

# **Glossary of Terms and Acronyms**

# Glossary of Terms and Acronyms

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- 8-INCH:** Used in this report to denote a U.S. Army artillery gun which fires 8-inch diameter shells.
- A300:** Model designation of a jet transport aircraft made by Airbus Industrie, a consortium of Belgian, British, Dutch, French, German, and Spanish companies.
- A-7:** The Corsair 11 light attack aircraft, produced in several versions for the U.S. Navy and Air Force and other nations. The Air Force is developing improved avionics and engines (for longer range) to upgrade its A-7s to a version unofficially called the "A-7 +."
- AAA:** Anti-aircraft artillery.
- ACE:** Allied Command Europe.
- Activity Cue:** As used in this report, indication of enemy movement provided by a surveillance or reconnaissance system, used for planning an attack.
- ACV:** armored combat vehicle. A tank, armored fighting vehicle (AFV), armored personnel carrier (Ape), armored cavalry vehicle, self-propelled artillery piece, or a mobile surface-to-air missile launcher.
- ADAM:** Area Denial Artillery Mine. A scatterable antipersonnel mine produced for the U.S. Army. A 155mm artillery shell can dispense 36 ADAMs.
- ADDS:** Army Data Distribution System. A data communications system now being procured by the U.S. Army to provide timely secure communications among corps commanders, their intelligence, fire support, and other staffs which would plan deep attacks, and the surface-to-surface missile batteries and tactical aircraft which would perform deep attacks. ADDS includes Joint Tactical Information Distribution System (JTIDS) terminals, Enhanced Position Location Reporting System (EPLRS) terminals, and net control stations. Formerly called PJH [PLRS-JTIDS Hybrid].
- ADT:** MICNS Air Data Terminal for the Aquila RPV; the Aquila uses an ADT to receive commands from, and transmit television imagery to, a MICNS Remote Ground Terminal (RGT) of a TADARS Ground Control Station (GCS). See MICNS, TADARS.
- ADU:** Air defense unit.
- AFATDS:** Advanced Field Artillery Tactical Data System. A U.S. Army follow-on to the TACFIRE artillery fire control system.
- AFV:** Armored fighting vehicle.
- AGB:** Autonomous Guided Bomb. A glide bomb in preliminary development by the Air Force, to be capable of recognizing and steering toward a vulnerable point on a fixed target.
- AGM:** Air-to-ground missile.
- AGM-65:** The Maverick air-to-ground missile (any of several versions: AGM-65A/B/D/E/F/G),
- AGM-65A:** TV-guided Maverick. [In inventory]
- AGM-65B:** TV-guided Maverick with greater magnification for use against smaller targets or at longer range. [In inventory]
- AGM-65D:** IR-guided Maverick for use at night or in adverse weather. [Being procured]
- AGM-65E:** Laser-guided Maverick for U.S. Marine Corps. [Being procured]
- AGM-65F:** Navy Maverick. Anti-shiping-IR-guided with alternate warhead and selectable-delay fuze. [In development]
- AGM-65G:** "Alternate Warhead Maverick." A modified AGM-65F with a heavier warhead for use against ships, armored vehicles, and overburdened fixed targets. [In advanced development]
- AGM-88A:** The HARM High-Speed Anti-Radiation Missile (q.v.).
- AGM-130:** A short-range, rocket-powered, air-to-ground missile derived from the GBU-15. The AGM-130A uses a unitary 2,000-lb Mk-84 warhead. The AGM-130B, which is not presently funded, is a version of this weapon with a submunitions dispenser as the payload.
- AI:** Air interdiction. A tactical air mission.
- Air Attack:** As used in tables in this report, an operational concept using penetrating tactical aircraft (TACAIR) as weapons platforms. *Direct* air attack uses TACAIR flying directly over, or within sight of, the target. *Stand-off* air attack uses a weapon such as the Modular Stand-off Weapon (MSOW) launched by tactical aircraft at a standoff (distance) of 25 to 50 km from the target.
- ALB:** AirLand Battle. U.S. Army doctrine (endorsed by the U.S. Air Force as appropriate) for the conduct of Army operations.
- ALCM:** Air-launched cruise missile.
- AMS:** Airborne Mission Subsystem of the Aquila RPV.
- AMTI:** Airborne moving-target indicating (radar system). Detects and indicates objects (e.g., vehicles) moving with respect to the ground.
- AN/TPQ-37:** "Firefinder" radar system for tracking missiles and projectiles to locate missile launchers and artillery batteries.
- AOI:** (1) Area of interest: in NATO and U.S. Army doctrine, the area including, but extending be-

