
Index

“n” refers to notes

- acoustic sensors, 47–48, 139–40, 166, 177, 193, 207, 231, 234, 237
- Advanced Man-portable Surveillance and Target Acquisition Radar (AMSTAR), 44–45
- aerial
 - reconnaissance, 3, 15, 24, 33–36, 62–75, 90, 115, 201, 236
 - and space-based video, 233
 - surveillance radar, 26, 45, 126, 141, 166, 231, 233, 236
- aerospace surveillance platforms, 74
- aircraft
 - aerostats/balloons, 33
 - attack helicopter. *See* attack helicopter
 - comparison with satellites, 34–35, 73–74
 - comparison with ground observers, 63–67
 - Congo (MONUC), 7, 28
 - fixed-wing, 88
 - maned, 33, 68–74, 188
 - MFO, 91, 93
 - MINUSTAH, 139–40
 - MONUC, 119–32, 155, 169, 188, 191n23
 - NATO, 144–45
 - rotary-wing (i.e. helicopter), 69, 71–72
 - transport/logistics, 3
 - unauthorized/smuggling, 27, 45, 89, 104n8, 141, 151n19, 240
 - unmanned aerial vehicle. *See* unmanned aerial vehicle
 - UNAMID, 115, 169
 - UNSCOM, 90, 105n20
- African Union (AU), 110
- African Union Mission in Sudan (AMIS), 110
- African Union/United Nations Hybrid Operation in Darfur (UNAMID), 9, 12, 110, 112, 115, 117, 168–69, 223
- AH. *See* attack helicopter (AH)
- Airborne Warning and Control System (aircraft) (AWACS), 45, 145, 188, 191n22
- air surveillance radar (ASR), 26, 45, 126, 141, 151n22, 166, 231, 233, 236
- AMIS. *See* African Union Mission in Sudan (AMIS)
- AMSTAR. *See* Advanced Man-portable Surveillance and Target Acquisition Radar (AMSTAR)
- Annan, Secretary-General Kofi, 95–96
- Armistice Demarcation Line, 78

arms

- embargoes, 20, 26–27
 - shipments, clandestine, 1
 - smuggling, 23, 124, 182
 - trafficking, 61n38, 141, 198
- artillery-locating/tracking radar, 23, 45, 162, 166, 187, 201, 207, 233, 236
- ASR. *See* air surveillance radar (ASR)
- attack helicopter (AH)
- aerial intelligence and halting of night-flying, 65
 - in DRC, 28, 132, 157
 - forward-looking infrared cameras, fourth-generation, 44
 - joint Congolese–UN force, 66
 - Lama helicopters, 168
 - Mi-25/35, 7n5, 25
 - Mi-35 in Congo, 5, 67, 75n3, 119, 122–23, 125, 128–32, 168
- AU. *See* African Union (AU)
- AWACS. *See* Airborne Warning and Control System (aircraft) (AWACS)
- balloons, 33, 36, 73–74, 141, 200–201
- biometric technologies, 37, 59n7
- machine-readable passports, 37
- Bosnia, 7n1, 14, 17, 44–45, 142–49, 156, 188, 191n12, 219–20
- Brahimi Report, 55, 60n34, 252
- C4ISR. *See* Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)
- C-34. *See* UN Special Committee on Peacekeeping Operation (C-34)
- camera
- infrared. *See* infrared (IR).
 - digital/still, 2, 5, 36–38, 54–55, 58, 101, 118, 115, 154, 155, 169, 172, 177
 - video, 2, 38, 40–41, 118, 207, 233, 236
- car jackings, 136
- Carlog devices, 49–50
- CCTV. *See* closed-circuit television (CCTV)
- CCTV/DVN. *See* video camera systems (CCTV/DVN)
- cell phone, 4, 24, 30, 37, 47, 50–54, 117, 128, 137, 179–80, 200, 205
- checkpoints, 15–16
- after the Yom Kippur War, 84
 - biometrics at, 37
 - customs, 38

- Egyptian, 81
 - identify optimal, 29
 - militia, 66
- MINUSTAH, 135, 139
- mobile UN, 34
- observation posts and road, 62
- radar guns, hand-held, 46
- for security concerns, 56
- under-vehicle surveillance system at, 172
- UNDOF, 170
- UNEF II, 85–87
- UNIKOM, 89
- UNMEE, 147
- UNPROFOR, 143–44
- vehicle, 27
- vehicles detection, 38, 231, 234
- chemical sensors, 166, 234, 237
- CIT. *See* communications and information technology (CIT)
- CITS. *See* Communications and Information Technology Service (CITS)
- civil war
- in Darfur, 110
 - in DRC, 4–5, 219
 - in Lebanon, 78
 - post-Cold War, 12
 - preventing, 1
 - resolving a conflict after (or during), 108
 - in Sierra Leone, 52
 - in Sudan, 113
 - verifying information, viewing events and confirming facts, 110
 - in Yemen, 78
- closed-circuit television (CCTV), 2, 24, 38, 93, 97, 118, 163, 166, 187, 233, 236
- CNDP. *See* Congrès national pour la défense du peuple (National Congress for the Defence of the People) (CNDP)
- COB. *See* Contingency Operating Base (COB)
- code-breaking capability, 47
- COE. *See* Contingent-Owned Equipment (COE)
- COE Manual. *See* *Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions* (COE Manual)

- Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), 4, 57
- commercial satellite imagery (CSI), 35, 55, 127, 138, 208. *See also* satellite imagery
- communications and information technology (CIT), 208. *See also* information technology (IT)
- Communications and Information Technology Service (CITS), 172, 180, 197
- Congo, 119–33
- Congrès national pour la défense du peuple (National Congress for the Defence of the People) (CNDP), 128–32
- Contingency Operating Base (COB), 129–30
- Contingent-Owned Equipment (COE), 3, 43, 116, 140, 155, 159–63, 168, 185, 193–94, 199, 202, 203n1, 204n2, 209
- counter-intelligence capability, 47
- crimes against humanity, 110
- crowdsourcing, 24, 52
- CSI. *See* commercial satellite imagery (CSI)
- Cyprus, 93–102
- Dallaire, Roméo, 4
- Darfur, 109–19
- Darfur Peace Agreement (DPA), 110, 223
- database of fingerprints, 37
- DCOS. *See* Deputy Chief of Staff (DCOS)
- DDR. *See* disarmament, demobilization and reintegration (DDR)
- DDRRR. *See* demobilization, disarmament, repatriation, resettlement and reintegration (DDRRR)
- demilitarized zone (DMZ), 78–81, 89, 214, 218, 237, 239
- demobilization, disarmament, repatriation, resettlement and reintegration (DDRRR), 222
- Democratic Republic of the Congo (DRC), 3, 14, 25, 35, 62, 108, 120, 155, 180, 194, 207
- Department of Field Support (DFS), 6, 116, 149, 154, 172, 192
- Department of Peacekeeping Operations [UN] (DPKO)
- additional resources and improved functioning, 226
 - advanced information technology architecture, 3
 - airborne surveillance service, commercial, 188
 - “Capstone” document, 157
 - Carlog system benefits, 49
 - Cartographic Section and GIS start-up packages for new missions, 55
 - cartography units in the missions, 4
 - Casualties Database, 22
 - countries capable of providing monitoring equipment and expertise to UN missions, 194
 - day and night observation, testing, 158
 - DSS partnered with, 165
 - equipment shortfall list by category, 160
 - expensive equipment leased from TCCs, 161
 - Extended Senior Management Team, 165
 - fatalities listed in, 22
 - guidance documents and need for technology, 192
 - Handbook on United Nations Multidimensional Peacekeeping Operations*, 192
 - information-gathering using military, police and civilian personnel, all-source, 134
 - Integrated Training Service and training materials on modern monitoring technologies, 158
 - intranet and databases, 3, 195–96
 - Joint Mission Analysis Centre (JMAC), 134
 - Joint Operations Centre (JOC), 134
 - lobbyists and commercial vendors, 189
 - low-and-medium-cost technologies deployment, 6
 - low–medium-cost surveillance and communications project, 138
 - maps of conflict areas, preparation of, 55
 - Military and Police Advisers Community, 193
 - Military Planning Service [Division] of, 123
 - missions administered by, 9
 - “Monitoring and Surveillance Capabilities” section in Concept of Operations, 163
 - Monitoring and Surveillance Technology policy, 164
 - monitoring problems and night-vision devices (NVD), 120
 - monitoring technology issues, 163

