Crash of the Polish Governmental Plane PFL 101 in Smolensk[1]

April 10, 2010

Status Report Dated November 10, 2011[2]

Contents

[1] According to the "Head" Instruction that governs the transportation of the officials of the Polish Republic such as the President, Prime Minister, Chairperson of the Lower House of the Parliament and the Senate, the designation "PFL 101" mean that the President is on board.

[2] This Status Report was prepared by a multidisciplinary team of experts that supports the families of the Smolensk victims.

Introduction

The Republic of Poland, acting as the State of the Operator and the State of Registry pursuant to Article 6.3 of Annex 13 to the 1944 Convention on International Civil Aviation ("Chicago Convention"), on December 19, 2010 submitted its comments to the draft Final Report prepared by the Russian Federation that acted as the State of Occurrence and the State of Manufacturer and conducted the investigation into the crash of the Tu-154M aircraft tail number 101 dated April 10, 2010 ("Smolensk Crash"). The Tu-154M aircraft, Flight 101 from Warsaw, Poland to Smolensk, Russia, carried the President of Poland and 95 Polish citizens traveling for the commemoration of the 70thieth anniversary of the Katyn Crime.

The Remarks of the Republic of Poland to the draft Final Report of the Russian Federation dated December 19, 2010 ("Polish Response") were submitted to the Russian Federation in Polish and Russian languages but were not officially translated into English.[3] Therefore, the families of the Smolensk victims hired the most renowned international firm *Transperfect Translations* to perform the translation of the Polish Response to the Russian Final Report on the Smolensk Crash into English.[4] The Russian Federation, acting through the Interstate Aviation Committee (IAC) as the investigator-in-charge, disregarded the Polish Response, in particular objections as to the causes of the crash, and announced the Final Report with its own conclusions as to the causes of this crash at a press conference in Moscow on January 13, 2011 ("IAC Final Report").

In its investigation into the April 10, 2010 crash, the Russian Federation requested the assistance of the United States with respect to recovering the TAFS and FSM readings by the US manufacturer of these systems - Universal Avionics Systems Corporation from Redmond, Washington.

The United States acting through the National Transportation Safety Board provided the requested assistance, however did not receive the status of the accredited representative to participate in the investigation to the Smolensk Crash as allowed by article 5.23 of the Chicago Convention. At least one citizen of the United States lost his life in the Smolensk Crash.

The objections to the investigation of the Russian Federation into the Smolensk crash are multifold and of fundamental nature. They range from challenging the credibility of the IAC by virtue of its members acting in direct conflict with their official positions with Tupolev, the manufacturer of the Tu-154M aircraft to challenging the IAC investigation and the conclusions

[3] No attempts by the Polish Government have been made to translate the Polish Response to the Russian investigation into English. It is entirely up to non-governmental organizations and private persons that the Western reader can learn of this official Polish Response and confront the scope of irregularities of the Russian investigation into the Smolensk Crash.

[4] Sponsors of the English translation of the Polish Response ("Polish Response in English") are: The Katyn 2010 Family Association, Ul. Chełmzyńska 98C , 04-247 Warszawa, Poland, Mobile (Poland): +48 784 756 531 Mobile (UK): +44 793 555 7562 ; +44 796 936 2341 e-mail: polish.remarks@gmail.com.

of the IAC Final Report in its entirety, as presented by the Republic of Poland in the Polish Response. The Polish objections to the Russian investigation range from denying the Republic of Poland access to the investigation by preventing the Polish Accredited Representative from participating in the IAC meetings, denying Polish requests for information and assistance, to destroying, falsifying and manipulating the evidence, providing inadequate rescue and medical assistance to the victims of the crash, conducting the investigation in violation of ICAO standards, and drafting the IAC Final Report in violation of Annex 13 to the Chicago Convention. This Status Report does not address all issues arising from the Russian investigation of the Smolensk Crash but rather highlights the most important problems and the most representative violations.

IAC Investigation Conducted in Violation of International Agreements

Three days after the Smolensk Crash, the Republic of Poland and the Russian Federation entered into an agreement to proceed with the investigation of the Smolensk Crash in accordance with the Chicago Convention. The parties agreed to proceed with Annex 13 to the Chicago Convention that governs aircraft accident and incident investigation ("Annex 13) under which the Russian Federation as the State of Occurrence was in charge of conducting the investigation while Republic of Poland designated its Accredited Representative to participate in the investigation in accordance with Article 5.18 of the Chicago Convention.

In the course of the investigation, the Polish Government acting through its Accredited Representative filed numerous motions and requests with respect to the investigation in accordance with Article 5.25 of Annex 13. Specifically, the Polish side submitted 222 inquiries for information to the Russian Federation. Only 34 inquiries were answered. The Russian Federation ignored or refused to acknowledge 169 inquiries, and partially answered 19 inquires. As a result of this lack of cooperation from the Russian side, the Polish Accredited Representative and his advisers were unable to fulfil their responsibilities under the Annex 13 to the Chicago Convention.

Among the motions ignored or refused was a request for information regarding the assessment of the minimum airdrome conditions at the Smolensk airport, a request for video recordings of radar display readings by the Chief Air Traffic Controller on 10 April, 2010 with respect to landing approach of the following flights: Il-76, Yak-40, Tu-154M, a request for photographic documentation from the crash scene, a request for data of the fly-around performed soon after the crash, and requests for inspection of communication and navigation aids. The Polish side did not receive any technical expertise of the wreckage debris or any data of two failed attempts of Il-76 landings prior to the crash of PLF 101. A motion to authorize the Polish Accredited Representative and two specialists to take part in the fly-around procedure was denied. A protest against this refusal was ignored as well as the protest against the refusal of the inspection of the RSP-6M2 radar system in Smolensk.

The Republic of Poland as the State having suffered fatalities of its President, First Lady, nine generals and the top leadership, was denied access to the relevant factual information with

respect to rescue, first aid, survival data and autopsy examination in direct violation of Article 5.27 of Annex 13. As a result, the Polish side was unable to provide its response to vitally important parts of the IAC Final Report, including sections 1.13 Medical Tracing Examination, 1.14 Data on the Survival of Passengers, Crew Members and Others of the Aircraft Incident, and 3.1. Findings. In particular, the Russian side failed to provide to the Polish side the following information:

1) documentation of forensic examination of the crew of the aircraft, together with the results of toxicological and identification examination;
2) report of the inspection of the site; the Polish side has no knowledge as to where the specific inspection areas were located and how they were marked.[5]

The IAC Final Report provides no information about the rescue actions taken at the scene of the accident. The Polish side has not received any transcripts of communication or situational plans, reports of participants of the rescue and fire fighting teams, photographic documentation, including film footage, which is essential for proper assessment of the security level of Smolensk "Severny" Airfield regarding fire fighting services, rescue operations and medical security. The Polish side did not have access to the protocol of surveillance of the location of the occurrence thus was not able to reply to Finding 3.1.67.

