



THE MH17 REPORT: READING BETWEEN THE LINES

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Executive Summary

On October 13 the Dutch Safety Board issued the final technical and safety report on the causes of the crash of flight MH17 on July 17 2014. The report was issued following an 18 month-long international investigation, which included inputs from a wide variety of experts and states, including Russia. The DSB report was made in compliance with the ICAO provisions for investigations of international air disasters and Dutch law. The report is comprehensive, conclusive and final.

The report investigated all realistic hypotheses for the crash, and concluded that the only technically feasible cause was the detonation of a Russian-made surface-to-air missile of the types BUK 9M38 or 9M38-M1, but in either scenario using a modern Russian-made warhead of the 9N314M type.

Based on the distribution of damage on the aircraft's body and wings, and inside the cockpit and cabin, the report was able to pinpoint the angle of ascent of the missile toward the aircraft, and reverse-engineered its possible trajectories. Using sensitivity scenarios, the report proved that the BUK could have been launched only from within a specific polygon of approximately 320 sq. km., located in separatist-held territory at the time of the incident.

While the DSB did not have the mandate to assign liability for the downing of flight MH17, a comprehensive analysis of the report leaves little doubt that the culprits were either pro-Russian separatists, or Russian armed forces acting in separatist-held territory. This explicit conclusion, likely with further details as to the actual culprits, is expected to be contained in the report from the parallel criminal investigation of the Joint Investigation Team, anticipated in early 2016.

The DSB report forebodes a heavy reputation cost for Russia, which looms as "the culprit that should not be named" in the DSB report. There is no scenario in which Russia can emerge unscarred from the pending JIT report. Even under the least incriminating scenario, Russia will be proven to have permitted the smuggling of powerful and advanced surface-to-air weaponry into Ukraine.

By allowing the reader to read between the lines, but without explicitly connecting the dots as to the culprits, the DSB report appears to provide a window of opportunity to Vladimir Putin to negotiate a "lesser evil" exit for Russia. Such exit may involve cooperating with the JIT, surrendering information Russia has on the physical perpetrators, and pinning the blame on the pro-Russian separatists and/or "rogue" forces within its military. In providing this exit, the West appears to recognize the political and military risks that will arise if Russia loses the deterrent of its reputation cost.

So far, the Kremlin does not appear to ready to take up this extended olive branch. Instead, it has tried unsuccessfully to sabotage the investigation's progress, and to obfuscate the report's conclusions and finality. This strategy of obfuscation is targeted primarily at the domestic electorate as well as at the sympathetic (or naïve) global consumers of Russian disinformation. The Kremlin knows, however, that this smokescreen is ineffective where it counts: with its international political counterparts, and with Russia's business and political elite.

We deem it to be a plausible scenario that after a flurry of additional histrionic indignation and

obfuscation, the Kremlin will initiate – or accept – negotiations with the West on recognizing partial blame, under terms that will allow it to perpetuate the fragile consensus of the Russian elite. The gains from such a transaction to the West will be mainly in the preservation of a soft deterrent from overly aggressive Russian actions in the near future.



Introduction

On October 13, 2015, the Dutch safety Board (DSB¹) published its final report on the causes for the crash of flight MH17, as a result of which all 298 persons on board were killed. This long-awaited report was in fact one of two simultaneous international investigation into the circumstances that led to the downing of Malaysian Airlines' Boeing 747 on July 17 2014, in the area of the village of Hrabovo, Eastern Ukraine. DSB's mandate was to investigate the incident from a technical/safety aspect, and to establish the specific cause for the mid-air disintegration of the aircraft, as well as to confirm the causes and circumstances of the death of the passengers and crew. This mandate is a legal requirement both under Dutch law and under international ICAO rules which require that causes of fatal incidents with commercial airlines be thoroughly documented and investigated, for preventive, insurance, liability and other purposes². The dual-purpose mandate was broadened further due to the public expectations in the Netherlands, which had lost 196 citizens in the tragedy. The DSB undertook to answer whether Dutch air-safety and security services had possibly failed, and what lasting lessons can be derived for the future for safe route selection over territories of military unrest.

A parallel investigation is carried by the so-called Joint Investigation team (JIT) from a criminal-law perspective. The JIT, consisting of prosecution and/or intelligence teams from 5 countries³, has the mandate to identify the perpetrators of the hypothetical criminal act, if such is established. Based on the findings of the DSB, there appears no doubt that a criminal act has taken place.



Method of work

Under Dutch law, the DSB is completely independent, not only in the process of drawing its conclusions but also in designing the method – and the scope - of its investigation. Thus, the ultimate responsibility for the design and outcome lies with the DSB, and its final conclusion are not subject to a judicial review.