- Department of Peacekeeping Operations [UN] (DPKO) (cont.)
- MONUC and recommendations of the Joint Assessment Mission on surveillance assets, 194
- “New Horizon” 2009 agenda, 116
- “New Horizon” paper, 6, 154, 192
- new technology for the field, 154
- night-vision devices, 43
- operational survey of current practice, 194
- peacekeeping doctrine and the policy directives of, 207–8
- policy on monitoring technologies, 163
- political will of, 163
- priority action, need for, 226
- radars, human-portable ground surveillance, 124
- Selection Standards and Training Guidelines for United Nations Military Observers*, 158
- seven missions supplied with additional technology, 173
- Special Committee, progress report for, 227
- Special Committee recommendations for peacekeepers in volatile and dangerous conditions, 227
- Standard Cost Manual*, 7n6, 162, 195
- Standard Operating Procedure, 164
- structures for information-gathering and analysis, 28
- struggle supplying field resources and developing general policy, doctrine and training materials for PKOs, 186
- surveillance equipment in UN missions project, 165, 168
- Table of Organization and Equipment (TOE), 158–59, 193
- Technical Specifications Working Group, 165
- UNAMID mission and Darfur, 112
- United Nations Peacekeeping Training Manual*, 158
- UN peacekeeping, mismatch of scope and tools, 197
- “UN Policy on Monitoring,” development of, 174
- UN Special Committee on Peacekeeping, 193
- US export licenses denied for Generation 3 binoculars, 43
- Department of Safety and Security [UN] (DSS), 30, 164–65
- Deputy Chief of Staff (DCOS), 131–32
- DFS. *See* Department of Field Support (DFS)
- digital cameras, high-zoom, 2, 5, 118, 177
- digital networks, 2
- digital video network (DVN), 2, 38, 41, 118, 166, 233
- digital video recorder (DVR), 38, 40
- disarmament, demobilization and reintegration (DDR), 121, 123, 171–73
- DMZ. *See* demilitarized zone (DMZ)
- DOMREP. *See* Mission of the Representative of the Secretary-General in the Dominican Republic (DOMREP)
- Doppler radar, 144, 230
- DPA. *See* Darfur Peace Agreement (DPA)
- DPKO. *See* Department of Peacekeeping Operations [UN] (DPKO)
- DRC. *See* Democratic Republic of the Congo (DRC)
- drug trafficking, 73, 141
- DSS. *See* Department of Safety and Security [UN] (DSS)
- “dual-use” aircraft, 82
- DVN. *See* digital video network (DVN)
- DVR. *See* digital video recorder (DVR)
- Egypt–Israel Armistice Commission, 82
- electromagnetic sensing (active), 230–31
- electromagnetic sensing (passive), 230
- electronic intelligence (ELINT), 47, 124, 127
- electronic monitors, 167, 237
- electronic translators, 37
- ELINT. *See* electronic intelligence (ELINT)
- “Enhanced Protective Measures and Resources,” 165
- EOD. *See* Explosive Ordnance Disposal (EOD) Detachment [of MFO]
- equipment, contingent-owned, 3, 43, 116, 155, 159–63, 168, 185, 193–94, 209
- equipment for observation in COE Manual, 162
- equipment shortfalls by category, 160–61
- EU. *See* European Union (EU)
- EUFOR. *See* European Union Force (EUFOR)
- European Union (EU), 2, 37, 122, 156
- European Union Force (EUFOR)

- in DRC, 44, 156, 188, 207
 mirage jets with photo reconnaissance capabilities, 36
 MONUC and the election period, 36
 night-vision sights from tube-launched, optically-tracked and wire-guided (TOW) anti-tank missile launchers, 44
 peacekeeping tasks in Bosnia, 149
 secure satellite phones, radios, fax, 47
 unmanned aerial vehicles (UAVs), 35–36, 65, 126, 188
 European Union Satellite Centre (EUSC), 116
 EUSC. *See* European Union Satellite Centre (EUSC)
 Explosive Ordnance Disposal Detachment [of MFO] (EOD), 92–93
 explosives detector, 49, 60n23, 166, 237
 export permits, 174
- FAC. *See* Forward Air Controller (FAC)
 FARDC. *See* Forces Armées de la République Démocratique du Congo (FARDC)
 far-IR, 42–43, 230
 flight bans, 20
 FLIR. *See* forward-looking infrared (FLIR)
 Forces Armées de la République Démocratique du Congo (FARDC), 66–67, 123, 128–32
 forensic analysis, 24
 forensic investigation, 54
 former warring factions [in Bosnia] (FWF), 144–45
 Forward Air Controller (FAC)
 MONUC, 131
 forward-looking infrared (FLIR). *See also* infrared (IR); passive infrared [sensors] (PIR)
 airborne, 64–65
 cameras, fourth-generation, 44, 129
 devices in helicopters in eastern DRC and East Timor, 208
 Italian Force Protection Company, 172
 MINUSTAH, 136
 reconnaissance aircraft with night-vision, 201
 thermal imaging from aircraft, 236
 United Nations Police (UNPOL), 140
 FrontlineSMS, 52
 FWF. *See* former warring factions [in Bosnia] (FWF)
- Geneva conventions, 119
 geographic information system (GIS), 238
 about, 55–57
 Cartographic Section at UN headquarters and, 195–96
 commercial marketplace availability, 4
 commercial satellite imagery (CSI), 127
 database sharing with UN police and military observers, 4
 for detailed maps for commanders, planners and troops, 138
 Global Positioning System (GPS) and, 66
 imagery could link to, 196
 information analysis, 238
 integral part of mapping, charting and geodesy, 36
 JOC and JMAC units, 29
 mapping data for eastern DRC, 126
 MINURSO (Western Sahara), 169
 “network-centric warfare” based on, 4
 UN and commercial advances in databases linked to, 142
 UNMOGIP (Kashmir), 171
 UNOCI, 171
 for UN troops, military observers, police and civilians, 193
 UN upgrading of cartography to, 199–200
 geophones, 48, 166, 231, 234, 237
 geo-referenced database, 54, 57
 GIS. *See* geographic information system (GIS)
 Global Positioning System (GPS)
 advanced smartphone incorporates, 180
 COE Manual, 160
 convoy trackers and positioning devices, 23, 238
 devices, wireless technologies and phones, 50
 equipment shortfalls, 160
 Explosive Ordnance Disposal Detachment (EOD) uses, 92–93
 geographic information systems (GIS), 55
 GIS units in the missions for mapping services, 55
 global receiver, 92
 hand-held GIS PCs, 55
 jamming of, 189
 laser range-finders, 158–59, 199
 MINURSO, 169, 173
 monitoring technologies, 165
 Multinational Force and Observers, technologies employed by, 92