Similarly, the Polish side was not in the position to respond to Finding 3.1.68 of the IAC Final Report that the Commander-in-Chief of the Polish Air Forces General Andrzej Blasik was present in the cockpit at the time of the impact with the ground. Similarly the Polish Side was not in the position to respond to the statement that the coronary examination revealed 0.6‰ of ethanol in the blood of the Commander-in-Chief of the Polish Air Forces. Results of testing the concentration of alcohol in the blood of the Polish Air Force Commander Blasik cannot be independently verified because of the unavailability of the source documentation. No authorized toxicological data and information as to when and how the material was secured for analysis was provided to the Polish side.[6]

All requests of the Polish side regarding the information with respect to smoke present in the vicinity of the airport on the day of the crash were denied. Regular citations made by the meteorologist from 4.00 a.m. UTC indicated the presence of smoke. The Polish inquiry as to the source of fires and smoke in the area surrounding the airport at the time of the crash and its adverse effect on atmospheric conditions was ignored as well. No information about the rescue and extinguishing of fires was provided. No reports regarding the presence of any traces of explosive materials were provided. Only 18 full post-mortem reports were provided; the

[5] The Polish Response in English, p. 60.
[6] The Polish Response in English, p. 143. In January 2011 IAC published on its website a document nr.37 dated April 11, 2010 that purportedly represents testing of Gen. Błasik's blood. Medical experts point out that a natural alcohol is produced in the body within 24 hours from death and can reach even 1 percent. Therefore other tests are required to verify such findings. However the Russian side did not produce any other tests and did not present supporting documents. See also:
www.rp.pl/artykul/593062_Ekspert--Blasik-niekoniecznie-pil-.html and
www.naszdziennik.pl/index.php?dat=20110131&typ=po&id=po51.txt
http://www.naszdziennik.pl/index.php?dat=20110115&typ=po&id=po02.txt

remaining 77 are either grossly inaccurate or were not provided. Medical and pathological reports for some victims contain descriptions of organs that had been surgically removed from the victims long before the crash. [7]

The list of 169 Polish requests unanswered by the IAC as of December 19, 2010 remained unchanged after the official presentation of the IAC Final Report on January 13, 2010. In August 2011, the Polish side officially confirmed that no additional information regarding the outstanding 169 Polish inquires has been received from the Russian Federation.[8]

IAC Final Report Does not Comply with Annex 13

The Polish Response to the IAC Final Report the Republic of Poland points out that the IAC Final Report violates the standards of Annex 13 to the Chicago Convention and has been prepared in violation of the guidelines contained in the ICAO Document Number 9756 entitled 'Manual of Aircraft Accident and Incident Investigation,' ("ICAO Investigation Manual"). According to Annex 13 the first chapter of the final report, entitled "Factual Information," should contain only facts; while the analysis should be included in the second chapter entitled "Analysis." Thus, the Republic of Poland objects to the inclusion of the so-called 'psychological analysis' as facts in the chapter entitled "Factual Information." The psychological analysis presented in this chapter is not based on facts and is not supported by evidence. To the contrary, it is based on assumptions of highly speculative nature and stands in contradiction to the Cockpit Voice Recorder ("CVR") readings obtained by the Polish side. [9]

Furthermore, contrary to ICAO Investigation Manual, the analysis presented in the second chapter of the IAC Final Report is based on assumptions and hypotheses rather than facts and relevant evidence presented under "Factual Information." Hypotheses not supported by facts should have been abandoned. Unfortunately, the hypotheses based on assumptions were not abandoned, but instead were presented without conditional clauses as explained in the Polish Response below:

> *The analysis should examine the evidence already presented in Chapter 1**. Factual Information,** and develop circumstances and situations that might occur. This should lead to the formulation of possible hypotheses that should be discussed in the context of the evidence gathered. Hypotheses unsupported by evidence should be rejected.* ***Hypotheses*** *may not be treated as* ***certainties****, and their proof may not rely on* ***hypothetical evidence.*** *The listed items are presented as statements in the form of axioms; and conditional expressions, such as likely, possible, etc., were not used even once. The analysis contains many repetitions as well as references to many facts that were not included in the Factual Information**. It does not focus on the description of*

[7] See also:
http://wiadomosci.gazeta.pl/wiadomosci/10,114927,10009206,_Rosja_nie_przekazala_pelnej_dokumentacji_dot__sekcji.html
http://www.rmf24.pl/raport-lech-kaczynski-nie-zyje-2/fakty/news-parulski-kompletne-materialy-z-sekcji-tylko-18-ofiar,nId,319018

[8] Official Statement of the Polish Ministry of Internal Affairs from August 2011.

[9] See further discussion under 'Contradictions in the IAC Final Report.'

> *possible variants of the course of action and the assessment of the course of individual flight sequences. The activities of the Flights Management Group were not evaluated neither the impact of decisions taken outside the Flights Management Group on these activities. It mainly focused on proving that the activities of the controllers at the traffic control were correct.*[10]

While the analysis of the psychological pressure presumably exerted on the Polish pilots by third persons was based on speculations not supported by any evidence contained in the Factual Information of the IAC Final Report, the analysis of psychological pressure exerted on the Russian air traffic control team on the ground was entirely disregarded. The outside psychological pressure on the Russian Chief Air Traffic Controller ("CATC") – he was the only person suggesting that the Tu-154M aircraft should be sent to an alternate aerodrome, but he was overruled by a third person present in the Flight Control Tower ("FCT") – was not even mentioned. The IAC merely stated that the activities of the FCT controllers were correct.

The psychological pressure exerted by persons present in the FCT but not belonging to the Flights Management Group on the decision making process of the controllers was not evaluated by the Russian side at all. After the official presentation of the IAC Final Report, the IAC, under pressure from the Polish side, published additional transcripts from the recording that confirmed the Polish allegations that a third person not belonging to the Flights Management Group was present in the FCT at the Smolensk Severny Airfield on April 10, 2010.[11] The presence of a third person in the FCT represents an important piece of factual information that shall be included in any accident investigation report. A full analysis of the situation at the Smolensk “Severny” FCT should be carried out as part of the official IAC investigation in accordance with Annex 13. The analysis should evaluate the influence of that third person present in the FCT over the decision making process of the CATC.

Furthermore, the analysis presented in the IAC Final Report does not include any analysis of possible alternative courses of action and does not present any assessment as to the course of individual flight sequences. Such examination of alternative scenarios is indispensable in arriving at the final conclusion with respect to the causes of any crash.

