

**An interface is a plane or place at which independent systems or components thereof meet and act or communicate with each other.**

## **TYPES OF PHYSICAL INTERFACES:**

**Mechanical**

**Electrical**

**An interface media such as physical contact, electrical signals in wiring, fluid flow in plumbing, or a radio signal in space.**

**As a function of being bolted together, two physically interfacing components will remain attached.**

**As a function of being connected by a wire harness, an aircraft on-board computer may send a command to the aileron actuator of an aircraft that causes the aileron to move interacting with the air mass of the environment, in a relative motion with respect to the aircraft, to roll and turn the aircraft such that the command signal is nulled out in the on-board computer as a function of the guidance system detecting approach to the direction commanded.**

It is common practice to associate an interface with one of two types: functional and physical.

A physical interface involves the form and fit of mating parts. Examples of physical interfaces include: mounting bolt patterns, drive shaft flange connections, mating wire harness connector physical attachment, and the tires of a fighter plane resting on the apron.

Some examples of functional interfaces are a 28VDC signal passing from a solenoid driver in an on-board computer to a valve solenoid in a pressurization control unit, a digital data stream flowing from an instrumentation control unit to a flight data recorder input port, and the flow of liquid oxygen from a rocket propellant system to the engine.

# **INTERFACE CONTROL DOCUMENT (ICD)**

This is a document that is used to document the interface definition and is also used to control the interface so that it cannot be changed without both sides of the interface knowing that it has been changed.

## **Interfaces Definition**

An interface is defined as the functional and physical characteristics required to exist at a common boundary between two or more equipment items/computer programs.—Apperdbcll ML-STD-483

Must also include human interfaces