- Global Positioning System (GPS) (cont.)
 night-vision and, 117–18, 149, 159
 for peacekeepers in barren desert, 92
 peacekeepers located by, 65–66
 in peace operations, 154
 positioning and tracking systems, 167,
 234, 238
 self-navigating UAVs using, 68
 smartphones, 54, 180, 205
 social networking and interconnectivity,
 54
 UN field station and automated response
 with, 54
 UN vehicles, 49–50
Google Earth, 2, 56, 116, 154, 187
GoS. *See* Government of Sudan (GoS)
Government of Sudan (GoS), 110, 112–15,
 117
GPR. *See* ground-penetrating radar (GPR)
GPS. *See* Global Positioning System (GPS)
Greek National Guard Post 50 (NG50),
 99–100
Green Line in Nicosia, 41, 94–95, 98–101,
 198, 236
ground-penetrating radar (GPR), 27, 34, 46,
 166, 171, 230, 233, 237
ground surveillance radar (GSR)
 COE Manual observation equipment, 162
 detection of intruders, movements of
 persons, vehicles or boats, 34
 detection of moving person or vehicle up
 to 10 km, 44, 145
 electromagnetic sensing, 230, 238
 global positioning system, 92
 ground surveillance, 126
 human-portable, 124
 Irish Quick Reaction Force, 44
 medium-cost technologies, 200
 monitoring technology, 166
 night monitoring, 25
 on-shore observation posts, 89
 single mission deployment, 207
GSR. *See* ground surveillance radar (GSR)
“The Guardian” (software application), 54,
 60n32

Haiti, 133–42
Hammarskjöld, UN Secretary-General Dag,
 11, 82, 104n6
hand-held wand, 166, 234, 237
HD. *See* high-definition (HD)

helicopter
 attack. *See* attack helicopter
 reconnaissance, 101
high-definition (HD)
 IP cameras, 39
 IP video, 40
human intelligence (HUMINT), 127
humanitarian aid, 13, 17
Humanitarian Information Unit of the US
 Department of State, 56
human rights
 abuses, 52, 183
 compliance, 9
 Darfur and Google Earth, 56
 evaluators of, 10
 in Haiti, 135
 MINUGUA, 216
 MINURCAT, 223
 MINUSTAH, 222
 missions, encryption software systems for,
 54
 monitoring in DRC, 121
 MONUC, 124–25, 151n24
 in multidimensional operations, 16
 ONUB, 222
 in post-Cold War period, 12
 promotion, 13
 radar technology and, 46
 respect for individual privacy, 181
 smartphone software applications, 54
 UNAMA, 221
 UNAMID, 223
 Universal Declaration of Human Rights,
 181
 UNMIBH, 220
 UNMIL, 222
 UNMIS, 223
 UNMIT, 223
 UNOCI, 222
 UNOMSIL, 216
 UN peace operations, 20
 video monitoring and, 233, 236
 violations, GPS for, 54
 violations, UN peacekeepers and, 114
 violations by government troops, 123
 war criminals and major violators of,
 183
human shields, 27–28
human trafficking, 20, 73, 141, 198
HUMINT. *See* human intelligence
 (HUMINT)

- IAEA. *See* International Atomic Energy Agency (IAEA)
- ICC. *See* International Criminal Court (ICC)
- IDF. *See* Israel Defense Forces (IDF)
- IDP. *See* internally displaced person (IDP)
- IED. *See* improvised explosive device (IED)
- IFOR. *See* Implementation Force (NATO force in Bosnia) (IFOR)
- image intensification, 43–44, 162, 207
- image intensifiers, 25, 43, 135, 140, 154, 160, 166, 233, 236
- Implementation Force (NATO force in Bosnia) (IFOR), 7n1, 15, 47, 144–46, 149
- improvised explosive device (IED), 42, 172
- information technology (IT). *See also* communications and information technology (CIT)
- advances in, 2, 96
- “Capstone” document, 157
- Communications and Information Technology Service (CITS), 172, 180, 197
- DPKO has advanced, 3
- enhanced use of, 236
- information for UN analysis and decision-makers, 28, 30
- information transfer improved by, 183
- UN electronic transmission channels, 177
- infrared (IR). *See also* forward-looking infrared (FLIR); passive infrared [sensors] (PIR)
- advanced mobile platforms, 207
- aircraft imaging suite, 70
- break-beam sensors, 34, 177
- camera, third-generation thermal, 147
- cameras, 44, 139, 141, 173
- COE Manual, 160
- detection, cameras for, 198
- devices in cold weather, 177
- devices in helicopters, 208
- devices to detect heat, 140
- electromagnetic sensing, 230
- emitter to “brighten” area invisibly, 167
- filters, cameras equipped with, 97
- ground sensor system component, 146
- high-cost technologies, 201
- illuminators, 198
- imagers, 29
- imaging (heat sensing), 230
- medium-cost technologies, 200
- night vision and aerial reconnaissance, 66
- night-vision equipment, 166
- radiation, 42
- remote sensing, 46
- sensing equipment, 173
- sensors, advanced, 65
- sensors, passive, 145
- sensors, spotlight triggered by, 139
- sensors and heat from human body, 42
- sensors capable of monitoring troop movements, 144
- system cost, 162–63
- thermal (far-infrared) imaging devices, 187
- Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR), 115, 168–69, 171
- intelligence capability, 27, 47
- internally displaced person (IDP), 61n38
- camp, 110–11, 118
- International Atomic Energy Agency (IAEA), 48, 59n13
- International Charter. *See* International Charter on Space and Major Disasters (International Charter)
- International Charter on Space and Major Disasters (International Charter), 35
- International Criminal Court (ICC), 110, 117, 122
- International Peace Observation* (Wainhouse), 78, 254
- International Satellite Monitoring Agency, 34
- Internet Protocol (IP) camera, 38, 168, 171
- interposed forces, 11–13, 16, 217–18
- intrusion alarms, 167, 234, 236
- IP. *See* Internet Protocol (IP)
- IR. *See* infrared (IR)
- Israel Defense Forces (IDF), 86, 104n6
- ISTAR. *See* Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR)
- IT. *See* information technology (IT)
- JAM. *See* Joint Assessment Mission (JAM)
- JMAC. *See* Joint Mission Analysis Centre (JMAC)
- JOC. *See* Joint Operations Centre (JOC)

- Joint Assessment Mission (JAM), 120, 123–26, 194
- Joint Mission Analysis Centre (JMAC)
analytical products for mission planning, execution and security risk assessment, 30
captivity, description of conditions of, 140
captivity, locating position of, 140
data analysis of mission, 163–64
gangs' strengths and weaknesses, assessment of, 142
GIS database, 142
i2 analytical tools, 137
imagery intelligence and over-flights, 135–36
information, medium to long-term, 28–29
“information synergy,” need to create, 29
intelligence analysis, 141
intelligence organization and process, 127
intelligence products, 142
intelligence “products” for anti-gang operations, 142
Joint Operations Centre (JOC) and, 21, 134, 196, 238
mission structure to process, analyse and disseminate information, 21
in peacekeeping operations to conduct all-source information-gathering, 134
PKOs, component of, 28
professional members of, 29
security levels and security postures to protect UN staff and property, 30
signals from cameras, 139
skill sets required, 29
Standard Operating Procedures, 238
strategic assessments, long-term, 142
UNAMID and satellite surveillance, 115
UN to identify technologies to help, 29
- Joint Operations Centre (JOC)
closed-circuit television, 97
image analysis deployed to field, 196
information analysis, 238
- Joint Mission Analysis Centre (JMAC), 21, 28, 134, 196, 238
peacekeeping operations and all-source information-gathering, 134
PKOs, component of all, 28
unmanned observation posts, cost of, 98
verbal response to violence, 102
- Joint Surveillance and Target Attack Radar System (JSTARS), 45
- jungle warfare, 120, 132
- kidnapping, 5, 51, 123, 134, 136–37
- Kivu provinces, 121
- Korean War, 103, 133
- Kuwait invasion (1990), 88, 103, 105n17
- lake surveillance, 127
- LAN. *See* local area network (LAN)
- landmines, 21, 23, 34, 42, 56, 92–93, 231, 234
- laser range-finders, 158–59, 199
- League of Nations, 8, 103n3
- Lebanon, 86–87
- Ledra Street Crossing (LSX), 100
- license plate recognition (LPR), 37–38
- LIDAR. *See* Light Detection and Ranging (LIDAR)
- Light Detection and Ranging (LIDAR), 85, 167, 230, 234
- local area network (LAN), 38, 41
- looting, 5
- LPR. *See* license plate recognition (LPR)
- LSX. *See* Ledra Street Crossing (LSX)
- MAC. *See* Mixed Armistice Commission (MAC)
- magnetic (and quasi-static electric field) detection, 231
- magnetic sensors, 145–46, 177, 190n3, 205
- manned aircraft, 33, 68, 70–74, 188
- Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions* (COE Manual), 159
- binoculars and night-vision goggles, cost of, 98
- Capability Development Officer, 174
- Global Positioning System (GPS), 160
- ground surveillance radar (GSR), 162
- image intensifiers, cost of, 43
- infrared (IR), 160
- monitoring technologies, 165
- MOU of UN with contributing nations, 195

