



## **Statement delivered by Germany**

**on**

### **Human / Machine Interaction**

#### **General considerations**

- Only weapons that are operated in compliance with IHL are acceptable means of warfare.
- This might, as it is widely agreed on, only be assured as long as humans retain the sufficient control, at least over the critical functions of the weapons they operate, to the extent necessary to ensure compliance with IHL. In that context we highlight the importance of weapon reviews as required by IHL.
- This makes it necessary to further develop the already existing human-machine interaction or rather cooperation in order to
  - balance each the weaknesses of the one and the other where
  - the human has to remain the essential team-element with the overall responsibility
  - the human has to take the decision and to coordinate the processes that might better be executed by artificially intelligent colleagues
- The minimum indispensable extent of human involvement, in particular over the critical functions of the weapon must not be replaced by machine-led decision-making.

#### **Human Involvement over Life Cycle of Autonomous Weapons – Development, Testing, Deployment:**

There will be several persons involved to varying degrees, in different phases of the development and operation offering a multitude of concrete opportunities for human/machine-interaction. This could for example include:

- teams of software developers jointly creating the algorithms,
- other technical experts who ‘train’ the software,
- engineers that are responsible for the hardware and integration,
- political leaders deciding on procurement,
- intelligence officials that submit targeting information,
- a commander who orders the deployment of the system
- military personnel, which activates it and potentially monitors its functioning.