At the same time, the DSB has to comply with a high standard of transparency, both under ICAO regulations and under Dutch law, both of which prescribe an iterative consultation process, permitting key interested parties to voice their critique, or contribute additional data that they deem relevant for the investigation. This consultation aspect provides the international aspect of DSB's investigation, unlike the parallel JIT investigation which is truly a collaborative process among five independent national teams.

The DSB appointed a Guidance Team of 8 advisers (experts in physics, aerodynamics,

aviation and international relations) and a Project team of 11 full-time investigators. The teams developed a comprehensive data-gathering procedure, including actual investigation fieldwork at the crash site and on the repatriated body remains and aircraft wreckage, as well as on third party data provided from aviation authorities, airline operators, Dutch security and military intelligence services, and dozens of other sources.

Aside from analysis of the evidence collected, significant data requests and inputs from third parties were: radar and satellite data request from Ukraine and Russia; analysis of public information from traditional and social media prior to the crash, analysis of public political statements by Ukraine and Russia in relation to assessing the risk of a potential incident; and classified data from security services. All interested parties were also publicly invited to provide any data that they considered relevant.

The DSB conducted the data gathering and assessment in an iterative procedure. As new data was collected, stake-holders were invited to review it and share their findings with other stake-holders and the DSB team. Four such meetings were held, with a broad group of stake-holders (including Russia) participating in 3 of them, while the last, fourth meeting, including only representatives of the working team, the parallel criminal-investigation team, and Dutch security service representatives. Based on the data gathered and analyzed up until the end of May 2015, a preliminary, draft report was compiled and circulated to all stake-holders for comments and critiques. All input was critically assessed by DSB, and were either incorporated in the final report, or rejected with detailed explanations of the reasons thereto.

The final report consists of 835 pages, including appendices. It is thorough, non-qualified in its conclusions, and final. No further international investigation will be made into the technical aspects of the crash.



Key conclusions in relation to the cause of the crash

The main finding of the report was the specific cause of the crash: the detonation of a 9N314M warhead, carried by either a 9M38 or 9M38-M1 BUK, near the cockpit of the plane while it was at cruising altitude at 10,000 m. over Eastern Ukraine. The main evidence for this conclusion were the following established facts:

- (a) The location of the detonation was proven to be outside and to the left of the cabin. This was proven by at least two methods: first, the sound peak of the explosion was captured on three cockpit recorders, each with a microscopic difference in timestamps; this permitted a triangulation and approximate location of the source of the sound outside and to the left of the cockpit. Second, the vectors of propagation of the holes created by the fragments pointed to an external source, approximately at the same location as the audio triangulation suggested. By means of this sub-conclusion, the DSB rejected all alternative hypotheses involving and internal explosion inside the airplane, or cannon-fire from another plane.
- (b) The damage pattern on the outside of the cabin and the spread of the holes made by fragments both outside and inside the cockpit lead to conclusion of a particular volume of payload (shrapnel). Several independently conducted computer simulations proved that the shrapnel (fragments) load must have been no less than 70 kg in

order to create the particular pattern of damage observed. This finding precluded the hypothesis of an air-to-air missile (AAM), as those carry warheads with payload no heavier than 40 kg.

- (c) Finally, the specific type of BUK warhead was established thanks to the discovery of a unique kind of fragments – in the shape of a bowtie – among the plane wreckage and in the bodies of at least two crew members. This particular shape is used only in one type of BUK warhead: 9N314M. This was a crucial finding, as it rejected the main Russian hypothesis that the airplane had been shot down by *an older warhead* which is no longer in active use by the Russian military. The 9N314M can be carried by either the older 9M38 (which Russia claims is now disused,) or by the newer 9M38-M1 modification. Thus, the DSB report made allowance for – and investigated slightly different trajectories – for both carrier missile types.
- (d) Additional analysis of the injuries sustained by three crew members in the cockpit; the mechanics of the aircraft disintegration, and the explosive residues and paint found on the metal skin of the cockpit, were all compliant with the 9N314M hypothesis, but not with any different realistic hypothesis, including use of multiple weapons.

The second most crucial finding in relation to the weapon used was the launch location. Although the DSB did not have the explicit mandate to point to the origin of the weapon of destruction, the data gathered during the investigation of the cause, and the simulation models applied, allowed it to compute conclusively the possible area of origination of the BUK missile. This was necessary as a reality check on the plausibility of the BUK scenario.