- yond, a commander's area of responsibility (AOR, q.v.), in which the commander must monitor enemy activity which could affect the future situation in his AOR; (2) *Area of influence*: the area in which a tactical commander has a capability to fight the enemy.
- AOR**: Area of responsibility. A specific zone or sector assigned to a commander in which he is responsible for fighting the enemy. Also called area of operational responsibility in NATO doctrine, and area of operations in U.S. Army doctrine.
- APAM**: Anti-personnel anti-materiel. A type of submunition usually designed as a small grenade or bomblet that damages unarmored vehicles and people. Examples are the Army M-74 grenade and the Air Force BLU-61 and BLU-63 bomblets.
- APGM**: Autonomous Precision-Guided Munition for 155mm artillery.
- Aquila**: U.S. Army-developed remotely piloted vehicle.
- ARDS**: Airborne Radar Demonstrator System, A NATO project to make certain U. S., British, and French airborne ground-surveillance radar systems compatible.
- ARIA**: Advanced Range Instrumentation Aircraft. A modified Boeing 707 jet transport (designated EC-18B) used by the U.S. Air Force.
- ARM**: Anti-radiation missile.
- Artillery Attack**: An operational concept using artillery guns or rocket-launchers as weapons platforms.
- ASAC**: All-Source Analysis Center, which supports the intelligence function at division and corps tactical operations centers.
- ASARS**: Advanced Synthetic Aperture Radar System (specifically, ASARS 11). A U.S. Air Force high-resolution ground-surveillance imaging radar system, which can detect stationary objects. The ASARS 11 can be carried by the high-altitude, long-endurance TR-1 aircraft.
- ASAS**: All-Source Analysis System. An intelligence fusion system being developed by the U.S. Army. Both the ASAS and the U.S. Air Force's Enemy Situation Correlation Element (ENSCE) are being developed under the Joint Tactical Fusion (JTF) program and will use some common equipment.
- ASIC**: All-Source Intelligence Center.
- Assault Breaker**: A technology development program sponsored by the U.S. Defense Advanced Research Projects Agency (DARPA) in which T-16 (Patriot) and T-22 (Lance) missiles were guided, by the Joint STARS-like Pave Mover airborne radar and weapon guidance system, to concentrations of armored vehicles, where they dispensed Skeet sensor-fuzed smart submunitions.
- ASTOR**: Airborne STand-Off Radar (formerly called CASTOR: Corps Airborne STand-Off Radar). Either of two airborne ground-surveillance radar systems developed for the British Ministry of Defence. ASTOR-C indicates fixed targets; ASTOR-I indicates moving targets.
- AT-2**: A scatterable mine being developed by the Federal Republic of Germany for MLRS rockets.
- ATACMS**: Army Tactical Missile System. A ballistic missile currently in development by the U.S. Army. ATACMS missiles will be launched from unmodified MLRS launchers.
- ATAF**: Allied Tactical Air Force (of NATO).
- ATARS**: Advanced Tactical Air Reconnaissance System (also called Follow-On Tactical Reconnaissance System). A program to develop a TV camera and digital data link for use on either manned aircraft or unmanned aerial vehicles.
- ATDL**: Adaptive Targeting Data Link. A proposed radio data link which could transmit target location data from Joint STARS or PLSS aircraft to weapon delivery platforms such as F-16 fighter aircraft equipped with ATDL equipment or possibly to advanced weapons—such as ballistic or cruise missiles—which could be equipped with ATDL equipment.
- ATF**: Advanced-Technology Fighter being developed for the U.S. Air Force.
- ATR**: Automatic target recognition.
- AUTO TGT**: A notional automatic target recognition capability for attack of units on trains using CALCM-X.
- AVSCOM**: Aviation Systems Command of the U.S. Army.
- AWACS**: Airborne Warning and Control System (E-3A/B/C) used by the U.S. Air Force and NATO.
- B-52**: A heavy bomber operated by the U.S. Strategic Air Command.
- BAI**: Battlefield air interdiction. A tactical air mission.
- BICES**: Battlefield Information Collection and Exploitation System, a NATO project.
- BL775**: A British anti-armor cluster weapon.
- BMP**: A Soviet-made infantry combat vehicle.
- BN-2T**: A twin-turboprop aircraft (the Turbine Islander) made by Pilatus Britten-Norman; see *Turbine Islander*.
- BTR**: A series of Soviet-made armored personnel carriers. Some are used for command, control, and communications.
- Buccaneer**: A British fighter-bomber.

