

## GLOSSARY OF AVIATION ACRONYMS AND ABBREVIATIONS

----- AVIATION TERMS (A) AA Autotuned NAVAID AAt or Above (constrained altitude) AA American AAATS Australian Advanced Air Traffic Services AAC Aeronautical Administration Communication (a class of communication which supports administrative communication) AAS Advanced Automation System (the end systems for all FAA air traffic control, located at the ARTCCs) AATT Advanced Aviation Transportation Technology ABM Abeam A/C Aircraft AC Air Canada ACARS Aircraft Communications Addressing and Reporting System ACARS ARINC communications and address reporting system (digital communications system used primarily for aircraft-to-airline messages) ACARS MU ACARS Management Unit ACAS Airborne Collision and Avoidance System ACF Area Control Facility ACFS Advanced Concepts Flight Simulator (a generic "glass cockpit") ACK Acknowledge ACMS Aircraft Condition Monitoring System ACT Active ADC Air Data Computer ADF Automatic Direction Finder ADI Attitude Director Indicator ADLP Aircraft Data Link Processor (the Mode S subnetwork function onboard the aircraft that implements the OSI network layer protocols) ADMA Aviation Distributors and Manufactureres Association ADS Automatic Dependent Surveillance AECB Atomic Energy Control Board AERA Automated Enroute ATC AFCS Automatic Flight Control System AFDS Autopilot Flight Director System (also A/P F/D) AFS Automatic Flight System AGATE Advanced General Aviation Transport Experiments AGL Above Ground Level AHRS Altitude Heading Reference System AIRS Advanced Infrared Sounder A/I Anti-ice AI Artificial Intelligence AL Allegheny Alert Indicator (visual or auditory) which provides information to the flightcrew in a timely manner about an event requiring pilot awareness. ALPA Air Line Pilots Association ALT Altitude ALT Alternate ALTN Alternate ALT HOLD Altitude Hold Mode AM Amplitude Modulation AM Aeromexico AMSS Aeronautical Mobile Satellite Service ANA All Nippon Airways AOA Angle-of-Attack AOC Aeronautical Operation Control (communications which support safety and regularity of flight that normally take place between aircraft and the operator) AOCS Attitude and Orbit Control System AOM Aircraft Operating Manual AOPA Aircraft Owners and Pilots Association A/P Autopilot APA Allied Pilots Association APC Aeronautical Passenger Communication (a class of communication which supports passenger communication) APMS Automated Performance Measurement System APPR Approach/Approach Mode APR April APRT Airport APU Auxiliary Power Unit AQP Advanced Qualification Program ARAC Aviation Rulemaking Advisory Committee ARINC Aeronautical Radio Incorporated ARPA Advanced Research Projects Agency ARR Arrival ARTCC Air Route Traffic Control Center ARTS Automated Radar Terminal System ASCII American Standard Code for Interface and Interchange ASI Air Speed Indicator ASR Airport Surveillance Radar ASRS Aviation Safety Reporting System (aviation incident reporting system run by NASA for FAA) AT At (an altitude) A/T Autothrottle ATA Air Transport Association ATA Actual Time of Arrival ATC Air Traffic Control (a generic term for a joint civil/military system for controlling traffic within a specific area) ATCS Advanced Train Control Systems ATCSCC Air Traffic Control System Command Center ATHR Autothrust System ATIS Automatic Terminal Information Service (recorded voice message that provides weather and airport services information) ATM Air Transportation Management ATN Aeronautical Telecommunications Network (the collection of ground subnetworks, air/ground subnetworks and airborne subnetworks interconnected by ATN routers that support computer-to-computer, internetwork communication and message transfer between host computers using the OSI ISO protocol architecture) ATS Automatic Throttle System ATSC Air Traffic Service

