

Malaysian airport security, trade secrets, sabotage?

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The Chinese criticised Malaysia for not responding swiftly during the initial stages of the problem, because it is now apparent that there were obvious loopholes in security checks in Malaysia airport. A commercial aircraft was missing on 8th March on its journey from Kuala Lumpur in Malaysia to Beijing in China.

Chinese holidaymakers

One newspaper noted that:

'The Chinese society is no longer in the era of poverty, life is no longer cheap. We demand safety of food, air, water as well as transportation. So we pay great attention to the safety situation in holiday destinations in other countries which are popular among the Chinese.'

A commentary in the *People's Daily* overseas edition, noted that there were different nationalities on board the plane and "humanity shares the same fate". The newspapers questioned security at the Kuala Lumpur International Airport in Malaysia after it was discovered that two passengers boarded the plane with stolen passports, raising questions about security at the Kuala Lumpur International Airport in Malaysia after it was discovered that two passengers boarded the plane with stolen passports. *China Business News* said in an article on 16 March 2014 that the persons holding the two fake passport should have been stopped at the immigration counter and *China Daily* said that this fact should serve as a reminder to the whole world that security can never be too tight, at airports in particular noting that it is easier for passengers with stolen passports to pass through custom checks in South-east Asian airports.

Either pilot or hijacker could have switched off airplane signalling system

A former 777 pilot related how easy it is to switch off most of the systems that track an aircraft. Most pilots would know how to do it - though traditional radar would still pick up the presence of a plane. Most systems, like the transponder, the radio, the ACARS etc, have what is effectively an 'off' switch.

Every electrical system in a commercial aircraft has a circuit-breaker. The pilot has a panel of hundreds of buttons above his head; one of which can switch off the system. Such circuit breakers are necessary to isolate electrical systems if they overheat or catch fire.

An orange warning light would have appear on a screen in front of both pilot and copilot, so that it is highly unlikely one pilot could switch off the system without the other noticing and sending for mayday help.

Added to which, the pilot may not know about every system the aircraft has on board which sends signals to satellites – an explanation for pings received hours after the aircraft was known to be missing with the 139 person on board- despite everything else possibly being switched off. The idea of hacking into an aircraft's systems has also been mooted, but is not apparently likely on an aeroplane such as this because the manufacturers say they have put in a lot of work to stop this happening.

No passenger made a call home

If this aircraft flew low over land, and people on board knew there was a problem, why did no-one try to make a phone call? Investigators are trying to obtain more radar and satellite data from any of the countries that Malaysia Airlines flight MH370 may have passed over, with its 239 crew and passengers.

The leaders of several Asian countries have been briefed by the Malaysia government in what acting Transport Minister Hishammuddin Hussein has described as a new phase of the search.

He said:

'From focusing mainly on shallow seas, we are now looking at large tracts of land, crossing 11 countries, as well as deep and remote oceans.

Malaysian officials are receiving search help from 25 countries including Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Pakistan, Bangladesh, India, China, Myanmar, Laos, Vietnam, Thailand, Indonesia, Australia and France. They are also asking countries to provide assistance in the search for the plane, including satellite data and analysis, ground-search capabilities, and maritime and air assets. After checking their radar recordings, Pakistani civil aviation officials said they had found no sign of the missing jet. Malaysian national police chief Gen Khalid Abu Bakar said background checks had been requested on all passengers aboard the plane, but that so far nothing suspicious had been reported - though some intelligence agencies still had to respond. The police are also reportedly looking at the family life and psychological state of the plane's pilot, Zaharie Shah, and co-pilot Fariq Abdul Hamid, and searched their homes on Saturday. The two pilots had not asked to fly together, Mr Hishammuddin confirmed at the news conference. Officers spoke to relatives of the pilot and experts are examining the pilot's personal flight simulator. Police have visited his house for a second day. Because no passenger made a call home, coupled with the evidence of aircraft pings 5 hours later may mean the plane had crashed somewhere on land.

The passengers

153 Chinese including a delegation of artists

38 Malaysians including an official who was due to start a job at a branch office in Beijing

2 Iranians using false passports in a bid to seek asylum in Europe

3 Americans including an IBM executive who had recently relocated to Kuala Lumpur

2 Canadians returning to Beijing after a business trip

7 Indonesians,
6 Australians,
5 Indians
4 French
2 from New Zealand and
2 from Ukraine;
1 from Russia,
1 from Taiwan and
1 from the Netherlands.

