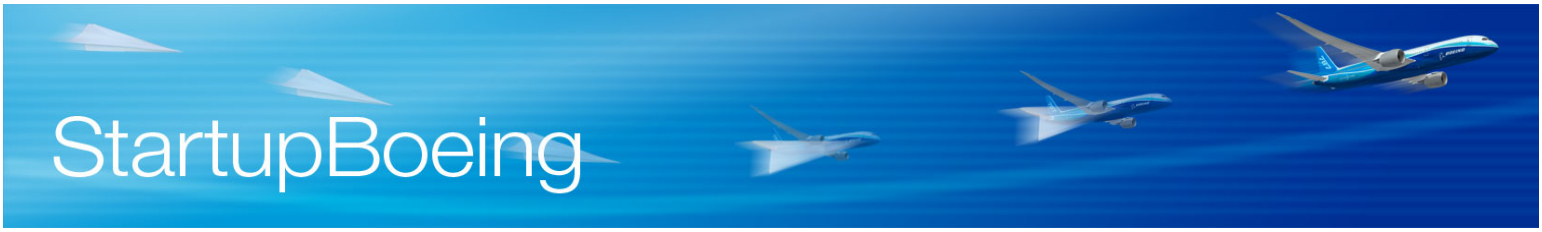

ACMI lease agreement	A lease contract between two parties, through which an entity with an air operating certificate (an air carrier) is the lessor. The lessor provides the aircraft, crews, maintenance, and insurance (ACMI) to the lessee. The second party, in most cases also with an air operating certificate, is the lessee. The lessee is responsible for the schedule, flight charges, cargo handling, crew support, flight operations, ramp handling, aircraft servicing, fuel, etc. ACMI charges are typically based on an hourly rate, with a minimum number of hours to be operated per specified period.
Aircraft ULD	An assembly of components consisting of any of the following: 1. Aircraft container 2. Aircraft pallet and pallet net 3. Aircraft pallet and pallet net over a nonstructural container or igloo The purpose of the **unit load device (ULD)** is to enable individual pieces of cargo to be assembled into a standard-size unit to facilitate efficient loading and unloading of aircraft having compatible handling and restraint systems.
Airline Tariff Publishing Company (ATPCO)	A corporate entity wholly owned by certificated air carriers that publishes and distributes passenger fares and cargo tariffs throughout the air transport, travel, and shipping industries.
Air Operator's Certificate (AOC)	The AOC is the key link to safety oversight. It attests to an airline's competence as to safe operation and it determines who is responsible for an airline's safety oversight. In the US it is issued by the FAA. In the UK it is issued by the Safety Regulation Group of the CAA. An AOC is one of the criteria required in order for any nation's civil aviation regulatory body to grant an operating license. Known also as an Air Carrier Certificate in the US.
AS 1825 Volume	The Society of Automotive Engineers, Inc. (SAE) Aerospace Standard. AS 1825, issued July, 1983, developed recommended standards for determining usable internal volumes in a variety of areas. Generally speaking, container volume is calculated as 93.5 percent of the external envelope volume. For pallets, volume is determined by making the following allowances: 1. Pallet thickness: 0.75 inches (19mm) for commercial and 2.25 inches (57mm) for military. 2. Length and width: assumes a 2-inch setback from the outer edges of the pallet. Height: controlled by a 2-inch clearance dimension allowance to the minimum aircraft envelope through which the pallet must pass. For detailed information, see the referenced Aerospace Standard.
Available seat-kilometers (ASKs)	Or **available seat-miles (ASMs)** measure capacity. The number of seats on an airplane multiplied by the number of kilometers or miles flown (empty or full) by that airplane (i.e. airplane capacity). Same measure for all aircraft in the fleet over a specified period of time will show total airline capacity during that period.
Available freight tonne-miles or tonne-kilometers (AFTMs or AFTKs)	A measure of airline or aircraft cargo capacity and production; calculated as the product of total cargo payload capacity and distance flown.