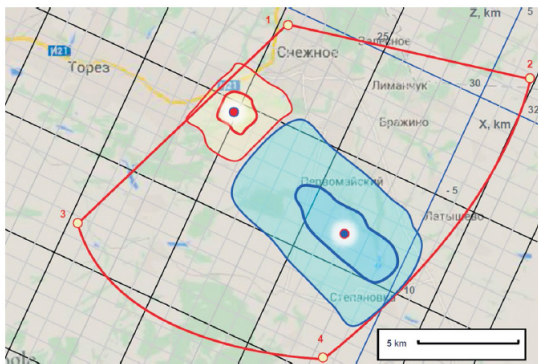


Figure 64: Visualisation of JSC Concern Almaz-Antey fly out simulation results. Note: The red line, numbered 1 to 4, marks the initial area identified by the NLR fly out simulation; an area since updated. (Source: JSC Concern Almaz-Antey)

The reverse-engineering of the trajectory was based on the computed angle of ascent of the BUK's warhead (based on the damage dispersion analysis), and technical data about the two possible BUK types, including weight, aerodynamics, and proximity triggering mechanisms, which were provided by the Russian state-owned manufacturer of BUK SAMs, Almaz-Antey. Depending on which of the two BUK missiles was used, the area of launch was computed to be slightly different, but in both scenarios within a polygon of 320 sq. km (approximately 15 km by 20 km), south of the village of *Snizhne (Сніжне)* in Eastern Ukraine, and stretching to about 5 km of the border

with Russia.

The DSB report did not explicitly identify under whose control the territory of the feasibly launch location was. Maps of the conflict published hours before the crash by different parties (both official Ukrainian, and from sources sympathetic to separatists) showed most of the polygon as having been under the separatists' control.⁴



Other key findings in the DSB report

The DSB included extensive analysis and conclusions about whether the airspace over Eastern Ukraine should have been closed prior to the crash, and if so, whose responsibility such decision should have been. The DSB concluded that indeed, a prudent risk assessment should have resulted in closure of the airspace to civilian aircraft, as sufficient (while not always confirmed) information was available about the possibility of separatists obtaining control over powerful SAM's in the weeks prior to the crash. Furthermore, DSB concluded that under international law, the state of Ukraine should have implemented the closure, as it has sovereignty its own airspace. DSB however assigned similar responsibility to all parties involved in route selection, including Malaysian airlines and all other airlines that had chosen to fly over warring territory. This conclusion was challenged by both Ukraine and the Dutch government, both of whom argued that Ukraine had been diligent in closing airspace up to an altitude of 9700 m, given that all prior evidence of separatists' anti-aircraft activity had been limited to altitudes below 3000 m.

Further significant conclusions dealt with the cause and circumstances of the death of crew and passengers. The report concluded that three crew members (two pilots and the purser) had died from the direct penetration by hundreds of steel fragments (shrapnel), while the remainder of crew and passengers had died from decompression and related causes following the disintegration of the plane in mid-air at 10 km altitude. The report assessed that the passengers are likely to have died within seconds of the detonation, thus limiting the duration of suffering by the victims (an aspect of importance to relatives and of relevance to insurance and tort claim procedures).

The report also addressed issues of specific importance to Dutch administrative procedures, and criticized the amount of time it had taken for the Dutch authorities to release the definitive passenger list to victims' relatives.



Russia's criticism of the DSB Report

Russia is the only stake-holder that has criticized the report in relation both to the investigation process, and to the conclusions about the weapon type and launch location. Although Russia has expressed different and sometimes contradictory positions before and immediately after the report was published, the following three main criticisms appear to be the official Russian position, as presented during RosAviatsia's press-conference on October 14th 2015, and in official comments from the Russian Ministry of Foreign Affairs.

- In relation to the process, Russia has formally criticized the DSB of isolating Russia from the investigation process, and ignoring Russia's input.
- In relation to the launch location, Russia has accused the DSB and its third-party experts to have miscomputed the trajectory of the missile, due to wrong assumptions about the location of the detonation, and in result, about the angle of approach. Russia insists the missile approached the plane *perpendicular* from the left side, and not from front and from the left. Russia also insists that a correctly re-computed trajectory

places the launch location near the village of *Zaroshenske*, approximately 20 km west of the polygon pinpointed by the DSB report.

- In relation to the weapon type, Russia insists that the missile was an older model (9M38), which Russia says has not been in use in its army since 2011. Russia bases this claim on the "insufficient" number of fragments of the bow-tie variety, while – according to Russia, nearly ¼ of all fragments found should have been in the bowtie form, had the missile been the newer 9M38N1 model. Russia does not offer an alternative explanation of how *any* bowtie-shaped fragments were found among the wreckage and in the crew's bodies, but implies that they may be from a different weapon such as AAM, or even planted after the crash.



Russia's involvement in the investigation

The DSB report shows that despite Russia's claims of isolation, it was actively involved in the data-gathering, participated in the three interim-progress meetings held by the DSB, and provided a total of 74 written comments in the consultation process between the draft and the final report. 19 of these comments resulted in amendments of the report's text, with varying degrees of significance. This puts the Russian Federation at the top of the "amendment contributors" list, both in absolute number of inputs and as a relative success rate. In comparison, the Netherlands provided 38 comments, with zero success in influencing the DSB to change the draft text, while Ukraine provided 46 comments, and was able to achieve largely stylistic changes in only 3 cases.