- Bullpup:** U.S. Air Force AGM-12C command-guided weapon, designed to attack hard fixed targets. It includes a WDU-25B 974-pound warhead.
- Bundeswehr:** The West German Army.
- C2 (or C'): Command and control.**
- C3 (or C''): Command, control, and communications.**
- C3I (or C<sup>3</sup>I): Command, control, communications, and intelligence.**
- CALCM-X:** An acronym used in this report for a proposed conventionally armed, air-launched cruise missile, possibly ALCM-Bs retired from SIOP duty and modified to carry more payload to a shorter range.
- CASTOR:** Corps Airborne STand-Off Radar. Now called ASTOR (q.v.).
- CBU:** Cluster Bomb Unit. A class of Air Force weapons consisting of a dispenser filled with (usually 200 to 600) bomblets, designed to attack an area target by dispersing the bomblets.
- CEB:** Combined Effects Bomblet. U.S. Air Force submunition (denoted BLU-97/B)
- CEM:** Combined Effects Munition. U.S. Air Force weapon (denoted CBU-87/B) consisting of a TMD containing 202 CEB bomblets. CEM weighs 945 lbs, can be carried by F-16, F-111, and F-15E aircraft, and is effective against personnel and unarmored and light armor targets.
- CENTAG:** Central Army Group of NATO's Allied Command, Europe.
- Central Region:** The region for which NATO's Allied Command, Europe, is responsible, including the Federal Republic of Germany.
- CGF:** Central Group of Forces. Soviet Forces stationed in Czechoslovakia, consisting of about five divisions.
- Chicken Little:** A joint Army-Air Force program for testing advanced anti-armor munitions.
- CHOKPT:** A contraction used in this report for "chokepoint an obstacle to the advance of Warsaw Pact forces, either preexisting (e.g., a bridge) or created by NATO forces (e.g., a mined road).
- CINC:** Commander-in-Chief
- CINCENT:** Commander-in-Chief, Allied Forces, Central Europe
- CINCNORTH:** Commander-in-Chief, Allied Forces, Northern Europe
- CL289:** An unmanned aerial vehicle (UAV) made in Canada.
- CLGP:** Cannon-launched guided projectile.
- CMAG:** Cruise Missile-Advanced Guidance. A program to develop sensors (LADAR, MMW, and SAR) and software for automatic target recognition and precision terminal guidance of cruise missiles.
- CNAD:** Conference of National Armaments Directors of NATO.
- COCOM, CoCom:** Coordinating Committee on Multilateral Export Controls.
- COMINT:** Communications intelligence. Information gained from intercepting enemy electronic communications signals, either voice or message.
- Command Posts:** Groups of trucks and lightly armored vehicles used by commanders of Warsaw Pact regiments, divisions, and armies, and their staffs; possible targets for attacks against follow-on forces.
- Compass Call:** Air Force EC-130 aircraft designed for jamming enemy radio communications.
- Copperhead:** The M712 cannon-launched guided projectile, a U.S. Army 155mm artillery shell that homes on a target illuminated by a laser designator.
- Copperhead 11:** A developmental autonomously guided artillery projectile which does not require that its target be designated (i.e., illuminated) by a laser. A Copperhead II shell would be made by replacing the laser seeker of an M712 Copperhead shell with an autonomous seeker now in development.
- CP:** Command post.
- CPS:** Central Processing Subsystem (of PLSS).
- Cruise Missile Atk:** An operational concept using cruise missiles launched from airborne platforms (in friendly airspace) to penetrate and attack targets deep in the Warsaw Pact rear.
- DAACM:** Direct Airfield Attack Combined Munition.
- DARPA:** Defense Advanced Research Projects Agency. An agency of the U.S. Department of Defense.
- D-Day:** As used here, hypothetically, the day on which NATO is overtly invaded or attacked by Warsaw Pact forces. In general, the first day of a real or hypothetical war or a military operation during a war.
- DDR:** Deutsche Demokratische Republik: East Germany. Also GDR: German Democratic Republic.
- DF:** (Radio) Direction-Finding.
- DGSM:** Down-sized Ground Station Module for Joint STARS.
- DIRECT AIR ATK:** See *AIR ATTACK*.
- DIV:** Division.
- DIV ASSY AREAS:** Division assembly areas, also known as "concentration areas," for Warsaw Pact divisions. These areas are usually within the range band of 80 to 150 km from the FLOT.

- Assembly areas are large enough that the density of vehicles is relatively low, and are chosen by the Warsaw Pact forces to take maximum advantage of cover and concealment.
- Division Columns:** Groups of vehicles moving on roads, which comprise a division on the march. The actual groupings of vehicles are usually battalion-sized, about 40 to 60 vehicles per column, with spacing between columns using the same road.
- DME:** Distance-measuring equipment. Radionavigation equipment consisting of transponder units and interrogator units which can determine how far away the transponders are. In some radionavigation systems, such as that used by PLSS, the interrogator units are carried by aircraft and the transponder units are at surveyed locations on the ground. In other radionavigation systems, the transponder units are carried by aircraft and the interrogator units are at surveyed locations on the ground.
- DNA:** Defense Nuclear Agency. An agency of the U.S. Department of Defense.
- DOA:** Direction of arrival. A technique for determining the direction from which a radio signal is being received—i.e., the direction toward the radio transmitter.
- DoD:** U.S. Department of Defense.
- DPC:** Defence Planning Committee (of NATO). It is composed of the representatives of member countries participating in NATO's integrated military structure. The DPC meets at either the Ambassadorial or Ministerial (Defense Minister) level.
- DPICM:** Dual-Purpose Improved Conventional Munition. An APAM munition used in artillery shells and rockets.
- DRG:** Defence Research Group (of NATO).
- E-3:** The AWACS Airborne Warning and Control System. A modified Boeing 707 jet transport carrying air surveillance radar and communications equipment. Several models (E-3A/B/C) are currently used by the U.S. Air Force and NATO.
- E-8A:** The Joint Surveillance/Target Attack Radar System (Joint STARS). A modified Boeing 707 jet transport carrying aground surveillance radar and communications equipment. In development for the U.S. Air Force.
- EC-18B:** The Advanced Range Instrumentation Aircraft (ARIA). A modified Boeing 707 jet transport used by the U.S. Air Force.
- ECCM:** Electronic counter-countermeasures.
- ECM:** Electronic countermeasures.
- EF-111A:** An Air Force airborne jamming system for jamming radars; also called "Raven."
- EFP:** Explosively formed penetrator. A type of anti-armor munition.
- ELINT:** Electronics intelligence. Intelligence obtained by interception of non-communications signals (e.g., radar signals).
- ELS:** Emitter Location System. An upgrade which would allow PLSS to locate non-pulsed emitters.
- ENSCE:** Enemy Situation Correlation Element. An intelligence fusion system being developed by the U.S. Air Force. Both the ENSCE and the U.S. Army's All-Source Analysis System (ASAS) are being developed under the Joint Tactical Fusion (JTF) program and will use some common equipment.
- EO, or E-O:** Electro-optical. Employing vacuum tubes or semiconductor devices to convert optical (visible, ultraviolet, or infrared) radiation into electrical currents, to serve as a TV camera.
- Epervier:** A Belgian remotely piloted vehicle used for reconnaissance.
- EPLRS:** Enhanced Position Location Reporting System, a component of ADDS.
- ERAM:** Extended-Range Antiarmor Mine, partially developed, then abandoned, by the U.S. Air Force.
- ESD:** (1) Electronic Systems Division of the U.S. Air Force Systems Command; (2) Electronique Serge-Dassault, a French electronic systems manufacturer.
- ESECS:** European Security Study. A study of options for increasing the combat capability, and hence the presumed deterrent effect, of NATO's non-nuclear forces in Europe. The study was sponsored by the American Academy of Arts and Sciences; its findings were published in two reports known as ESECS I and ESECS 11.
- ESM:** Electronic warfare support measures. Radio direction-finding and signals intelligence (COMINT and ELINT) activities performed in support of electronic warfare (jamming, etc.).
- EW:** Electronic warfare.
- F-4:** The Phantom fighter-bomber; developed in the United States; also used by the Federal Republic of Germany.
- F-4G:** The version of the F-4 fighter designed and equipped to attack enemy air defenses, dubbed the "Wild Weasel."
- F-15:** The top-line air superiority fighter of the U.S. Air Force, dubbed the "Eagle."
- F-15E:** The ground-attack version of the F-15 Eagle, dubbed the "Strike Eagle," now in devel-