- night-vision equipment, 199, 203–4n1, 203n1
 NVE standards, 43–44
 revise and update, need to, 194
 shortfalls and standards, 159–63
 thermal (far-infrared) imaging devices, 162
 troop-contributing country (TCC), 160, 162
 UN-owned equipment standard, 43
 marine radar, 141, 166, 233
 massacres
 in Congo, 5, 122
 in plain view of helpless peacekeepers, 23
 preventing, 1
 rival ethnic groups hunted each other at night, 122
 by Serb, Muslim and Croat forces, 143
 mass graves, 34, 42, 230, 233, 237
 medical monitoring technologies, 23
 Memorandum of Understanding (MOU), 159, 162, 174n4, 185, 195
 metal detectors, 27, 46, 92, 139, 165–66, 169, 171, 187, 234, 237
 MFO. *See* Multinational Force and Observers (MFO)
 microphone, 199, 231
 microwave communications, 99
 mine detector, 92, 166, 234, 237
 Minimum Operating Security Standards (MOSS), 164–65
 MINUGUA. *See* UN Verification Mission in Guatemala (MINUGUA)
 MINURCA. *See* UN Mission in the Central African Republic (MINURCA)
 MINURCAT. *See* UN Mission in the Central African Republic and Chad (MINURCAT)
 MINURSO. *See* UN Mission for the Referendum in Western Sahara (MINURSO)
 MINUSTAH. *See* UN Stabilization Mission in Haiti (MINUSTAH)
 MIPONUH. *See* UN Civilian Police Mission in Haiti (MIPONUH)
 Mission of the Representative of the Secretary-General in the Dominican Republic (DOMREP), 214
 Mixed Armistice Commission (MAC), 78–83, 85
 “Monitoring and Surveillance Capabilities” section in Concept of Operations, 163
 Monitoring and Surveillance Technology policy, 164
 monitoring technologies
 current and potential, 236–38
 financial problems, 187–89
 institutional and cultural problems, 186–87
 legal problems, 180–81
 operational problems, 176–79
 other problems, 189–90
 political problems, 182–86
 summary of benefits, 233–34
 technical problems, 179–80
 MONUA. *See* UN Observer Mission in Angola (MONUA)
 MONUSCO. *See* UN Organization Mission in the Democratic Republic of the Congo (MONUSCO)
 MOSS. *See* Minimum Operating Security Standards (MOSS)
 motion detectors, 2, 42, 102, 118, 166, 171, 178, 187, 198, 233, 236
 MOU. *See* Memorandum of Understanding (MOU)
 Multinational Force and Observers (MFO), 85, 90–93

 National Election Watch (NEW), 52
 National Support Element, 34, 174n4, 185, 208
 NATO. *See* North Atlantic Treaty Organization (NATO)
 NATO bodies for enhanced military technology, 148–49
 NATO Consultation, Command and Control Agency (NC3A), 146
 NC3A. *See* NATO Consultation, Command and Control Agency (NC3A)
 near infrared, 230
 NEO. *See* network-enabled operation (NEO)
 network-centric warfare, 4, 58, 61n41
 network-enabled operation (NEO), 4, 57–58, 61n41
 NEW. *See* National Election Watch (NEW)
 NG50. *See* Greek National Guard Post 50 (NG50)
 NGO. *See* non-governmental organization (NGO)

- night-vision device (NVD)
 - battalions, use of, 172
 - battery-operated, 179
 - for camp protection and night operations, 29
 - ground observation posts equipped with, 34
 - ground surveillance, 126
 - infantry platoon, “force standard” for, 161
 - inspection and field testing, 160
 - lake surveillance, 127
 - loan to contingents without, 123–24
 - military observers equipped with, 158
 - military unit requirements, 160
 - monitoring, technology-enabled, 193
 - monitoring devices, cost of, 187
 - for night violence, 198
 - second-generation, 92, 154
 - smugglers, for detection of, 124
 - technologies employed by the
 - multinational force and observers, 92
 - UNAMID, identified needs of, 115, 117, 169
 - UN Department of Peacekeeping Operations (DPKO), 43
 - UN helicopters equipped with advanced, 67
 - UN monitoring problems, solution to, 120
- night-vision equipment (NVE)
 - advantage of, 142
 - arms smugglers have, 26
 - COE Manual and contingents, 43–44
 - contingent-owned equipment, 161
 - for contingents such as MINUSTAH, 140
 - deficiencies in, serious, 162
 - depth perception problems, 177
 - for driving on unit roads, 23
 - export permits requirements, 174
 - field commanders want third-generation, 185
 - fourth generation, 4
 - generations of, capabilities of various, 153n40
 - Haitian gangs possess better, 157
 - on helicopters for flights into southern Darfur, 114
 - inspection and testing, 199
 - intruders and attackers, to locate and confront, 25
 - monitoring technologies, 166
 - for observation, 44
 - peacekeepers operating, 26
 - peacekeeping operations, 158
 - for pilots, 26
 - South African forces, 156
 - Special Forces operating in jungles, 199
 - stockpile for quick deployment, 196
 - for troops at night on lookout for threats, 25
 - UNDORF (Golan Heights), 170
 - UNIFIL, 172
 - United Nations Peacekeeping Training Manual*, 158
 - UN lacks recording capabilities for, 44
 - UNMOGIP (Kashmir), 171
 - UN monitoring technology on missions, gap in, 156
 - UNOCI (Côte d’Ivoire), 171
 - UN to identify substandard, 199
 - UNTSO (Palestine, including Lebanon), 171
 - US export control, 185, 191n15
 - Working Paper No. 2, 225
- no-fly zones, 20, 231, 236
- non-governmental organization (NGO), 52, 54, 110
- North Atlantic Treaty Organization (NATO). *See also* NATO Consultation, Command and Control Agency (NC3A)
 - advanced technologies for peace support operations, 2, 108, 177
 - Airborne Warning and Control System (AWACS) aircraft, 145
 - Balkans, operations in the, 149
 - intelligence preparation of the battlefield, 133
 - military technology, bodies mandated to enhance, 148–49, 186
 - military technology infrastructure, 149
 - monitoring, 47
 - monitoring technology, 156
 - peacekeeping in Bosnia and Herzegovina, 14–15, 47, 142–49, 155–56, 220
 - peace support operations, 18n2
 - secure communications systems, 47
 - special expertise and expert analysts to recognize target signatures, 177
 - surveillance platforms to assist peacekeepers, robust, 149
 - third-generation technology, 191n15