The first chapter of the IAC Final Report emphasizes "psychological analysis" but does not address the history of the flight. According to Annex 13 and the ICAO Investigation Manual, the history of the flight should contain reconstruction of the significant portion of the flight path and location.

[10] The Polish Response in English, page 101.

[11] The fourth microphone track represents recordings from the open microphone at the Near Control Place of the Flight Control Tower.

Violation by the Russian Federation of Rules and Procedures of the Chicago Convention, its Annexes and ICAO Regulations

Flight Management Group

In the IAC Final Report the Russian Federation states that the Chief Air Traffic Controller Pavel Pliusnin and Landing Zone Controller Viktor Ryzenko[12] underwent medical examinations and were authorized to perform air traffic control functions by a doctor on duty at the medical point JW 06755. According to the statement given to the public prosecutors of the Russian Federation on 10 April 2010, the medical point was closed at that time. Both controllers decided themselves that 'there were no obstacles to fulfil their duties' judged on their wellbeing.

> In his statements made before the public prosecutor on April 10, 2010 between 2 and 4 PM, the Landing Zone Controller stated that the medical unit was closed at the time. The statement also contains the following text: *"I felt good on 10 April 2010. Around seven o'clock that day, Pliusnin and I underwent a medical examination at the Military Health Facility unit 06755: [* Translator's Note: **before the word "underwent" the word "did not" is added /** ~~**as a result of which it was concluded that I was in good health**~~ **/ Translator's Note: the deleted words are deleted in the original protocol],** *since there was nobody at the medical unit, but as I already stated, I felt good and nothing happened that would affect my ability to carry out my official duties."*

The Polish side pointed out that above statement is inconsistent with Par. 1.5.3 of the IAC Final Report entitled "Details of the ground crew." In the table regarding CATC under "Medical examination before shift" the following text appears: *At 05:15, authorised for air traffic control by the doctor on duty of Military Unit 06755*, while in the table regarding Landing Zone Controller under "Medical examination before shift" the following text appears: *At 06:50, authorised for air traffic control by the doctor on duty of Military Unit 06755.*[13]

The IAC disregarded the vital information as to the eligibility of the Chief Air Traffic Controller (CATC) to perform his duties at the airport that day. There is no record that the Air Traffic Controller was authorized to work in difficult meteorological conditions. During questioning by the IAC on 18 April 2010, the Air Traffic Controller admitted it was only his second time in this role ever at the Smolensk airport. His first ever shift took place on April 7. Within the 12 month prior to this accident, he had undertaken this role only nine times altogether. Again, there is no documentation provided as to whether the Landing Zone Controller had ever been trained or authorized to operate and supervise the Precision Approach Radar RSP-6M2 System in Smolensk.

A Third Person in the Flight Control Tower

The assessment of the role of Colonel Krasnokutsky at the Air Traffic Control Station in Smolensk during the landing of Tu-154M made in the IAC Final Report contradicts the evidence and therefore is disingenuous and wrong. According to the IAC Final Report Deputy Chief of

[12] CATC Assistant W. W. Lubancev was also on duty that day.
[13] Polish Response in English, p. 33.

Military Unit 21350 Colonel Krasnokutsky was delegated to the Military Unit 06755 "for the purposes of organizational control and assistance to the head of this Unit (who was not an aviation specialist) with arriving VIP flights on April 7 and 10. Actually this person from April 2 to April 10 was delegated the functions of coordination and control of all aerodrome services involved in accepting the arriving flights."[14] The Russian side further claims that:

> During the flights of 10.04.2010, according to the ATC recorder and his [Krasnokutsky] own explanations, this person was at the BSHP [ACT Near Control Place] from time to time (including the time of the accident) providing general coordination of various services, informing (by phone) of different officials on the actual situations concerning the accepted flights and weather conditions as well as coordination of alternate aerodromes. He was not directly involved in the air traffic control.[15]

The Polish side responded to the above statement as follows:

> According to the recordings (reel 9 channel 4) he [Colonel Krasnokutsky] took an active part in conducting radio communications, **despite several suggestions from the CATC to discontinue the approach of the Tu-154M aircraft by a clear command *"Allowing them till 100 m only, 100 m no questions"* and cuts off any further attempts of CATC to send the aircraft to a reserve aerodrome.**

Clearly Colonel Krasnokutsky was the most active member of the ground crew who talked directly to the Polish pilot and not only gave him detailed reports about the aircraft position and the situation at the airport but also made the critical final decision to bring the airplane down to 100 meters. According to the Polish side, the active role of Colonel Krasnokutsky in directing the flight that interfered with the decision of CATC requires a psychological evaluation of the situation at the FTC. The role of Colonel Krasnokutsky in the decision-making process not to send the Tu-154M aircraft to an alternative airport should be closely scrutinized. Numerous requests of the Polish side for information on the authorization of Col. Krasnokutsky to direct the flights at the ACT Near Control Place in Smolensk on April 10, 2010, were ignored by the Russian side.[16] Furthermore, the Russian side refused to provide any information about another person with whom Colonel Krasnokutsky had spoken via cell phone during the landing of the Tu-154M aircraft.

Rescue Operations

The Tu-154M plane crash-landed at 6:41:05 UTC, 400 hundred meters from the runway beam. As detailed in the IAC Final Report, the PCz-3 rescue service unit was on duty at the aerodrome all day on April 10, 2010. The unit was not summoned until 6.50 UTC. The information eventually reached the unit, but according to witness testimony, the unit initially headed in the opposite direction and had to do a U-turn, and they arrived at the scene 14 minutes after the accident took place. The Chief Air Traffic Controller also called units stationed further away in

[14] IAC Final Report, English translation, p. 128
[15] Ibid.
[16] The Polish Response in English, pp. 111, 113, 114.

the town. They arrived at the scene 44 minutes later. The Russians have not supplied any details of the rescue and medical operations or actions taken to extinguish fires at the accident scene.

In the IAC Final Report there is no information about the Medical Rescue Team present on the runway. It appears there was no such team at all. The Polish side points out that the first medical rescue unit arrived at the scene at 6.58 UTC, that is 17 minutes after the crash. Additional seven medical units appeared 46/43 minutes after the crash, despite the fact that the airport is situated within the city boundaries. [17]

In the opinion of the Polish side, search and rescue operations were grossly deficient. Victims were not provided with first aid on a timely basis. Initial reports from the crash scene indicated that 6 people on the crash scene showed signs of life. However no first aid was forthcoming in the first hour after the crash. As a result, no one survived the crash.[18] Bodies were not handled with dignity either at the crash scene or subsequently during the medical examination in Moscow. The bodies arrived in Poland for burial in locked coffins and the families were denied the right to open the coffins before the funerals. They were denied the right to perform their own autopsies. Permission was given to one family to exhume the body of a victim one and a half years after the crash; the autopsy performed on the exhumed body confirmed only 10 percent of the information from the Russian autopsy report.