- opment by the U.S. Air Force. The primary mission of the F-15E will be air interdiction.
- F-16:** The dual-role (air- and ground-attack) fighter of the U.S. Air Force and several other NATO countries, dubbed the "Fighting Falcon. "
- F-111:** A U.S. Air Force long range interdiction aircraft.
- FARRP:** Forward area re-arming and refueling point, for helicopters.
- FBA:** Fighter bomber aircraft.
- FEBA:** Forward edge of the battle area. The approximate line along which opposing ground forces are in contact; compare FLOT (q.v.).
- Firefinder:** A tactical radar system (designated AN/TPQ-37) used by the U.S. Army for tracking missiles and projectiles to locate missile launchers and artillery batteries.
- FLIR:** Forward-Looking InfraRed. A TV-like camera sensitive to the infrared radiation emitted by all (especially warm) objects; useful at night and less affected by fog, smoke, or haze than TV.
- FLOT:** Forward line of own troops. Unlike a FEBA (q.v.), a FLOT (e.g., Inner-German border) can exist in peacetime.
- FOG:** Fiber-optic gyro. In development for missile inertial attitude reference and navigation systems.
- FOG-M:** Fiber-Optic Guided Missile. In development for the U.S. Army.
- FRG:** Federal Republic of Germany (West Germany).
- front:** A Soviet command echelon above "army."
- FSCL:** Fire support coordination line. A line established at approximately the range of fire of NATO artillery, or about 25 to 35 km into enemy area across the FLOT.
- FSD:** Full-Scale Development.
- FTI:** Fixed target indicator. A type of radar useful for surveillance of stationary objects such as shelters or parked vehicles.
- fusion:** Combining intelligence information from multiple sensors or disciplines (e.g., SIGINT and IMINT) to assist interpretation.
- GACC:** Ground Attack Control Capability (or Center). For controlling air attack of ground targets, now under development by the U.S. Air Force.
- GAMP:** Guided Antiarmor Mortar Projectile. Partially developed, then abandoned, by the U.S. Army.
- Gator:** Air delivered anti-tank and anti-personnel mines.
- GBU-15:** A Glide Bomb Unit, which is "thrown" by an attacking aircraft and guided toward the target from the aircraft, but which has no propulsion of its own. The GBU-15 weighs 2,500 lbs, including the Mk-84 2,000-lb warhead, and can be carried by the F-4, F-111, and F-15E (when available).
- GDR:** German Democratic Republic. East Germany. Also DDR: Deutsche Demokratische Republik.
- GPS:** Global Positioning System. A system by which a user vehicle can determine its position on the ground to high accuracy. GPS will use a constellation of NAVSTAR satellites to allow a terminal on the vehicle to compute its location in earth-fixed coordinates.
- GR/CS:** GUARDRAIL/Common Sensor. An upgrade to GUARDRAIL.
- GSFG:** Group of Soviet Forces, Germany.
- GSM:** Ground Station Module. A mobile ground station being developed by Motorola for the U.S. Army for use with the Joint STARS airborne radar system.
- GUARDRAIL:** A communications intelligence system.
- hard:** Highly resistant to damage by weapon effects (e.g., blast), either by design or inadvertently.
- harden:** To make highly resistant to damage by weapon effects.
- hardened:** Highly resistant, by design, to damage by weapon effects.
- HARM:** The AGM-88A High-Speed Anti-Radiation Missile. An air-launched missile used by the Navy and Air Force to attack radar antennas by homing on the signals they emit.
- HAVE QUICK:** An Army-Air Force program to provide or upgrade the jam resistance of certain tactical radios.
- Heron-26:** An Italian-made remotely piloted vehicle which can be used for reconnaissance.
- HLTD UNIT:** a contraction used in tables in this report to denote a halted enemy unit which is the target of an attack against follow-on forces.
- HTM:** Hard Target Munition. A bomb being developed by the Air Force to attack hard fixed targets (e.g., bunkers).
- HVM:** Hypervelocity Missile. An air-launched antiarmor missile being developed for the U.S. Air Force. It will use CO, laser command guidance and kill by kinetic energy.
- IABG:** Industrieanlagen Betriebs GmbH (Gesellschaft mit beschränkter Haftung). A West German corporation which performs research, development, and operations analysis for the West German Ministry of Defense and for West German industries.
- IADL:** Interoperable Air Data Link. IDL equipment carried by TR-1 aircraft used as Precision Location Strike System (PLSS) platforms.
- IAM:** Inertially-Aided Munition. A developmental glide-bomb program.
- ICM:** Improved Conventional Munition, An APAM