Average daily flight hour utilization	Represents the average number of flight hours flown in scheduled service per day per aircraft for the total fleet of operated aircraft.
Base maintenance	Comprises in-depth inspections known as system checks and structural checks, as well as the consequent non-routine tasks. • A system check is traditionally known as a C-check and is typically done up to three years depending on airplane type. • A structural check is also known as a D-, 4C-, or SI-check. This complete structural inspection and restoration of an airplane is referred to as the completion of a maintenance cycle. When in a blocked maintenance program, this inspection is accomplished after an aircraft has been in operation from 4-12 years, depending on the operator, airplane type, and utilization.
Bilateral agreement	An agreement or treaty between two nations, contracting for reciprocal international air service to be operated by designated carriers of each nation. The agreement may include provisions for the types of aircraft to be used, frequency of service, intermediate stops en route, aircraft airworthiness compliance, insurance requirements, fuel taxation, and arbitration procedures. These are normally standardized agreements applied to negotiations between one nation and numerous other nations, which allow for the inclusion of different routes and service points by various carriers.
Break-even load factor	Represents the percentage of seats that must be filled in order for scheduled passenger revenue to cover operating expenses. Calculated by dividing cost per available seat-mile (CASM) by revenue per revenue passenger mile (RRPM).
Codeshare	A marketing arrangement in which an airline places its designator code on a flight operated by another airline and sells tickets for that flight. This offers carriers an opportunity to provide service to destinations not in their route structure. The sale of codeshare seats can vary depending on the sale arrangement between the carriers.
Cost per available seat-kilometer (CASK)	Or **CASM (cost per available seat-mile)** The unit operating cost of an airline expressed for each seat mile offered. Operating cost divided by ASK or ASM. Typically expressed in US cents.
Cargo load factor	The percentage of capacity available to carry cargo that is actually used to carry such cargo. Load factor may be calculated on the basis of volume, weight, or unit loading device capabilities. On passenger aircraft, cargo capacity excludes the space necessary to carry passenger baggage. The most common method of computing cargo load factor is the ratio of the actual cargo load by weight to the available cargo weight capacity based on a carrier's cargo density assumptions.
Cargo revenue tonne-miles or tonne-kilometers	A measure of cargo operation productivity. Calculated as the product of cargo carried (revenue tons or tonnes) and the distance flown in the revenue service. Cargo tonnage includes freight, express packages, and mail.
Certification, ULD	Approval by the appropriate governmental airworthiness authorities indicating that the aircraft unit load device (ULD) meets their safety requirements.

Charter	A non-scheduled flight operated according to the national laws and regulations of the country being served, as provided for in Article 5 of the Chicago Convention. A flight on which all (or almost all) the capacity which is occupied by passengers or cargo has been sold to one or more charters for resale. Sometimes charter operators seek to sell some seat-only tickets in order to fill the aircraft (some aviation partners are more liberal than others; some will allow any type of charter, including seat-only, subject to reciprocity; others control charter operations very tightly).
CIF	A pricing method that includes cost, insurance, and freight.
Computer reservation system (CRS)	A computerized system that displays information on availability of seats and connecting services etc., and provides comprehensive facilities for direct booking by travel agents.
Convertible aircraft	An aircraft which is certified for, and can be converted between, an all-passenger configuration and an all-cargo configuration.
Damp lease	An ACMI, includes cockpit crew but without not cabin crew. The lessee would provide its own cabin crew.
Deferred rate	An air cargo rate that is lower than the corresponding standard rates for a comparable shipment. Shippers using a deferred rate agree in advance to a lower level of service in return for the reduced rate.
Direct operating costs	Costs that are directly related to or caused by operating the aircraft.
Dry lease	An aircraft leasing arrangement between two parties. The lessor provides the aircraft to the lessee. The lessee operates the aircraft under its AOC and provides its own crew, fuel, maintenance, insurance, etc. as required for operation. Lessee pays rental payments and typically maintenance reserves to lessor. (Compare “ACMI” and “wet lease.”)
European Aviation Safety Agency (EASA)	The European Aviation Safety Agency is the centerpiece of the European Union’s strategy for aviation safety. Their mission is to promote the highest common standards of safety and environmental protection in civil aviation. (Refer to http://www.easa.europa.eu)
Extended operations (ETOPS)	Certification requirement that allows extended range operations for those flights conducted over a route that contain a point further than one hour flying time at the approved one-engine inoperative cruise speed (under standard conditions in still air) from an adequate airport.
Finance lease	Type of long-term debt financing used to support aircraft acquisition. Generally under a finance lease, the risks and rewards associated with aircraft ownership lie with the lessee (the airline). Both asset and debt appear on lessee’s balance sheet. Lessee pays scheduled principal and interest payments to lender/lessor and incurs depreciation of the aircraft asset. Lessee also pays all costs associated with operating aircraft including crew, fuel, maintenance, insurance, etc. Lessee also typically assumes residual risk.