Contradictions in the IAC Final Report

According to the IAC Final Report, "On 15 April 2010, upon request of the investigation team the An-26 t/n 147 of Military Unit 21350 aircraft laboratory made a test fly-around of the aerodrome navigation aids and lighting equipment. According to the results of the standard checklist for fly-around the mentioned navigation aids and lighting equipment were operative which was confirmed by the relative task sheets." Unfortunately, the Polish Accredited Representative and his advisors were not allowed to participate in any test flights. The analysis from the above mentioned test flight was not made available to the Polish side, either, despite many requests made pursuant to Article 5.25 of Annex 13. [19]

According to the IAC Final Report, the airport lighting system was working properly at the Smolensk Severny Airfield at the time of the accident. This conclusion stands in direct contradiction to statements contained in the report indicating that four out of eight rows of lights were turned off.[20] This information was revealed after a journalist from Belorussia made

[17] Ibid., pp. 60-64.
[18] See: Interview with Małgorzata Wassermann; See: http://www.youtube.com/watch?v=n7O1rbeQ8S4
[19] Polish Response in English, pp. 68-69.
[20] IAC Final Report, English translation, p. 55. The lighting equipment check also revealed that depending on the aircraft position and flight altitude the lights at a distance of 400, 700 and 800 m from RWY 26 can be shaded by the surrounding trees and bushes. It revealed that the lights of the second and third group (800 and 700 m from RWY 26 threshold) were missing, there were fragments of lights, and the power cable was torn off. The light filters on the firsts group lights (900 m) were broken, and only one of the three lights was operative.

public photos showing Russian soldiers replacing bulbs and fixing power supply cables only a few hours after the crash.[21]

According to the IAC, records from the radar video tape related to the landing of Tu-154M were missing. "During the pre-flight preparation on April 10 only the operability of the recorder was checked with no assessment of the record quality. The analysis revealed that the record was not made due to twisting (bridging) of wires between the video camera and the video recorder. After the wires were insulated the video recording was resumed."[22]

While reviewing the IAC Final Report, the Polish side noticed the information on the location of the blips of the aircraft on the glide path that must have come from the radar video-recording and inquired: "In light of the information about the missing video-recording of the process of approach to landing on the PRL indicator, the quotation of data related to the location of the blips of the aircraft on the glide path on the PRL indicator raises serious doubts."[23] Accordingly, the Polish side requested an explanation as to why a number of statements were made by the Russian side based on the reading from the radar video-recording if, allegedly, such recording was not made due to malfunctioning. The following statements made in the ICA Final Report illustrate this issue: “At 6 km the aircraft was actually higher than the glide path (considering the indication inaccuracy the aircraft blip was on the top boundary of the glide path tolerance area for glide path angle of ~3°10”)."[24]

Another statement also refers to the reading from the radar recording: “At 10:40:39 the landing zone controller informed the crew: '2, on course, on glide path'. At that time the aircraft was at a height of about 115 m with reference to RWY 26 threshold, which was almost corresponding to the missed approach height. Considering the indication inaccuracies the aircraft blip on the radar was almost at the lowest boundary of the glide path tolerance area.”[25]

The last sentence from the quote above is false in several important respects. First, it describes the aircraft blip from the radar tape that allegedly was not made. Second, the conclusion that the blip was “almost at the lowest boundary of the glide path tolerance” is grossly inaccurate considering that the margin of error in this instance is in the range of 600 percent because the tolerance level[26] at the distance of 2000 meters is 7 meters while the variance in this case is 42 meters below the gliding path, which amounts to 600% error.[27] Therefore the conclusion that the aircraft blip on the radar was “*almost* at the lowest boundary of the glide path tolerance area” in the situation where the margin of error represents 600% is grossly unreasonable and

[21] Polish Response in English, p. 70-73
[22] IAC Final Report, English translation, p. 73.
[23] Polish Response in English, pp. 57-60.
[24] IAC Final Report, English translation, p. 58. Similar statements that refer to detailed information about the location of an aircraft on the radar screen were made on pages 57-60 of the report.
[25] Ibid.
[26] The tolerance levels of the Russian Federation as provided by the Federal Aviation Provisions regarding State Aviation Flights ("FAPPPGosA") are presented on page 108 of the Polish Response.
[27] According to K. Matyszczak, at the glide path angle of 2°40’the error is 600 %. If the Russians insist on using the glide path angle of 3°10’ in this scenario the margin of error would amount to 1,000 %. (2000 distance +-6 m tolerance level, 60 m below the glide path: 60/6x100).

wrong. Similar misleading statements are made with respect to the entire description of the gliding path.[28]

A similar contradiction of fundamental significance to this investigation can be found with respect to the evaluation of Flight Control Group's actions and the subsequent impact of these actions on the occurrence of the aviation event. In the IAC Final Report, the Russian side concludes that the ATC group actions during the approach did not contribute to the accident. [29] The Polish side challenges this conclusion by pointing out that the aircraft crew was incorrectly informed that they were on the correct course and path position, when in fact the plane was above the path, and from 2.5 km to DS 26 was below the path by 2°40'[30]

The Russian side further concludes that the level of professionalism of the ATC group of Smolensk "Severny" Airdrome complied with the requirements. The Polish side objects to this conclusion by stating that the Landing Zone Controller had little experience working in this capacity. "He served in this function seven times in the last 12 months prior to the day of the disaster, of which only once in adverse atmospheric conditions. In his log book, there is no proper entry of being authorized to perform KSL duties at the Smolensk 'Severny' Airfield, which is inconsistent with FAPPPGosA [Regulations of the Russian Federation]."[31]

Another significant contradiction presented in the IAC Final Report relates to the analysis of the landing charts. The ICAO test flight was performed on March 15, 2010 at the Smolensk 'Severny' airport with the glide path angle of 2°40'. This glide path angle was used on the approach cards of Tu154M that were made available to the Polish side. After the accident, on April 15, 2010 the Russian side performed a second fly-around test at the Smolensk 'Severny' Airfield with the glide path angle of 3°12.3'. This second glide path angle was then selected for further calculations by the IAC. In its comments the Polish side points out that "there has been no analysis regarding the path of 2°40' (±30) valid for the approach cards. The explanation for changes in the path of 2°40' to 3°12.3' may be an attempt to explain the lack of response from KSL [Landing Zone Controller] to the deviation of position of Tu-154M aircraft from the valid glide path outside the permissible tolerance."[32]

The lack of response of the Landing Zone Controller to the wrong position with respect to the glide path is further justified by the Russian report as follows: "Thus, in the accident flight the landing zone controller saw the aircraft blip on the radar as being referenced to glide path of ~3°10'. The inaccuracy was about 0.5°, which is equal to the tolerance area range."[33]

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[28] IAC Final Report, English Translation, pp. 153, 154, 162,163,164

[29] IAC Final Report, English Translation, pp. 131-132

[30] Polish Response in English, p. 78. In relation to the 3°10' path cited by the Russian side, the aircraft intersected the path downward 3.3 km from the DS 26 threshold. DS 26 means the landing runway at the Smolensk 'Severny' airport in the direction 259 degree from east to west E-W.

