Description générale des niveaux de fidélité

Flight deck layout and structure = (S)
An enclosed full-scale replica of the aeroplane flight deck, which will have fully functional controls, instruments and switches to support the approved use. Anything not required to be accessed by the flight crew during normal, abnormal, emergency and, where applicable, non-normal operations does not need to be functional.

Flight deck layout and structure = (R)
An enclosed or perceived to be enclosed flight deck, excluding distraction, which will represent that of the aeroplane derived from, and appropriate to class, to support the intended use.

Flight deck layout and structure = (G)
An open, enclosed or perceived to be enclosed, flight deck, excluding distraction, which will represent that of the aeroplane derived from, and appropriate to class, to support the intended use.

Flight model (aero and engine) = (S)
Aerodynamic and engine modelling for all combinations of drag and thrust, including the effects of change in aeroplane attitude, sideslip, altitude, temperature, gross mass, CoG location and configuration to support the intended use. Should address ground effect, Mach effect, aeroelastic representations, non-linearities due to sideslip, effects of airframe icing, forward and reverse dynamic thrust effect on control surfaces. Realistic aeroplane mass properties, including mass, CoG and moments of inertia as a function of payload and fuel loading should be implemented.

Flight model (aero and engine) = (R)
Aerodynamic, engine and ground effect modelling, aeroplane-like, derived from and appropriate to class to support the intended use. Flight dynamics model that accounts for various combinations of drag and thrust normally encountered in flight corresponding to actual flight conditions, including the effect of change in aeroplane attitude, sideslip, thrust, drag, altitude, temperature.

Flight model (aero and engine) = (G)
Aerodynamic and engine modelling, aeroplane-like, not specific to class, model, type or variant to support the intended use.
Flight dynamics model that accounts for various combinations of drag and thrust normally encountered in flight corresponding to actual flight conditions, including the effect of change in aeroplane attitude, sideslip, thrust, drag, altitude, temperature.

Ground reaction and handling characteristic = (S)
Represents ground reaction and handling characteristics of the aeroplane during surface operations to support the intended use. Brake and tyre failure dynamics (including anti-skid) and decreased brake efficiency should be specific to the aeroplane being simulated. Stopping and directional control forces should be representative for all environmental runway conditions.

Ground reaction and handling characteristics = (R)
Represents ground reaction and handling, aeroplane-like, derived from and appropriate to class

Ground reaction and handling characteristics = (G)
Represents ground reaction, aeroplane-like, derived from and appropriate to class. Simple aeroplane-like ground reactions, appropriate to the aeroplane geometry and mass.

Aeroplane systems = (S)
Aeroplane systems should be replicated with sufficient functionality for flight crew operation to support the intended use.
System functionality should enable all normal, abnormal, and emergency operating procedures to be accomplished. To include communications, navigation, caution and warning equipment corresponding to the aeroplane. Circuit breakers required for operations should be functional.

Aeroplane systems = (R)
Aeroplane systems should be replicated with sufficient functionality for flight crew operation to support the intended use. System functionality should enable sufficient normal and appropriate abnormal and emergency operating procedures to be accomplished

Flight controls and forces = (S)
Control forces and control travel should correspond to those of the aeroplane to support the intended use. Control displacement should generate the same effect as the aeroplane under the same flight conditions. Control feel dynamics should replicate the aeroplane being simulated.

Flight controls and forces = (R)
Aeroplane-like, derived from class, appropriate to the aeroplane mass to support the intended use. Active force feedback required.