The pilot

Those who know Mr Zaharie, 53, insist he is a normal family man, reports the BBC's Jonah Fisher in Kuala Lumpur. With 18,000 hours of flying experience, he is a self-confessed "aviation geek" and proudly posted pictures online of the flight simulator he built at home. As well as the crew and passengers, police are investigating the engineers and other ground staff who may have had contact with the aircraft before take-off. It has also emerged that a team from British telecommunications company Inmarsat team arrived on Saturday in Malaysia.

A team of French investigators is in Malaysia to help with the search, the French transport ministry has said in a statement. They will join members of the United States National Transportation Safety Board already in Malaysia.



Communications sabotage?

The Malaysian authorities confirmed their suspicions that the airplane was hijacked. Malaysian Prime Minister Najib Razak announced on Saturday that the plane's communication systems had been deliberately cut before it was diverted from its route. According to satellite evidence, the Boeing 777 could have continued flying for a further seven hours after its last radar contact, he said. The flight left Kuala Lumpur for Beijing at 00:40 local time (16:40 GMT) on 8 March and disappeared off air traffic controllers' screens at about 01:20. An extensive search - involving 43 ships and 58 aircraft - since the plane disappeared has proved fruitless.

To put paid to any blame on terrorism- the British Boeing firm and the British Rolls Royce?

Malaysian Airlines share price have plunged in value with the news of this missing Boeing 777 and its 139 passengers. However, Rolls Royce share and Boeing shares have not suffered at all during this time.

Known vulnerabilities of Boeing 777 aircrafts

The British Rolls Royce Engine has much to answer for. The several aircraft accidents of the past have demonstrated that the Boeing 777 has known vulnerabilities to mid-air break-ups and '*drastic loss in cabin pressure because of cracks in the fuselage*' and even as late as six months ago, the Federal Aviation Administration ('FAA') gave a warning to all airlines to 'detect and correct cracking and corrosion in the fuselage skin' of all Boeing 777 airplanes by April 2014 because failure to do so would leave the airplane vulnerable to a rapid decompression and loss of structural integrity. Boeing retorted that this directive did not apply to the Malaysian Airlines planes.

Also, there were, since 2007, known civil liberties issues with the progress of developments in communications within the communications industry. The arms firm **BAE Systems** (The Boeing Company [NYSE; BA])¹ announced in 2007 its laboratory success in efforts to use jet fighter data radios as Wi-Fi IP networking kit. The then current NATO standard for military data exchange was *Link 16*, a protocol set up originally to let military ships and aircraft exchange their tactical battle plots in near real time. Thus, for instance, patrolling fighters could see all the aircraft in a given stretch of sky as viewed by an AWACS radar plane - without ever needing to turn on their own radars, giving their position away. The set-up of the *Link 16 protocol* makes it difficult to send ordinary IP traffic. But IP dominance in the Internet and other popular applications

¹ BAE Systems is the premier transatlantic defence and aerospace company delivering a full range of products and services for air, land and naval forces, as well as advanced electronics, information technology solutions and customer support services. With more than 100,000 employees worldwide, BAE Systems' sales exceeded \$28 billion in 2005.

means that this capability would be useful. What's more, Link 16 UHF radios are quite capable of 1 Mbit/sec throughput; but just 115 kbit/sec of this - or even less - is normally used.

The situation isn't unlike that of most homes before the broadband revolution which had a copper wire, which we used to carry a fairly limited voice or dial-up-data channel to and from the exchange. But much of the wire's potential capacity was unused.

In 2006 BAE had a flight test of their new Flexible Access Secure Transfer (FAST) software modification for the MIDS LVT-3 radio box mounted in the F-15 fighter airplane. They showed that F-15s could use their existing Link-16 boxes to send IP data alongside the Link-16 channels. However, Link-16 ships, aircraft and HQs across NATO use a variety of different radios and so it was necessary to widen the compatibility. BAE and partners SRA claimed success in doing this, announcing successful lab hookups between a variety of Link-16 boxes modified with FAST-compatible software. Undoubtedly, BAE's share price must have enjoyed the successful news.