- munition used in artillery shells and rockets. Also called DPICM: Dual-Purpose ICM.
- IDA: Institute for Defense Analyses (Alexandria, Virginia).
- IDL: Interoperable Data Link. A radio data link used by the Precision Location Strike System (PLSS).
- IEPG: Independent European Programme Group, composed of European members of NATO.
- IEW UAV: Intelligence and Electronic Warfare Unmanned Aerial Vehicle. One of the family of UAVs proposed for development by the U.S. Army.
- IFF: Identification–friend or foe. A system for identifying aircraft as friendly or other (foe or neutral) e.g., using coded radio signals.
- IGB: Inner-German border. The boundary between West and East Germany. Sometimes called the inter-German border.
- IGDL: Interoperable Ground Data Link. Ground-based IDL radio equipment used by the Precision Location Strike System to communicate with IADL radio equipment on TR-1 aircraft.
- IIR: Imaging infra-red (adj.). Using a TV-like camera which is sensitive to long-wavelength infrared radiation and can “see” in the dark and, to some extent, through fog.
- IITS: Intra-Theater Imagery Transmission System. A facsimile system used by U.S. forces in Europe.
- IMINT: Image (or imagery) intelligence. Intelligence obtained from photographic imagery, electro-optical imagery, radar imagery, or other types of imagery (e.g., radiometric).
- INF: Intermediate-range Nuclear Forces.
- IPB: Intelligence Preparation of the Battlefield.
- IR: Infrared. Electromagnetic radiation having wavelengths longer than those of visible light but shorter than those of radio waves (i.e., 0.0007 to 1 millimeter).
- I<sup>2</sup>R: Imaging infrared. See IIR.
- IRTGSM: Infrared Terminally-Guided Submunition.
- Islander: A twin-engine aircraft made by Pilatus Britten-Norman in both piston and turbine versions. See *Turbine Islander*.
- Jaguar: A British aircraft used for reconnaissance.
- Joint Attack: An operational concept using both ground- and air-launched weapons. For example, an air-launched weapon (GBU-15) could be used to destroy a bridge and create a chokepoint, and ground-launched missiles (ATACMS) could be used to attack units that halted and bunched up at the destroyed bridge.
- Joint STARS: Joint Surveillance Target Attack Radar System. A developmental airborne radar system carried on E-8A aircraft intended to locate moving (and certain fixed) targets on the ground and to control attacks against such targets using tactical aircraft or guided missiles.
- JSTARS: See *Joint STARS*.
- J(S)TARS: Used here to denote the MTI surveillance capability of Joint STARS (q.v.).
- JS(TA)RS: Used hereto denote the target acquisition and attack control capabilities of Joint STARS (q.v.).
- JTF: Joint Tactical Fusion.
- JTFP: Joint Tactical Fusion Program.
- JTIDS: Joint Tactical Information Distribution System. A joint (U.S. Navy/U.S. Air Force) jam-resistant radio system used to send digital messages between aircraft and between aircraft and ground stations.
- KB-44: A small shaped-charge anti-armor submunition developed to be dispensed from the MW-1.
- LADAR: Laser Detection And Ranging. A system for determining the position of an object using visible-wavelength radiation, analogous to radar (which uses radio-wavelength radiation).
- Lance: The T-22 dual-capable (nuclear or conventional) missile used by NATO corps.
- LANTIRN: Low-Altitude Navigation/Targeting InfraRed for Night. A system designed to give tactical aircraft low-altitude all-weather navigation and targeting capabilities.
- LCS: Low-Cost Seeker (for the HARM High-speed Anti-Radiation Missile). Under development by the Navy and the Air Force. Also called Low-Cost Anti-Radiation Seeker.
- LOC: Lines of communication.
- LOC-E: Limited Operational Capability-Europe: a U.S. intelligence fusion system in Europe, derived from the Battlefield Exploitation and Target Acquisition (BETA) testbed.
- LOCPOD: Low-Cost Powered Off-boresight Dispenser: NATO development project for air-launched standoff submunition dispenser.
- LPI: Low probability of interception.
- LRSOM: Long-Range Standoff Missile: a proposed long-range cruise missile being considered in a tri-national feasibility study by the United States, the United Kingdom, and the Federal Republic of Germany.
- Luftwaffe: Air Force [viz., “air weapon”] of the Federal Republic of Germany.
- M-74: An Army APAM submunition to be used in ATACMS missiles for attack of unarmored targets.
- Martel: A British TV-guided bomb.

