What is the difference between the auto thrust systems in Airbus aircraft and Boeing aircraft?

Normally in an aircraft or vehicle, the throttle or the accelerator controls the engine RPM/power output. Through suitable clutch arrangement, the power is transmitted to the wheels or propeller to move the vehicle. The engine RPM is to be suitably controlled by continuously adjusting the throttle to achieve desired variations in speed, climb, descent etc., The accuracy in this act of correct throttle control is more important during the approach to landing.

In a typical aircraft having an auto-thrust system, the throttle has some three or four settings (notches) where they can be engaged. Most essential settings are reverse, idle, cruise and take-off. In each of the setting, the computer senses the 'demand' made by the desired flight path and adjusts the fuel flow into the engine, exactly like the manual adjustments to the throttle done by a human. The only difference is that the throttle position does not change in the cockpit and the adjustments are done through electrical signals. The throttle position can only be changed manually by the pilot in the cockpit.

The system is almost similar in all aircraft. But then, please note that they will not be exactly similar.

In **Airbus**, Thrust lever is based on "fixed throttle" concept; there's no motorised movement of throttle levers. Means, In case of **Auto thrust** active, thrust lever won't move.

While in **Boeing**, there is **Auto throttle** concept in which, throttle lever will move in case of thrust is automatic.

An Auto throttle - (automatic throttle) allows a pilot to control the power setting of an aircraft's engines by specifying a desired flight characteristic, rather than manually controlling the fuel flow.

In its basic form, it is just like the cruise control in a car.*

Here is a photo of the autopilot control panel on a Boeing 777. Note the "IAS 200" window on the left:

IAS stands for "indicated airspeed". When engaged, this setting tells the auto-thrust to adjust engine power to maintain 200 knots of airspeed.

Just like a car, when you go uphill you need more gas to maintain a constant speed, and when you go downhill you give it less gas. If the downhill is steep enough, you may have to use some brakes to maintain a constant speed.

Same thing happens when a plane pitches up to climb or pitches down to descend. **Airspeed**, **vertical speed** and **engine power** are closely related - changing any one will impact the remaining two. This is the fundamental of how planes fly, and likely your first ground school lesson if you learn to become a pilot. Auto-thrust is a component of the autopilot system which manages engine power. Note that I used *constant airspeed* as an example in the previous paragraph: advanced autopilots have many modes, and it can be set to maintain constant vertical speed instead of airspeed. But in all cases, auto-thrust manages engine power.

*It is worth noting that many aircraft are not equipped with auto-thrust or auto-throttles, including many of those with sophisticated autopilots.

*I wouldn't call those autopilots "sophisticated" then. And I'd say it's pretty common. Surely it is rare in GA, but on the passenger side, I'd bet at least 8 out of 10 flights you can book at major airlines is flown on an aircraft with auto-thrust.