The G7 Research Group at the Munk School of Global Affairs at Trinity College in the University of Toronto presents the

2017 G7 Taormina Interim Compliance Report
27 May 2017 to 30 January 2018

Prepared by
Katrina Bland, Andrew Liu and Sarah Mariani
G7 Research Group, University of Toronto
17 April 2018, updated on 20 April 2018
www.g7.utoronto.ca
g8@utoronto.ca
@g7_rg and @g8rg

“We have meanwhile set up a process and there are also independent institutions monitoring which objectives of our G7 meetings we actually achieve. When it comes to these goals we have a compliance rate of about 80%, according to the University of Toronto. Germany, with its 87%, comes off pretty well. That means that next year too, under the Japanese G7 presidency, we are going to check where we stand in comparison to what we have discussed with each other now. So a lot of what we have resolved to do here together is something that we are going to have to work very hard at over the next few months. But I think that it has become apparent that we, as the G7, want to assume responsibility far beyond the prosperity in our own countries. That’s why today’s outreach meetings, that is the meetings with our guests, were also of great importance.”

Chancellor Angela Merkel, Schloss Elmau, 8 June 2015
Contents
Preface ........................................................................................................................................... 3
Research Team ............................................................................................................................. 4
Executive Summary ....................................................................................................................... 6
Table A: 2017 Priority Commitments Selected for Assessment* .................................................... 7
Table B: 2017 G7 Taormina Interim Compliance Scores ................................................................ 9
Table C: 2017 G7 Taormina Interim Compliance Scores by Country ............................................. 10
Table D: 2017 G7 Taormina Interim Compliance Scores by Commitment ..................................... 10
1. Terrorism: Aviation and Border Security .................................................................................. 11
2. Terrorism: Combating Online Extremism ................................................................................. 25
3. Non-proliferation: Nuclear Weapons and Disarmament ......................................................... 40
4. Trade: Protectionism and Trade Practices ................................................................................. 60
5. Gender: Human Trafficking and Exploitation ......................................................................... 73
6. Gender: Encouraging Women in the Private Sector ................................................................. 88
7. Migration: Addressing the Drivers of Migration ..................................................................... 101
8. Climate Change: Energy and Clean Technology ..................................................................... 128
9. Climate Change: Paris Agreement ........................................................................................... 142
10. Food and Agriculture: Food Security and Nutrition ................................................................. 165
11. Development: African Union Agenda 2063 ......................................................................... 176
12. Health: Mental Health ............................................................................................................ 189
13. Trade: Internationally Recognized Environmental Standards .............................................. 202
14. Labour and Employment: Work Conditions ......................................................................... 220
15. Macroeconomics: Inclusive Growth ....................................................................................... 234
16. Regional Security: Ukraine .................................................................................................... 250
1. Terrorism: Aviation and Border Security

“[We commit ourselves to] enhancing border and aviation security.”

*G7 Taormina Statement on the Fight Against Terrorism and Violent Extremism*

<table>
<thead>
<tr>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
</tr>
<tr>
<td>Canada</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>Italy</td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>European Union</td>
</tr>
<tr>
<td>Average</td>
</tr>
</tbody>
</table>

**Background**

Cooperation on aviation and border security have been central issues in the G7/8 international terrorism agenda since the 1978 Bonn Summit “Statement on Air Hijacking,” the first G7 statement issued on a non-economic issue.¹

In the wake of the 9/11 terrorist attacks on the United States, the G8 issued the “Cooperative G8 Action on Transport Security” initiative at the 2002 Kananaskis Summit, stating that the attacks “illustrated the critical yet fragile nature of the international transport system” and that the G8 had “agreed on a set of cooperative actions to promote greater security of land, sea and air transport.” These called on G8 countries to share information on security vulnerabilities, make proportionate contributions to the International Civil Aviation Organization (ICAO), and facilitate “rapid implementation of mandatory aviation security audits of all ICAO contracting states.”²

At the 2003 Evian Summit, the G8 established the Counter-Terrorism Action Group (CTAG), an international body that supports the delivery of capacity building assistance by the UN Security Council’s Counter-Terrorism Committee (CTC). Part of that mandate is providing assistance in “drafting and enforcing legislation on the establishment of border controls” and “the development and implementation of … aviation and transportation security measures.”³ The 2003 Evian Summit also saw the implementation of “Enhance Transport Security and Control of Man-Portable Air Defence Systems (MANPADS): A G8 Action Plan.” This plan recognized the danger of MANPADS (surface-to-air missile systems designed to be carried and fired by an individual) to civil aviation and committed to “reducing their proliferation and call upon all countries to strengthen control of their Manpads stockpiles.”