[31] Ibid.

[32] Polish Response in English, p. 69.

[33] IAC Final Report, English translation, p. 123. Even at a glide path angle of 3°12' and taking into account allowable deviations from the beam runway centre, the aircraft would still have remained under the glide path, dangerously close to the ground, even if starting from a distance of 3000 meters from the runway beam.

According to the Polish side, the analyses of the glide path of 3°10' do not correspond with the valid and the published path of 2°40'. Furthermore, the information presented by IAC indicates that "**the aircraft blip was outside of the permissible error area of the linear deviation, even for the path of 3°10'**, which is not commented by the authors of the Report."[34] Calculations carried out by the Polish side that take into account the position of the aircraft in relation to the glide path of 3°10' show that "at a distance of 3.3 km to the DS26 the permissible error of linear deviation is ± 28 m, i.e. with a tolerance of 1/3 of the value that is below - 9.33 m, KSL should have informed the crew of its wrong position on the path. The conclusion is that even before reaching 3 km, KSL continued to inform the crew of their correct position 'on the course and path', when in fact the flight of the aircraft was lowering, increasing its vertical distance from the path."[35]

The IAC Final Report also includes the following statement: "At 10:39:10 the controller informed the crew that they were 10 km from the runway threshold and had reached the glide path entrance point." According to the Polish side "Informing the crew that at a distance of 10 km the aircraft had reached the glide path entrance point [means] that KSL guided the aircraft according to the approach glide path angle 2° 40' that was in force on cards."[36]

In analyzing the last phase of the flight, the IAC decided to change the glide path angle[37] from 2° 40' to 3° 12'. In fact, three different glide path angles, that is 2°40', 3°10' and 3°12,3 angles, are used by IAC throughout the report. According to the Polish side, in the text of the IAC Final Report "various angles of the descent path are referred to depending on the need for conducting the analysis, which gives the impression that the choice of path was dictated by the need to prove that on the radar screen the blip of the aircraft was always "on course". In addition to the doubts about the angle of the path of the radar landing system and the consistency of the analysis [. . .], there is a statement saying that in fact the flight crew performed the flight with an angle *of 5°."* Therefore, the Polish side was forced to ask: what angle of the path should be used here if even the path of 5° did not cause distress and reaction of radar guidance controllers.[38]

According to the Polish side, when using the gliding angle of 2°40' the airplane was on gliding path only at a distance of 10 km and later at a distance of 2.78 km while crossing the gliding path. At all other times in a distance from 9 km to 2.78 km from the landing beam the margin of error was in the range from 200% to 600%. At a distance from 2.78km to 1.48 km the airplane was below the gliding path with the error ranging from 300 to 600%.

[34] Polish Response in English, p. 69 and pp. 107-108.
[35] Polish Response in English, p. 121
[36] Polish Response in English, p. 115.
[37] As required by Article 115 of the Russian FAPPPGosA, "the location of the blip on the indicator corresponds to the position 'on the glide path' when the permissible error of linear deviation does not exceed 1/3 of the linear dimensions of the zone of tolerance."
[38] Polish Response in English, p. 123.

Even assuming the incorrectly applied gliding path angle of 3°10' used by the IAC, the airplane would have remained 75% of the time outside the gliding path. At a distance of 3 km from the airport beam it was dangerously below the gliding path, exceeding the accepted margin of error[39] by 10% at 3.0 km and by 1000% at 2.5km to 1.95 km. The FCT reacted only at 1.45 km from the airport beam where the accepted error exceeded 1600%. [40]

At the point where the crew crossed 'level 101' the FCT did not alert them about the problem but instead reassured the crew they were on course and on the correct path, misleading the crew about the actual distance from the runway beam. The FCT has not corrected this misleading information for at least 30 seconds.

Although the aircraft was for 29 seconds outside the zone – below the gliding path[41] – the Landing Zone Controller did not give the crew information about its incorrect position relative to the path, still incorrectly informing them of the correct position 'on course and on path.'[42] The command “Level 101” (10:40:53.4) was given about 14 seconds after informing the crew of the aircraft Tu-154M that they were “two on course on the gliding path” (10:40:39,9),[43] The command “Level 101” was issued by the Landing Zone Controller too late, when the aircraft's marker already disappeared from the indicator (according to testimony).

In violation of article 2.25(h) of Annex 13 to the Chicago Convention, the Accredited Representative of the Republic of Poland was not allowed to inspect the expert report on the activities of the group directing flights on 10 April 2010.

In the IAC Final Report, the IAC states that the Polish side did not submit required documentation regarding the April 8, 2010 incident when the Tu-154M aircraft entered in contact with a bird. However, in fact the Polish side had submitted to the IAC all required documents regarding this incident, and the IAC had in fact received full documentation of the event.[44]

Tampering with Evidence

On September 8, 2011, Prof. Kazimierz Nowaczyk testified before the Polish Parliamentary Committee for the Investigation of the Smolensk Crash ("Polish Parliamentary Committee") that the satellite pictures of the accident site taken by the GeoEyes Satellite show that the ground

[39] According to the regulations of the Russian Federation.
[40] Polish Response in English, p. 108.
[41] Ibid. In accordance with Article 115 of FAPPPGosA, the permissible error of linear deviation does not exceed 1/3 of the linear dimensions of the zone of tolerance.
[42] In addition, FTC communications with the crew from the very beginning provided distance information with 600-700 meter error. Thus the crew thought they were closer to the airport than in fact they were.
[43] Polish Response in English, p. 121. In fact the plane was already on the glide path at an altitude of 17 m in relation to the threshold of DS 26.
[44] Polish Response in English, pp. 48-50. The Polish side provides a detailed list of all the documentation submitted in connection with the bird incident.

position of the plane's left horizontal stabilizer changes between April 11 and April 12, 2010.[45] The horizontal stabilizer was moved about 20 meters closer to the main part of the wreckage between April 11 and April 12. The IAC Final Report in its analysis includes a new position from April 12 as the original position in which the horizontal stabilizer purportedly was found.[46]

In October 2010 the Polish press published photos showing the process of demolition of the wreckage of the Tu-154 M airplane at the Smolensk 'Severny" Airport. Some of these photos are shown in Attachment 1 herein. A video footage of the Russian workiers destroying the wreckage of the Tu-154M airplane immediately after the crash, i.e. on April 11,2010, is shown in a documentary "Akcja specjalna" by Anita Gargas.[47]