- MASINT: Measurement and signature intelligence—e.g., a measurement of a target's closing velocity obtained using moving target indicating (MTI) radar.
- Maverick: A guided short-range air-to-ground anti-armor missile used by the U.S. Air Force (designated AGM-65, q.v.).
- MICOM: U.S. Army Missile Command.
- MICNS: Modular Integrated Communications and Navigation System—used by the Target Acquisition Designation Aerial Reconnaissance System (TADARS).
- MIFF: An air-delivered anti-tank mine made in the Federal Republic of Germany to be dispensed by MW-1 dispensers on Tornado aircraft.
- Mine: A destructive device detonated after its emplacement, usually by some action of its target.
- Mirach-100: An Italian-made remotely piloted vehicle which can be used for reconnaissance.
- Mirage 5: A Belgian aircraft used for reconnaissance.
- Missile Attack: An operational concept using ground-launched missiles such as ATACMS.
- Mk-82: A general-purpose 500-lb bomb.
- Mk-84: A general-purpose 2,000-lb bomb.
- MLRS: Multiple Launch Rocket System. An artillery system now in procurement by the U.S. Army and several other NATO nations.
- MLRS/TGW: Terminally Guided Warhead for MLRS. An anti-armor TGSM, now in development by the U.S. Army.
- MMW: Millimeter-wave. Sensing or using electromagnetic radiation with wavelengths between one millimeter and one centimeter.
- MNC: Major NATO Commander (SACEUR, SACLAN, or CINCHAN).
- Mohawk: A U.S. Army airborne ground-surveillance radar system carried by OV-1D aircraft.
- MOS: Military Occupational Specialty designations used by the U.S. Army.
- Moving Columns: Groups of vehicles moving on roads as part of a combat unit on the march. The actual groupings of vehicles are usually battalion-sized, about 40 to 60 vehicles per column, with spacing between columns using the same road.
- MPS: Mission Payload System for the Aquila RPV.
- MR: Motorized rifle.
- MSC: Major Subordinate Commander (e.g., CINCENT, CINCNORTH)
- MSOW: Modular Stand-Off Weapon. An air-launched weapon now in concept development in NATO. This weapon would provide 25 to 50 km of stand-off, and would employ a dispenser and either anti-armor or APAM submunitions.
- MTI: Moving target indicator. A type of radar useful for surveillance of moving objects such as aircraft or ground vehicles.
- MW-1: Multipurpose Weapon, a submunition dispenser made in the Federal Republic of Germany for the Tornado aircraft; it can dispense several types of submunitions.
- NAA: North Atlantic Assembly. An organization composed of selected members of the parliaments of NATO member nations.
- NAAG: National Army Armaments Group (of NATO).
- NGF: Northern Group of Forces. Soviet Forces stationed in Poland, consisting of about two divisions.
- NIS: NATO Identification System. An IFF system being considered for adoption by NATO.
- NORTHAG: Northern Army Group of NATO's Allied Command Europe.
- NIMROD: An airborne early warning system developed in the United Kingdom for the Ministry of Defense. The United Kingdom has since decided to procure U.S. E-3 AWACS aircraft instead.
- NSWP: Non-Soviet Warsaw Pact.
- O&C: Operations and control (for Joint STARS).
- OLA: Off-loading area.
- OMG: Operational Maneuver Group.
- ON WPN: On weapon. Used here to describe autonomous target acquisition systems installed on weapons (e.g., cruise missiles).
- ORCHIDEE: Observatoire Radar Coherent Heliporte d'Investigation Des Elements Ennemis. A developmental French airborne ground-surveillance radar system which will be carried by Super Puma helicopters to indicate moving targets.
- OV-1D: The U.S. Army "Mohawk" observation aircraft equipped with an airborne ground-surveillance radar system.
- OUSDRE: Office of the Under Secretary of Defense for Research and Engineering, in the U.S. Department of Defense.
- Patriot: A modern surface-to-air missile system used by the U.S. Army in Europe; it uses a phased-array radar and fires T-16 missiles.
- Pave Mover: An experimental airborne radar and weapon guidance system carried by an F-111 aircraft and used in DARPA's Assault Breaker program; Joint STARS will use similar but improved technology.
- Paveway: A series of laser-guided bombs used by

the U.S. Air Force, built around the Mk-82 (500-lb) and Mk-84 (2,000-lb) bombs, denoted GBU-12B and GBU-10C, respectively.

**Peacetime Intel:** As used here, peacetime intelligence which can be used to locate certain fixed targets (e.g., bridges, power stations, and rail segments) with high accuracy.

**PGS:** PLSS Ground Station. A hardened facility in Europe proposed (but no longer planned) to house a PLSS CPS.

**Phoenix:** An unmanned aerial vehicle made in England by GEC Avionics.

**PIAP:** PLSS Intelligence Augmentation Program. An Air Force program under which the PLSS Intelligence Augmentation System (PIAS) is being developed.

**PIAS:** PLSS Intelligence Augmentation System. A proposed facility for augmenting the analysis, reporting, and exploitation of data collected by PLSS.

**PIM:** PLSS Interface Module. A proposed facility within a PLSS Central Processing Subsystem for selecting, formatting, and disseminating PLSS location reports to various users according to their needs.

**Pioneer-1:** An unmanned aerial vehicle made in Israel by AAI/Mazlat.

**PLSS:** Precision Location Strike System. An airborne surveillance and control system developed for TR-1 aircraft to detect, identify, and accurately locate advanced (pulsed, frequency-hopping) enemy radar transmitters and some types of jammers in near real time and to guide weapons or aircraft to such targets with sufficient accuracy to destroy them.

**PLSS GS:** PLSS Ground Station.

**POL:** Petroleum, oil and lubricants.

**RAAM:** Remote Anti-Armor Mine, produced for the U.S. Army.

**RAF:** Royal Air Force of the United Kingdom.

**Rail Mine:** Used here to denote a hypothetical mine designed to damage track and derail moving trains. Such a mine could use a modified anti-bunker munition and a Mk-75 fuze.

**Raven:** The Air Force EF-111A aircraft, which is equipped to jam enemy radars,

**R&D:** Research and development.

**RDT&E:** Research, development, testing, and evaluation.

**recce:** Reconnaissance (slang).

**reconnaissance:** As used here, collecting information about specific areas or activities of particular interest using any of several types of sensors.