Russia repeatedly brought up its two main criticisms – of trajectory and weapons type – and each time received detailed responses and rebuttals from the DSB team. In addition, Russia attempted to make the report less deterministic by claiming there was contradicting evidence for several alternative hypotheses. To this goal, Russia even changed its position on issues it had previously subscribed to. One key example is the early acceptance by Russia of a SAM as the working weapon-type hypothesis. Russia adhered to this hypothesis at the first and second progress meetings (February and May 2015), differing from DSB's conclusions only in the simulation of the BUK missile trajectory. Russia's delegate dexpert – the state-owned BUK manufacturer Almaz-Antey – had presented an alternative model that pinpointed a launch location in territory under disputed control, near the village Zaroshenske.

However, after DSB presented stakeholders with its draft report, which included a rebuttal of Almaz-Antey's alternative trajectory model, Russia retreated from its earlier position. During the third and final progress meeting, held August 11-12 2015, Russia surprised the joint team with an unannounced presentation of a "*Russian ballistic study*", which concluded that the existing evidence, collected by DSB, was insufficient for a definitive conclusion as to the type of weapon. In particular, Russia presented the results of an "*empirical experiment*", conducted by Almaz-Antey on bowtie shaped fragments, which allegedly proved that one fragment found by the Dutch team and weighed by the Russians during the first meeting, was too light (at 5.5 g), compared to those test-shot by Almaz-Antey through aircraft-type metal plates in their empirical test (weighing at 7.2 g). The Russian ballistic presentation concluded that based on the evidence, *Flight MH17 might have been shot down by either a BUK SAM, and if so by an older model not containing bowtie fragments; or – equally likely – by an air-to-air missile (AAM).*

The DSB team rejected the new Russian data as unverifiable, unannounced, and conducted outside of the official investigation process. The DSB stated that it is improper to compare ground-based, stationary experimental results to expected outcomes at an altitude of 10 km, with different air-density and at a cross-speed of missile and aircraft approaching 5,000 m/s.

From the content of the consultations before the final report was issued, it appears that Russia attempted to remove all traces of its prior endorsement of the ground-to-air hypothesis. Russia insisted on a complete removal of all references to the Almaz-Antey presentation made during the second meeting. It stated that the Almaz-Antey report and trajectory computation had had the relevance of a tentative "what-if" scenario, and were not an official position of Russia.

Another key concern for Russia was the inclusion in the draft report of the results of a second trajectory simulation conducted by Almaz-Antey at the request of the DSB. This simulation, based on the actual impact dispersion data compiled by DSB's experts, led to a nearly identical missile launch site as the simulations ran by the 3 other parties engaged by the DSB – all inside the 320 sq. km polygon south of the village of Snizhne. Almaz-Antey presented this trajectory simulation during the second progress meeting in early May.

Russia asked DSB to remove the results of this Almaz-Antey simulation from the final report, but DSB declined.

Russia's attempts to substantiate a missile trajectory leading to Zaroshenske (approx. 20 km to the West of the polygon, computed by the 4 other simulations) was essential to the official Russian narrative. Four days after the MH17 was shot down, the Russian Defence Ministry [published satellite imagery](#), allegedly taken by a Russian satellite on the day of the crash, which purported to show two BUK units in the immediate vicinity of Zaroshenske. The authenticity of the imagery has been disputed both by Ukraine and by independent researchers and journalists. Furthermore, Russia's Novaya Gazeta and other journalists interviewed residents of the village of Zaroshenske (currently – and at the time of the interviews - under separatist control), who stated that there had been no Ukrainian military presence in or around the village around the time of the crash. No local resident had seen or heard evidence of artillery or missile launches in the area, and no physical traces (such as scorched grass) had been spotted in the area after the crash. Cartography experts interviewed by Novaya Gazeta alleged that Zaroshenske, at the time of the crash, was "[6-7 km within rebel territory](#)" Yet, keeping consistent with its early narrative, Russia has insisted that the only conceivable trajectory of a BUK might have come from a narrow square near that village.



