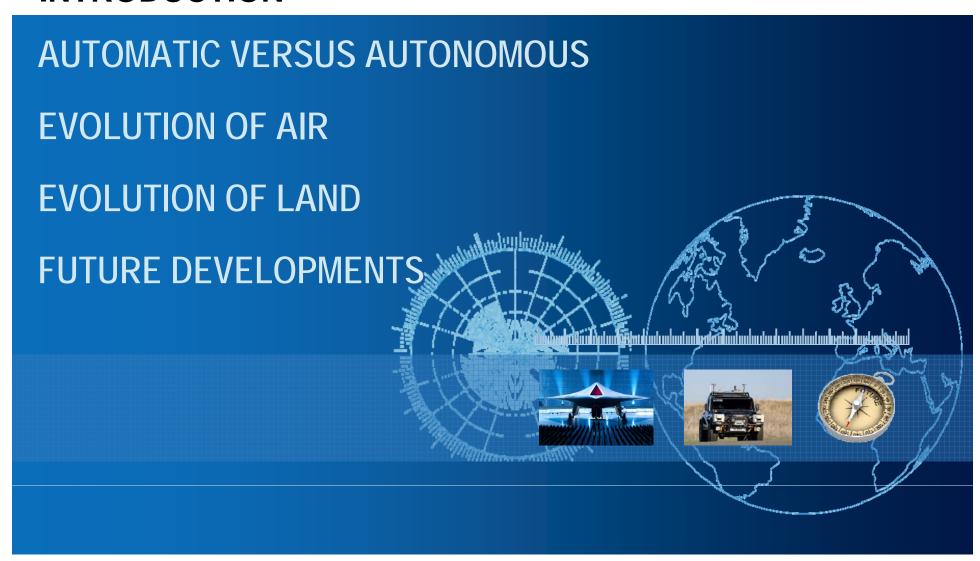
# **AUTONOMOUS CONTROL SYSTEMS Stewart Webb**



## INTRODUCTION





# **AUTOMATIC VERSUS AUTONOMOUS**

# DECISIONS ARE MADE BY A HUMAN..... OR A MACHINE

### **AUTOMATIC:**

DECISION MAKING IS EXTERNAL TO THE VEHICLE
COMPUTER DRIVES THE VEHICLE BUT IS CONSTRAINED AND A DRIVER IS PRESENT
THE SIGNALLING SYSTEM IS "IN AUTHORITY"
SITUATION AWARENESS IS OFF-BOARD

### **AUTONOMOUS:**

DECISION MAKING IS INTERNAL TO THE VEHICLE
COMPUTER DRIVES THE VEHICLE AND NO DRIVER IS PRESENT
VEHICLE IS IN AUTHORITY THROUGH DEFINITIONS OF "INTENTIONS" AND CONSTRAINTS
SITUATION AWARENESS IS ON-BOARD



### **EVOLUTION WITHIN AIR**



© BAE Systems plc 2012 4



## **EVOLUTION WITHIN LAND**





## **EVOLUTION WITHIN LAND**



© BAE Systems plc 2012 6



## **FUTURE DEVELOPMENTS**





### **SUMMARY**



THE DEGREE OF AUTOMATION OR AUTONOMY NEEDS TO BE BASED ON WHAT IS APPROPRIATE

AUTOMATIC VERSUS AUTONOMOUS
EVOLUTION WITHIN AIR
EVOLUTION WITHIN LAND
FUTURE DEVELOPMENTS

## BAE SYSTEMS