---

From 2004 to 2016, aviation and border security counterterrorism commitments have been on the agenda of the 2004 Sea Island Summit, the 2005 Gleneagles Summit, the 2006 St. Petersburg Summit, the 2007 Heiligendamm Summit and the 2010 Muskoka Summit.

Specifically, the 2004 Sea Island Summit introduced the Secure and Facilitated International Travel Initiative (SAFTI), which includes 28 projects focusing on “raising standards, modernizing procedures, and exchanging information.” Since the completion of these projects in 2007, controlling the threat of MANPADS has not been a concern on the G7 agenda. However, the approach of acting multilaterally through the G7, CTAG, ICAO, and other international organizations to design and implement better practices for aviation and border security has been consistent since the 2002 Kananaskis Summit.

The 2016 Ise Shima Summit saw the adoption of the “G7 Action Plan on Countering Terrorism and Violent Extremism.” This plan called on G7 countries to enhance border security through expanding the use of Passenger Name Record (PNR) and Advance Passenger Information (API) in traveler screening, greater cooperation between border agencies, and “greater use of existing border security programs such as the World Customs Organization (WCO)’s Security Programme.”

Regarding aviation security, the action plan called on all states to implement the standards of Annex 17 to the Convention on International Civil Aviation, to coordinate in addressing potential vulnerabilities in state aviation security systems, and to review and improve recommended practices in the ICAO’s Universal Security Audit Programme (USAP).

In June 2017, the Roma-Lyon Group (a joint effort by the G7’s expert groups on fighting international crime and international terrorism) published the “Roma-Lyon Group’s First Report on the Implementation of the G7 Action Plan on Countering Terrorism and Violent Extremism.” It highlighted the passing of UN Security Council Resolution 2309, which focused on implementing Annex 17 to the Convention on International Civil Aviation and called on UN members to assist in capacity development. It also noted Resolution A39-18 at the 39th session of the ICAO Assembly on
continuing specific aviation security-related ICAO policies. On border security, it reiterated the G7’s commitment to broader implementation of PNR and API in traveler screening.\textsuperscript{13}

**Commitment Features**

Citing a need to “redouble” its efforts towards the implementation of the 2016 Ise Shima Summit “G7 Action Plan on Countering Terrorism and Violent Extremism” after the May 2017 terrorist attack in Manchester, United Kingdom, the G7 committed to “enhancing border and aviation security” in the G7 Taormina Statement on the Fight Against Terrorism and Violent Extremism.\textsuperscript{14}

**Border Security**

To fulfil this commitment feature, G7 members must improve cooperation between their border agencies with other G7 members and take action towards broadening implementation of PNR and API in traveller screening. Examples of measures that improve cooperation are joint projects, statements indicating that they are sharing information, meetings between officials, and increasing participation in multilateral programs that improve border security such as the WCO’s Security Programme.

Measures taken to strengthen the capacity of any other country through funding, training, or providing technical aid also serves to improve international border security.

**Aviation Security**

The commitment to enhance aviation security requires the G7 member to take “effective, proportionate and risk-based aviation security measures,” that may be implemented in various ways according to national circumstances. Some measures accepted by all G7 members include supporting the implementation of UN Security Council Resolution 2309, Resolution A39-18 at the 39th session of the ICAO Assembly and improving recommended practices in the ICAO’s Universal Security Audit Programme (USAP).

Resolution A39-18 identifies several measures to enhance aviation security, including refining and developing the Global Aviation Security Plan (GASEP), protecting civil aviation against cyber-attacks, preventing attacks carried out or facilitated by insiders, and broadening international and regional cooperation.

Finally, measures taken to strengthen the capacity of any other country through funding, training, or providing technical aid also serves to improve international aviation security.