**Regimental Columns:** Groups of vehicles, which comprise a regiment moving on roads. The ac-

tual groupings of vehicles are usually battalion-sized, about 40 to 60 vehicles per column, with spacing between columns using the same road.

**REGT ASSY AREAS:** Regimental assembly areas, also known as "departure areas," for Warsaw Pact divisions. These areas are usually located within the range band of 30 to 80 km from the FLOT, outside of the range of NATO artillery. Assembly areas are large enough that the density of vehicles is relatively low, and are chosen by the Warsaw Pact forces to take maximum advantage of cover and concealment.

**RF-4C:** A reconnaissance version of the F-4 Phantom fighter-bomber, used by the U.S. Air Force. Some carry TEREK equipment.

**RF-4E:** A reconnaissance version of the F-4 Phantom fighter-bomber, used by the Luftwaffe.

**RF-104:** A reconnaissance version of the F-104 Starfighter, used by the Royal Netherlands Air Force.

**RGT:** (1) Remote [MICNS] Ground Terminal for TADARS; (2) regiment.

**RITA:** Mobile radio-telephone equipment made by a consortium of Belgian and French companies; being purchased by the U.S. Army for use in Europe.

**RLG:** Ring-laser gyro. A laser device that can provide rotation rate measurements for navigation and guidance systems; it has no rotating parts but can substitute for a gyroscope, which previously was required for this purpose.

**Rockeye:** A U.S. cluster bomb which dispenses 247 unguided anti-armor shaped-charge bomblets.

**RPV:** Remotely piloted vehicle: an unmanned vehicle which is guided by operators in a control station, where television imagery or other information transmitted by the vehicle is displayed. In this report, the term refers only to aircraft. See also *UAV*.

**RSC:** Reconnaissance-strike complex. A Soviet military term for integrated surveillance/attack systems such as those demonstrated by DARPA in its Assault Breaker program.

**R&S/SA:** Reconnaissance and surveillance/situation assessment.

**RSTA:** Reconnaissance, surveillance, and target acquisition.

**SAC:** Strategic Air Command of the U.S. Air Force.

**SACEUR:** Supreme Allied Commander, Europe.

**SADARM:** Search and Destroy Armor, Smart anti-armor submunition for surface-to-surface weapons.

**SAM:** Surface-to-air missile.

**SAR:** Synthetic aperture radar. A type of airborne

- or orbital radar used for obtaining high-resolution radar images of stationary objects. A SAR can obtain imagery much more detailed than that obtainable by a real aperture radar having an antenna of comparable size.
- SCDL: Surveillance and Control Data Link (for Joint STARS).
- SEAD: Suppression of enemy air defense.
- SENIOR RUBY: A tactical ELINT system.
- SENIOR SPEAR: A tactical COMINT system.
- SFW: Sensor Fuzed Weapon. A U.S. Air Force anti-armor weapon now in development, consisting of a Tactical Munitions Dispenser (TMD) containing ten BLU-108 Skeet dispensers, each of which releases four Skeet submunitions.
- SHAPE: Supreme Headquarters, Allied Powers, Europe.
- SIGINT: Signals intelligence. Consisting of both communications intelligence (COMINT) and electronics intelligence (ELINT).
- SINCGARS: Single-Channel Ground-Air Radio System. A jam-resistant voice radio system used for communications between aircraft and ground units of the U.S. Air Force and the U.S. Army.
- SIOP: Single Integrated Operational Plan. For U.S. use of strategic nuclear weapons.
- Skeet: A "smart" puck-shaped anti-armor submunition developed by the Air Force to sense a target and discharge a high-velocity explosively-formed penetrating projectile at it. "Skeet" is a trademark of Avco Corp.
- Skeet/TGSM: In this report, denotes smart anti-armor munitions: either Skeet or TGSM or both.
- Skyeye: An unmanned aerial vehicle made in the United States by Lear-Siegler.
- SLAR: Side-looking airborne radar.
- SNS: Site Navigation Subsystem of PLSS.
- SOTAS: Stand-Off Target Acquisition System. A heliborne MTI ground-surveillance radar system developed by the U.S. Army. The SOTAS program has been canceled and superseded by the Joint STARS program.
- SRSOM: Short-Range Stand-Off Missile; NATO feasibility study.
- SSM: Surface-to-surface missile.
- Standoff Air Atk: See *AIR ATTACK*.
- STARS: See *Joint STARS*.
- STC: SHAPE Technical Centre.
- surveillance: As used here, routine monitoring using any of several types of sensors (e.g., airborne radar).
- T-16: The Patriot missile.
- T-22: The Lance missile.
- TA/AC: Target acquisition/attack control
- TAC RECCE: Tactical reconnaissance, A tactical air mission.
- TACAIR: Tactical aircraft, air forces, or airpower.
- Tacit Rainbow: A long-endurance missile (an expendable lethal air-launched unmanned aerial vehicle) being developed in the United States to attack radio emitters such as radars and jammers.
- TACMS: Tactical Missile System (see *ATACMS*).
- TADARS: Target Acquisition/Designation Aerial Reconnaissance System. A reconnaissance and target acquisition and designation system being developed for the U.S. Army. It includes the Aquila unmanned aerial vehicle as well as truck-mounted rail launchers, recovery nets, air vehicle transporters, maintenance shelters, and ground-control stations.
- target acquisition: Detection and recognition of a potential target and estimation or prediction of its location with sufficient accuracy to permit attacking it effectively with available weapons.
- TBM: Tactical ballistic missile.
- TDOA: Time difference of arrival. A radiolocation technique—used by the Precision Location Strike System (PLSS)—by which a network of radio receivers can determine the relative location of a transmitter. Also: a related technique—used by other military and civil radiolocation systems such as LORAN—by which a single radio receiver can determine its location relative to those of synchronized radio transmitters.
- TERCOM: Terrain Comparison. A system and method for high-accuracy navigation, presently employed on certain cruise missiles.
- TEREC: ELINT reconnaissance equipment carried by some RF-4C aircraft.
- TGSM: Terminally-Guided Submunition. Smart anti-armor submunition under consideration for ATACMS missiles. The TGSM has the capability to search an area for the target vehicle and then fly toward the target and kill it by detonating a shaped charge on contact.
- TGW: Terminally Guided Warhead. A developmental warhead for MLRS rockets which will release TGSMs.
- TLE: Target location error.
- TMA: Theater of military action. Also known as TMO, TSMA, and TVD.
- TMD: Tactical Munitions Dispenser. A U.S. Air Force system (denoted SUU-65/B) to dispense

