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Office

**UNITED KINGDOM OF GREAT BRITAIN  
AND NORTHERN IRELAND**

**Statement for discussion on the human element in the use of lethal force and  
aspects of human-machine interaction in the development, deployment and use of  
emerging technologies in the area of Lethal Autonomous Weapons Systems**

**At the Meeting of the Group of Government Experts on Lethal Autonomous  
Weapons Systems, Wednesday 11 April 2018**

Mr Chairman,

1. Thank you for your introduction to this valuable discussion. On Tuesday, I set out that a key consideration in the characteristic of LAWS is the method and nature of human control at the critical functions of a weapons system, the principal of which the UK believes to be when the system selects and engages a target.
2. Firstly, let me recall that the UK's position on the use of lethal force is that there must always be human oversight and authority in the decision to apply lethal force – a position that would apply equally to LAWS. We have seen continuous developments in automation in military systems worldwide. While the degree of automation has increased, such systems still have human operators defining operating parameters, initiating and controlling systems and exercising responsibility for outcomes. The UK believes that, whatever the environmental complexity that the system operates within, a minimum level of human control is always required to fulfil the principles of International Humanitarian Law (IHL). The technology will continue to change rapidly, but this minimum level of control will not; therefore the UK believes understanding this is the key to advancing the LAWS debate.

3. The UK believes there is consensus here that all states consider that there should be human control over weapons systems. Human control means that humans must have the ability to influence decisions on the use of lethal force. There are a number of ways in which we could look to begin to codify effective human control. For example, the NATO Joint Targeting Cycle as set out in Allied Joint Publication 3.9 details the component steps in the process, potentially facilitating detailed discussions on which activities could be conducted by machines whilst the system as a whole remains under effective human control. Regardless, the UK feels that whilst automated systems can in certain circumstances and environments DETECT targets, the process of SELECTING them and making the complex decisions around when and where to apply lethal force must be discharged by humans. This discussion is complex and could merit further time and consideration.
4. The UK does not believe that a fully autonomous lethal weapon system would ever be militarily useful. Technologies whose critical functions cannot be predicted within known bounds would carry significant risk on a battlefield. Furthermore, while artificial intelligence technologies have achieved impressive feats, they are purposed to a particular function – often with relatively narrow inputs and outputs. Warfare is complex, and will always demand a combination of humans and machines for any military organisation to be effective. In a military context, computers are vital for activities that require the assimilation and processing of huge amounts of data, such as navigation, system management or logistical calculations. Conversely, humans are vital for understanding context and evaluating consequences. Therefore, systems should always have a human operator involved in making critical decisions, including the use of lethal force.
5. Turning now to the important issue of accountability. As we think about the aspects of human-machine interaction of future weapons systems, I wish to establish that the UK insists that LAWS, if they existed, would be subject to the same rigorous accountability processes as all other weapons. Accountability measures are built in throughout the lifecycle of weapons systems – from concept, to initial development, through the assessment of legal use and acceptance into service, and ultimately the decision to deploy a system operationally. This is written into the technical standards governing their development to their assessment through the medium of Article 36 legal weapon reviews and rigorous field testing procedures.
6. Once deployed, accountability is vested in the trained operators who employ the system, and in the decisions taken by commanders at every level who have operational or tactical responsibility for the conduct of a campaign and the specialists who advise them. Responsibility is discharged through the military Chain of Command, and accountability measures are set out clearly in the orders, directives and Standard Operating Procedures that are enforced by all responsible militaries engaged in the conduct of operations. Ultimately, if a decision has been taken to field any capability, there should be an auditable trail of the decision makers and a record of their assessments on the suitability of the system for use in a specific theatre or phase of

operations. Accountability might even be improved if the automated recording systems that an autonomous system would need in order to legally operate provide better evidence to support subsequent investigation in the event of an incident. Above all, all fielded systems must be capable of acting within the parameters established by IHL and the Law of Armed Conflict.

7. Mr Chairman, in closing, I stress the importance of human oversight in the critical functions of weapons systems. I also recall that the important next step is to develop understanding of the acceptable minimum level of human control. Thank you.