Communications (Communications related to air traffic services. This includes ATC, aeronautical and meteorological information, position reporting and services related to safety and regularity of flight) AUG August AV Avianca AVAIL Available AVHRR Advanced Very High-Resolution Radiometer AWACS Airborne Warning And Control System AWAS Automated Weather Advisory Station AWIPS Advanced Weather Interactive Processing System (B) B At or Below (constrained altitude) BALPA British Air Line Pilots Association BASIS British Airways Safety Information System BF MarkAir BIT(E) Built-In-Test (Equipment) BRG Bearing BRT Brightness (C) C Centigrade CAA Civil Aviation Authority (Great Britain) CAB Civil Aeronautics Board CAAC Civil Aviation Authority of China CAS Calibrated (Computed) Air Speed CASE Computer Aided Software Engineering CAT Clear Air Turbulence CAT Category Cat II A Cat II approach involves weather minimums of a 200 ft ceiling and 2600 ft RVR CBT Computer Based Training CDI Course Deviation Indicator CDU Control display unit (pilots' interface to the FMS) CDTI Cockpit Display of Traffic Information CENA Centred' Études de la Navigation Aérienne (France) CFIT Controlled Flight Into Terrain CG Center of Gravity CGS Centimeter-gram-second CI Cost Index CI China Airlines CIT Compressor Inlet Temperature CLB Climb Detent of the Thrust Levers CLR Clear CMC Central Maintenance Computer CNS Communications Navigations and Surveillance CO Continetnal COM Cockpit Operating Manual CON Continuous CO ROUTE Company Route (also CO RTE) COTR Contracting Officer's Technical Representative COTS Commercial Off The Shelf CP Control Panel CPCS Cabin Pressure Control System CPDLC Controller Pilot Datalink Communications CPU Central Processing Unit CRC Cyclic Redundancy Check CRITTER Civil Rotorcraft IFR Terminal-Area Technology Enhancement Research CRM Cockpit Resource Management CRM Crew Research Management CRS Course CRT Cathode Ray Tube CRZ Cruise CSD Constant Speed Drive CTA Controlled-Time of Arrival CTA Control Area (ICAO Term) CTAS Center TRACON Automation System CTC Centralized Train Central CTR Center CTR Civil Tilt Rotor CTRL Control CVSRF Crew-Vehicle Simulation Research Facility (NASA Ames) CWS Control Wheel Steering (D) D Derated DA Descent Advisor DBS Direct Broadcast Satellite DE-TO PR Derated Takeoff Engine Pressure Ratio D-TO Nl Derated Takeoff Engine Fan Speed DADC Digital Air Data Computer DATALINK Digitized Information Transfer (air/ground) DC Direct Current Electricity D/D Drift Down DEC December DEC Digital Equipment Corporation DECR Decrement DEL Delete DEP Departure DES Descent DEST Destination DEV Deviation DFDAU Digital Flight Data Acquisition Unit DFDR Digital Flight Data Recorder DFGS/C Digital Flight Guidance System/Computer DFW Dallas Fort Worth International Airport DGPS Differential GPS DH Decision Height DIR Direct DIR/INTC Direct Intercept DIS Distance DISCR Discrepancy DIST Distance DL Delta DLP Data Link Processor (the FAA's ground automation system that supports the Mode S subnetwork (GDLP), internetwork (ATN router) and non-ATC data link application processes) DLR German Aerospace Research Establishment DME Distance Measuring Equipment (ground navigational aid that can provide display of distance to selected ground navigational radio transmitter) DMU Data Management Unit DNTKFX DownTrack Fix DOT Department of Transportation DOD Department of Defense DRU Data Retrival Unit DSPY Display (annunciation on CDU) DTG Distance-to-go (E) E East EADI Electronic Attitude Director Indicator EAS Equivalent Airspeed ECAM Electronic Centralized Aircraft Monitor ECON Economy (minimum cost speed schedule) ECS Environmental Control System E/D End-of-Descent EDF Electricité de France EEC Electronic Engine Control EFC Expected Further Clearance EFIS Electronic Flight Instrument System EGT