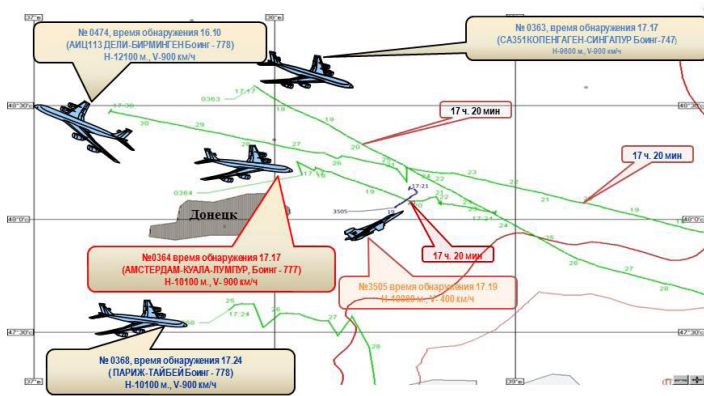
Missing radar data

By the time of the third progress meeting, Russia re-introduced the "air-to-air" missile hypothesis. This hypothesis had been introduced publicly during the Russian MoD press-conference on July 21st 2014, when Russia declared that it had radar data proving that a Ukrainian SU-25 fighter had been flying up towards the altitude of the MH17 airliner at 17:20 local time.

" Russian system of air control detected the Ukrainian Air Force aircraft, purported Su-25, moving upwards toward to the Malaysian Boeing-777. The distance between aircrafts was

3-5 kilometers.”

Diagram shown by Russian Defense Ministry on July 21 2014



Russia claimed that the alleged Su-25 flew without active radio self-identification, thus it could be registered only by its primary radar system. At the press-conference, the MoD displayed a video-recording of a radar screen, purported to show the Ukrainian fighter.

From the DSB final report it becomes evident that when Russia re-introduced the air-to-air hypothesis, it no longer referred to the alleged presence of a Ukrainian fighter near

the Malaysian Air Boeing. Furthermore, Russia declined to provide DSB with the raw data from its radar locator sites near the Ukraine border, claiming it was not obliged to retain it.



Analysis of Russia's reaction to DSB investigation

The Russian reaction to the DSB report (both before and after its publication) implies that Russia has switched from an offensive mode to a damage-control mode. Up until the issuance of the draft report in June 2015, Russia's official hypothesis was that MH17 was downed by a Ukrainian AAM (the primary hypothesis pursued by Russia's chief investigatory agency SledCom), or by a Ukrainian SAM (the fallback hypothesis pushed by Almaz-Antey). After the June draft DSB report was presented, Russia has adhered to an agnostic hypothesis, claiming that the DSB report is inconclusive and tarred by the rejection of Russia's "evidence", but without offering a concrete *main alternative hypothesis*. Instead, Russia has rejected the DSB report as politically motivated and biased, and requested a resumption of the investigation by a new international consortium, with Russia being a participant of equal status.

Insofar as Russia still brings up the "Ukraine-origin hypothesis", it clearly is intended for a domestic audience. Russia is well aware that without providing actual raw radar data and original, verifiable satellite imagery, and without inviting international experts to its empirical experiments, all of its claims of alternative hypotheses lack the necessary seriousness to be accepted by the DSB team, or by the international political mainstream. Furthermore, it would be naïve to expect that the Kremlin earnestly believes that there exists a procedure under which the completed investigation may be reopened, at that with Russia becoming a full-fledged investigator – while Russia does not fall into any category of an "interested party" under ICAO rules. The DSB report is final, and no international body, or stakeholder other than Russia, will deviate from long-established procedures under ICAO rules.



Russia's reactions to the DSB report imply a complex, three-tiered strategy, targeting three different audiences.

First, Russia's arguments for a "Ukrainian link", amplified by the mainstream Russia media and pro-Kremlin spokespeople abroad, are so homeopathically substantiated that they seem to be meant only a domestic audience, plus a limited international audience sympathetic to Russian messaging.

The second audience is the international political establishment; Russia's political counterparts. Conscious of the paucity of its arguments, Russia's strategy vis-a-vis this audience is not to overturn mainstream political opinion, or to destroy credibility in the DSB report. Instead, it is to keep its options open for as long as possible, and to be prepared to accept any outcome with minimum damage - but only if and when it gets proven beyond any reasonable doubt.⁵

The third audience is the broadest; it comprises the passive news consumers, both internationally and domestically. By creating distracting narratives and offering alternative, confusing and unverifiable evidence, as well by claiming unique expertise⁶ not available to others, Russia tells this audience that the truth is too complex to be known. A passive news consumer is an appropriate target for this narrative, as it reduces the requirement to process complex information and form opinions.

This choice of this particular strategy is informative. It implies that Russia has sufficient hard evidence that it the source of the missile was not Ukrainian. If it had evidence of a Ukrainian link, Russia would have supplied its available data to the DSB, as it would only gain from such move. It would be naïve to assume that Russia did not have solid surveillance over territory stretching only 50 km from its border, in a theater of war with high stakes for Russia.