- UN alliance with, 208
 UN-mandated no-fly zones in former Yugoslavia using AWACS, 45
 UNPROFOR, 142–49
 NVD. *See* night-vision device (NVD)
 NVE. *See* night-vision equipment (NVE)
- observation post (OP)
 along Sinai border and Gaza Strip, 82
 cost estimates for manned *vs.* unmanned, 98
 imaging equipment, equipped with, 34
 manned *vs.* camera system, 102
 mobile patrols and CCTV/heliborne surveillance *vs.*, 41
 OPFOR and CCTV systems, 101
 road checkpoints and, 62
 UNDOF (Golan Heights), 170
 UNEF II, 85
 UNFICYP, 94–96, 102
 UNIFIL, 87
 UNIKOM, 89
 United Nations, 15
 UNMO, 104n6
 UN peace operations, 16
 UNTSO, 83, 85–86, 171
 video cameras, 236
- observer missions, 10–13, 16, 18n4, 214–16
 OMIK. *See* Organization for Security and Co-operation in Europe Mission in Kosovo (OMIK)
 ONUB. *See* UN Operation in Burundi (ONUB)
 ONUC. *See* UN Operation in the Congo (ONUC)
 ONUCA. *See* UN Observer Group in Central America (ONUCA)
 ONUMOZ. *See* UN Operation in Mozambique (ONUMOZ)
 ONUSAL. *See* UN Observer Mission in El Salvador (ONUSAL)
 OP. *See* observation post (OP)
 Operation Artemis [European Union], 64, 122
 OPFOR. *See* opposing force (OPFOR)
 opposing force (OPFOR)
 camera-based system to spot violations, 97, 99
 CCTV systems *vs.* observation posts, 101
 cease-fire lines, filming behind, 100
 Ledra Street Crossing, 100
 monitoring tense zone between armed, 93
 motion-initiated camera systems, 97
 sharing video imagery with, 203
 UNFICYP and heavily armed, 94
 UNFICYP and the Green Line, 94, 98–99, 101, 198
 UNMOGIP and India and Pakistan, 172
 UN's allegations of ill discipline, 97
 Organization for Security and Co-operation in Europe Mission in Kosovo (OMIK), 41, 59n14
- P-3 Maritime Patrol aircraft, 144
 Palestine Liberation Organization (PLO), 86
 Pan Tilt Zoom [cameras] (PTZ), 39, 41, 59n14, 99, 171
 passive infrared [sensors] (PIR), 178. *See also* forward-looking infrared (FLIR); infrared (IR)
 patrols, foot and vehicle, 15–16, 124
 peacekeepers
 advance surveillance flights, 65
 aerial images to learn about terrain, 66
 aerial surveillance by US drones, 156–57
 ambush of, 117
 armed, 11
 arms shipments, locate and intercept clandestine, 1
 atrocities, uncover evidence for courts and tribunals, 1
 attacks on, are violations of international law, 117
 binoculars at observations posts and on patrols, 82
 “Blue Helmets,” 9
 buffer zone controlled by, 84
 camcorders on, 117
 camera imagery from helicopter flights, 101
 cameras, digital still and video, 197
 “cat and mouse” game, 114
 CCTV/DVN in Darfur, 118
 cell phone systems and Internet, 51, 54–55
 Cold War *vs.* post-Cold War, 12
 combatant positions and military forces movements, 11

- peacekeepers (cont.)
 - command of the information sphere in area of operation, 27
 - conflicting parties generally pledged more cooperation, 10
 - conflicting parties have better equipment, 26
 - customized smartphone software
 - applications, 54
 - deaths in Congo, 5
 - deaths in Haiti, 134
 - deployment across entire countries, 1
 - digital (still) imagery, 196
 - DRC genocide, 122
 - DVD players, portable, 200
 - electronic “ears” (radios with frequency scanners), 46–47
 - forward-looking infrared devices in helicopters, 208
 - freedom of movement and legal immunity of UN, 12
 - geographic information systems (GIS), 199, 239
 - Global Positioning System (GPS), 92
 - Greek National Guard Post 50, 99
 - helmet cameras, 198
 - images, ground, aerial and satellite, 193
 - increase in numbers, 13–15
 - intervention based on imagery of swelling and violent crowds, 41
 - in Iraq, 88
 - in Lebanon, 86
 - massacres in plain view of helpless, 23
 - in Middle East, 77
 - mobile patrols and CCTV/heliborne surveillance, 41
 - monitoring technologies in toolkit, 32
 - in multidimensional operations, 16
 - Multinational Force and Observers, 91
 - new technologies, 93
 - night, need to operate at, 25
 - night-vision binoculars, 115
 - night-vision equipment (NVE), 42–44, 117
 - peacekeeping training, 158
 - peace processes, monitor potential spoilers of, 1
 - personal cameras, 117
 - proactive, 184
 - professionalism of, 96
 - reliance on old-generation tools, 2
 - remote monitoring, 102
 - robust surveillance platforms for, 149
 - smartphones, 200
 - surveillance equipment of, 1
 - technical monitoring and increased safety and security of, 206
 - technical monitoring and surveillance, 226–27
 - technological deficiencies in UN missions, 5
 - technological proficiency among, 178
 - technology enables, 206
 - technology to monitor at night, 25–26
 - technology vs., 184
 - trust and understanding, building, 32
 - UN checkpoints and oncoming vehicles, 34
 - video cameras, remote, 198
 - video witness to conflict, 101
 - weapons search across national borders, 26
- peacekeeping operation (PKO). *See also* Department of Peacekeeping Operations [UN] (DPKO)
 - advanced technology, standardize use of, 227
 - dangerous, most, 7n9
 - defined, 18n2
 - disarming unwilling parties, 26
 - Global South, troops from the, 159
 - ground sensors, 239
 - high technology in, 225
 - interposed forces, 11–13, 16, 217–18
 - in Iraq to protect Kuwait, 87
 - Joint Mission Analysis Centre (JMAC), 134
 - Joint Operations Centre (JOC), 134
 - in Middle East, 102–3
 - MINUSTAH situation reports, 142
 - missions administered by, 9
 - monitoring and surveillance technologies, advanced, 227
 - monitoring tools and methods, wide set of, 21
 - MONU and Eastern Division with Security Council support, 123
 - multidimensional operations, 12–13, 15–17, 91, 108–49, 219–23
 - multiple information sources for, 75
 - NATO replaced UN forces for, 143
 - night surveillance in, 70