Exhaust Gas Temperature EHSI Electronic Horizontal Situation Indicator EICAS Engine Indicating Crew Alerting System EIU Electronic Interface Unit ELT Emergency Locator Transmitter EMP Electromagnetic Pulse EMS Emergency Medical Services ENG Engine E/O Engine-Out EPR Engine Pressure Ratio EPROM Erasable Programmable Read-Only Memory EST Estimated ETA Estimated Time of Arrival ETX End of Transmission EXEC Execute (F) F Fahrenheit FA Final Approach FAA Federal Aviation Administration FADEC Full Authority Digital Engine Control FAIL FMC Fail Failure The inability of a system, subsystem, unit or part to perform within previously specified limits. FAF Final Approach Fix FANS Future Air Navigation Systems FAR Federal Aviation Regulations (federal rules under which flight operations are conducted) FAR Federal Acquisition Regulation FAST Final Approach Spacing Tool FBO Fixed Based Operator FCC Flight Control Computer FCU Flight Control Unit F/D (FD) Flight Director FDAMS Flight Data Acquisition and Management System FDC Flight Data Company FDR Flight Data Recorder FEATS Future European Air Traffic System FEB February FF Fuel Flow FGS/C Flight Guidance System/Computer FIR Flight Information Region Fix Position in space usually on aircraft's flight plan FL Flight Level FL 310 For example, FL310 is an altitude 31,000 ft. above sea level; used for altitudes above 18,000 ft FLCH Flight Level Change FLIDRAS Flight Data Replay and Analysis System FLT Flight FMA Flight Mode Annunciator: display on or near the PFDs of the current modes of autoflight system FMC Flight Management Computer (also FMCS - FMC System) FMGC Flight Management Guidance Computer FMGS Flight Management Guidance System FMS Flight Management System FO First officer FOQA Flight Operations Quality Assurance FPA Flight Path Angle FPA Focal Plane Array FPM Feet Per Minute FQIS Fuel Quantity Indicating System FR From FRA Flap Retraction Altitude FRA Federal Railroad Administration FREQ Frequency FSF Flight Safety Foundation FT Feet (G) GA Go-Around GA General Aviation GAR Go-Around GCA Ground-controlled Approach GDLF Ground Data Link Processor (the Mode S subnetwork function within the ground system that implements the OSI network layer protocols) GHz Gigahertz GMT Greenwich Mean Time GNSS Global Navigation Satellite System GPS Global Positioning System GPWS Ground Proximity Warning System (warns of inadequate separation from ground and excessive sink rate close to ground) GRAF Ground Replay and Analysis Facility GRP Geographical Reference Points GS Glide Slope GS Ground Speed G/S Glideslope GSFC Goddard Space Flight Center GW Gross Weight (H) HAC Hughes Aircraft Co. HAI Helicopter Association International HBARO Barometric Altitude HDG Heading HDG SEL Heading Select HDOT Inertial Vertical Speed HE Altitude Error HF High Frequency HI High HIRS High-Resolution Infrared Sounder Host Computer Facility located at the ARTCC which operates user application software, as well as certain peer network layer protocols required to communicate with adjacent ATN routers. Host Processor "End system" as defined by ISO that includes the OSI upper layer protocols (i.e., transport layer and above) and application processes HP Holding Pattern HPRES Pressure Altitude HSI Horizontal Situation Indicator HUD Head-Up Display (I) IA Inspection Authorization IAOA Indicated Angle-of-Attack IAS Indicated Airspeed ICAAS Integrated Control in Avionics for Air Superiority ICAO International Civil Aviation Organization ID Identifier IDENT Identification IEPR Integrated Engine Pressure Ratio IF Intermediate Frequency IFR Instrument Flight Rules IFRB International Frequency Registration Board IGFET Insulated Gate Field Effect Transistor ILS Instrument Landing System (uses precision localizer and glide-slope radio transmitters near a runway to provide landing approach guidance) IMC Instrument Meteorological Conditions INBD Inbound INFO Information in.hg.