But even if Russia had no hard evidence, but believed that pro-Russian separatists and/or Russian military were not involved, it still would have opted for a different strategy than obfuscation. Instead, it would have followed consistently its offensive line, accusing Ukraine's military, knowing that there can never be evidence to the contrary discovered. The fact that this offensive strategy was replaced by obfuscation and agnosticism, implies that Russia is well informed that the missile was not launched by Ukrainian forces. In this scenario, and given that the top separatists' military commanders from July 2014 are currently in Russia, it follows that Russia is well informed of who and where actually launched the BUK missile.

What Russia does not seem to know, however, is how much the West knows, and/or how much the West is willing to make public. Russia's disorientation has possibly led it to some hectic, highly risky steps.

Since at least the beginning of September 2015, the DSB investigators working on the MH17 report, and several of their external contributors, have been subjected to highly sophisticated hacking attacks. These involved phishing attempts based on fraudulent web servers impersonating popular storage services such as Google Drive, and VPN and FTP servers seemingly belonging to the DSB IT infrastructure. According to leading cyber-security firm TrendMicro, the hacking activity accelerated at the end of September. On September 28 2015, a fake server was created mimicking the secure FTP server of the Dutch Safety Board. The next day, a fake Outlook Web Access server was set up to target an important DSB partner in the MH17 investigation. The goal, based on the method of attack (phishing),

was to acquire log-in credentials of people involved with the investigation, most plausibly in order to obtain advance information on the contents of the upcoming report.

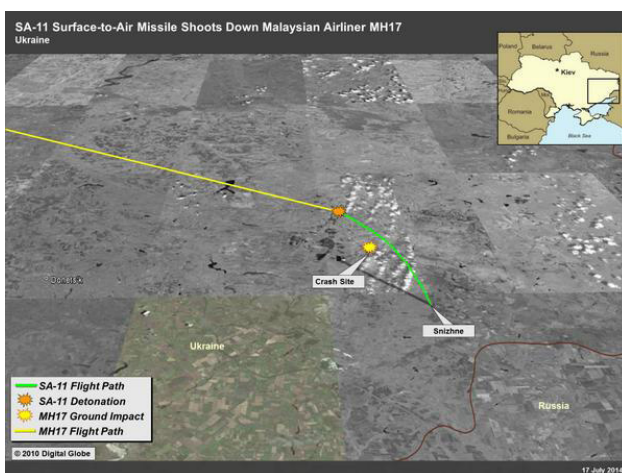
According to TrendMicro, analysis of the source code behind the phishing sites suggests the hacker group is part of a long-running sophisticated espionage operation called Pawn Storm. Previous hacking attempts by the same group have been registered on targets belonging to NATO and the White House, and have targeted opposition figures in Russia and, in the past, Ukraine. TrendMicro and other IT security experts are convinced that the activities of Pawn Storm originate in Moscow⁷.

The Dutch cyber-police was alerted of the sophisticated phishing attempts in early September, and measures were taken to prevent unauthorized access to the DSB infrastructure. The DSB confirmed that no breach of data has occurred. It is possible, however, that rather than blocking access to any data, the Dutch cyber police, working alongside DSB's management⁸, may have provided access to "decoy" data. One hypothesis is that access to such (incomplete, or false) data, may have caused the hurried and misguided press conference by Almaz-Antey, presented several hours before the publication of the DSB report and containing false prediction about what the report would contain. An alternative hypothesis is that Russia *expected* to be able to obtain data through the hacks, but was not able to in time, and had to resort to the ad-hoc Almaz-Antey presentation based on a best-guess as to the contents of the DSB report.



DSB Report: Between the Lines

Several elements in the DSB report suggest that the Dutch investigators, and their international partner services, know more about the specifics of the missile launch circumstances than is disclosed in the report. One such element is the reference to classified information that was provided to the DSB team to inspect but without permission to cite it. Such information, the report said, was provided by the Dutch military intelligence and general intelligence services, and included information gathered by these two agencies and information from partner security services. This information "*confirmed the report's findings about the causes of the crash*", but due to national security considerations, could not be included in the report.



From a sub-report on the knowledge of the Dutch security services, included in a different section of the report, however, it becomes evident that the Dutch services had no substantial classified information or data-gathering operations in the area of the crash. Thus it is most likely that the information referenced was provided by foreign services. The only realistic source is the United States satellite surveillance operation in the area. The United States have not kept it secret that they have access to proprietary satellite surveillance in the area, as evidenced by a series of released satellite imagery purporting to show Russian GRAD rocket launches into Ukraine⁹. Russia has also

tactically accused the US is not disclosing satellite data on the MH17 (although it has effectively

not disclosed its satellite data, either).

In all likelihood, it was namely US satellite imagery that was presented to the DSB management, and gave them sufficient comfort to proceed with the definitive conclusion about the missile type and launch location. Shortly after July 17th 2014, the US Embassy in Kiev released a stylized image of a trajectory of the suspected BUK, originating from the area of Snizhne, precisely within the polygon later modelled by DSB.