Soon after this news, American firm AMETEK Aerospace & Defence launched a new global website: www.ametekaerodefense.com to feature information on the full line of products and services offered by AMETEK's various business units, re-designing the website to bring together AMETEK's aerospace and defence related business units within a single, easy-to-navigate website for worldwide customer base. AMETEK is a leader in highly engineered engine and aircraft monitoring systems, aircraft data management systems, cooling and ventilating systems, environmental control systems and variety of subassemblies for aerospace and military customers as well as a leading provider of maintenance, overhaul and repair services. Among its businesses and brands are Advanced Industries, Aircontrol, Airscrew, AMPHION, B&S Aircraft Parts & Accessories, Gulton Statham, Hughes-Treitler, Rotron, Southern Aeroparts, Total Air Probe and Turbo-Mass. AMETEK Inc. a leading global manufacturer of electronic instruments and electromechanical devices has annualised sales of several billion US dollars.

Rolls Royce plum contract

Later BAE announced Scott O'Brien as president of BAE Systems' Products Group business, based in Jacksonville, Florida, US and shortly after this, it was announced that Rolls-Royce was selected to develop technology for the ADVENT programme, the next-generation propulsion system for the US Air Force.

Money –the ruler? Anti-trust gone too far?

If this airplane has disintegrated in mid-air due to the known problem, which BAE as a disclaimer put out a warning to fix the problem, the proving of this will cause billions of pounds to be lost by Rolls Royce if its share price were to suddenly fall. Strangely, Rolls Royce share have not been affected, even though a terrorist group has said it had nothing to do with the tragedy.

In July 2007, the Law Society of England and Wales issued a Practice Note '*The conflicting duties of maintaining client confidentiality and reporting terrorism*'. The statement said that the right of persons suspected of a criminal offence to communicate in confidence with their legal adviser is a fundamental aspect of their right to have a fair trial.

However, the Law Society said that it also recognises that everyone has a public duty, reinforced by the notification offence provisions under consideration in this Practice Note, citing *R v Central Criminal Court ex parte Francis & Francis* [1989] 1 AC 346, *Rivers District Council v Bank of England (No 6)* [2004] 3 WLR 1274 at paragraph 61, [2005] 1 AC 610; *R v Inner London Crown Court ex parte Baines & Baines* [1988] QB 579; *Nationwide Building Society v Various Solicitors* [1999] P.N.L.R. 53; *R v Manchester Crown Court, ex parte Rogers* [1999] 1 W.L.R. 832 ; *Chant v Brown* (1852) 9 Hare 790; *Parry v News Group Newspapers* (1990) 140 New Law Journal 1719; *Bullivant v Attorney-General of Victoria* [1901] AC 196; *Butler v Board of Trade* [1971] Ch 680 14; *R v Cox & Railton* (1884) 14 QBD 153; *Banque Keyser Ullman v Skandia* [1986] 1 Lloyd's Rep 336; *O'Rourke v Darbishire* [1920] AC 581; *Finers v Miro* [1991] 1 W.L.R. 35; *R v Central Criminal Court ex parte Francis & Francis* [1989] 1 AC 346; and *R v Secretary of State for the Home Department ex parte Simms* [2000] 2 AC 115.

Terrorists' denouncement

The Pakistan Taliban said it had nothing to do with the disappearance of MH370 (It has neither the resources or the knowledge todo so). The existence of a bomb on board the plane or a hijacking ending in a fatal crash cannot be excluded. Intelligence officials who monitor Internet chat rooms and blogs say there has been no 'chatter' in extremist circles.

The unthinkable deed-to gain anti-terror aid from the United States?

Some governments have been alleged to have carried out abuses on behalf of the United States ('US') as a means of gaining US favour or counterterrorism funding. For some, the collaboration had no strings attached. Libya, for example, took custody of a number of Libyan nationals who were rendered to Libya by the CIA in 2004 to 2006, it was alleged. While the detention and interrogation of these men were deemed to serve U.S. interests, the Libyan authorities had other reasons for wanting to hold them. The forms of cooperation varied from intelligence sharing to prisoner transfers to allowing the US to hold prisoners in secret detention on a country's territory. After 9/11, some governments allegedly adopted abusive practices in response to direct US pressure.² The US were alleged to have encouraged a number of countries to pass draconian counterterrorism

² On September 11, 2001, international terrorists killed thousands of people by flying commercial passenger airliners into and destroying several of the World Trade Centre buildings in New York City, heavily damaging the Pentagon and killing personnel there, and killing passengers on an aborted airliner that crashed near Shanksville, Pennsylvania. While these acts occurred in the United States, citizens of many nations were victims in the attack.

laws, often laws that expand police powers, reduce due process guarantees, and set out vague and overbroad definitions of terrorism.