- night-vision devices, 43
 night-vision equipment (NVE), 158
 observer missions, 10–13, 16, 18n4, 214–16
 peacekeeping, defined, 9
 Peacekeeping Operations Support
 Service unit of DSS, 165
 political considerations for selection of
 monitoring methods and technologies,
 182
 political environment shifts toward better
 cooperation and assistance for, 116
 recommendations for appropriate
 technologies, 192–203
 sensors to UN military and civilian
 domains, 4
 Status-of-Forces Agreement (SOFA), 181
 systemic use of technology in, 6
 Table of Organization and Equipment
 (TOE), 158–59, 193
 transitional administrations, 13–15, 17,
 224
 UNAMID and Resolution 1769, 112
 UNEF II and early warning system in the
 Giddi and Mitla passes, 84
 UNFICYP and closed-circuit television,
 93
 UNIFIL, 87
 United Nations Truce Supervision
 Organization (UNTSO), 78
 UNMIH, 133
 UN Secretary-General, under control of,
 19n10
 UN Special Committee on Peacekeeping
 Operation (C-34), 6, 28, 163, 193, 202,
 225–28
 video teleconference links with, UN New
 York, 3
 wider and systemic use of technology in,
 227–28
 Pérez de Cuéllar, Secretary-General Javier,
 87–88
 PIR. *See* passive infrared [sensors] (PIR)
 PKO. *See* peacekeeping operation (PKO)
 PLO. *See* Palestine Liberation Organization
 (PLO)
 POC. *See* protection of civilians (POC)
 position and tracking systems, 50, 167, 234,
 238
 pressure and strain sensing, 231
 pressure transducers, 34, 167, 234
 protection of civilians (POC)
 “crowdsourcing,” 24
 PKOs, new mandate of, 23
 UNAMID, 113
 UN missions are under-equipped, 155
 UN peacekeeping operation, 17
 PTZ. *See* Pan Tilt Zoom [cameras] (PTZ)
- quasi-static electric field detection, 231
- RADAR. *See* Radio Detection and
 Ranging (RADAR)
- radars, 233
 air surveillance radar (ASR), 26, 45, 126,
 141, 166, 233, 236
 artillery locating, 166, 233, 236
 ground surveillance. *See* ground
 surveillance radar
 ground penetrating radar (GPR), 34, 46,
 166, 171, 230, 233, 237
 synthetic aperture, 45, 65, 68, 144, 166,
 177, 230, 236
 wall-penetrating, 46, 139, 169, 230
- Radio Detection and Ranging (RADAR),
 230
- radio frequency identification (RFID)
 GIS and, 55
 microwave, 50
 position and tracking systems, 50, 167,
 234, 238
 tags, 50
 UNMIS, 170
 weapons in storage, verifying disarmed,
 50, 234
- radio scanners, 167, 234, 237
 radio-wave monitoring, 230, 234
- RAID. *See* Rapid Aerostat Initial
 Deployment (RAID)
- Rapid Aerostat Initial Deployment
 (RAID), 73, 75
- Rapid Mapping Service for UN agencies, 35
- RC-135 reconnaissance aircraft, 144
- recommendations, 192–203
- refugee camps, 20, 24, 69, 118, 187, 198, 200
- REMBASS. *See* Remotely Monitored
 Battlefield Sensor System (REMBASS)
- Remotely Monitored Battlefield Sensor
 System (REMBASS), 145–46
- RFID. *See* radio frequency identification
 (RFID)
- road monitor, 167, 234
- ROE. *See* Rules of Engagement (ROE)

- Rules of Engagement (ROE), 24, 27, 31n6, 123
- Rwanda, 4–5, 103, 111, 114, 120, 122, 132, 215
- SAR. *See* synthetic aperture radar (SAR)
- satellite(s)
- Ikonos and QuickBird, 138
 - imagery for operational planning, 124, 185
 - overhead imaging, 35, 73
 - phone networks, 3
 - phones, radios, fax, 3, 47
 - RADARSAT, 45–46
 - radio signals from GPS of, 167
 - reconnaissance, 33, 64, 73, 86
 - SAR imagery from commercial, 45
 - surveillance, 83, 91, 115–17, 225
 - surveillance radars, 44
 - UN ownership of, 34
- satellite imagery. *See also* commercial satellite imagery (CSI)
- cost of, 187
 - costs per scene, 56
 - European, 116
 - GIS system, 199
 - high-resolution, 2, 34, 56, 116, 195
 - for mapping, 176
 - near-real-time, 2
 - selected US, 143
 - UN analysis of, 116
 - UN-ordered, 35
 - weather-forecasting using, 23
 - of Western Sahara and boundaries, 169
- Security Council
- airspace, permission to enter, 64
 - arms embargoes in conflict areas, 26
 - Chapter VII of UN Charter, 27, 122, 163
 - condemnatory statements or resolutions, 79
 - DRC and illegal mineral shipments, 5
 - information from UN field missions, 83
 - Iraqi invasion of Iran, 88–89
 - MINUSTAH and cross-border illicit trafficking of persons, drugs, arms, 141
 - monitoring by UN peacekeepers, 20
 - MONUC, 123
 - Multinational Force and Observers, 85
 - plan for peace in Iraq, detailed, 87
 - protection of civilians, 23
 - Resolution 50 (1948), 78
 - Resolution 598 (1987), 87
 - Resolution 1568 (2004), 96
 - resolutions for interposed forces, 217–18
 - resolutions for multidimensional operations, 219–23
 - resolutions for observer missions, 214–16
 - resolutions for transitional administrations, 224
 - Rwanda and UN failure in the eyes of the world, 4
 - troop withdrawal by Uganda and Rwanda, 122
 - UNIFIL, 86
 - UN missions, overstretched, 184
 - UNPROFOR, 143
 - UNTSO, 79–80
 - US-led invasion of Iraq, 90
- security sector reform, 20, 122, 222
- seismic
- arrays, 34, 166, 234
 - detection, 231
 - sensing, 231
 - sensors, 25, 47–48, 145, 166, 171–72, 200, 234, 237
 - systems, 47–48, 187
- seismometers, 231, 237
- Selection Standards and Training Guidelines for United Nations Military Observers*, 158
- sensing technologies for peacekeeping, 230–31
- SFM. *See* Sinai Field Mission (SFM)
- SFOR. *See* Stabilisation Force in Bosnia and Herzegovina (SFOR)
- Short Message Service (SMS), 51–52, 54, 180
- SIGINT. *See* signals intelligence (SIGINT)
- signal-locating equipment, 167, 234, 237
- signal monitoring, 167, 234, 237
- signals intelligence (SIGINT), 136–37, 144
- Sinai Field Mission (SFM), 48, 91
- Six Day War (1967), 83
- SLA. *See* South Lebanon Army (SLA)
- Smartphones, 50–55, 60n30, 68, 180, 200, 205
- software applications for, 54
- SMS. *See* Short Message Service (SMS)
- smuggling
- about, 5, 13, 127, 233, 237
 - arms, 2, 23, 42, 124, 155, 182

- of drugs, 155
- human, 2, 42, 237
- of illegal resources, 155
- SOFA. *See* Status-of-Forces Agreement (SOFA)
- Sonar detection, 231
- SOP. *See* standard operating procedure (SOP)
- South Lebanon Army (SLA), 86–87
- Stabilisation Force in Bosnia and Herzegovina (SFOR), 15, 47, 146, 149
- standard operating procedure (SOP)
 - for camera systems, 98
 - for flights, 75
 - for GIS units, 61n36
 - for high-tech monitoring equipment, 207
 - for information analysis, 238
 - for intelligence services, 133
 - model, recommended, 192
 - for “Monitoring and Surveillance Technology in Field Missions,” 164
- Status-of-Forces Agreement (SOFA), 11, 113, 150n7, 181, 240
- strain gauges, 48
- strain sensitive cable, 48, 231
- Sudan, 113–14
- surveillance, ground and air, 62, 67, 126, 139, 157
- surveillance equipment, 1, 159, 165, 173, 193
- SWIR. *See* short wave (SWIR)
- synthetic aperture radar (SAR), 45, 65, 68, 144, 166, 177, 230, 236
- Table of Organization and Equipment (TOE), 158–59, 193
- TCC. *See* troop-contributing country (TCC)
- TCP. *See* Turkish Cypriot Police (TCP)
- technologies
 - employed by Multinational Force and Observers, 92
 - low-and-medium-cost, 6, 173
 - monitoring, 166–67
 - recommendations, other, 202–3
 - recommendations for high-cost, 201–2
 - recommendations for low-cost, 197–200
 - recommendations for medium-cost, 200–201
 - shortfalls, low–medium-cost surveillance, 169–71
- terrorism threat, 165
- thermal imagers, 125, 142–43, 154, 196, 207, 233, 236
- thermal (far-infrared) imaging devices
 - advantages of, 142
 - Canadian forces, 143
 - COE Manual, 162
 - downlink communications to the tactical level, 125
 - evaluation and deployment of, 193–94
 - headgear (goggles), 44
 - high unit cost, 43, 162–63, 187
 - Mi-25/35 attack helicopters, 25
 - MINUSTAH, 139, 169
 - NATO helicopters, 144
 - night-vision equipment (NVE), 42, 166, 233, 236
 - peacekeepers enabled to spot warm bodies, 42–43
 - third-generation, 147
 - tripod-mounted, 143, 153n46, 162
 - UN does not systematically deploy, 154
 - UNDOF, 170
 - UNFICYP, 170
 - UN force helicopters, on, 140
 - UNIFIL, 168
 - UNMOGIP, 171
 - UNOCI, 171
 - UN should stockpile, 196, 207
- Threat and Risk Assessment (TRA), 21, 30, 164–65
- TOE. *See* Table of Organization and Equipment (TOE)
- TOW. *See* tube-launched, optically-tracked, wire-guided [type of missile] (TOW)
- TOW Under Armour (TUA), 143
- TRA. *See* Threat and Risk Assessment (TRA)
- trafficking
 - arms, 61n38, 141, 198
 - detecting illegal, 21, 26–27
 - drugs, 73, 141
 - human, 20, 73, 141, 198
 - illegal activities, 141, 155
 - in illicit materials, 20
 - natural resources, 198
 - routes, 56
- transitional administrations, 13–15, 17, 224
- transponders and tags, 167, 234, 238
- Treaty of Peace, Egypt-Israel (1979), 85, 91

