NATO PARLIAMENTARY ASSEMBLY

SUMMARY

OF THE MEETING OF THE

SCIENCE AND TECHNOLOGY COMMITTEE

Ballroom 3
Halifax Convention Centre, Canada

18 November 2018

249 STC 18 E | Original: English | 7 December 2018

ATTENDANCE LIST

Committee Chairperson	Maria MARTENS (Netherlands)
General Rapporteur	Susan DAVIS (United States)
Special Rapporteur	Leona ALLESLEV (Canada)
President of the NATO PA	Rasa JUKNEVICIENE (Lithuania)
Secretary General of the NATO PA	David HOBBS

Member delegations

Belgium	Alain DESTEXHE
	Luk VAN BIESEN
	Veli YUKSEL
	Olga ZRIHEN
Bulgaria	Nikolay TSONKOV
Canada	James BEZAN
	Michael MACDONALD
	Andy FILLMORE
	Cheryl GALLANT
Croatia	Miro KOVAC
	Furio RADIN
	Miroslav TUDJMAN
	Franco VIDOVIC
Denmark	Jeppe JAKOBSEN
	Peter JUEL-JENSEN
Estonia	Hannes HANSO
France	Philippe MICHEL-KLEISBAUER
	Frédéric TAILLET
Germany	Jürgen HARDT
	Roland HARTWIG
	Michaela NOLL
	Katrin STAFFLER
	Thomas HITSCHLER
	Georg MAIER
Hungary	Agnes VADAI
Iceland	Njall Trausti FRIDBERTSSON
Italy	Andrea CANGINI
	Fabrizio ORTIS
Latvia	Ivans KLEMENTJEVS
Luxemburg	Nancy ARENDT KEMP
Montenegro	Genci NIMANBEGU
	Obrad Miso STANISIC
Netherlands	Sven KOOPMANS
Norway	Sverre MYRLI
Portugal	Bruno VITORINO
Spain	Emilio ALVAREZ
	Ramon MORENO
Turkey	Hisyar OZSOY
	Kamil Okyay SINDIR

United Kingdom	Douglas CHAPMAN
	Kevan JONES
	Lord HAMILTON OF EPSOM
	Baroness RAMSAY OF CARTVALE
United States	James COSTA
	Thomas MARINO

Associate delegations

Austria	Nikolaus BERLAKOVICH
	Christian HAFENECKER
	Harald TROCH
	Maximilian UNTERRAINER
Finland	Tom PACKALEN
	Mikko SAVOLA
Georgia	Giorgi KANDELAKI
Serbia	Dejan RADENKOVIC
Switzerland	Isidor BAUMANN
The former Yugoslav Republic of Macedonia*	Ilija DIMOVSKI
	Katerina KUZMANOVSKA
	Vesel MEMEDI
Ukraine	Yurii BEREZA

European Parliament

David McALLISTER

Parliamentary Observers

Japan — Takayuki YAMAMOTO

Speakers

Gordon B. DAVIS Jr.,
Deputy Assistant Secretary General, Defence Investment Division, NATO

Auke VENEMA,
Principal Member, Netherlands, NATO Science & Technology Board

Dr Peter BROOKES,
Senior Fellow for National Security Affairs, The Heritage Foundation

Tadej NARED,
Chairman of the Board, SICEH (Slovenian Certified Ethical Hackers) Foundation

Committee secretary — Sarah PETIT

International Secretariat

Henrik BLIDDAL, Director
Sarah FOULON, Coordinator
Millie RADOVIC, Research Assistant

* Turkey recognises the Republic of Macedonia with its constitutional name.

I. Opening remarks by Maria MARTENS (Netherlands), chairperson

1. The Science and Technology Committee Chairperson **Maria Martens** (NL) welcomed all participants and called the 64th NATO PA Annual Session to order. She thanked the STC Special Rapporteur and Deputy Head of the Canadian Delegation to the NATO PA, **Leona Alleslev** (CA), for all her work in bringing the 2018 Annual Session to Halifax. Ms Martens reminded delegates that the Assembly was moving towards organising paperless events. Thus, the document dossiers would no longer be printed, cutting out the past Sessions immense consumption of paper.