The question arises why the US – and its allies – are withholding such vital data they are in possession of. There are three plausible hypothesis.

First, the data may in fact have already been submitted to the JIT, but in the interest of the criminal investigation, it will not be disclosed until the completion of that line of inquiry. Indeed, withholding similar “smoking gun” data is not unusual in criminal investigations, especially in ones of such cross-border complexity and possibly involving state-sponsored actors.

A second hypothesis is that the US does not wish to release such data into the public domain, for fear of exposing its data gathering methods to its enemies. This may be linked, for example, to the potential use of LEO (low-earth orbit) reconnaissance satellites above or adjacent to Russian territory.

A third hypothesis may be that the US and its allies are tactically deferring disclosure of such incriminating data, to allow Russia one last exit from the highway to a rogue state. If Russia cooperates with the West, and concedes to partial acceptance of blame, it may be spared the full public disclosure and its political consequences. Such cooperation may be embodied by delegation of guilt to pro-Russian separatists and to certain rogue elements in the Russian military, without whose involvement the separatists could not have realistically implemented the BUK launch. While this would not exculpate Russia in full, it would give the Kremlin a deniability legend, which is mandatory for retaining the delicate consensus of the Russian elite, and for saving face on the international stage.

The West’s interest in such hypothetical self-censorship is solid. A substantiated disclosure of the Kremlin’s involvement in the shoot-down of a passenger plane would create unquantifiable risks for international security. On one hand, Russia will lose any incentive to moderate its expansionist, retaliatory or subversive activities outside its boundaries, which are currently still mitigated by its desire not to pay a high reputation cost. On the other hand, such development would lead to collapse of the internal consensus of the elite within Russia, which may lead to destabilization in an unpredictable political direction. Neither of these prospects are acceptable to the West.

A possible nod towards this scenario may lie in certain unnecessarily open-ended conclusions in the DSB report on MH17. For instance, while the polygon computed by DSB’s experts clearly points to territory controlled by pro-Russian separatists, no explicit reference to that fact is made in the text. When DSB director Tjibbe Joostra was asked if the missile launch area was controlled by separatists, he confirmed. When pressed further to confirm that, therefore, pro-Russian forces must have launched the missile, he declined to do so. When confronted by a reporter who said “*But does 2 + 2 not make a 4?*,” Joostra replied: “*Yes it does, but sometimes, someone else needs to make that calculation.*”

A hint in the same direction is the fact that immediately after the publication of the report,

Dutch prime-minister Mark Rutte requested an urgent conversation with Sergey Lavrov. Significantly, this initiative was disclosed only by the Russian side, as part of the standard Russian diplomatic plaintive narrative about the West “that tries to boss Russia around”.

We believe this third hypothesis to be the most plausible. In its scope, an additional unknown variable is whether Russia will agree to such hypothetical political trade. Obviously, whether a similar transaction is desirable for the Kremlin depends on the balance between the domestic political cost of admitting that it has misled its population for nearly two years, and the reputation cost of disclosure of incriminating information.

What the West may overestimate, however, is the discount factor that the Kremlin places on international reputation cost. Additionally, that reputation cost may be brought down to zero by extraneous events, such as for example the Russian intervention in Syria, laden with risks for massive civilian casualties.

Thus, if Russia does accept a hypothetical deal, it will be to preserve the fragile consensus of the domestic political and business elite, rather than to preserve its international reputation. The Russian media coverage in the wake of the DSB report was substantially more objective than the defensive, patriotic press coverage following the downing of MH17 in July 2014. While this is far from a symptom of a dramatic collapse of the consensus of the elite, it does signal a tangible threat to Putin’s regime, in case the final report contains strong incriminating evidence. What has become clear now is that the Kremlin no longer has control over the mainstream commercial media and certainly not to the extent required to limit the diffusion of objective information.

In any event, under this hypothesis, these are decisions that the Kremlin must make in the next several months, if not weeks, in order to prevent the JIT investigation from crossing the point of no return.



New international Security Risks in the context of the DSB report

The most tangible international security risk would arise if Russia ultimately ignores the window of opportunity to reconcile itself with the mainstream international perception of liability for the MH17 tragedy. In case of ultimate disclosure in the JIT report of a proven, direct, government-sponsored Russian link to the downing of the airliner, Russia will be condemned by the international community, and will lose many if not most of its remaining political allies. This will relegate Russia to a super-rogue-state. Having lost the deterrent of its reputation cost, Russia will begin to behave as any rogue state, with all the security implications, primarily for its European neighbors.

Thus, the West has a vested interest in invoking Russia’s cooperation in the period between the DSB and the JIT report, and will continue to offer negotiation opportunities. Russia, however, will prevaricate negotiations until it is certain that the West owns the “smoking gun” evidence, or its Russian counterpart, the *Chekhov Gun* that is missing from the wall. In a classic prisoner’s dilemma situation, however, the West will not be willing to give up its information advantage over Russia, before it knows that Russia is motivated to compromise.