- troop-contributing country (TCC)
 - advanced technologies, new and relatively, 208
 - African Union, 114
 - COE Manual, 160, 162
 - equipment leasing from, 161
 - Memorandum of Understanding (MOU), 159
 - monitoring technology gap, 155
 - payment according to two classes of equipment in field, 160
 - self-reliant in technologies, 196
 - “special case” equipment, reimbursement rate for, 162
 - technology capabilities, sought evaluation of, 154
 - training of military or contracted personnel, 188
 - unmanned aerial vehicles (UAVs), 188
 - UN payment for each soldier, 98, 162, 175n9
 - in volatile and dangerous conditions, 227
- TUA. *See* TOW Under Armour (TUA)
- tube-launched, optically-tracked, wire-guided [type of missile] (TOW), 44, 143
- Turkish Cypriot Police (TCP), 100
- U-2 spy plane, 72, 90, 105n20
- UAV. *See* unmanned/uninhabited aerial vehicle (UAV)
- UGS. *See* unattended ground sensor (UGS)
- ultrasound probing, 48, 231
- UN. *See* United Nations (UN)
- UN Advance Mission in Cambodia (UNAMIC), 215
- UNAMA. *See* UN Assistance Mission in Afghanistan (UNAMA)
- UNAMIC. *See* UN Advance Mission in Cambodia (UNAMIC)
- UNAMID. *See* African Union/United Nations Hybrid Operation in Darfur (UNAMID)
- UNAMIR. *See* UN Assistance Mission for Rwanda (UNAMIR)
- UNAMSIL. *See* UN Mission in Sierra Leone (UNAMSIL)
- UN Angola Verification Mission (UNAVEM I), 31n1, 215, 220
- UN Angola Verification Mission II (UNAVEM II), 215, 220
- UN Angola Verification Mission III (UNAVEM III), 220
- UN Aouzou Strip Observer Group (UNASOG), 215
- UNASOG. *See* UN Aouzou Strip Observer Group (UNASOG)
- UN Assistance Mission for Rwanda (UNAMIR), 220
- UN Assistance Mission in Afghanistan (UNAMA), 9, 221
- unattended ground sensor (UGS), 193, 205, 239–40
- UNAVEM I. *See* UN Angola Verification Mission (UNAVEM I)
- UNAVEM II. *See* UN Angola Verification Mission II (UNAVEM II)
- UNAVEM III. *See* UN Angola Verification Mission III (UNAVEM III)
- UN Civilian Police Mission in Haiti (MIPONUH), 221
- UN Civilian Police Support Group (UNPSG), 221, 224
- UN Confidence Restoration Operation in Croatia (UNCRO), 219–20
- UNCRO. *See* UN Confidence Restoration Operation in Croatia (UNCRO)
- UN Disengagement Observer Force (UNDOF), 9, 31n1, 85–86, 168, 170, 173, 217
- UNDOF. *See* UN Disengagement Observer Force (UNDOF)
- UNEF. *See* UN Emergency Force (UNEF)
- UNEF I. *See* UN Emergency Force I (UNEF I)
- UNEF II. *See* UN Emergency Force II (UNEF II)
- UN Emergency Force (UNEF), 11, 82–83
- UN Emergency Force I (UNEF I), 217
- UN Emergency Force II (UNEF II), 48, 84–85, 217
- UNFICYP. *See* UN Peacekeeping Force in Cyprus (UNFICYP)
- UN General Assembly
 - Special Committee on Peacekeeping, 225
 - UN Emergency Force (UNEF), 11, 82–83
- UNGOMAP. *See* UN Good Offices Mission in Afghanistan and Pakistan (UNGOMAP)
- UN Good Offices Mission in Afghanistan and Pakistan (UNGOMAP), 214

- UNIFIL. *See* UN Interim Force in Lebanon (UNFIL)
- UNIMOG. *See* UN Iran–Iraq Military Observer Group (UNIIMOG)
- UNIKOM. *See* UN Iraq–Kuwait Observation Mission (UNIKOM)
- UN India–Pakistan Observation Mission (UNIPOM), 214
- UN Institute for Disarmament Research, 239, 241
- UN Integrated Mission in Timor-Leste (UNMIT), 9, 223
- UN Interim Administration Mission in Kosovo (UNMIK), 9, 13–14, 17, 41, 60n24, 152n36, 224
- UN Interim Force in Lebanon (UNFIL), 9, 217
- UNIPOM. *See* UN India–Pakistan Observation Mission (UNIPOM)
- UN Iran–Iraq Military Observer Group (UNIIMOG), 88, 214
- UN Iraq–Kuwait Observation Mission (UNIKOM), 45, 60n20, 89–90, 105n19, 218
- United Nations (UN)
- aircraft fleet, 3
 - cartography products and paper maps, 4
 - disengagement of fighting forces and reform of security sector, 13
 - information power vs. military power, 15
 - investigations of atrocities, 24
 - mediation, 10, 12, 18n6, 80, 87
 - nocturnal actions and preparations, to detect and deter, 25
 - Official Document System database, 3
 - peace arrangements, verification of fragile, 8
 - peacekeeping, definition of, 9
 - “Responsibility to Protect” doctrine, 24
 - sensors, slow to use, 4
- United Nations Peacekeeping Training Manual*, 158
- Universal Declaration of Human Rights, 181
- unmanned/uninhabited aerial vehicle (UAV)
- about, 67–68
 - aerial reconnaissance, 63
 - European Union Force (EUFOR), 65
 - in Iraq, 39
 - manned vs., 68, 70–71
 - mini-UAVs, 63, 68–72, 188, 202
- MONUC, 35–36
- for night surveillance, 65
 - of other countries/organizations, 7n1
 - rotary-wing UAV, 69, 71–72
 - sub-tactical UAV, 69–71, 202
 - tactical UAVs, 68–72, 74, 202
 - types and characteristics, 69
 - UN does not have, 2
 - video imagery, 65
- UN Medevac/Emergency flights, 114
- UNMEE. *See* UN Mission in Ethiopia and Eritrea (UNMEE)
- UNMIBH. *See* UN Mission in Bosnia and Herzegovina (UNMIBH)
- UNMIH. *See* UN Mission in Haiti (UNMIH)
- UNMIK. *See* UN Interim Administration Mission in Kosovo (UNMIK)
- UNMIL. *See* UN Mission in Liberia (UNMIL)
- UN Military Observer (UNMO)
- incidents, investigate, 79
 - investigated incidents accompanied by military representatives, 79
 - liaison officers accompany, 85–86
 - peacekeeping activities, day-time, 25
- UNAMID, 169
- unarmed, 22, 78
- UNIIMOG, 88
- UNMIL, 173
- UNMIS, 170
- UNTSO, 78
- UNTSO investigations, 80–82
- UN Military Observer Group in India and Pakistan (UNMOGIP), 9, 36, 171, 214
- UNMIS. *See* UN Mission in Sudan (UNMIS)
- UNMISSET. *See* UN Mission of Support in East Timor (UNMISSET)
- UN Mission for the Referendum in Western Sahara (MINURSO), 9, 60n24, 75n5, 169, 173, 215
- UN Mission in Bosnia and Herzegovina (UNMIBH), 220
- UN Mission in Ethiopia and Eritrea (UNMEE), 55, 147, 150n1, 201, 218
- UN Mission in Haiti (UNMIH), 133, 220
- UN Mission in Liberia (UNMIL), 9, 43–44, 60n23–24, 170, 173, 222