Fleet planning	Determine which aircraft should be operated and in what numbers to meet the needs of the business. Typically, this involves evaluating new and existing aircraft types, comparing all the costs and checking compatibility with the existing fleet and route network.
General commodity rate	The tariff rates published that are applicable to all articles or commodities not specifically identified elsewhere in the carrier's governing rules tariff as a "Specific Commodity." Often abbreviated as "G.C."
Ground handling operator	Company that provides ground handling support services to airlines. Ground handling may include: aircraft cleaning, catering, ticketing and check in of passengers as well as engineering support.
Hub and spoke system	A hub is an airport on which traffic from a number of peripheral points is concentrated, and which is in turn linked by direct flights to peripheral (spoke) points. Such systems can involve linking a gateway airport to a number of domestic points (common in the US) or can be used in change of gauge operations. Compare with point-to-point.
Hundredweight	The standard tariff unit used for establishing U.S. domestic cargo rates for shipments over 100 pounds that are rated on a weight basis. Hundredweight is abbreviated as cwt.
Indirect operating costs	All costs incurred by the airline that are not directly associated with the operating of the aircraft. Such costs include marketing, administration, rent, IT and ownership.
Interlining	Changing, at an intermediate point on a journey, from one aircraft to an aircraft of a different airline but without any sharing of the airline codes. Compare code sharing.
International Aviation Safety Assessments (IASA) Program	The United States Federal Aviation Administration (FAA) established the IASA program through public policy in August of 1992. FAA's foreign assessment program focuses on a country's ability, not the individual air carrier, to adhere to international standards and recommended practices for aircraft operations and maintenance established by the United Nation's technical agency for aviation, the International Civil Aviation Organization (ICAO). (Refer to www.faa.gov/about/initiatives/iasa/.)
Internal volume, ULD	The maximum total available cubic space within a cargo container or pallet net envelope. The internal volume of containers with the same type or designation varies by manufacturer and materials. The Pallets and Containers section of the ***StartupBoeing*** website indicates the AS 1825 Volume, which is generally calculated as 93.5 percent of the external envelope volume. This serves as a practical internal volume figure, accommodating the majority of manufacturing variations.
International Air Cargo Association	A worldwide not-for-profit Air Cargo Industry Association with broad-based membership that includes airlines, forwarders, airports, ground handlers, all-cargo carriers, motor carriers, multimodal operators, and customs agencies. The organization's primary objective is to advance the interests of the air cargo industry and strengthen its contribution to world trade. (Refer to www.tiaca.org)

International Air Transport Association (IATA)	A voluntary industry association founded in 1919, which is open to scheduled air carriers whose home countries are members of the International Civil Aviation Organization (ICAO). IATA is actively involved in virtually every aspect of airline operations and management. Primary functions include provision of a wide range of services to airlines, airports, governments, and consumers. Primary products and services include consulting, publications, and training for both passenger- and cargo-related issues. (Refer to www.iata.org)
International Civil Aviation Organization (ICAO)	A United Nations body formed in December 1944 under the auspices of the Chicago Convention with the objectives of developing the principles and techniques of international air navigation and fostering the planning and development of international air transport so as to: ensure safe and orderly growth of international aviation throughout the world; encourage the arts of aircraft design and operation for peaceful purposes; encourage the development of airways, airports and air navigation facilities for civil aviation; meet the needs of peoples of the world for safe, regular and efficient and economical air transport; prevent economic waste caused by unreasonable competition; ensure the rights of states are respected; avoid discrimination between states; and promote the safety of flight. (Refer to https://www.icao.int/Pages/default.aspx)
Layout of passenger accommodations (LOPA)	Aircraft interior configuration document is an engineering diagram of the cabin interior but is not limited to locations of passenger and flight attendant seats, exits, lavatories, galleys, emergency equipment, etc.
Line maintenance	Routine servicing, troubleshooting, and maintenance corrective actions required for airplane dispatch. Line maintenance generally includes transit checks, daily checks, and service checks, all of which are traditionally called the A-check.
Load factor	The percentage of capacity available to carry payload that is actually utilized. 1. **Passenger load factor**: The percentage of seats available that are actually purchased by passengers (or RPKs divided by ASKs). 2. **Cargo load factor:** The percentage of cargo load by weight based on a computed cargo weight capacity based on a density assumption. This is the most common method of computing cargo load factor. 3. **Position load factor:** The percentage of loaded ULDs to cargo ULD positions available on an aircraft. 4. **Volume load factor**: The percentage of the volume actually used to carry cargo to the usable internal volume of ULDs and bulk compartments. 5. **Weight load factor**: The percentage of actual cargo weight to the maximum payload weight available on an aircraft when loaded for a specific range.
Lower deck ULD	A unit load device (ULD) (pallet or container) carried in the lower deck/hold/lobe cargo compartment. These units are commonly designated with an “LD” prefix, plus a number. Many come in both full and half sizes, as related to the width of the lower deck (e.g., LD-1 through LD-11).