inches of mercury INIT Initialization INR Image Navigation and Registration INS Inertial Navigation System INTC Intercept IPT Integrated Product Team IRS Inertial Reference System IRU Inertial Reference Unit ISA International Standard Atmosphere ISO International Standards Organization ITU International Telecommunications Union (J) JAL Japan Air Lines JAN January JAR Joint Airworthiness Regulations JATO Jet Assisted Takeoff JL Japan Air Lines JSRA Joint Sponsored Research Agreement JUL July JUN June (K) KG Kilogram kHz kilohertz KLM Royal Dutch Airlines km Kilometer KT (kts) Knots kW Kilowatt (L) L Left LAT Latitude LAX Identifier for Los Angeles LCN Local Communications Network. LDGPS Local DGPS LFR Low-frequency Radio Range LIM Limit LMM Compass locator at the middle marker LNAV Lateral Navigation (provides computer description of aircraft's planned lateral flight path that can be tracked by the autoflight system; lateral path can be shown on map display.) LO Low LOC Localizer Beam LOE Line Oriented Evaluation LOFT Line Oriented Flight Training LOM Compass Locator at the Outer Marker LON Longitude LORAN Long Range Navigation LOS Line-Oriented Simulation LRC Long Range Cruise LRU Line Replaceable Unit LVL CHG Level Change (M) M Mach Number M Manual Tuned NAVAID MAA Maximum Authorized IFR Altitude MAG Magnetic MAINT Maintenance MAN Manual MAP Missed Approach MAR March M/ASI Mach/Airspeed Indicator MAX Maximum MAX CLB Maximum engine thrust for two-engine climb MAX CRZ Maximum engine thrust for two-engine cruise MCA Minimum Crossing Altitude MCDU Multipurpose Control Display Unit MCP Mode Control Panel (pilots' interface to the autoflight system; usually located centrally just below cockpit glare shield) MCT Maximum Continuous Thrust MCW Modulated Continuous Wave MDA McDonnell-Douglas Aerospace MDA Minimum Descent Altitude MDL Multipurpose Data Link MEA Minimum Enroute Altitude MEL Minimum Equipment List MIDAS Man-Machine Integration Design and Analysis System (NASA Ames) MIDAS Multi-discipline Data Analysis System MILSPEC Military Specifications MIN Minutes MIN Minimum MIT Massachusetts Institute of Technology MLA Maneuver Limited Altitude MLE Landing Gear Extended Placard Mach Number MLS Microwave Landing System MMO Mach Max Operating MN Magnetic North MOA Memorandum of Agreement MOCA Minimum Obstruction Clearance Altitude MOD Modified/Modification Mode S Type of secondary surveillance radar (SSR) equipment which provides Mode A and Mode C interrogations, discrete address (Mode S) interrogations from the ground or air, and a data link capability MODIS Moderate-resolution Imaging Spectrometer MRA Minimum Reception Altitude MSG Message MSL Mean Sea Level MTBF Mean Time Between Failures MU Management Unit MWP Meteorological Weather Processor (N) N North NACA National Advisory Committee for Aeronautics NADIN II National Airspace Data Interchange Network II (the national digital message switching network for aeronautical data) NAS National Airspace System NAS National Aircraft Standard NASA National Aeronautics and Space Administration N/A Not Applicable NATCA National Air Traffic Controllers Association NAV Navigation NAVAID Navigational Aid NBAA National Business Aircraft Association NGATM New Generation Air Traffic Manager ND Navigation Display NDB Nondirectional Radio Beacon NESDIS National Environmental Satellite, Data, and Information Service NLM Network Loadable Module NLR National Research Laboratory (The Netherlands) NM Nautical Mile NMC National Meteorological Center NOAA National Oceanic and Atmospheric Administration NOTAM Notice for Airman NOV November NRP National Route Program NTSB National Transportation Safety Board NW Northwest Airlines NWS National Weather Service NI Engine Revolutions per Minute (percent) (O) OAG Official Airline Guide

OAT Outside AirTemperature OATS Orbit and Attitude Tracking OBTEX Offboard Targeting Experiments OCT October ODAPS Operational OGE Data Acquisition and Patch Subsystem OFST Lateral Offset Active Light OGE Operational Ground Equipment OIS OGE Input Simulator OO SkyWest Airlines OP Operational OPT Optimum O-QAR Optical Quick Access Recorder OSI Open Sytem Interconnection (ISO defined communications architecture used in data link to permit heterogeneous data communication systems to be interconnected in order to allow the reliable exchange of messages without regard to the implementation of the networks and physical media through which the messages pass) OTFP Operational Traffic Flow Planning OV Overseas