

# Information Technology and Law Series

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Bart Custers  
Editor

# The Future of Drone Use

Opportunities and Threats from Ethical  
and Legal Perspectives



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## Series Information

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# Abbreviations

|       |  |
|-------|--|
| ACLU  | American Civil Liberties Union   |
| ACPO  | Association of Chief Police Officers   |
| ADCO  | Administrative Co-operation  |
| ADS-B | Automatic Dependent Surveillance Broadcast   |
| AED   | Automated External Defibrillator   |
| AGL   | Above Ground Level   |
| AI    | Artificial Intelligence  |
| ANAC  | Administración Nacional de Aviación Civil (Argentina)  |
| ANAC  | Agência Nacional De Aviaco Civil (Brazil)  |
| ANO   | Air Navigation Order (UK)  |
| ANSPs | Air Navigation Service Providers   |
| ASD   | Aeronautical Systems Center  |
| ATM   | Air Traffic Management   |
| ATT   | Arms Trade Treaty  |
| BALPA | British Airline Pilots Association   |
| BC10  | Beijing Convention 2010: Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation. ICAO Doc. 9960 |
| BD    | Big Data   |
| BP10  | Beijing Protocol 2010: Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft. Doc 9959    |
| BS    | Border Surveillance  |
| BYTE  | Big data roadmap and cross-disciplinary community for addressing societal externalities  |
| C2C   | Command and Control  |
| CAA   | Civil Aviation Authority   |
| CAD   | Civil Aviation Department (Hong Kong)  |
| CC44  | Chicago Convention 1944: Convention on International Civil Aviation. 61 Stat. 1180; 15 UNTS 295                                  |
| CCTV  | Closed Circuit Television  |
| CEO   | Chief Executive Officer  |

|         |  |
|---------|--|
| CEPT    | Conférence Européenne des Administrations des Postes et des Télécommunications         |
| CERA    | Canterbury Earthquake Recovery Authority   |
| CIA     | Central Intelligence Agency  |
| CISE    | Common Information Sharing Environment   |
| CJEU    | European Court of Justice  |
| CNIL    | Commission nationale de l'informatique et des libertés (France)                        |
| CNPC    | Control and Non Payload Communications   |
| COA     | Certificates of Waiver or Authorization  |
| COE     | Council of Europe  |
| COIN    | Counter-Insurgency/Counter-Terrorism   |
| COSME   | EU programme for Competitiveness of Enterprises and Small and Medium-sized Enterprises |
| CPIP    | Common Pre-Frontier Intelligence Picture   |
| CSDP    | Common Security and Defense Policy   |
| DAA     | Detect and Avoid   |
| DARPA   | US Defense Advanced Research Projects Agency   |
| Decea   | Department of Airspace Control (Brazil)  |
| DGCA    | Directorate General of Civil Aviation (France)   |
| DG CNCT | EU Directorate General for Communications, Networks, Content and Technology            |
| DG ENTR | EU Directorate General for Enterprise and Industry                                     |
| DHL     | DHL Express  |
| DNA     | Deoxyribonucleic Acid  |
| DOT     | US Department of Transportation  |
| DPA     | Data Protection Authority  |
| DPIA    | Data Protection Impact Assessment  |
| EASA    | European Aviation Safety Agency  |
| EC      | European Commission  |
| ECA     | European Cockpit Association   |
| ECAC    | European Civil Aviation Conference   |
| ECC     | Electronic Communications Committee  |
| ECHR    | European Convention on Human Rights  |
| ECTHR   | European Court of Human Rights   |
| EDA     | European Defense Agency  |
| EDPS    | European Data Protection Supervisor  |
| EEAS    | European External Action Service   |
| E-ES    | Entry-Exit System  |
| EMC     | Electro Magnetic Compatibility   |
| ENG/OB  | Electronic News Gathering and Outside Broadcasting                                     |
| ERC     | European Radio Committee (former ECC)  |
| EREA    | European Research Establishments in Aeronautics  |
| ESA     | European Space Agency  |
| ESP     | European Situational Picture   |
| ETA     | Euskadi Ta Askatasuna (Basque nationalist and separatist organization)                 |

