to Kerala in order to take part together with the Indian authorities in the ballistic analysis, which was thought to have to be carried out in cooperation, were admitted to take part in the survey just as external observers and only during the shooting tests. (This was confirmed by many and diverse serious sources).

The fact that they were present when the shooting tests were carried out plays no role in terms of control over the reliability of the results of the ballistic expertise and of the investigations altogether.

The decision not to admit the two officers of the Carabinieri to take part in the shooting tests and in the comparisons of the results of the test give a bad impression about the reliability of the survey and about how in India the authorities manufacture and deal with evidences against our marines.
At this point the question we have to ask is the following one:

**With what exactly were the bullets of the rifles compared, which allowed to say that the shots that killed were fired from the rifles of Andronico e Voglino?**

I have no answer, but some suspicions I have already formulated elsewhere.

The diffusion of the report written by Admiral Piroli, who surely did his best in drawing up the report, just boosts the huge amount of declarations of the authorities who speak only of probability and compatibility, it boosts the huge amount of declarations, of the TV reports of Keralian politicians who promise an exemplar sentence based on incontrovertible evidences against the two marines, of the unconfirmed press reports about more or less confidential documents.

The fact that the investigation is going on within a frame of honesty and of openness is considered to be guaranteed by the mere presence of the Italian experts of the Carabinieri in the first phase of the technical survey. But it is always omitted that the Italian experts of the Carabinieri were excluded form decision-making, they had no role in carrying out the technical survey and went back to Italy before the end of the analyses they were not allowed to contribute to.

More than one year after the incident, and after the conclusion of the investigation no evidence having probative force, no uncontroversial technical element has been released and presented to the public opinion (autopsy, exhibits, technical surveys, eyewitness accounts).

Why do the Indian authorities say they have evidences without showing them?

During the trial the evidences against the marines have to be shown and the defense has the right to let them analyze by the own technical experts. In order to be able to do this they need to have access to the trial acts and the authority to carry out new analysis without destroying or damaging the exhibits.

[THE PARLIAMENTARY ACT ABOUT THE CASE]
The Indian authorities have to show any evidence to the contrary, if they do not have the intention of making provision for a legal punishment in spite of the blemish one can easily find out by analyzing the facts.

I would be able to carry out a more detailed technical analysis if the acts were public and accessible.

The quite unorthodox way of the Indian authorities in conducting the investigations leads to the conclusion that the hypothesis of the falsification of evidences is real.

The following observations support this hypothesis:

- the authorities in Kerala had two confessed criminals to be charged with murder;
- they needed the evidences that the Italian marines had killed and that each of them had killed one man;
- the marines were equipped with six rifles, the Indian authorities did not know that the rifles had identification numbers;
- they seized two rifles and manufactured the evidences against two persons, for they were convinced that the rifles were on an arm-rack and that they were spread and then taken at random, which is quite normal in many armies all over the world;
- the Indian authorities were so short-minded that they took for granted that the two marines made exactly the same mistake and got the same result;
- the whole dispute settlement procedure collapses in the light of the fact that the Indian authorities in Kerala charged Latorre and Giroen with murder, even if they knew that the shots were fired from Andronico's and Voglino's rifles.

(...)  

There are other technical and procedural elements which support the mentioned hypothesis, but it is not appropriate to talk about them here. They can be illustrated later on.

**SUMMARY OF THE RELEVANT STEPS WHICH CHARACTERIZE THE CASE OF THE INDIAN BALLISTIC EXPERTISE:**

**SEIZURE OF THE FIREARMS**

At the end of the second day of search on board of the Enrica Lexie the police of Kerala seized four cases which contained the firearms the Italian marines were equipped with. They are now in the hands of the Indian police in Kerala.
DIFFERENT BORE

The press released the report of Prof. K. Sasikala, who carried out the autopsy of the victims. In his report he describes the bullets recovered from the bodies of the victims. The measures are not compatible with the bullets the Italian marines were equipped with. Rather, they seem to correspond to a Russian 7.62 bore.

A MISSING FIREARM

According to the Times of India the authorities believe that one of the firearms of the marines is missing and has not been seized yet - the firearm used by one of the marines is not among the 7 firearms seized from the Enrica Lexie. In this way they justify the incongruity which arose during the shooting tests carried out on the firearms seized from the Italian oil tanker and on the bullets recovered from the bodies of the killed fishermen. The public opinion came to know that on 30th March 2012 the police got back on board of the tanker in order to interrogate the other 4 marines on board. They had to answer some questions about the identification numbers and the description of the firearms the detachment was equipped with.

THE NON EXISTING ARM

In a report which the FSL (Forensic Science Laboratory) gave to the Indian judiciary and to the chief of police carrying out the investigations it is asserted that the shots were fired from two Beretta rifles ARX-160. This is an experimental rifle which the marines on the Enrica Lexie were not equipped with.
The ARX 160 is a firearm with a specific feature. If it used with a normal 5.56 NATO bore a quick change of the bore is possible. Its quick-change barrel allows to shoot cartridges with a 7.62 bore (the cartridges of the Russian kalashnikov, not the NATO ones). We have already mentioned the Russian bore above.