National Airways (P) P Procedure-Required Tuned NAVAID PA Pan Am PAR Precision Approach Radar PAWES Performance Assessment and Workload Evaluation PBD Place Bearing/Distance (way point) PD Profile Descent PDB Performance Data Base PDC Pre Departure Clearance PERF Performance PF Pilot Flying PFD Primary Flight Display PHARE Program for Harmonized ATC Research in Europe PHIBUF Performance Buffet Limit PHINOM Nominal Bank Angle PIREPS Pilot Reports PMS Performance Management System PND Primary Navigation Display PNF Pilot Not Flying POS Position POS INIT Position Initialization POS REF Position Reference PPI Plan Position Indicator PPOS Present Position PREV Previous PROC Procedure PROF Profile PROG Progress Page on MCDU PROV Provisional PS Pacific Southwest Airways PT Total Pressure PTH Path PVD Plan View Display (Q) QAR Quick Access Recorder QNH Quantity QRH The barometric pressure as reported by a particular station QTY Quantity QUAD Quadrant (R) R Right R Route Tuned NAVAID RAD Radial RAD Radio RAPS Recovery Access Presentation System RASCAL Rotorcraft Air Crew Systems Concepts Airborne Laboratory RCP Radio Control Panel R/C Rate of Climb RDP Radar Data Processing (system) REF Reference REQ Required/Requirement REQ Request RESTR Restriction RESYNCING Resynchronizing rf radio frequency RMPs Radio Management Panels RNAV Area Navigation (generic acronym for any device capable of aircraft guidance between pilot-defined waypoints RNP Required Navigation Performance Router An ATN network layer gateway which performs the relaying and routing of data packets across interconnecting subnetworks based on the source and destination network layer addresses and the desired quality of network service RTA Required Time of Arrival RTCA Radio Technical Committee on Aeronautics RTE Route RVR Runway Visual Range RW Runway (S) S South SA Situation Awareness SAS Scandinavian Airlines System SAT Static Air Temperature SATCOM Satellite Communications SBIR Small Business Innovative Research S/C Step Climb SEA/TAC Seattle/Tacoma International Airport SEL Selected SEP September SESMA Special Event Search and Master Analysis SID Standard Instrument Departure SIGMET Significant Meteorological Information SITA Société Internationale Télécommunique Aéronautique SO Southern Airways SOP Standard Operating Procedure SOPA Standard Operating Procedure Amplified SP Space SPD Speed Mode SPS Sensor Processing Subsystem SQL Structured Query Language SRP Selected Reference Point SSFDR Solid-State Flight Data Recorder SSM Sign Status Matrix STAB Stabilizer STAR StandardTerminal Arrival Route STEPCLB StepClimb STOL Short Takeoff and Landing STTR Small Business Technology Transfer Resources SUA Special Use Airspace SWAP Severe Weather Avoidance Program (T) TACAN Tactical Air Navigation TACH Tachometer TAI Thermal Anti-Ice TAP Terminal Area Productivity TAS True Airspeed TAT Total AirTemperature TATCA Terminal Air Traffic Control Automaiton TBD To Be Determined TBO Time between Overhauls TBS To Be Specified TCA Terminal Control Area TCAS Traffic Alert & Collision Avoidance System T/C (TOC) Top-of-Climb T/D

(TOD) Top of-Descent TDWR Terminal Doppler Weather Radar (TDWR located and classifies windshear conditions and provides advisories in the terminal area. These data are available through the DLP.) TEMP Temperature TFM Traffic Flow Management TGT Target THDG True Heading THR Thrust THR HOLD Throttle Hold TI Texas International TIAS True Indicated Airspeed TKE TrackAngle Error TMA Traffic Management Advisor TMC Thrust Management Computer TMF Thrust Management Function TMU Traffic Management Unit TN True North T/O (TO) Takeoff TOD Top of Descent TO EPR Takeoff Engine Pressure Ratio TO N1 Takeoff Engine Fan Speed TOGA Takeoff/Go-Around TOT Total TRA Thrust Reduction Altitude TRACON Terminal Radar Approach Control Facility. TRANS Transition TRK Track (to a NAVAID) TRU True TSRV Transport Systems Research Facility TT Total Temperature TURB Turbulence (U) UA United UHF Ultra-high Frequency US USAir USAF United States Air Force (V) V Velocity VA Heading to an Altitude VA Design Maneuvering Speed VAR Variation VAR Volt-amps Reactive VAR Visual-aural Radio Range VASI Visual Approach Slope Indicator VBF(LO) Flaps up minimum buffet speed at current maneuver load factor minus altitude dependent variable VBFNG(HI) High speed CAS at N g's to buffet onset VBFNG(LO) Low speed CAS at N g's to buffet onset VCMAX Active Maximum Control Speed VCMIN Active Minimum Control Speed VC Design Cruising Speed VD Design Diving