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Office

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

STATEMENT

to the

**Informal Meeting of Experts
on
Lethal Autonomous Weapons Systems**

11 - 15 April 2016

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Working towards a definition of LAWS

Mr Chairman,

1. I'd like to start by thanking all those who have already shared their views on this agenda point, including the panelists for their informative presentations. Definitions of a Lethal Autonomous Weapons System (LAWS), and other concepts, such as Meaningful Human Control, are fundamental to this debate, and it is clear that there is still some way to go before we reach consensus on a useful definition.

2. Warfare, and the human role within it, is continuing to evolve. We have seen continuous developments in elements automation within weapons systems worldwide, from unmanned systems operated from distant locations to automatic defensive systems, for example, the UK Phalanx. However, where there has been an increase in automation, it has been supported by human operators who have set and defined the operational parameters – we have not yet seen a move to fully autonomous weapons systems. This demonstrates an evolving intelligent partnership between operators and computers, not a paradigm shift. As technology progresses, it is the UK's view that this partnership will need to continue to evolve to allow us to carry out military functions with greater precision and efficiency. For example, this might be by accomplishing difficult tasks such as landing on an aircraft carrier, or by performing tasks which happen too quickly for humans to process – such as shooting down incoming missiles.

3. But the UK does not believe that there would be any military utility in a fully autonomous lethal weapon system – there will always need to be a partnership. Humans and computers have different strengths and weaknesses. With regard to weapon systems, computers are optimised for mission support tasks and tasks that require the assimilation of huge amounts of data such as navigation, system management and fuel calculations. Conversely, humans are much better at complex decision making including understanding context, assessing intent and evaluating consequences. Therefore any system must seek to use these different capabilities to best effect; however, such systems will always have a human operator involved in all targeting decisions. To ensure this principle is applied, all of the UK's research programmes adhere to the Laws of Armed Conflict, UK Law and MOD Policy, and the project teams ensure that an ability to apply Rules of Engagement is a key capability driver. The UK is not researching systems that will be able to release weapons without human oversight.

4. A fully autonomous lethal weapon system would take us to new territory. The UK understands such a system to be one which is capable of understanding, interpreting and applying higher level intent and direction based on a precise understanding and appreciation of what a commander intends to do and perhaps more importantly why. Critically, this understanding is focused on the overall effect the use of force is to have and the desired situation it aims to bring about. From this understanding, as well as a sophisticated perception of its environment and the context in which it is operating, such a system would decide to take - or abort - appropriate actions to bring about a desired end state, without human oversight, although a human may still be present. The output of such a system could, at times, be unpredictable - it would not merely follow a pattern of rules within defined parameters. It is in this way that it differs markedly from an automatic system, which is programmed to logically follow a predefined

set of rules with predictable outcomes, for example a remotely piloted aircraft system (RPAS) programmed to return to a fixed point after a signals outage.

5. Based on these definitions we believe that lethal autonomous weapon systems do not exist, and may never exist. They differ fundamentally from existing weapons systems, which may have elements of automation but only respond in predictable ways according to human instruction and programming. The UK considers that existing highly automated weapons are not, and should not, be part of this discussion.

6. I turn now to the phrase meaningful human control. This is not a concept that the UK actively uses in its doctrine, principally because what may or may not be meaningful is almost an entirely subjective judgment: therefore, any system based on this concept would be open to a wide range of interpretation. This level of ambiguity would not be helpful in agreeing definitions. Furthermore, some of the terms and phrases used to define MHC will themselves also need to be defined, for example, full situational awareness in order to have an informed understanding. Variances in definitions and criteria of MHC, particularly with regard to accountability, do not align with the current UK doctrine. Therefore, the UK believes it would be useful to research relevant doctrine when trying to define accountability. In essence, MHC describes the relationship between weapons technology (that can in part function autonomously) and the operator. It is suggested that the phrase MHC is changed to more accurately reflect the premise of human-machine interaction, for example intelligent partnership.

7. It is worth reiterating that as a matter of policy the UK Government is clear that the operation of its weapons will always be under human control as an absolute guarantee of human oversight, authority and accountability for weapons use. Moreover, the UK Government does not possess fully autonomous lethal weapon systems and has no intention of developing them. Whilst a limited number of defensive systems can operate in automatic mode, there is always a person involved in setting the operational parameters of any such mode.

8. However, I want to be clear - the UK's policy on LAWS does not advocate a pre-emptive ban. While it might seem incongruous to some that one could neither seek to develop such weapons, nor agree to a pre-emptive ban, the UK believes firmly that it is too soon to ban something we simply cannot define. More importantly, we believe that existing international humanitarian law is sufficient in assessing whether any future weapon system including LAWS would be capable of legal use. Furthermore, we believe strongly that there could be legitimate non-lethal advantages to increasingly autonomous technology in the future, for example, in the field of logistics. To legislate now, without a clear understanding of the potential opportunities as well as dangers of a technology that we cannot fully appreciate, would risk leading to the use of generalised and unclear language which would be counter-productive.

9. The debate on the potential development and use of fully autonomous systems is slowly gaining momentum. However, it is worth noting that a small part of this debate is on lethal weaponisation. Other areas of autonomy – such as logistics, data management and bomb disposal – could offer positive opportunities that deserve further investigation and development.

9. Finally, it will become increasingly difficult for modern conventional armed forces to maintain a

technological advantage given the rate at which technology is evolving. Future adversaries, including non-state actors, will be able to use commercial technology to deliver novel effects. It is against this backdrop that states need to continue to develop their understanding of autonomous technology and reserve the right to track and monitor developments in the field.

10. I hope this is a helpful summary of the UK's views and look forward to the continuing debate.

Thank you.