A G7 member will have fully complied if it takes action to enhance both aviation and border security. If the member makes efforts in only one of these areas, it will have partially complied. Finally, if the member fails to take action, or takes action that is antithetical to the commitment, it will be assigned a score of −1 for non-compliance.


### Scoring Guidelines

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td>G7 member fails to take action to enhance aviation or border security</td>
</tr>
<tr>
<td>0</td>
<td>G7 member takes action to enhance either aviation or border security</td>
</tr>
<tr>
<td>+1</td>
<td>G7 member takes action to enhance both aviation and border security</td>
</tr>
</tbody>
</table>

**Canada: +1**

Canada has fully complied with its commitment to enhancing border and aviation security.

On 27 June 2017, Canada’s Minister of Public Safety and Emergency Preparedness Ralph Goodale, Minister of Immigration, Refugees, and Citizenship Ahmed Hussen, and Minister of Justice and Attorney General Jody Wilson-Raybould hosted the Five Country Ministerial and Quintet meeting of Attorneys General. They met with the interior ministers, immigration ministers, and attorneys general of Australia, New Zealand, the United Kingdom, and the United States in Ottawa, Canada to discuss national security challenges and collaborative efforts to address security issues. The five countries committed to shared efforts to counter violent extremism. In their joint communiqué, the ministers and attorneys general highlighted key areas of collaboration including global migration and refugees systems and security cooperation on border management, human trafficking, and aviation security. They affirmed the importance of fortified border security, cooperation on screening and vetting travelers, and reinforcing border agencies’ use of public information for screening purposes. They also affirmed the importance of sharing information on criminal activities and national security issues including terrorism.

From 12 to 14 September 2017, the International Civil Aviation Organization (ICAO) and Airports Council International (ACI) held the Inaugural Global Aviation Security Symposium (AVSEC2017) at ICAO headquarters in Montreal, Canada. The symposium focused on five key areas: aviation security culture, risk based mitigation, security processes and technological innovation, effective quality control and oversight systems, capacity building and enhanced cooperation. The symposium aimed to foster collaboration among members to subdue terrorist threats against civil aviation. Canadian professionals were among the participants that delivered keynote speeches; showcased the

---


newest state and industry aviation security technology; and took part in discussions, presentations, and interactive activities.\textsuperscript{33}

On 20 October 2017, Minister Ralph Goodale issued a statement after meeting with the interior ministers of G7 member countries in Ischia, Italy.\textsuperscript{24} In his statement, Goodale emphasized the significance of international cooperation in combating terrorism.\textsuperscript{25} He noted discussions that took place during the summit surrounding measures in “preventing would-be foreign fighters from traveling to commit terrorist offences and managing their return.”\textsuperscript{26} In their joint communiqué, the G7 interior ministers reaffirmed their commitment to sharing and using Passenger Name Record (PNR) and Advance Passenger Information (API) to improve traveller screening and combat terrorism.\textsuperscript{27}

From 24 to 26 October 2017 the 13th Symposium and Exhibition on the ICAO Traveller Identification Programme (TRIP) was held at the ICAO headquarters in Montreal, Canada.\textsuperscript{28} The symposium focused on improving traveller identification management to “secure border integrity through border control management processes, including the implementation of an Advance Passenger Information (API) system.”\textsuperscript{29} In accordance with United Nations Security Council Resolution 2309, the symposium aimed to advance international cooperation to address terrorist threats against international civil aviation.\textsuperscript{30}

From 31 October to 2 November 2017, Canada participated in the sixth World Customs Organization Technology and Innovation Forum (WCO TI Forum) held in Tokyo, Japan.\textsuperscript{31} The objective of the forum was to present and review technological developments and common practices in border management.\textsuperscript{32} The forum intended to facilitate dialogue between the public and the

\begin{footnotesize}
\end{footnotesize}
private sectors in exploring technological innovations.\(^{33}\) Topics addressed in the WCO TI Forum include the advantages and disadvantages of new technologies, the effects of “disruptive technologies”\(^{34}\) on border management, and the “coordination between agencies”\(^{35}\) in customs enforcement.\(^{36}\)

Canada has taken action to enhance both aviation and border security. Thus, Canada receives a score of +1.