Speed VD Heading to a DME distance VF Design Flap Speed VFE Flaps Extended Placard Speed VFR Visual Flight Rules VFXR(R) Flap Retraction Speed VFXR(X) Flap Extension Speed VG Ground Velocity VGND Ground Velocity VH Maximum Level-flight Speed with Continuous Power VHF Very-high Frequency VHRR Very High-Resolution Radiometer VISSR Visible Infrared Spin Scan Radiometer VI Heading to a course intercept Vls Lowest Selectable Airspeed VLE Landing Gear Extended Placard Airspeed VLO Maximum Landing Gear of Operating Speed VLOF Lift-off Speed VM Heading to a manual termination VMC Visual Meteorological Conditions VMC Minimum Control Speed with Critical Engine Out VM(LO) Minimum Maneuver Speed VMAX Basic Clean Aircraft Maximum CAS VMIN Basic Clean Aircraft Minimum CAS VMO Velocity Max Operating VNAV Vertical Navigation (provides computer description of aircraft's speed and altitude that can be tracked by autoflight system) VNE Never-exceed Speed VNO Maximum Structural Cruising Speed VOM Volt-ohm-milliammeter VOR VHF OmniRange Navigatgion System (ground navigational aid that can provide display of aircraft position relative to course through selected ground navigational radio transmitter) VORTAC VHF Omni Range Radio/Tactical Air Navagation VPATH Vertical Path VR Heading to a radial VR Takeoff Rotation Velocity VREF Reference Velocity VS Design Speed for Maximum Gust Intensity V/S Vertical Speed/Vertical VSCS Voice Switching and Control System VSI Stalling Speed in a Specified Flight Configuration VSO Stalling Speed in the Landing Configuration VSTOL Vertical or Short Takeoff and Landing VTK Vertical Track Distance VTOL Vertical Takeoff and Landing V/TRK Vertical Track VTR Variable Takeoff Rating VU Utility Speed VX Speed for Best Angle of Climb VY Speed for Best Rate of Climb VI Critical Engine Failure Velocity (Takeoff Decision Speed) V2 Takeoff Climb Velocity (W) W West WAAS Wide Area Augmentation System Waypoint Position in space usually on aircraft's flight plan WBC Weight and Balance Computer WINDR Wind Direction WINDMG Wind Magnitude WPT Way point W/MOD With Modification of Vertical Profile WMSC Weather Message Switching Center WMSCR Weather Message Switching Center Replacement WO World Airways W/STEP With Step Change in Altitude WT Weight WX Weather WXR Weather Radar (X) XTK Crosstrack (cross track error) XY Ryan Air (Z) Z Zulu (GMTtime) ZFW Zero Fuel Weight ZNY New York

Air Route Traffic Control Center ----- COGNITIVE SCIENCE TERMS Action: goal directed behavior performed by an agent Agent: any system component that executes tasks that process information Attention allocation: process by which an agent samples information on media in the environment Cognitive tasks: tasks that achieve their goals by processing information Distraction: an event that causes attention to move away from task to which agent should continue to attend Distributed cognition: term used to emphasize that cognitive tasks that are important to performance at system level are distributed across various people in the system and various artifacts and machines Error-resistant system: system designed to minimize occurrence of errors Error-tolerant system: system that can detect errors and correct them before they result in undesirable consequences Expectation: representation of a state predicted to occur in a given situation; agents can compare expectations to what actually happens and thereby detect possible processing errors Information: describes the relation between a structure (in the world) and some agent that interprets that structure; world is full of structure, but the only structures that are informative are those capable of affecting the behavior of the agent that is interpreting those structures Information processing: tasks that depending on the situation, transform information represented in one medium to information represented in a different medium Media: any physical things that can be used to represent information Mediated information: information that has been transformed from its primary source Mistake: an error in which the executed action is the intended action but the intended action is incorrect Representation: structure in the world used to express information on a medium Slip: an error in which the executed action is not the intended action Side Effect: change in a machine state that is a byproduct of an agent using the machine to accomplish some task Task: actions accomplished by agents to satisfy goals ----- Distributed by Palm Pilot Plaza Curator: Li Zhang