II. Adoption of the draft agenda [180 STC 18 E]

2. **The draft Agenda [180 STC 18 E] was adopted.**

III. Adoption of the Summary of the Meeting of the Science and Technology Committee held in Warsaw (Poland), on Sunday 27 May 2018 [128 STC 18 E]

3. **The summary of the meeting of the Science and Technology Committee held in Warsaw (Poland) on Sunday 27 May 2018 [128 STC 18 E] was adopted.**

IV. Procedure for amendments to the draft Resolutions *Safeguarding Elections in the Alliance* [222 STC 18 E] and *Maintaining the Science & Technology Edge and Enhancing Alliance Agility* [223 STC 18 E]

4. The Chairperson reminded the delegates of the procedure for amendments.

V. Consideration of the draft General Report *Russian Meddling in Elections and Referenda in the Alliance* [181 STC 18 E] by Susan DAVIS (United States), General Rapporteur

5. STC General Rapporteur **Susan Davis** (US) presented the 2018 draft General Report *Russian Meddling in Elections and Referenda in the Alliance* [181 STC 18 E]. She opened by stating that the issues raised in the report affected constituents in all Allied nations. Recalling the STC meeting at the May 2018 Spring Session in Warsaw, Ms Davis outlined the updates and recommendations incorporated into the report since then.

6. Ms Davis stated that disinformation campaigns spread false information about national institutions and sought to exploit domestic political cleavages. As many countries represented in the meeting had recently held elections, she invited delegates to share their recent experiences. Calling on parliaments to institutionalise pre-election processes against potential interference, Ms Davis urged member states to develop and communicate best practices, for example on personal digital hygiene. However, she underlined that no 'one size fits all' approach existed. She also pressed for public-private partnerships to combat interference, improve the understanding of challenges in the information and cyber spaces, and streamline responses in case of meddling.

7. Discussions following Ms Davis' introduction centred on the complexities of interference in democratic processes and the key challenges of combatting such meddling, as well as specific cases. Meddling varied by country, members argued, but the common aspect was the targeting of core values shared by all Allies. Delegates pointed, *inter alia*, to the ease with which information operations could distort public discourse. 'Fake news' and disinformation campaigns could be especially damaging to societies in transition and those facing interethnic cleavages, associate members of the NATO PA argued.

8. Members raised various questions regarding how to counter interference in elections and referenda. For example, they discussed how buyers of online advertisement, especially foreign buyers, could be identified. It was particularly crucial to follow the financing of campaigns and media outlets by Russia, delegates argued. One delegate was concerned that some Allied governments did not always fight Russian meddling and perhaps even latched onto disinformation to support their government politics. Delegates outlined their national responses to this new phenomenon, including their efforts to combat interference in domestic political processes, increase transparency and accountability on social media and increase their engagement with non-state actors and the general public. A member asked whether an international body or forum could be best suited to tackle disinformation campaigns as a global phenomenon. A debate arose as to whether and how other foreign actors, for example North Korea and China, had also attempted to meddle in democratic processes, with one member questioning the report's near-exclusive focus on Russian actions.

9. Ms Davis responded to the questions and concerns of the delegates and clarified her report's approach. She agreed with some members that Western nations had to catch up to new realities. Ms Davis echoed a member's sentiment that NATO's democracies were on the frontlines of disinformation battles.

10. The rapporteur argued that increasing accountability in cyber space was essential. Public-private partnerships with social media companies were key in this respect. Another element of countering election meddling was building resilience, she underlined. Here, Ms Davis emphasised the role of education, arguing that teaching young people how to identify and critically assess information on internet was crucial. To counter information operations, firm policies, evaluation tools and new forums for discussions were also critical elements. She also asked fellow parliamentarians to engage with eminent national experts and young people, especially skilled graduate students, to research on and build resilience against disinformation campaigns.

11. No counter-election meddling strategies should aim to shut down legitimate free speech, the rapporteur underlined, but she also cautioned that the balance between protecting democratic processes and preserving principles of free speech and expression was sometimes difficult to strike. She furthermore pointed to the core principle that states should never interfere with legitimate democratic processes.

12. **The draft report [181 STC 18 E] was adopted with one vote against.**

VI. Panel Discussion of on *Maintaining NATO's Science and Technology Edge and Enhancing Alliance Agility*

13. STC Special Rapporteur Leona Alleslev introduced her draft special report *NATO Science and Technology: Maintaining the Edge and Enhancing Alliance Agility* [183 STC 18 E]. She thanked **Thomas Marino** (US) for inspiring her to keep alive the conversation on NATO science and technology (S&T) and defence innovation after his 2017 STC report and resolution on these issues.