Manipulation of Data

"Go-around"

The Russian conclusion that the pilot was under pressure to "to continue descent in the conditions of unjustified risk with a dominating aim of landing at any means"[48] is supported by the following statement: "At a distance of 1200 – 600 m from the point of first impact during the actual descent with the vertical speed of about 8 m/sec, the CVR recorded three reports within 8 seconds about the height of 100 m, equal to the established minimum descent altitude. [. . .] The PIC's [Pilot in Command] decision to go around did not follow."[49]

However, the Polish reading of the CVR revealed that upon passing an altitude of 100 m the PIC ordered the 'go around.' The co-pilot confirmed this command.[50] Thus, contrary to the Russian statements and conclusions, the decision to 'go around' was made at the right time because the Pilot-in-Command ordered aborting the landing at an altitude of 100 meters, as required by standard airport landing minimum.[51]

"He will go crazy"

The 'psychological analysis' presented in the IAC Final Report is based on the transcripts from the Cockpit Voice Recorder ("CVR") allegedly containing statements made by the crew members during the last 30 minutes before the crash. These transcripts, prepared by the IAC in

[45] Kazimierz Nowaczyk, "Are MAK and KBWL LP reports trustworthy?" as retrieved on line on November 7, 2011 at http://mdabrowski.salon24.pl/340718,prezentacja-ekspertow-przed-zespolem-parlamentarnym-08-09-2011.
[46] IAC Final Report, English translation, p. 87
[47] See: http://www.youtube.com/watch?v=Oeel3QTC8Ac Breaking windows is of added significance because in searching for evidence of explosion the glass is the best material for testing.
[48] IAC Final Report, English translation, p. 183.
[49] IAC Final Report, English translation, Article *3.1.59*
[50] The Polish Response in English, p. *142.* The transcript of the cockpit recording with the command 'go around' was published in August 2011. See http://mswia.datacenter-poland.pl/protokol/Zalacznik_nr_8_-_Odpis_korespondencji_pokladowej.pdf
[51] Polish Response in English, p. 139.

May and June 2010, contain lines which do not appear on the CVR copy in the possession of the Polish side.

In the IAC Final Report, the Russian side twice included the following statement allegedly uttered by a member of the Polish crew: *'He will go crazy.'*[52] This statement has been used to prove that there was pressure to land coming from a third party, specifically from the Main Passenger. This third party pressure on the PIC to land is presented in the conclusions of the IAC Final Report as one of the main causes of the Smolensk Crash.

According to the Polish side, the words 'he will go crazy...' were not uttered by the crew of Tu-154M. In the opinion of the Polish side, the CVR tape was altered to imply such a statement. Both the Polish Investigation Committee and the Polish Prosecutor's Office publically concluded that no such statement was ever uttered by any member of the Polish crew.

The Polish side unequivocally rejected any suggestions that the crew might have undergone any psychological pressure from a third party to continue descent. According to the Polish Response, "the record of the on-board voice recorder located in the cabin of the aircraft Tu-154M (CVR) did not reveal any passage confirming the attempt to influence the actions of the crew by third persons, including the Main Passenger."[53]. This position was once again confirmed by the spokesman of the Polish Main Military Prosecutor's Office on April 19, 2011 as follows: "In the documents gathered thus far there is no evidence whatsoever indicating that the crash of TU-154 was caused by undue pressure exerted on the crew of TU-154."[54]
In the transcript from the CVR published by the Polish side in August 2010 at the point 10:38:00 (06:38:00 UTC) where according to the Russians the statement "He will go crazy..." was uttered, no such statement is listed. Between 10:37:22 a 10:38:30 the transcript lists the counting by the navigator of a distance to the airport beam, and the following statement not included in the Russian transcript: "Tell that one more mile to the center remains." [55]

The Russian side ignored the above Polish objections and used the psychological hypothesis supported by false evidence as the basis for their conclusion.

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[52] IAC Final Report, English translation, p. 103: *A number of phrases recorded by the CVR (at 10:30:33 "Pan Director": "So far no President's decision what to do next" and at 10:38:00 unidentified voice23: "He'll go crazy if…") show that the PIC was in psychologically difficult position. It was obvious that in case of missed approach and proceeding to the alternate airdrome the PIC could have to face negative reaction of the Main Passenger. As the phrase "He'll go crazy if…" was said during the final turn the PIC could have changed his previous decision and decided to take the risk of descending lower than the decision altitude hoping to finally establish visual contact with the runway and land. See:* http://www.mak.ru/russian/investigations/2010/files/tu154m_101/finalreport_eng.pdf
[53] The Polish Response in English, p. 66.
[54] See: http://www.tvn24.pl/-1,1699665,0,1,matprokuratura-nie-ma-zadnego-dowodu-na-naciski,wiadomosc.html
[55] Odpis Korespondencji Pokładowej, Załącznik 8, p. 118, as posted on November 7, 2011 at http://mswia.datacenter-poland.pl/protokol/Zalacznik_nr_8_-_Odpis_korespondencji_pokladowej.pdf

Topography of Terrain

The IAC Final Report ignores the evidence from the CVR which proves that the Tu-154M crew knew the topography of the terrain in the vicinity of the Smolensk 'Severny" airport very well. The IAC completely disregarded clear statements made by the Polish pilots regarding the lowering of the terrain before the airport beam that appear in the CVR transcript. According to the transcript, the Co-pilot reminded the Pilot in Command of the lowering of the terrain less than two minutes before the crash and 5 km before the airport beam — that is 3 km from the lowering of the terrain to which the Pilot in Command responded: "I know."[56] In direct contradiction to this evidence, the IAC concluded that the pilots lacked the knowledge of the terrain topography. Such conclusion also disregards the information that the PIC landed at the Smolensk airport as co-pilot three days before the crash.