This leads to an additional new risk, exemplified by the recent accelerating electronic warfare attacks by Moscow-linked groups. It is unreasonable to assume a non-government

origin of such sophisticated and structured electronic espionage initiatives as *Pawn Storm*. Given the high political stakes involved for Russia, and the relatively low reputation cost of further disclosures of failed hacks, we predict that there will be an aggressive escalation of electronic espionage attempts, both on DSB and JIT infrastructure, and on EU and US government servers. We expect that individual attacks on perceived collaborators of the respective investigating bodies, such as investigative journalists or third-party experts used by the investigators, will be particularly emphasized due to the lower protection level of their IT infrastructure. This risk vector, with all its possible collateral damage, will continue to accelerate until either the publication of the JIT report, or the political transaction between Russia and the West, if such is realized earlier.



Risks for EU, Ukraine and Bulgaria

In addition to heightened risk of electronic espionage, the period between the DSB and the JIT reports carries a significant risk of effective disinformation among passive news consumers in Europe, which will be directly proportionate to the level of pre-existing openness to Russian narratives in the respective markets.

This risk arises both as a result of the Russian active obfuscation/complexity strategy, and as a side-effect of the intentional implicitness of the DSB report. The latter effect is important to expand on. By pursuing higher policy goals, for example fire-proofing the report from accusation of anti-Russian bias, and, plausibly, facilitating negotiations with Russia, the DSB has given space to Russia-sympathetic media to misinterpret its findings as "open-ended" in general. Furthermore, where DSB did not have to pursue similar higher-policy objectives – for example in concluding that Ukraine and Malaysian Airlines share moral responsibility for the route selection – it has permitted a distorted representation of Ukraine being assigned the blame for the crash.

None of this is true. A systematic review of the DSB report shows that it is conclusive and final, and only leaves a few final dots to be connected by the reader. Furthermore, it shows that the European political establishment, represented by the Dutch government, stands firmly behind Ukraine and discards any assumption of guilt-by-association. Furthermore, a careful review of the report's appendices shows that the EU establishment is explicit about Russia's active aggressive role in the Donbass conflict.

None of these important findings find place in the post-report narratives that have permeated the information space of Russia-influenced or Russia-sympathetic environments, such as Bulgaria. Instead, mainstream media in such markets multiply the message of "inconclusiveness" and "blame assigned to Ukraine". These distortion effects are also felt in the more detached media environments in Europe, in countries that did not have casualties in the MH17 downing, or which feel less threatened by Russia, for example Austria.

The same direction of distortion, albeit for different reasons, is observed in media in Ukraine. The Ukrainian press (and the political establishment) expected more conclusive language in the report, and has been disappointed that it is referenced as bearing some moral responsibility, but the true culprit has been left unnamed. Ukraine's media and political intuitive reaction has been to criticize the DSB conclusions, and to report on them in a fatalistic manner. This, however, is an approach that misses the Report's point and misinforms the electorate,

in a way inadvertently similar to the disinformation in the Russia-sympathetic markets.

The disinformation risks can be mitigated via a more aggressive myth-busting and counter-disinformation activity, where an appropriately leading role should be undertaken by the newly created StratCom External Action Task Force at the European Commission.

REFERENCES

¹ An independent Dutch investigative agency, created by means of a special law in 2005 following several high-casualty fires in the Netherlands, and entrusted with a mandate to investigate emergencies and calamities of significant public interest.

² Typically the country where the incident took place must lead such investigation; however, Ukraine delegated this right and obligation to the Netherlands, as the country with most nationals killed in the crash.

³ The Netherlands, Australia, Ukraine, Malaysia, and Belgium – the latter being a second EU member as a formal requirement under EU law.

⁴ http://www.imbf.org/tools/info/img/map_ato_17-07-2014.jpg, <http://voicesevas.ru/yugo-vostok/2931-voyna-na-yugo-vostoke-onlayn-17072014-hronika-sobytiy-post-obnovlyaetsya.html>

⁵ Almaz-Antey's CEO Jan Novikov implicitly confirmed this during the October 13 press-conference, by saying "Russia's main strategy is to keep all scenarios possible, and to choose at the last moment based on the most objective evidence available"

⁶ Jan Novikov, October 13: "We did not invite foreign experts to our experiment, because we are the only experts in this area"

⁷ [Operation Pawn Storm: Using Decoys to Evade Detection](#)

⁸ Mr. Tjibbe Joustra formerly served as National Counter-terrorism Intelligence Coordinator

⁹ <https://twitter.com/GeoffPyatt/status/493400686269566976/photo/1>