14. Ms Alleslev's draft report painted a picture of where NATO S&T finds itself today, where it should be tomorrow and where stakeholders dissent in their assessments. Focusing on policy recommendations in her presentation, Ms Alleslev emphasised the importance of this topic. She warned that NATO could be preparing for previous wars, instead of realigning Alliance paradigms and preparing for the future. The complexities and uncertainties of modern warfare meant that speed and agility had become immensely important.

15. The report recommended redoubling efforts to reach the 2014 Wales NATO Defence Investment Pledge, but also increasing Allied transparency on defence S&T investments. Further, Ms Alleslev called on legislators to stay focused on the role of S&T in NATO and its relevance to countering current and emerging threats. Talent recruitment and retention had to be a high priority

in a world where many scientists and engineers were attracted by private companies such as Google and Apple rather than by the armed forces. In order to enhance the agility of NATO S&T, it was key to nurture a more diverse and better-connected community. To make use of all Allied assets, scientists in 'theoretical ivory towers' need to connect with military operators. Finally, the Alliance had to put in place a framework to measure the actual performance of S&T and be aware of whether Allies were meeting the targets they sought.

16. **Gordon B. Davis Jr**., Deputy Assistant Secretary General of NATO's Defence Investment Division, opened his presentation by explaining the role and activities of the NATO Defence Investment Division. The Division supported a number of high-level NATO policy committees as well as all the key capability programme boards. Given the Division's responsibility for capability development, it assisted the armaments community in liaising with key stakeholders in defence capability building.

17. Mr Davis offered a few examples of the ongoing cooperation between the armaments and S&T communities as well as recommendations which reinforced those of Ms Alleslev's report. He outlined that the NATO armaments community tracked, supported and, where appropriate, participated in Science and Technology Organisation (STO) activities, including research, symposia, workshops, courses and demonstrations. Emphasising that the Defence Investment Division was a key partner of the S&T community, Mr Davis also explained that the Division proposed and helped launch industry studies, ensured inclusion of S&T topics and representatives in NATO Industry Forums, and oriented S&T work towards NATO Defence Planning Priorities. Mr Davis' recommendations involved increasing STO involvement in Multinational Cooperation Projects, focusing near to mid-term S&T efforts on Defence Planning Priorities, increasing the operational community's involvement in research, and planning and executing workshops focused on Defence Planning Priorities.

18. **Auke Venema,** Principal Member for the Netherlands on the NATO Science & Technology Board (STB), echoed the sentiments of Mr Davis, stating that, at the very least, what had to be done was explain the importance of defence S&T, which Ms Alleslev's report did well. He outlined the structure and activities of the NATO STB, explaining that it had taken on board the message that it needed to work harder and better and increase its focus. The new NATO S&T Strategy consisted of three goals: to accelerate capability development, to deliver timely and targeted advice, and to build capacity through partnerships. As such, Mr Venema emphasised that it was critical for the STB to have more means and tools available as soon as possible, because if they did not start today, the Alliance would have great difficulties in five to ten years.

19. In the past, research and development (R&D) had mainly been driven by military needs. Today, this was different: Technology firms in California drove R&D. Henceforth, the Alliance had to improve Allied collaboration and involvement with non-traditional defence firms. Mr Venema explained that, in 2019, the STB would focus on enhancing industry involvement through the NATO Industry Advisory Group (NIAG). Moreover, he emphasised two critical areas of competition: hypersonic rockets and underwater technology. The underwater threat was growing and the NATO Centre for Maritime Research and Experimentation (CMRE) in La Spezia played an important role in addressing it. The S&T community was highly interdependent, he argued. It was difficult for individual countries to accomplish many important efforts alone. The Alliance as a whole needed the S&T community as it enabled burden sharing, enhanced capacity, fostered interoperability, promoted innovation and built trust. Mr Venema closed by asking how the STB could help communicate the new NATO S&T strategy, including to parliaments.

20. Commending Ms Alleslev' s report, members discussed what should be done as a result of this discussion, some expressing a concern that the most difficult part would be to turn the Special Rapporteur's conclusions into actions. A conversation emerged about whether NATO had been fast enough in adapting to emerging challenges, as some members suggested that the phrase 'maintaining the edge' was no longer adequate, and that 'regaining the S&T edge' was perhaps more accurate. Meanwhile, some delegates were concerned that there was no mention of more specific

technologies, such as artificial intelligence (AI) and unmanned defence technologies. If the Alliance was to protect civilians, they argued, should it not invest more in regulating the development and discussing the rules of use of such weapons? Other delegates wanted to see modern AI systems and unmanned systems work together in the future.