TAWS and FMS

The Terrain Awareness and Warning System ("TAWS") that was on board of Tu-154M was to prevent "Controlled Flight Into Terrain" accidents. The Tu-154M was also equipped with the Flight Management System ("FMS"). Both these instruments were manufactured by the Universal Avionics System Corporation based in the USA. The reading of TAWS and FMS recordings was performed by the manufacturer with the participation of the NTSB and FAA.[57]

In the IAC Final Report only the time information from the TAWS and FSM recordings was provided. This information was referenced in Footnote 26 as follow: "Considering the difference in time zones three extra seconds were added to TAWS time to be synchronized with the FDR."[58] TAWS and FMS readings were not part of the analysis presented in the IAC Final Report except for the reading of the last FMS showing the position of the airplane, its altitude and speed. The original TAWS and FMS readings made by the American side were disclosed by the Polish side on July 29, 2011, more than six months after the publication of the ICA Final Report.[59] A careful analysis of this data shows that the entire computer system of the Tu-154M was shot down at an altitude of 15 meters from the ground and at a distance of 50 meters from first signs of the contact with the ground. This issue was not discussed at all in the IAC Final Report. Furthermore, as pointed out by Dr. K. Nowaczyk, TAWS No 38 was not listed in the IAC

[56] Ibid. CVR transcript: S-Drugi pilot, A-Pierwszy pilot: 6:40:09.0 S- (Tam jest obniżenie ?).6:40:12.0 S- (Tam jest 6:40:12.5 obniżenie ?), Arek. 6:40:13.0 A- (Wiem,) 6:40:13.5 zaraz, 6:40:14.0 będzie. 6:40:14.5 6:40:15.0 Tam, to jest taki ... ?) There were five lowerings of the terrain on the path. See: http://m.naszdziennik.pl/zasoby/smolensk/ZalacznikiDoRaportuKoncowego.pdf

[57] TAWS serial number 237 and FMS serial numbers 291, 1577.

[58] IAC Final Report, English translation, pp. 105-107.

[59] Final Report of the Polish Commission for the Investigation of the State Airplane Accident Number 192/2010/11 of the airplane 154M nr 101 on April 10,2010. See: http://m.naszdziennik.pl/zasoby/smolensk/RaportKoncowyTu-154M.pdf. According to this data submitted by the NTSB the recording took place at 6:41:02 with the speed of 270 km/h at the point N54°49.483' E032°03.161' at the corrected altitude of about 15 meters.

Final Report at all. This TAWS indicates a different direction of the plane in the last fragments of the flight than assumed by the IAC.

Bad Faith

The Russians accuse the Polish side of not conducting airport inspections before the April 10, 2010, whereas the Russian Federation refused the Polish side access to the airport for inspection purposes. As a result of the Russian refusal, there were no Polish inspections held at the Smolensk 'Severny' airport before April 10, 2010.

The Russian side accuses the Commander-in-Chief of the Polish Air Force of being present in the cockpit at the time of the crash and having alcohol in his blood. The comment about the alcohol in the blood of the top general of the Republic of Poland that are not supported by adequate evidence (see: Footnote 6) are of disparaging character, especially when disclosed by the IAC for the first time as the key evidence of the Polish guilt at the press conference announcing the results of the IAC investigation.

R. R. Yesayan as a member of the technical team for the investigation of the Smolensk Crash stated publically that the Tu-154M airplane was equipped for idiots.[60]

Credibility of IAC

On the basis of the Presidential Order of the Russian Federation dated April 10, 2010[61] a State Investigation Commission was appointed to investigate the causes of the Tu-154 aircraft accident. The Investigator-in-Charge for the State Investigation Commission was the Prime-Minister of the Russian Federation Vladimir Putin. From April 10 to April 13, 2010, the investigation at the accident site was supervised by the Head of the Flight Safety Agency of the Russian Armed Forces. During this three-day period the following individuals played the key role in the investigation into the Smolensk Crash: Jurij Czajka Prosecutor General, General Raszyd Nurgalijev, Gen. Sergei Ivanov and Gen. Sergei Shoigu.[62]

All these officials are closely connected with the Russian security forces, the ultimate successors to the executioners of the Katyn victims. General Shoigu is well known for his comments on the Katyn crime and the historiography of World War II. In March 2009, Shoigu publically stated: "Our parliament should pass a law that would envisage liability for the denial of the Soviet victory in the Great patriotic War." General Shoigu further stated that the legislation would also seek to punish eastern European or former Soviet states that deny they were liberated by the Red Army. "**The leaders of those countries could be banned from Russian soil. Then the**

[60] Scion, "Zbrodnia Smolenska," p. 73.
[61] Order of the Head of the State Commission № 225-рп.
[62] Alexander Scios, 'Zbrodnia Smolenska; Anatomia Desinformacji. " Wydawnictwo Antyk, Warszawa 2011, p. 70.

presidents of certain countries denying this would not be able to visit our country and remain unpunished,"[63] Shoigu said.

On April 13, 2010, the general supervision of the technical investigation and coordination with the interested Russian and foreign parties was delegated to A. N. Morozov, the IAC Chairperson who also acted as Deputy of the State Investigation Commission.

On April 13, 2010, Morozov issued an order concerning the technical investigation in cooperation with the Russian Ministry of Defense.[64] By this order the following investigation team was appointed: Investigator-in-Charge **A.N. Morozov**, Vice-Chairman of IAC – Chairman of the AAIC; Deputy Investigator-in-Charge**: V.V. Sorochenko**, Deputy Head of the Flight Safety Agency, Russian Armed Forces, Deputy Investigator-in-Charge: **G.A. Yachmenev,** Vice-Chairman of the AAIC, IAC; Members: 1) **A.V. Alekseyev**, Deputy of the Chief Engineer, Aviakor Ltd. Aviation Plant, 2) **R.T. Yesayan**, Deputy General Director – Head of flight-research center, State Research Institute for Civil Aviation; 3) **N.M. Kozhevnikova**, Consultant, AAIC, IAC; 4) **M.S. Kulikov**, Chief ATC instructor, Air Navigation Institute; 5) **V.G. Nekrasov**, Vice-Chairman of Airdrome and Equipment Certification Commission. IAC; 6) **A.V. Roldugin**, Vice-Chairman of the AAISTSC, IAC; 7) **A.A. Talalakin,** Deputy of the Chief Constructor, Tupolev Design Bureau.

Several members of the above listed technical investigation team acted in direct conflict of interest with respect to the investigation into the Smolensk Crash. The most alarming is the presence on the investigation team of a representative from the Aviacor Ltd. Aviation Plant in Samara ("Aviacor"). In his capacity as Deputy Chief Engineer of the Aviacor, Alekseyev was directly responsible for the technical reliability of the airplane under investigation because at the time of the crash the Tu-154M airplane operated under valid warranty from Aviacor. Just 2.5 months before the crash, Aviacor performed major warranty work on this particular Tu-154M. Similarly, the presence of Talalakin, a representative of the designer/manufacturer of the airplane under investigation, raises serious doubts as to his impartiality. Another member of the investigative team named Niekrasov serves as Deputy of the Airport Certification Committee of the IAC. In this capacity, Niekrasov issued IAC certificates for many airports including the appropriate support in Sochi where on May 3, 2006, an Armenian plane crash-landed in bad weather. According to IAC, the pilot was at fault. Armenia protested this finding, pointing out that the pilot did not receive appropriate support from the FCT.[65] Another member of the investigative team R.T. Yesayan publicly declaring that "they were seeking the ground and there was plenty of bodies." With respect to the assessment of the work of the Smolensk flight control team, Yesayan did not object to a statement by one of his experts that even "a chimpanzee could be seating and mumbling" in the Flight Control Tower.[66] Another member of the investigative team M.S. Kulikov as an expert on Civil Air Traffic Management had no

63 See: Adrian Blomfiled, "Russian to outlaw Criticism of WWII tactics." The Telegraph, March 5, 2009, as retrieved on line on November 7, 2011 at http://www.telegraph.co.uk/news/worldnews/europe/russia/4943814/Russia-to-outlaw-criticism-of-WWII-tactics.html.