**Analyst: Sharika Khan**

**France: +1**

France has complied with its commitment to enhancing border and aviation security.

On 19 June 2017, Laurent Collet- Billon, chief of the French weapons procurement office, signed an Aviation Safety Cooperation Arrangement with the European Aviation Safety Agency (EASA) that was finalized by the signature of EASA Executive Director Patrick Ky on 14 September 2017. The EASA-FR agreement establishes a framework allowing closer coordination in the following core areas: continuing airworthiness of type designs; continuing airworthiness of individual aircraft; aviation safety and security including environmental domains; Air Traffic Management; and Remotely Piloted Air Systems.\(^{37}\)

On 14 September 2017 a Franco-German proposal called for the right to reintroduce border controls within the passport-free Schengen zone for as long as four years in the face of the continuing threat of terrorism.\(^{38}\) France has invoked the temporary reintroduction of border controls within the Schengen Borders Code in the context of foreseeable security events. This has been applied to all its internal borders from the dates of 1 November 2017 to 30 April 2018.\(^{39}\)

On 27 September 2017, François Delattre, the permanent representative of France to the United Nations Security Council, addressed the International Civil Aviation Organization and the UN counter-terrorism bodies on France’s efforts to date in regards to aviation security. Delattre stated that France is committed in enhancing its overall air-transport security in terms of technological

---


capacity, incorporating intelligence, and “an adoption of a risk assessment programme for flights passing through third countries.”

France has taken substantial steps to fulfill its commitment in aviation and border security.

Thus, France receives a score of +1.

**Analyst: Sara Fallaha**

**Germany: +1**

Germany has fully complied with its commitment to enhancing border and aviation security.

On 12 July 2017, the German Military Aviation Authority announced a new initiative to combat cyber threats. The initiative was inspired by research demonstrating that hackers are able to commandeers military airplanes from the ground using equipment costing EUR 5,000. The initiative encompasses public relations, research and updating equipment. The initiative will attempt to raise awareness of cyber threats among the general public. It will also aim to start research projects on technology to combat cyber threats and equip aircraft with protective systems.

On 15 September 2017, Germany, in partnership with France, called to reintroduce border controls in the traditionally passport-free Schengen zone in light of the continual threat of terrorism. EU legislation allows for members to re-introduce internal border identity checks for up to six months after a threat to security arises. The new flexibility designed in the Schengen zone is to enable Germany, along with other member countries, to better protect its borders from terrorism.

On 18 September 2017, Germany and the European Aviation Safety Agency (EASA) furthered their partnership with a cooperative agreement. Together, Germany and the EASA will focus on aviation

---

safety, incident reporting systems, cyber security in aviation, as well as other aviation safety measures.\(^47\)

On 19 October 2017, the German Federal Ministry of the Interior announced its plan to continue border controls with Austria and flights arriving from Greece for an additional six months.\(^48\) The internal border controls are planned to be in place for as long as irregular migration patterns in Europe continue.\(^49\) The border controls had initially been set to end in November, and are now set to end in May 2018.\(^50\)

Germany has taken steps to further its commitment to both aviation and border security measures. Thus, Germany receives a score of +1.

**Analyst: Meagan Byrd**

**Italy: +1**

Italy has fully complied with its commitment to enhancing border and aviation security.

On 27 September 2017 a representative from Italy addressed the United Nations Security Council, reaffirming Italy’s commitment to civil aviation security. The representative stressed that international cooperation is required to strengthen border security, information sharing, and the implementation of security best practices. The representative specifically cited the G7 commitment to cross-border information sharing for passenger screening as an area for international improvement. He also highlighted the need for capacity building and improved technological infrastructure to ensure the aviation security of non-G7 countries.\(^51\)

On 20 October 2017, the Italian Minister of the Interior Marco Minniti met with United States Acting Secretary of Homeland Security Elaine Duke to sign the Secure Real Time Platform Implementing Arrangement, “which enhances the ability of both countries to identify known or suspected terrorists, irregular migrants, and other persons of interest through the automated exchange of fingerprints.”\(^52\)

Italy has taken steps to improve global cooperation in aviation and border security.

---


Thus, Italy receives a score of +1.

*Analyst: Claire Robbins*

**Japan: 0**

Japan has partially complied with its commitment to enhancing border and aviation security.