21. Agreeing that it was essential that NATO maintained its lead in technology, it was suggested that NATO and governments should work more closely with the private sector. Some delegates had questions over how legislators could best embrace the private sector. Moreover, how could Allied governments embrace and adapt to the rapid change of technology? It was even suggested that within the Wales Defence Investment Pledge to spend 20% of defence funds on new equipment, there should be a quota allocated to defence S&T.

22. Ms Alleslev noted that a member had asked whether the report title should be 'regain the S&T edge' rather than 'maintain the S&T edge' and suggested putting this to a vote in the Committee. Reminding delegates that AI had been proposed as a topic for 2019, Ms Alleslev also suggested including a reference to this in the report and, later in the day, the resolution. Regarding a minimum level of spending on defence S&T, her research had made clear that it should be left to each member state to determine how much it would devote to defence S&T, as each nation had different levels of ambition. She further argued that the discussion over what constituted an edge in S&T and how best to attain it was not a one-off conversation. As for defence industry relations, the STC should be more involved in NIAG efforts and in NATO's Defence Industry Day. Ms Alleslev urged parliamentarians to learn who their NIAG representatives were and to work with them on improving industry relations.

23. In response to the question on what politicians could do, Mr Davis recommended that governments commit to sharing expertise and increasing common Allied efforts in developing key capabilities. With respect to means of embracing rapid change, industry had asked governments and NATO to reform acquisition processes to speed up procurement. Mr Venema maintained that both ministries of defence and NATO had to fully include R&D and S&T into decision making; it could no longer be an afterthought.

24. The Chairperson concluded by asking the Committee to consider the proposed amendments. The first amendment (on amending the title by replacing 'maintaining' with 'regaining') was rejected, and the second (on adding a mention of AI) was accepted.

25. **The draft report [183 STC 18 E] was adopted, as amended, unanimously.**

VII. Presentation by Dr Peter BROOKES (United States), Senior Fellow for National Security Affairs, The Heritage Foundation, on *The Intermediate-Range Nuclear Forces Treaty*

26. **Dr Peter Brookes** discussed the current state of the Intermediate-Range Nuclear Forces (INF) Treaty. He began with a historical background of the treaty. Dr Brookes went on to argue that the INF treaty was significant in bringing about the end of the Cold War and led to the destruction of over 2,600 intermediate-range nuclear missiles. In today's security situation, however, the treaty's utility was more limited, as it only restricted ground-based launch systems, Dr Brookes argued.

27. Since 2008, the treaty was being significantly challenged, the speaker said, as Russia had advanced on the Novator 9M729 missile, also known as SSC-8. When confronted with this, Russia had tried to argue that the United States had itself violated the INF Treaty. Unfortunately, diplomatic efforts to stop Russia from violating the treaty had been unsuccessful so far. Dr Brookes maintained that this was unacceptable and argued for a harsher response to such actions.

28. These missiles provided Russia with an asymmetric advantage in Europe, Dr Brookes argued. He further posited that Russia was not complying with the treaty in the hope that Allied discussions as to how to react to these violations would cause friction or even a fracture in the Alliance.

Meanwhile, the United States was not just an Atlantic but also a Pacific nation, Dr Brookes underlined. As such, it was a cause for worry that China was not party to the INF Treaty: nearly 95% of Chinese missiles would violate the treaty. This threatened US interests in the Pacific, according to Dr Brookes. He was of the opinion that the US government was open to a renegotiation or at least a rewording of the INF Treaty. However, if current conditions remained in place, a US withdrawal was a distinct possibility – and for good reason, he argued. Finally, Dr Brookes did not believe that the United States staying in the treaty would moderate Russian behaviour and, as such, called for a stronger stance on Russia's violations.

29. Several Committee members underlined that, since the treaty's adoption, European Allies had very much relied on it to prevent any form of nuclear conflict in Europe. Other members raised questions as to whether the treaty was in step with today and tomorrow's military technological reality, including new sea-based and hypersonic weapons. Questions also emerged regarding how quickly the United States could develop weapons to counter the new Russian missiles.

30. Dr Brookes argued that Russia wanted to preserve the agreement despite its violations. He agreed with a Committee member that the INF Treaty should take new technologies into account. He told delegates that, within the US Congress, there had been some calls to develop missiles that would be banned by the INF Treaty.