64 Order №8-498/p

65 Scios, Zbrodnia Smolenska, p. 72.

66 Ibid. p. 73.

appropriate qualifications with respect to air traffic management at the military airport like the 'Severny' Airfield in Smolensk.

The Interstate Aviation Committee that conducted the investigation into the Smolensk Crash acted from the position of conflict of interest in many important respects. The IAC, as the state regulator, certified the designer of this plane, its manufacturer, its servicer, the manufacturer of engines, and the servicer of the engines. The average fee for the certification is in the range of three to five million dollars.[67] Accordingly, the IAC — as the agency responsible for quality control of the airplane, aircraft manufacturer, and the safety procedures at the airport — acted in direct conflict of interest in the investigation into the crash of the Tu-154M airplane in Smolensk.

The Tu-154M that crashed in Smolensk had experienced a major technical problem on landing in Haiti in January 2010. The IAC, as the agency overseeing Aviacor, took no action with respect to this incident.[68]

Findings of the Polish Parliamentary Committee for the Smolensk Crash Investigation

According to the IAC Final Report, "the aircraft collided with the birch with a trunk diameter of 30–40 cm, which led to the left outer wing portion of about 6.5 m ripped off and intensive left bank. In 5–6 more seconds, inverted, the aircraft collided with the ground and was destroyed."[69] Accordingly, the encounter with the birch that resulted in the loss of a part of the wing caused the plane to invert and crash. This scenario was illustrated by an animation demonstrating IAC's interpretation of the last moments of the airplane before the crash. This animation was not supported by any scientific or forensic analysis of the crash scene, but rather represented a work of art contrary to basic law of physics.

On September 8, 2011, Dr. Wieslaw Binienda, an expert on high-energy impacts on materials and structures testifying before the Polish Parliamentary Committee, proved beyond a reasonable doubt that the collision with the birch could not have ripped the outer portion of the wing from the aircraft. While applying all parameters presented in the IAC Final Report in a rigorous finite element analysis, he demonstrated through a virtual experiment that the high-energy impact causes the wing to act like an ax, cutting the birch with only a small amount of damage to the edge of the wing but without any damage to the lifting area of the wing.[70] These findings directly challenged the scenario presented by the IAC.

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[67] Per estimates of Michail Markov, the IAC received from Aviacor close to $ 25 million from certification fees. The credibility of the IAC is also challenged in connection with a major malfunction of the TU-154M airplane that took place in January of 2010 in Haiti. The IAC as the agency overseeing Aviacor took no action with respect to this incident.

[68] Scios, "Zbrodnia Smolenska" p. 75

[69] Findings No. 3.1.69 and 3.1.70, IAC Final Report, English translation, p. 180

[70] Wieslaw Binienda, "Czy brzoza w Smolensku mogla zlamac skrzydlo Tu-154M 10 kwietnia 2010 roku?," as posted on Novembr 7, 2011 at http://mdabrowski.salon24.pl/340718,prezentacja-ekspertow-przed-zespolem-parlamentarnym-08-09-2011

However, even if the scenario presented by the IAC is assumed whereby the birch rips off 1/3 of the length of the wing at the height of 6.5 meters from the ground, the ripped-off portion of the wing could not have fallen as far as 111 meters from the birch where it was found. The aerodynamic simulation shows that the ripped off part would crash to the ground no further than 12 meters from the birch at velocity of 100 km/h. The inspection of the crash scene showed that the ripped off portion of the left wing was found leaning against the trees 111 meters from the birch and on the right side of the path of the airplane. The observed damage to the trees and to the ripped off segment of the wing excludes the possibility of a velocity of 100 km/h at the point of impact.

In order to explain the final location of the ripped off segment of the wing, the aerodynamic analysis of free flow of this segment was conducted, requiring that the landing spot of the segment correspond with the location at which it was found.[71] The results obtained indicated that the separation from the wing at velocity of 80 m/s could only happen at a distance of 70 meters from the birch and 26 meters from the ground. Thus, the aerodynamic analysis demonstrates that the IAC's assumed path of 6.5 meters above the ground was 20 meters too low and the location of the separation of the wing was off by 70 meters.

Furthermore, the IAC's conclusion that the airplane traveling at the height of 6.5 meters from the ground could overturn is also impossible because the span of the wing is 19 meters. After presumably losing 6.5 meters on the birch the remaining 12.5 meters of the wing was still longer than the distance to the ground of 6.5 meters. Thus, the IAC conclusion that "after intensive left bank" the airplane "inverted" is obviously impossible and erroneous.

So possibly in anticipation of this problem, the IAC version of the crash assumes that the airplane after losing 1/3 of the wing is gaining height. This scenario also poses a fundamental problem because after losing a significant part of the wing, the airplane would be unable to gain any height. Accordingly the scenario presented by the IAC is incorrect in all fundamental aspects and thus impossible.

Conclusion

The Russian Federation violated Article 5.1 of the Chicago Convention that provides: 'State of Occurrence shall use every means to facilitate the investigation,' and Article 5.2 that establishes the responsibility of the state conducting the investigation. Furthermore, the Russian Federation violated the rights of the Accredited Representative of Poland and his advisors pursuant to Articles 5.24 and 5.25, the rights of Poland as the state having suffered fatalities or serious injuries to its citizens pursuant to Article 5.27, and the responsibility of the state conducting the investigation in preparation of the final report under Article 6.1. In conducting the investigation the Russian Federation violated the rules and procedures of Annex 13 to the Chicago Convention and the ICAO Investigation Manual.

[71] The analysis was based on solid-fluid interaction and high velocity aerodynamic drag laws of physics

Except for minor corrections, the Russian Federation ignored the Polish Response to the draft IAC Final Report. The wreckage of the airplane and the black boxes remain in the possession of the Russian Federation. The Polish Prosecutor General was not granted access to evidence in violation of Article 5.2 of the Chicago Convention.

In light of all the above, it is imperative that the international community muster the will to form an impartial international committee for the investigation of the Smolensk Crash.

Appendix 1: Destruction of Evidence

Photos Taken at the Scene of the Smolensk Crash on April 11, 2010[72].

[72] Photos from "Misja Specjalna" by Anita Gargas.


HITACHI


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TV