On 28 October 2017, Japan urged China to be more transparent with security information in a partnership to increase border security.\textsuperscript{53} Japan and China hosted talks to discuss joint defence policy in order to increase collective knowledge on border issues.\textsuperscript{54}

On 12 November 2017, Japan participated in consultations with the United States, India and Australia on coordinating in efforts against terrorism. They committed to continue these multilateral discussions and increasing cooperation in the future.\textsuperscript{55}

Japan has increased its action in border security with partnerships in information sharing, but it has not taken steps in increasing aviation security measures.

Thus, Japan receives a score of 0.

*Analyst: Meagan Byrd*

**United Kingdom: +1**

The United Kingdom has fully complied with its commitment to enhancing border and aviation security.

On 21 July 2017, a Memorandum of Understanding on civil aviation security was signed between the Kingdom of Morocco and the United Kingdom. The agreement focuses on strengthening civil aviation security. Some means of exchanging experiences and expertise are through new technologies, training activities, exchange visits, and joint evaluation of security measure applied at the two countries’ airports.\textsuperscript{56}

On 21 July 2017, the United Kingdom launched the UK Aviation Strategy for the future of the aviation industry to 2050 and beyond. The UK have launched public consultations to receive input on a variety of issues ranging from technological, security, environmental and customer service challenges. These include topics like improving airport bag check-ins, noise reductions at airports, and how the government should support and regulate emerging technologies around personal travel. The strategy also looks at how the government can support future growth in an industry that which


directly supports 240,000 jobs and contributes to at least GBP 22 billion to the UK economy each year. Another area of concern is how Britain will handle airport expansion in the future.\(^57\)

On 18 September 2017, United Kingdom announced a “future partnership paper”\(^58\) regarding post-Brexit security cooperation with the European Union. The paper names the European passenger name records (PNR) database, which was developed by the UK to identify terror and serious crime suspects travelling across Europe, as an area in which Britain wants to maintain cooperation with the European Union.\(^59\)

On 1 December 2017, the UK announced its intention to continue having its aviation industry regulated by the EU after Brexit. This indirectly places its aviation industry in the jurisdiction of the European Court of Justice. The transport secretary, Chris Grayling, indicated to aviation representatives that the United Kingdom’s government wants to remain in the European Aviation Safety Agency who is responsible for standards and safety checks across the continent.\(^60\)

On 14 December 2017, the UK-Japan Foreign and Defence Ministerial meeting released a joint statement. The UK and Japan confirmed that they would cooperate on counter-terrorism and aviation security.\(^61\)

On 14 December 2017, the UK’s Department for Transport published the Department Plan for 2018. One of its objectives is to maintain the safety and security of the transport system. The performance achievement goals under this objective states that UK will continue to deploy British aviation security experts overseas to work alongside its international partners and host states to improve aviation security. Another achievement is to develop and promote cyber security to manage cyber risks to transport networks in an increasingly interconnected digital infrastructure.\(^62\)

Thus, the UK receives a score of +1.

**Analyst: Wing Ka Tsang**

**United States: +1**

The United States has fully complied with its commitment to enhancing border and aviation security.

---


\(^{60}\) UK wants to remain in EU aviation safety agency, The Financial Times (London) 1 December 2017. Access date: 13 January 2018. https://www.ft.com/content/content/acc6c972-d5c8-11e7-a303-9060cb1e5f44.


On 28 June 2017, the US Department of Homeland Security (DHS) announced the implementation of new and enhanced security measures on all incoming commercial flights to the United States.\textsuperscript{63} The DHS cited new intelligence on rapidly developing terrorist methods to attack civil aviation as the reason for the implementation of the enhanced screenings.\textsuperscript{64} These new measures, which included rigorous screening of personal electronic devices and the implementation of additional preclearance sites inside airports, came into effect on 19 July 2017.\textsuperscript{65,66} These screenings were implemented in approximately 180 airports in 105 countries, and affected 325,000 passengers on a daily basis.\textsuperscript{67}

On 28 July 2017, the Border Security for America Act of 2017 was introduced in the House of Representatives.\textsuperscript{68} The Act proposed the strengthening of entry requirements along the southern border of the United States, and enhancement of security and intelligence capabilities of US border security agents.\textsuperscript{69} The Act also approved USD 10 billion for a border wall along the Mexican border of the United States, and proposed the employment of 5,000 additional border agents to be placed at the border.\textsuperscript{70} Furthermore, it broadened the security and intelligence gathering capabilities of United States border agents, for example, allowing them to collect biometric data.\textsuperscript{71} The Act also requires a threat analysis to be undertaken of the southern border in order to assess “current and potential threats.”