THE FALSE EXPERTISE

A RAI correspondent in New Delhi came into possession of the so called Indian ballistic expertise, a 36 pages long document, and the RAI presented it as if it was a real scoop and broadcasted some excerpts showing them in some national newscasts. Actually, what was shown is a long list of exhibits. The comments on them are just banality and obviousness, for example what is said about "the results of the tests". The journalist says: "under point 3 of the expertise it is mentioned that the tracer ammunitions and the ordnance ammunitions correspond to a 5.56 NATO bore, manufactured in Italy" Does one need a shooting test for this? The Indian ballistic expertise has been considered to be unreliable by many experts. Analyzing the broadcasted excerpts I could observe many revisions which seem to be falsifications. This has never been denied by official sources.
PAROLA DI PERITO Luigi De Stefano ha indagato sui misteri di Ustica

«Un falso clamoroso la perizia che accusa i nostri due marò»

Usate per compilare il documento due machere per scrivere con caratteri diversi. Evidenti cancellature e aggiunte postiche
THE MISTAKEN FIREARMS

Admiral Piroli wrote down a report in India (confidential for almost one year) in which he reports among other things for the sake of completeness the conclusions of the ballistic expertise, he puts into focus the conclusions of the Indian authorities distancing himself from them:

"If the results of the Indian tests are confirmed or if, as a consequence of further investigations acknowledged also by the Italian party, the authorities will prove that the bullets belong to the Italian marines, then the competent judiciary should find out if the fire was open with the purpose of firing warning shots into the water which wrongly or accidentally hit the fishing boat or if it was fired on the fishing boat with intent."

The Indian ballistic expertise confirms that the quite plausible result, which in judicial terms means nothing at all, becomes certainty and hence a guilty verdict: The Italian marines hit the St Anthony and its crew; it also precisely indicates from which rifles the shots were fired: from the mistaken ones.

(*) the former Italian foreign minister G. Terzi in the TV program IN ONDA (La7) on 6th April 2013 gave an interview about the Piroli report: He said: "It has never reached my desk". In this way he revealed interesting behind-the-scene activities about the construction of the Indian ballistic expertise.

CONCLUSIONS:

A simple analysis of the known steps of the case based on the Piroli report leads us to conclude that the hypothesis of a falsification of the evidences against the marines has the upper hand on the other hypothesis and has to be verified.

It is based on the fact that the Indian authorities in Kerala did not know the single and individual identification numbers of the firearms. Otherwise they would have cleared Latorre and Girone of all charges and they would have charged Andronico and Voglino.

Hence, no Bench can convict Latorre and Girone considering these evidences tending to prove their innocence.

The Indian authorities affirmed that the bullets recovered from the bodies of the fishermen and on the fishing boat St Anthony were fired from the firearms Andronico and Voglino were equipped with.
Once again, we have to remark that the responsibility for the impossibility to verify the existence and reliability of the so called evidences against Latorre and Girone is of the Indian authorities in Kerala, which repeatedly concealed relevant exhibits, as for example in the case of the lack of care in keeping the fishing boat St Anthony and as the sinking of the boat shows. I reported this concealment of relevant facts and exhibits in the exposé for the Public Prosecutor's Office in Rome on 13th March 2013.

The Piroli report, in which the hypothesis of the mistaken rifles is formulated, is another element against the reliability of the Indian technical survey and of the ballistic expertise and of the whole dispute settlement procedure (which has been considered to be invalid also by the Indian Public Prosecutor's Office, which put the investigations in the hand of another national Agency).

Of course, if carrying out new investigations for the Indian authorities means just the transcription of the investigations carried out in Kerala the investigation can go no step further.

On the other hand, if the hypothesis that the Indian authorities were aware of the identification numbers of the rifles and that also the Italian authorities were aware of this fact should be proved wrong, a more serious hypothesis than the one of the mala fides of the authorities could be formulated, as each reader can easily figure out.

This possible hypothesis is so serious that it can not be considered in a technical analysis.
[FROM THE LEFT: CONSUL CUTILLO, ADMIRALS FAVRE AND PIROLI, AJITH KUMAR, INDIAN CHIEF OF POLICE]

"Enrica Lexie: Technical Analysis" - Luigi Di Stefano - (credits) - www.seeninside.net/piracy
Chandy, the Prime Minister of Kerala, mentioned "incontrovertible evidences" against the two marines and said that "no mercy will be shown for the accused". "Our evidences" he explained "are in the complaint drafted by the Coast Guard", but "we can not go into the details, for the inquiry is still going on".

Chandy is confident that they have "incontrovertible evidences" about the guilt of the two Italian marines. I daresay that such statements are airy-fairy.

As a matter of fact, some Indian authorities knew on 16th February (the day after the events and the post mortem of the bodies of the victims) that the bore found in the bodies did not correspond to the bore of the Italian firearms. Therefore, it is not clear what such bombastic declarations are based on. Moreover, it is not clear what exactly justifies the arrest warrant against the two Italian marines issued after 16th February and the detention of the "Enrica Lexie" in the port of Kochi.

The only element which can be verified and which matches is the course of the tanker "Enrica Lexie", which corresponds in terms of time, space and speed to what has been reported by the Italian party.

Also, it is likely that the statements of the two Italian marines, who claim that they have not hit any vessels, least of all the "St. Anthony", are reliable.

All the rest, as we have seen, crumbles away when the elements are verified according to very simple methodological criteria of a judicial survey.
• The bore of the bullet does not match with the firearms our marines are equipped with;
• The "Enrica Lexie", when the fishing boat "St. Anthony" was hit, was sailing 27 NM north;
• The role of the Olympic Flair has never been investigated. It has been allowed this vessel to disappear. And we have seen that the Olympic Flait too reported to have been attacked in the harbor of Kochi.

The murders of the two fishermen have to be hunted elsewhere, rather than among the members of the crew of the "Enrica Lexie".

I believe I can say that analyzing the radar registrations we can have but other confirmations.

Rome, 29th march 2012

Luigi Di Stefano