VIII. Panel discussion on *Extremist and Terrorist Use of Cyber Space*

31. STC Vice-Chairperson **Bruno Vitorino** (PT) presented the STCTTS draft report on behalf of the Rapporteur, Matej Tonin (SL), who could not attend the Session. He praised the report for giving an excellent overview of how extremist and terrorist networks used encrypted messaging services, the dark web and cryptocurrencies as tools for propaganda, internal communications, financing and more. The report concluded that, of the three, encrypted messaging was the number one technology used by extremist and terrorist networks. The use of the dark web, meanwhile, was more limited but still occurred in the distribution of propaganda material. Finally, there had been almost no cases of cryptocurrencies being used by terrorists, partly because organisations still found it easy to raise funds through other channels. Mr Vitorino nonetheless urged intelligence and law enforcement agencies to keep a watch on the trends identified in these fields.

32. Echoing the concerns voiced during the discussion about countering election interference, Mr Vitorino argued that the report pointed out an important dilemma for liberal democracies: how could they preserve fundamental rights, such as privacy and freedom of speech, while keeping citizens safe from harm? An important guideline was that any measure aiming to frustrate extremist and terrorist use of these technologies had to be strictly designed for counterterrorism purposes only. Mr Vitorino also argued that systematically weakening encryption methods did not provide a viable path forward and could instead undermine the security of all.

33. **Tadej Nared** introduced the Slovenian Certified Ethical Hackers (SICEH) Foundation, which he directs. He told Committee members that anyone with access to internet could attack key civil infrastructure. Showing a map of all Industrial Control Systems (ICS) accessible over the internet (mostly in North America and Europe), Mr Nared explained why critical infrastructure was so vulnerable. ICS were usually built for air-gapped environments, i.e. environments isolated from other networks, he explained. Using a website called Shodan, Mr Nared showed how one could zero in on critical infrastructure and find the most vulnerable points. Emphasising that all societies were vulnerable, Mr Nared explained that even the most advanced systems suffered from the same trivial vulnerabilities as other parts of critical infrastructure. His key message and conclusion was that previous practices had shown that certified ethical hackers could substantially aid in exposing key vulnerabilities in cyber infrastructure. Legislators should work to enable them to do so by passing appropriate laws to protect these skilled individuals.

34. The presentations sparked various debates. Members asked Mr Nared to elaborate on the definition of what 'ethical hackers' were as well as who certified them. There were concerns over why the critical vulnerabilities had not yet been addressed. They also wanted to know which central authority could be a good option for reporting vulnerabilities. The delegates also questioned Mr Nared on the nature of "cyber armies", including what kind of facilities and assets they required. Having picked up on Mr Nared listing Iran as having the fourth largest 'cyber army', delegates inquired on who the other three were. There was also a question on the rationale for state cyberattacks.

35. Mr Nared explained that certified ethical hackers used their knowledge to improve overall cyber security in the world. He explained an ethical hacker's mindset was such that they saw the digital landscape as a common good like air or water. In the same way that someone would not poison water on purpose, they would not do so to the cyber realm. There were different certifications available that allowed one to choose a career path in this field. SICEH provided one such certificate. Mr Nared also maintained that NATO should take over the responsibilities of being the main reporting institution for ethical hackers. Currently, national and other Computer Emergency Response Teams cooperated with ethical hackers, he explained. However, the issue with cyber security was that its vulnerabilities were multifaceted and as such required a unified approach. In regard to cyber armies, he agreed that such initiatives could be spread out. It was easy for them to use proxies to disguise their true location.

36. Mr Nared argued that mitigating vulnerabilities was one of the biggest issues in cyber security, partly due to the lack of a skilled workforce. What legislators should do was to introduce responsible disclosure policies, Mr Nared said: if an individual found a vulnerability they should not be automatically criminally charged. In many NATO member states, ethical hackers were still considered as criminals simply because of common misunderstandings about the digital nature of the world today. He explained Iran itself had stated that it had the fourth largest cyber army. He estimated China, the United States and Russia would have the three biggest cyber armies today. Addressing the potential consequences of a cyberattack on the electrical power grid, he reckoned that after a year without electricity only 10% of people in big cities would survive. Mr Nared argued, however, that state actors would likely try to avoid a direct cyber war because it could ensure what was known during the Cold War as "mutually assured destruction".

37. In the meantime, **Kamil Okyay Sindir** (TR) recalled that Turkey had faced a coup attempt on 15 July 2016. The Turkish authorities, Mr Sindir said, had discovered that the group behind the attempted coup used encrypted messaging and a communications application called ByLock. Mr Sindir argued that the example should be incorporated into the report through an amendment he had submitted to Mr Vitorino earlier during the day.