- submunitions over a given target area. Many different types of submunitions can be used in the TMD, including the CEB, Gator, and Skeet.
- TMO:** Theater of military operations. (Also TMA, TSMA, and TVD.)
- TMSA:** Theater of military strategic action. (Also TMO, TMA, and TVD.)
- Tomahawk:** A cruise missile manufactured by General Dynamics in several versions: some armed with nuclear warheads, others with non-nuclear warheads.
- Tornado:** An advanced air interdiction aircraft in production and being fielded by the FRG, Italy, and the United Kingdom.
- TR-1:** A high-altitude, long-endurance aircraft used by the U.S. Air Force for surveillance and reconnaissance. It is used by the Tactical Reconnaissance System (TRS) and by the Precision Location Strike System (PLSS).
- TRIGS** (pronounced "triggs"): TR-1 Ground Station. A buried, hardened facility designed to receive, process, and exploit data from Tactical Reconnaissance System sensors carried by TR-1 aircraft. When operational, TRIGS will replace or augment the Tactical Reconnaissance Exploitation Development System (TREDS); it will provide additional capabilities such as dynamic (i.e., in-flight) retasking of TRS sensors.
- TRAC:** (1) the TRADOC Analysis Center of the U.S. Army; (2) Tactical Radar Correlator. A mobile ground station being developed by the U.S. Army for receiving, processing, exploiting, and disseminating data from airborne radar systems.
- TRADOC:** The Training and Doctrine Command of the U.S. Army.
- TREDS:** Tactical Reconnaissance Exploitation Development System. A developmental transportable ground station for the Tactical Reconnaissance System (TRS). TREDS includes: 1) a Mission Control Element (MCE), 2) an Interoperable Ground Data Link (IGDL), 3) a Tactical Ground Intercept Facility (TGIF), 4) a Ground Control Processor (GCP), 5) a SAR Ground Facility (SGF), 6) a Wide-Band Communication Element (WBCE), 7) a TREDS Communications Element (TCE), 8) an ASARS-II Interface Device (AID), and 9) a TREDS Support Facility (TSF).
- TRS:** Tactical Reconnaissance System. An airborne reconnaissance system which includes the ASARS-11 radar system.
- tube artillery:** Artillery guns, as distinct from missile artillery.
- Turbine Islander:** A twin-turboprop aircraft (designated BN-2T) made by Pilatus Britten-Norman in several versions; one—the CASTOR Islander—has been modified to carry the British ASTOR-1 side-looking airborne radar (formerly called CASTOR-I).
- TVD:** Teatr voennykh deistv. A Soviet military term variously translated as theater of military action (TMA), theater of military strategic action (TMSA), or theater of military operations (TMO); see ch. 4.
- UAV:** Unmanned aerial vehicles, including remotely piloted vehicles (RPVs), which require remote control by human pilots; autonomous aircraft (drones), which do not; and aerial vehicles which permit, but do not require, remote control by human pilots.
- UHF:** Ultra-high frequency. Radio frequencies between 300 megahertz (million cycles per second) and 3 gigahertz (billion cycles per second).
- UK:** United Kingdom of Great Britain.
- UMV:** Unmanned vehicle. Refers only to an unmanned aerial vehicle (UAV) in this report.
- USAFE:** U.S. Air Forces, Europe.
- USAREUR:** U.S. Army, Europe.
- VGK:** The Soviet Supreme High Command (translation of a Cyrillic acronym).
- VHF:** Very-high frequency. Radio frequencies between 30 megahertz (million cycles per second) and 300 megahertz.
- WASP:** (1) a now-defunct Air Force air-launched mini-missile development program; (2) an airborne computer system being developed for the F-4G Wild Weasel aircraft.
- WDL:** Weapon Data Link of Joint STARS, using the Joint STARS radar to transmit target data and a Weapons Interface Unit installed on an attack aircraft or missile to receive it.
- WDU-25B:** See Bullpup.
- Wild Weasel:** U.S. Air Force TACAIR hunter-killer system (denoted F-4G) for attacking enemy air defense units.
- WIU:** Weapons Interface Unit. A component of Joint STARS which would be installed on attack aircraft or missiles to receive target data updates from Joint STARS aircraft via the Weapon Data Link. A WIU is being developed, and the Air Force is considering procuring it.
- WP:** Warsaw Pact.
- WW:** Wild Weasel.