Piracy?

Whoever may have turned off MH370's location technology – the transponder that interacts with radar and the Acars maintenance computer which sends data via satellite – knew how to make an aircraft disappear from most tracking systems. Anonymous US officials have advanced the theory this could be evidence of an 'act of piracy'.

When combined with the idea that the Boeing 777 could have descended to an altitude of 5,000ft and undertaken the sort of terrain masking normally associated with agile military jets, the idea is touted that MH370 is sitting on an unknown runway with its passengers and crew held hostage. The idea that one of the 'pings' received by satellites after the loss of contact with the jet could have been from the ground has fuelled this particular area of speculation.

A rogue passenger?

Malaysian police said that one suspect being investigated is a flight engineer, Mohammed Khairul Amri Selamat, a 29-year-old flying from Kuala Lumpur to Beijing to carry out work on a airplane in China. As a flight engineer Selamat, would have had some of the technical knowledge required to fly an aircraft. But the Malaysia-based technician would not have had knowledge specific to the Boeing 777 aircraft.

Mechanical failure or pilot error?

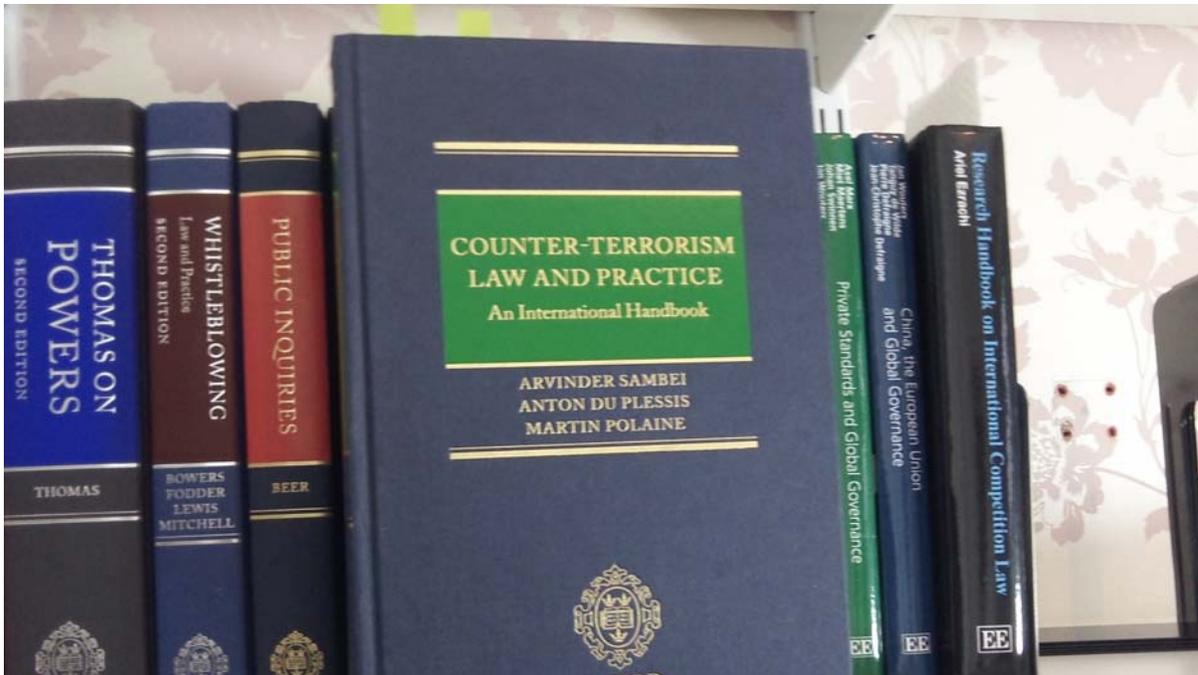
About 72% per cent of air disasters are caused either by mechanical failure or a mistake by the pilot. Sudden, catastrophic failure is diminished by the evidence that the plane changed direction and continued flying for several hours.

Suggested further reading

Editor, 'China and the missing airplane Boeing flight MH 370', *BBC News China*, 16 March 2014.

Editor, 'Missing Malaysia plane: Malaysia requests countries' help', *BBC News Asia*, 16 March 2014.

Sally Ramage, 'Missing Flight MN730 from Kuala Lumpur, Malaysia to Beijing, China in March 2014', *Criminal Law News*, Issue 64, April 2014.



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