38. Mr Vitorino respectfully asked Mr Sindir to withdraw the proposal. He explained that the Rapporteur was not present to examine the issue and that he himself was not familiar with the facts of the matter. Without arguing for or against the proposal, he thus very much preferred not to put the amendment to a vote in the Committee. Mr Sindir understood his reasoning and withdrew the amendment.

39. **The draft report [182 STCTTS 18 E] was adopted unanimously**.

IX. Consideration of amendments and vote on the draft Resolutions *Safeguarding Elections in the Alliance* [222 STC 18 E] presented by Susan DAVIS (United States), General Rapporteur, and *Maintaining the Science & Technology Edge and Enhancing Alliance Agility* [223 STC 18 E] by Leona ALLESLEV (Canada), Special Rapporteur

40. General Rapporteur Susan Davis briefly introduced her draft resolution *Safeguarding Elections in the Alliance* [222 STC 18 E].

41. With no amendments, **the draft resolution [222 STC 18 E] was adopted with one vote against.**

42. Special Rapporteur Leona Alleslev introduced her draft resolution *Maintaining the Science & Technology Edge and Enhancing Alliance Agility* [223 STC 18 E].

43. **Veli Yuksel** (BE) presented an amendment he co-sponsored concerning the draft resolution's wording in connection with the Defence Investment Pledge adopted at the 2014 NATO Summit. He argued that the draft resolution's language should use the exact phrases contained in the Pledge. Mr Marino disagreed: Allies had agreed to meet defence spending targets by 2024, he said. After four years, it was well past the time to merely 'aim' to increase investment in defence and it was time to indeed increase investment. Ms Alleslev agreed, arguing the Allies had not moved as quickly as they should have. She was against the proposed amendment, arguing that 'to aim' could be interpreted as merely an aspirational target. The amendment was rejected by a majority of the votes.

44. Following up on the discussions on the 2018 STC draft special report earlier in the day, Ms Alleslev presented an oral amendment. She proposed to include, at the end of paragraph 14.e, the following words: "and g) fostering communities of interest and boosting activities focused on autonomy, big data and artificial intelligence, and operations in contested urban environments;". The members approved the amendment by a majority of the votes.

45. **The draft resolution [223 STC 18 E] was adopted, as amended, unanimously.**

X. Election of Committee and Sub-Committee Officers

46. The following officers were elected:

Science and Technology Committee (STC)

Vice-Chairperson	Kevan JONES (UK)
	Njall Trausti FRIDBERTSSON (IS)
	Jean-Christophe LAGARDE (FR)

Sub-Committee on Technology Trends and Security (STCTTS)

Vice-Chairperson	Bruno VITORINO (PT)
	Karl-Heinz BRUNNER (DE)
	Marta DEMETER (HU)

Ukraine-NATO Interparliamentary Council (UNIC)

STC Representative	Sverre MYRLI (NO)
STC Alternate	Ivans KLEMENTJEVS (LV)

47. The following officers were re-elected:

Science and Technology Committee (STC)

Chairperson	Maria MARTENS (NL)
General Rapporteur	Susan DAVIS (US)
Special Rapporteur	Leona ALLESLEV (CA)

Sub-Committee on Technology Trends and Security (STCTTS)

Chairperson	Hannes HANSO (EE)

Ukraine-NATO Interparliamentary Council (UNIC)

STC Representative	Philippe MICHEL-KLEISBAUER (FR)

XI. Summary of the future activities of the Science and Technology Committee and the Sub-Committee on Technology Trends and Security

48. Chairperson Martens reviewed the past and upcoming visits, beginning with the three successful visits to the United Arab Emirates (January 2018), Norway (May 2018) and California (October 2018).

49. With regards to the 2019 visits, the full Committee was planning a visit to Singapore in order to better understand the changing global science and technology landscape. Meanwhile, the Sub - Committee planned to visit the United Kingdom and join the DSCTC on a visit to Canada to observe NATO's *Cutlass Fury* maritime exercise.

XII. Any other business

50. No other business was raised.

XIII. Date and place of next meeting

51. The STC would next convene in Bratislava, Slovakia, where the Spring Session would take place from 31 May to 3 June 2019.

XIV. Closing remarks

52. The Chairperson concluded the meeting of the STC and thanked the guest speakers, observers, interpreters, the NATO PA Secretariat and hosts from the Canadian Parliament.