Flight controls and forces = (G) Aeroplane-like to support the intended use. Active force feedback not required.
Sound cues = (S) Significant sounds perceptible to the flight crew during flight operations to support the intended use. Comparable engine, airframe and environmental sounds of correct frequencies and amplitudes for a specific aeroplane type. The volume control should have an indication of sound level setting.
Sound cues = (R) Significant sounds perceptible to the flight crew during flight operations to support the intended use. Comparable engine, airframe and environmental sounds representative for the aeroplane type or of an aeroplane of its class. The volume control should have an indication of sound level setting.
Sound cues = (G) Significant sounds perceptible to the flight crew during flight operations to support the intended use. Comparable engine and airframe sounds. The volume control should have an indication of sound level setting.
Visual cues = (S) Continuous field of view with infinity perspective and textured representation of all ambient conditions for each pilot, to support the intended use. Horizontal and vertical field of view to support the most demanding manoeuvres requiring a continuous view of the runway.
Motion cues = (S) Pilot receives an effective and representative motion cue and stimulus, which provides the appropriate sensations of acceleration of the aeroplane's 6 DOF. Motion cues should always provide the correct sensation to support the intended use. Replicates a specific aeroplane to the maximum extent possible within current physical limitations.
Motion cues = (R) Pilot receives an effective and representative motion cue and stimulus, which provides the appropriate sensations of acceleration of the aeroplane's 6 DOF. Motion cues should always provide a correct sensation, to support the intended use. These sensations may be generated by a variety of methods which are specifically not prescribed. The sensation of motion can be less for simplified non-type specific training, the magnitude of the cues being reduced. Replicates an aeroplane of its class to the maximum extent possible within current physical limitations
Environment — ATC =(S) ATC services should be automatically provided for at least two airports featuring multiple connected runways, taxiways and parking locations, with terminal and en-route controlled airspace, that are characteristic of the location supporting standard and regional ATC procedures and associated radio communications during ownship normal, non-normal and emergency conditions. Automated weather reporting and data link communications should be supported. Multiple distinct voices should be used for both ATC and other traffic radio transmissions. Other traffic should undertake airborne or ground manoeuvres correlated with ATC radio communications, and exhibit characteristic performance, follow appropriate routes and be visible in the scene and on cockpit and instructor displays, including ADS-B traffic information. The instructor should be able to configure traffic flow, have access to all radio communications, as well as the capability to mute and restore background radio communications.
Environment — ATC = (G) ATC services should be automatically provided for at least one airport featuring at least one connected runway, taxiway and parking location, with terminal and en-route controlled airspace, supporting standard ATC procedures and associated radio communications during ownship normal operations. Automated weather reporting should be supported. Distinct voices should be used for both ATC and other traffic radio transmissions. Other traffic should undertake airborne or ground manoeuvres correlated with ATC radio communications, and be visible in the scene and on cockpit and instructor displays, including ADS-B traffic information. The instructor should be able to configure traffic flow, have access to all radio communications, as well as the capability to mute/restore background radio communications.
Environment — Navigation = (S) Navigational data with the corresponding approach facilities to support the intended use. Navigation aids should be usable within range or line of sight without restriction, as applicable to the geographic area.

Environment — Atmosphere and weather = (R) Fully integrated dynamic environment simulation including a representative atmosphere with weather effects to support the intended use. The environment should be synchronised with appropriate aeroplane and simulation features to provide integrity. Environment simulation should include thunderstorms, wind shear, turbulence, microbursts and appropriate types of precipitation.
Environment — Atmosphere and weather = (G) Basic atmospheric model, pressure, temperature, visibility, cloud base and winds to support the intended use. The environment should be synchronised with appropriate aeroplane and simulation features to provide integrity.
Environment — Aerodromes and terrain = (R) Specific airport models with topographical features to support the intended use. Correct terrain modelling, runway orientation, markings, lighting, dimensions and taxiways. Visual terrain and EGPWS databases should be matched to support training to avoid CFIT accidents. Where the device is required to perform low-visibility operations, at least one airport scene with functionality to support the required approval level, e.g. low-visibility taxi route with marker boards, stop bars, runway guard lights plus the required approach and runway lighting. Airport detail must be developed using airport pictures, construction drawings, maps, or other similar data, or developed in accordance with published regulatory material.
Environment — Aerodromes and terrain = (G) Generic airport models with topographical features to support the intended use. Correct terrain modelling, runway orientation, markings, lighting, dimensions and taxiways.