- UN Mission in Sierra Leone (UNAMSIL), 55, 221
- UN Mission in Sudan (UNMIS), 9, 43, 60n23, 170, 172–73, 223
- UN Mission in the Central African Republic (MINURCA), 221, 223
- UN Mission in the Central African Republic and Chad (MINURCAT), 9, 223
- UN Mission of Observers in Prevlaka (UNMOP), 216
- UN Mission of Observers in Tajikistan (UNMOT), 216
- UN Mission of Support in East Timor (UNMISSET), 221
- UNMIT. *See* UN Integrated Mission in Timor-Leste (UNMIT)
- UNMO. *See* UN Military Observer (UNMO)
- UNMOGIP. *See* UN Military Observer Group in India and Pakistan (UNMOGIP)
- UN Monitoring, Verification and Inspection Commission (UNMOVIC) in Iraq, 41, 48, 59n13, 90
- UNMOP. *See* UN Mission of Observers in Prevlaka (UNMOP)
- UNMOT. *See* UN Mission of Observers in Tajikistan (UNMOT)
- UNMOVIC. *See* UN Monitoring, Verification and Inspection Commission (UNMOVIC)
- UN Observation Group in Lebanon (UNOGIL), 214
- UN Observer Group in Central America (ONUCA), 215
- UN Observer Mission in Angola (MONUA), 216
- UN Observer Mission in El Salvador (ONUSAL), 215–16
- UN Observer Mission in Georgia (UNOMIG), 31n1, 171, 173, 215
- UN Observer Mission in Liberia (UNOMIL), 215
- UN Observer Mission in Sierra Leone (UNOMSIL), 216
- UN Observer Mission Uganda–Rwanda (UNOMUR), 215
- UNOCI. *See* UN Operation in Côte d’Ivoire (UNOCI)
- UNOGIL. *See* UN Observation Group in Lebanon (UNOGIL)
- UNOMIG. *See* UN Observer Mission in Georgia (UNOMIG)
- UNOMIL. *See* UN Observer Mission in Liberia (UNOMIL)
- UNOMSIL. *See* UN Observer Mission in Sierra Leone (UNOMSIL)
- UNOMUR. *See* UN Observer Mission Uganda–Rwanda (UNOMUR)
- UN Operational Satellite Applications Programme (UNOSAT), 35, 59n3–4, 208
- UN Operation in Burundi (ONUB), 43, 60n24, 222
- UN Operation in Côte d’Ivoire (UNOCI), 9, 171–72, 222
- UN Operation in Mozambique (ONUMOZ), 219
- UN Operation in Somalia I (UNOSOM I), 219
- UN Operation in Somalia II (UNOSOM II), 219
- UN Operation in the Congo (ONUC), 13, 16–17, 62, 119, 137, 219
- UN Organization Mission in the Democratic Republic of the Congo (MONUSCO), 9, 45, 120, 151n18, 221, 223
- UNOSAT. *See* UN Operational Satellite Applications Programme (UNOSAT)
- UNOSOM I. *See* UN Operation in Somalia I (UNOSOM I)
- UNOSOM II. *See* UN Operation in Somalia II (UNOSOM II)
- UN Peace Forces (UNPF), 219
- UN Peacekeeping Force in Cyprus (UNFICYP), 9, 41, 93–103, 170, 192, 217
- UN peacekeeping operations (1948–2010) interposed forces, 217–18 multidimensional operations, 219–22 observer missions, 214–16 transitional administration, 224
- UNPF. *See* UN Peace Forces (UNPF)
- UNPOL. *See* UN Police (UNPOL)
- UN Police (UNPOL) anti-drug operations to capture drug lords, 141 LPR-equipped patrol vehicles to recover stolen vehicles, 38 MINUSTAH and imagery intelligence, 135–36, 140 technology to view rooms, 46

- thermal imaging (FLIR) and image intensifiers, 140
 through-wall vision/radar systems, 46
- UNPREDEP. *See* UN Preventive Deployment Force (UNPREDEP)
- UN Preventive Deployment Force (UNPREDEP), 218
- UNPROFOR. *See* UN Protection Force (UNPROFOR)
- UN Protection Force (UNPROFOR), 219
- UNPSG. *See* UN Civilian Police Support Group (UNPSG)
- UNSAS. *See* UN Standby Arrangements System (UNSA)
- UNSCOM. *See* UN Special Commission (UNSCOM)
- UN Security Council
 five permanent members of the UN Security Council (P5), 11–13, 90, 112
- UN Security Force in West New Guinea (West Irian) (UNSF), 224
- UNSMIH. *See* UN Support Mission in Haiti (UNSMIH)
- UN Special Commission (UNSCOM)
 in Iraq, 48, 59n13, 89–90
- UN Special Committee on Peacekeeping Operation (C-34), 6, 28, 163, 193, 202, 225–28
- UN Stabilization Mission in Haiti (MINUSTAH), 1, 9, 60n24, 133–42, 169, 173, 222
- UN Standby Arrangements System (UNSA), 116, 150n11
- UN Support Mission in Haiti (UNSMIH), 220
- UNTAES. *See* UN Transitional Administration for Eastern Slavonia, Baranja and Western Sirmium (UNTAES)
- UNTAET. *See* UN Transitional Administration in East Timor (UNTAET)
- UNTAG. *See* UN Transitional Authority in Cambodia (UNTAG)
- UN Temporary Executive Authority (UNTEA), 17, 224
- UNTMIH. *See* UN Transition Mission in Haiti (UNTMIH)
- UN Transitional Administration for Eastern Slavonia, Baranja and Western Sirmium (UNTAES), 224
- UN Transitional Administration in East Timor (UNTAET), 13–14, 17, 224
- UN Transitional Authority in Cambodia (UNTAG), 13, 16–17, 219
- UN Transition Mission in Haiti (UNTMIH), 221
- UN Truce Supervision Organization (UNTSO), 9, 78, 214
- UNTSO. *See* UN Truce Supervision Organization (UNTSO)
- UN Verification Mission in Guatemala (MINUGUA), 216
- UN Yemen Observation Mission (UNYOM), 75n2, 214
- UNYOM. *See* UN Yemen Observation Mission (UNYOM)
- urban surveillance, 127
- US Army Materiel Command, 145
- US Army's Pioneer UAV, 145
- US Holocaust Memorial Museum, 116
- U Thant, UN Secretary-General, 83, 119
- video
 cameras, 233, 236
 cameras, evolution of, 40
 monitoring, 2, 207
 monitors, 166, 233
 video camera systems (CCTV/DVN), 38, 41, 118
- Wainhouse, David W., 78, 254
- wall-penetrating radar, 230
- weapons, buried, 34, 230, 233
- weapons in storage, verifying disarmed, 50, 234
- weather-forecasting, 23
- weather radar, 65, 70, 166, 233
- web cameras, 2, 166, 183, 233
- weight scale, 231
- Wilson, Woodrow, 8, 205, 254
- X-ray
 detection and imaging, 231
 machines, 27, 32, 92, 165–66, 171, 187–88, 191n20, 231, 234, 237
- Yom Kippur War, 83–84, 103, 217