Main deck ULD	A unit load device (ULD) (pallet or container) carried on the main or primary aircraft payload deck. These units are commonly designated with an “A” or “M” prefix, plus a number (e.g., A, A2, Modified A, M1, M4, M6).
Maintenance reserves (MRs)	Cash paid to lessor (typically on monthly basis) and available for scheduled maintenance of aircraft and engines. MRs are based on the cost to restore performance and utility to an airplane’s high maintenance cost elements. MRs protect the asset from airline operational risk and are typically required by the lessor as a part of an operating lease agreement.
Manufacturer’s empty weight (MEW)	The weight of an aircraft’s structure, power plants, systems, furnishings, and other required items of equipment that are an integral part of a particular aircraft configuration. MEW is essentially a “dry” weight, including only those fluids (e.g., hydraulic) in closed systems.
Maximum gross weight for a ULD	The maximum allowable combined weight of the unit load device (ULD) and its contents/payload.
Maximum landing weight (MLW)	The maximum certified total aircraft weight for landing, as limited by aircraft strength and airworthiness requirements.
Maximum takeoff weight MTOW)	The maximum certified total aircraft weight at takeoff brake release, as limited by aircraft strength and airworthiness requirements.
Maximum zero fuel weight (MZFW)	The maximum certified total aircraft weight allowable before usable fuel must be loaded in the aircraft, as limited by aircraft strength and airworthiness requirements.
Net margin	Represents net profit after tax as a percentage of total revenue.
Network	Airline term for all destinations that a particular airline flies to.
Operating Empty Weight (OEW)	Manufacturer’s Empty Weight plus Standard and Operational (S&O) items. **Standard Items:** Equipment and fluids not considered an integral part of a particular aircraft and not a variation for the same type of aircraft. These items may include, but are not limited to, the following: • Unusable fuel and other unusable fluids • Engine oil • Toilet fluids and chemicals • Fire extinguishers, pyrotechnics and emergency oxygen equipment • Structure in galleys, buffets and bars • Supplementary electronic equipment **Operational Items:** Personnel, equipment and supplies necessary for a particular operation but not included in Manufacturing Empty Weight or Standard Items. These items may vary for a particular aircraft and may include, but are not limited to, the following: • Crew and Baggage