---


terrorism and criminal threats posed by individuals and organized groups seeking” unlawful entry into the United States.\textsuperscript{72}

On 24 September 2017, President Donald Trump enforced Presidential Proclamation 9645, titled “Enhancing Vetting Capabilities and Processes for Detecting Attempted Entry into the United States by Terrorists or Other Public Safety Threats.”\textsuperscript{74} The measure was intended to improve Executive Order 13780, which came into force on 16 March 2017 and banned entry into the US by residents of Iran, Libya, Somalia, Sudan, Syria, and Yemen for 90 days, by removing Sudan and adding Venezuela and North Korea to the ban list as well as suspending the admission of refugees and the entirety of the US Refugee Admissions Program for 120 days.\textsuperscript{75} However, the proclamation did not place an absolute ban on all individuals from all eight of these countries on entering into the United States.\textsuperscript{76} Nonimmigrants from Somalia and Iranians on student or exchange visitor visas would be permitted entry into the United States under enhanced screening procedures, and in Venezuela only certain government officials and their families would not be permitted entry.\textsuperscript{77} All immigrants from the seven other countries would not be permitted entry.\textsuperscript{78}

On 23 October 2017, the House of Representatives unanimously passed the Cuban Airport Security Act.\textsuperscript{79} The Act was proposed by US Representative John Katko (R-NY) in order to kickstart a security assessment of and enhance security measures at all ten of Cuba’s international airports and their employees.\textsuperscript{80} The Act was proposed due to fears by US security officials that terrorists would use the lax security measures at Cuban airports to gain entry into the US.\textsuperscript{81}

On 8 November 2017, delegates from the United States and Qatar held a meeting for the first counter-terrorism dialogue between the two countries. The delegations from both countries reviewed the progress made since the 11 July 2017 Memorandum of Understanding on counter-terrorism signed by Qatar and the US. The discussions between the two delegates also included “regional terrorist threats, counterterrorism financing, regulation of the charitable sector, information sharing, and aviation security.” The United States and Qatar delegations pledged to maintain open communication lines and “to deepen their counterterrorism cooperation further … to defeat terrorism.”

The United States has fully complied with its commitment to maintain aviation and border security. The United States has demonstrated its commitment to improving aviation and border security by implementing legislation and regulations, as well as committing to maintain open communication with its allies in order to counter terrorism.

Thus, the United States receives a score of +1.

Analyst: Nadin Ramadan

European Union: +1

The European Union has fully complied with its commitment to enhancing border and aviation security.

On 9 November 2017 European Commissioner for Migration, Home Affairs and Citizenship Dimitris Avramopoulos gave a keynote speech at the annual Plenary Congress of the network of airport law enforcement services (AIRPOL). He stated that AIRPOL had made sure to: “strengthen existing information systems, such as, the Schengen Information System;” and “adopt new systems where required, such as, the European Passenger Name Records framework.” He also called for future proposals for systems to fill gaps identified in existing systems, such as the European electronic system for travel authorization, and the EU entry-exit system. The keynote speech demonstrates the European Commission’s aim to ensure ensure the highest level of border security for European citizens, and this shows its commitment to enhancing security.

On 30 November 2017, as part of the European Commission’s Aviation Strategy, non-EU commercial airlines were forced required to obtain “third country operator authorisation”\(^{88}\) in order to be able to operate in Europe. The commission stated that its goal was to attain maximum security in the European skies. This prohibition enhances aerial security in all of Europe, and also drives the banned airlines to advance their safety measures, in order to potentially have full access to the EU.\(^{89}\)

The EU has taken steps to strengthen its border and aviation security as evidenced through the discourse and actions of its representatives.

Thus, the EU receives a score of +1.

_Analyst: Amr Doughan_
