Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Check against delivery

Group of Governmental Experts on lethal autonomous weapons systems (LAWS) 2018, Convention on Certain Conventional Weapons

Agenda item 6 b) Further consideration of the human element in the use of lethal force; aspects of human-machine interaction in the development, deployment and use of emerging technologies in the area of lethal autonomous weapons systems

Geneva, 11th of April 2018

Mr. Reto Wollenmann
Deputy Head Arms Control,
Disarmament and Non-proliferation Section, Switzerland

Thank you Mr. Chair,

Since 2014, the CCW has seen promising exchanges on different concepts related to human decision-making, control and/or judgement.

The chart you have distributed yesterday is a testimony of how the debate in the CCW has evolved.

Our deliberations have shown

- that (for various reasons) delegations support the notion that a **certain quality and level of human control or human judgement is required, notably in the targeting cycle;**
- that such control – in particular regarding target selection and engagement – is a pertinent factor in view of legal, ethical and military considerations;

Mission permanente de la Suisse auprès de l'Office des Nations Unies et des autres organisations internationales à Genève
Permanent Mission of Switzerland to the United Nations Office and to the other International Organizations in Geneva

Rue de Varembé 9-11, CP 194, 1211 Genève 20
Tél. +41 (0)22 749 24 24, Fax +41 (0)22 749 24 37, www.dfae.admin.ch/geneve

- that greater clarity on human decision-making is essential to discuss when and whether a system is usable, acceptable and legal, in particular with regard to compliance with IHL.

At the same time, discussions showed differences among states with regard to the extent, nature and the timing of the exerted control.

This year's GGE represents a chance to further clarify and develop the various concepts and to shed light on **how such control or supervision can be defined and exerted in the targeting cycle.**

As autonomy in weapons systems increases, there is a need to think carefully about the relationship or the interface between a human operator and a machine.

Increasing autonomy

- will transform the way humans interact with weapons systems and make decisions on the battle field,
- this makes it necessary to consider the role of humans alongside the machine,
- and it requires new models of human-machine collaborations.

Increasing autonomy could **support** or even **replace** humans in the execution of certain tasks, **but human involvement will still be necessary, notably for qualitative judgements** (values etc.) given their cognitive capabilities – something machines are (currently) not capable of.

With regard to compliance with IHL, Switzerland has already stated in its 2016 and 20017 working papers on AWS, that, (and I quote) given the current state of robotics and artificial intelligence, it is difficult today to conceive of an autonomous weapon system that would be capable of reliably operating in full compliance with all the obligations arising from existing IHL without any human control in the use of force, notably in the targeting cycle (end of quote). The question therefore is not *whether* States have a duty to control or supervise the development and/or employment of autonomous weapon systems, but *how* that control or supervision ought to be usefully defined and exerted.

Mr. Chair,

It is Switzerland's point of view that human control can be exercised in various ways, both independently or in combination. We have to study what kind and level of human involvement is required in different phases of the life-cycle of a weapon system.

To illustrate this point, let me just mention the following: Arguably, it might be possible in the future, to exert already a significant level of control in the development and programming phase.

- Through testing and evaluations, predictability and reliability of AWS can be increased.
- Through legal reviews the capability to use a given system, in all or some circumstances, in compliance with international law can be verified.
- Through both guidelines and training of armed forces the expected predictability and reliability rates required for IHL compliance can be achieved;
- And then, at the moment a system is actually used, those who employ such a system will need to evaluate, whether under the circumstances and parameters ruling at the time, a system can be employed in compliance with IHL.

The human control over the delivery of force, strictly speaking, is hence *just one* element, which is complemented by embedding human control in the design and development phases of the life-cycle of the system.

One important outstanding question is **what level of human control** will *always* be required in the operational use of weapons, irrespective of the control already embedded in the design, development and testing phases.

This is because complying with the principles of **distinction, proportionality and precaution seem to require the presence of independent value judgements**. And at least for the moment, given the current state of technology, such value judgements cannot be taken over by machines.

Thank you for your attention.