	• Manuals and navigational equipment • Removable service equipment for cabin, galleys and bars • Food and beverages, including liquor • Usable fluids other than those in useful load • Life rafts, life vests and emergency transmitters • Aircraft unit load devices
Operating margin	Represents operating profit as a percentage of total revenue.
Operating statistics	**Capacity:** ASKs or ASMs (passengers); AFTKs or AFTMs (cargo) **Traffic:** RPKs or ASKs (passengers); RFTKs or AFTKs (cargo); Load Factor: ASK/RPK (passengers) ; RFTK/AFTK (cargo) **Revenue:** RASK or RASM; RAFTK or RAFTM; Yield **Cost:** CASK or CASM; CAFTK or CAFTM
Point to point	A system whereby an airline's route network is composed of a number of city pairs, not necessarily linked by hub airports. This system is favored by low-cost carriers such as Southwest Airlines (in the US), easyJet and Ryanair (in Europe). Compare with hub and spoke.
Revenue passengers	Represents the number of scheduled fare paying passengers booked.
Revenue per available seat-kilometer (RASK)	Or **RASM (Revenue per available seat-mile)** The unit revenue base of an airline expressed for each seat kilometer or seat mile offered. Revenue divided by ASKs or ASMs. Typically expressed in US cents.
Revenue passenger-kilometer (RPK)	Or **RPM (Revenue passenger-mile)** Measures traffic. The number of fare-paying passengers multiplied by the number of km's or miles they fly.
Sale/leaseback transaction (SLB)	Airline sells its aircraft to lessor and then leases the aircraft back into its fleet under an operating lease, typically a dry lease. (See "dry lease".)
Sectors flown	Represents the number of scheduled passenger or cargo flight sectors flown.
Seat pitch	The distance between the rows of seats as measured from the back of one seat to the back of the seat behind. The measurement is taken from the same position on each seat.
Shipper's cooperative	An association of shippers, a legal entity, which acts in unison to increase the quantity of freight offered to carriers for transport. A key objective of most shippers' cooperatives is to obtain lower cost volume rates. A shipper's cooperative may, in some cases, also act as an agent of the direct air carrier.
Spill	Passengers turned away from a flight due to capacity restrictions. Demand exceeds supply.

Standard-body aircraft	Aircraft which generally have a fuselage diameter of less than 200 inches (5.08 meters). **Passenger**: Commonly referred to as “single-aisle” aircraft. **Cargo**: Payloads less than 45 Tonnes, (99,208 lbs). In most configurations and applications, this limits main deck cargo loading to a single row of full-size Unit Load Devices longitudinally. Examples: DC-9F, 727F, 737-200C, B737-300SF, 737-400SF, 737-800BCF, B757-200F, and DC-8-73F.
Structural-limit payload	Maximum aircraft payload calculated as a structural limit: maximum zero fuel weight minus operating empty weight.
Tare weight	The weight of an empty unit load device (ULD) (pallet or container), including all liners, doors, fittings, and nets. This varies by manufacturer for a given ULD type.
Tare weight allowance	A “free weight” allowance given to shippers as part of a unitization incentive program to encourage the use of unit load devices.
Ton	A unit of weight measurement. As most commonly used, a “short ton,” or U.S. ton (2,000 pounds), as compared to a “long ton” (2,240 pounds).
Ton-mile	One ton transported a distance of one mile.
Tonne	The French spelling of “ton” used in the air cargo industry to denote a metric ton (1,000 kg or 2,204.6 lb).
Tonne-kilometer	One metric ton transported a distance of one kilometer
Unit load	A number of individual pieces of freight or cargo in a single box or container, or on a pallet, and held in place with a net or similar device, to make them suitable for transporting, stacking, or storage as a single unit. It may also be a single large item packaged for transporting, stacking, or storage.
Volume utilization	A measure of the proportion of the unit load device ULD volume used to stow cargo expressed as a percentage. Volume utilization is calculated as follows: Volume utilization = ULD volume used for cargo divided by ULD total internal volume
Weight break	A cargo tariff parameter, which describes the weight of a cargo shipment at which a lower rate per pound (or per kilogram) becomes effective. (See “minimum weight” and “pivot weight.”) Example: 0–99 kg, $.45/kg; 100–250 kg, $.42/kg; over 250 kg, $.38/kg
Wet lease	A leasing arrangement between two parties. The lessor typically provides the aircraft and crew. Other operational requirements such as fuel, insurance, ground services, and maintenance are as negotiated. In the practical sense, wet leases function between the general provisions of an aircraft-only “dry lease” and an “ACMI agreement.” (See “ACMI” and “dry lease.”)

Workrate	The number of trips an aircraft makes in the period, times the average trip distance, times the cargo capacity. It is primarily used in macroeconomic-approach fleet planning.
Yield	**Passenger:** Passenger revenues divided by RPKs. It describes how much revenue an airline is receiving per passenger kilometer flown. Typically expressed in US cents. **Cargo:** Air transport revenue per unit of weight and distance. For U.S. domestic and international traffic, it is ordinarily stated as dollars per ton-statute mile. For international traffic, it is generally stated as units of currency per tonne-kilometer. The term “yield” is often confused with “average revenue.” Yield considers the distance carried, while average revenue does not.