|                |  |
|----------------|--|
| EU             | European Union   |
| EUBAM          | EU Border Assistance Mission   |
| EUROCAE        | European Organisation for Civil Aviation Equipment   |
| EURODAC        | European Dactyloscopy, the European fingerprint database   |
| EUROSUR        | EU external border surveillance system   |
| FAA            | Federal Aviation Administration  |
| FATA           | Federally Administered Tribal Areas (Afghanistan and Pakistan)   |
| FBI            | Federal Bureau of Investigation  |
| FedEx          | Federal Express  |
| Frontex        | EU Agency for external border cooperation  |
| FSS            | Fixed Satellite Services   |
| GDPR           | EU General Data Protection Regulation  |
| GIS            | Geographic Information System  |
| GMES           | Global environmental monitoring and security related operations  |
| GPS            | Global Positioning System  |
| HOT            | Humanitarian OpenStreetMap Team  |
| HVT            | High Value Target  |
| ICAO           | International Civil Aviation Organization  |
| ICO            | Information Commissioner's Office (UK)   |
| ICRC           | International Committee of the Red Cross   |
| ICT            | Information and Communication Technologies   |
| IFRC           | International Federation of Red Cross and Red Crescent Societies   |
| IHL            | International Humanitarian Law   |
| IHRL           | International Human Rights Law   |
| ILT            | Human Environment and Transport Inspectorate (Netherlands)   |
| IMO            | International Maritime Organization  |
| IOM            | International Organization for Migration   |
| IS (ISIL/ISIS) | Islamic State (of Iraq and the Levant)   |
| ISAF           | International Security Assistance Force  |
| ISO            | International Organization for Standardization   |
| ISR            | Intelligence, Surveillance and Reconnaissance  |
| IT             | Information Technologies   |
| ITU            | International Telecommunication Union  |
| JARUS          | Joint Authorities for Rulemaking on Unmanned Systems   |
| JSOC           | Joint Special Operations Command   |
| kg             | kilogram   |
| LARs           | Lebanese Aviation Regulations  |
| LED            | Light-Emitting Diode   |
| LIBE           | Civil Liberties, Justice and Home Affairs  |
| MA             | Manned Aircraft  |
| MALE           | Medium Altitude Long Endurance Drone   |
| MAV            | Micro Aerial Vehicle   |
| MC99           | Montreal Convention 1999: Montreal Convention for the Unification of Certain Rules for International Carriage by Air. 2242 U.N.T.S. 309; S. Treaty Doc. No. 106-45 |
| MH             | Mental Health  |

|          |  |
|----------|--|
| MHz      | Megahertz, one million hertz   |
| MONUSCO  | UN Stabilization Mission in the Democratic Republic of the Congo   |
| mW       | Milliwatt, one thousandth Watt   |
| NCB      | Nuclear, Chemical or Biological weapons  |
| NCC      | National Coordination Centres  |
| NGO      | Non-Governmental Organisation  |
| NLRC     | Netherlands Red Cross Society  |
| NRA      | National Regulating Authority  |
| NYU      | New York University  |
| PbD      | Privacy by Design  |
| PETs     | Privacy Enhancing Technologies   |
| PIA      | Privacy Impact Assessment  |
| PII      | Personally Identifiable Information  |
| PTSD     | Post-Traumatic Stress-Disorder   |
| R&TTE    | Radio and Telecommunications Terminal Equipment  |
| RC52     | Rome Convention 1952: Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface. ICAO Doc. 7364/310 UNTS 182 |
| RCMP     | Royal Canadian Mountain Police   |
| RED      | Radio Equipment Directive  |
| RFID     | Radio Frequency Identification   |
| ROA      | Remotely Operated Aircraft   |
| RPA      | Remotely Piloted Aircraft  |
| RPAS     | Remotely Piloted Aircraft Systems  |
| RR       | Radio Regulations  |
| RTP      | Registered Travelers Program   |
| SAR      | Search and Rescue  |
| SARPs    | Standards and Recommended Practices  |
| SBC      | Schengen Borders Code  |
| SES      | Single European Sky  |
| SESAR JU | Single European Sky ATM Research – Joint Undertaking   |
| SIA      | Societal Impact Assessment/Social Impact Assessment/<br>Surveillance Impact Assessment   |
| SIGINT   | Signal Intelligence  |
| SIS      | Schengen Information System  |
| SME      | Small and Medium Enterprise  |
| SMS      | Short Message Service  |
| SOLAS    | Convention on the Safety of Life at Sea  |
| SUA      | Small Unmanned Aircraft  |
| TC       | Third Countries  |
| TCA      | Third Country Assistance   |
| TNT      | Trinitrotoluene (explosive material)   |
| UA       | Unmanned Aircraft  |
| UAS      | Unmanned Aircraft System/Unmanned Aerial System  |

|         |   |
|---------|---|
| UAV     | Unmanned Aerial Vehicle   |
| UCAV    | Unmanned Combat Aerial Vehicle  |
| UGV     | Unmanned Ground Vehicle   |
| U-Haul  | Self-moving truck band  |
| UK      | United Kingdom  |
| UN      | United Nations  |
| UN OCHA | United Nations Office for the Coordination of Humanitarian Affairs  |
| UNCLOS  | UN Convention on the Law of the Sea   |
| UNITAR  | UN Institute for Training and Research  |
| UNOSAT  | UN Operational Satellite Applications Program   |
| UPS     | United Parcel Service   |
| US      | United States   |
| USPS    | United States Postal Service  |
| UVSI    | Unmanned Vehicle Systems International  |
| VIP     | Very Important Person   |
| VIS     | Visa Information System (Schengen)  |
| VLOS    | Visual Line of Sight  |
| WC29    | Warsaw Convention 1929: Convention for the Unification of Certain Rules Relating to International Carriage by Air. 49 Stat. 3000; 137 LNTS 11 |
| WRC     | World Radio Conference  |