AAPA	Association of Asia-Pacific Airlines
ACI	Air Cargo, Inc.
ACMI	Aircraft, crews, maintenance, and insurance
AD	Airworthiness directive
AEA	Association of European Airlines
AFM	Airplane flight manual
AOC	Air operator's certificate
APU	Auxiliary power unit
ATC	Air Traffic Control
ATK	Available tonne-kilometers
ATM	Available ton-miles
ATPCO	Airline Tariff Publishing Company
B	Boeing, aircraft manufacturer (e.g., B747F)
BCF	Boeing-Converted Freighter
CAA	Civil Aviation Authority (United Kingdom)
CAAC	Civil Aviation Authority of China
CFMI	CFM International, engine manufacturer, a GE/SNECMA consortium
CIS	Commonwealth of Independent States
Combi	Combined main deck passenger/cargo aircraft
CRAF	Civil Reserve Air Fleet
CRS	Computer reservation system
Cu	Cubic
DDG	Deviation Dispatch Guide
DOT	Department of Transportation (United States)
EASA	European Aviation Safety Agency
EFIS	Electronic flight information system
EPNdB	Effective perceived noise level in decibels
ER	Extended range
ETOPS	Extended operations
EU	European Union
FAA	Federal Aviation Administration (United States)
FAR	Federal Aviation Regulations (United States)
FADEC	Full authority digital engine controls
FCOM	Flight Crew Operations Manual
FCTM	Flight Crew Training Manual
FF	Frequent Flier
FPPM	Flight Planning and Performance Manual
ft	Feet
ft3	Cubic feet (dry volume measure)
FTK	Freight tonne-kilometers

FTM	Freight ton-miles
GDS	Global Distribution Systems
GE	General Electric, engine manufacturer
H/K	Hushkit (engine noise—reducing system)
hp	Horsepower
IAE	International Aero Engines, engine manufacturer (R-R, P&W, JAE, MTU, and Fiat)
IASA	International Aviation Safety Assessments (IASA) Program
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IFE	In-Flight Entertainment
IFR	Instrument Flight Rules
in	Inches
JAA	Joint Aviation Authority
JAR	Joint Aviation Regulations
kg	Kilograms (metric weight measure)
km	Kilometers (metric distance measure)
kN	Kilonewtons (metric thrust measure)
km/h	Kilometers per hour (speed in kilometers per hour)
kn	Knots (speed in nautical miles per hour)
kW	Kilowatts (electrical power/energy)
lb/lbt	Pounds/pounds of thrust
LTL	Less than truck load shipment
L	Liters (metric liquid volume measure)
M	Modified
m3	Cubic meters (metric dry volume measure)
MD	McDonnell Douglas, aircraft manufacturer (e.g., DC-8, MD-80)
MMEL	Master Minimum Equipment List
MEW	Manufacturer's empty weight
mi/h	Miles per hour (speed measure)
MLW	Maximum landing weight
MNPS	Minimum Navigation Performance Specification
MTOW	Maximum takeoff weight
MTW	Maximum taxi weight
MZFW	Maximum zero fuel weight
NAS	National Aerospace Standards
NATO	North Atlantic Treaty Organization
NCD	Nose cargo door
NMI	Nautical miles (distance measure)
NRN	Noise reduction nacelle
OAG	Official Airline Guide
OEM	Original equipment manufacturer

OEW	Operating empty weight
P&W	Pratt & Whitney, engine manufacturer
PAX	Passengers
PF	Package freighter
PIP	Performance improvement program
QC	Quick change aircraft and/or associated equipment
QRH	Quick Reference Handbook
RE	Re-engine
R-R	Rolls-Royce, engine manufacturer
RTK	Revenue tonne-kilometers
RPK	Revenue passenger kilometers
RVSM	Reduced Vertical Separation Minimum
SII	Stage 2 hushkit designation
SIII	Stage 3 hushkit designation
SCD	Side cargo door
S/N	Serial number
SF	Special freighter, converted passenger aircraft
SHP	Shaft horsepower
SQ	Square
SR	Short range
STC	Supplemental type certificate
STOL	Short takeoff and landing
TCAS	Traffic collision avoidance system
TIACA	The International Air Cargo Association
TSO	Technical standard order
ULD	Unit load device
U.S. gal	U.S. gallons (liquid volume measure)
VFR	Visiting friends and relatives or Visual flight rules