

Mechanized system

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Since the invention of the first steam boat in 1807 by Robert Fulton, development of AHP's for water terrain seemed highly speculative. This mode of transportation also was noticed to be vital in olden days since there was no option available rather than this to travel to great vicinities such as country to country. Today different types of water transport exist such as ships, rafts, passenger liners, ferries, hydrofoils (hovercrafts), steamboats, yachts, etc.

Each type of mechanized system exists for different purposes an ideal example would be comparing yachts and passenger liners. Yachts are mainly used for entertainment or leisure purposes only whereas passenger liners are used extensively for massive transportation of goods and people to long vicinities. In olden days it was noticed that mechanized systems made for water terrain lacked comfort , that is it was not possible to travel at ease due to the absence of facilities that were quite necessary such as rest rooms, food and health services .

Today, with the use of technology there have been wide range of improvement seen with passenger liners and many other systems , main of which is the star cruise series which now offer 22 ships with 35, 000 berths . Almost all types of services are available on board this ship allowing the travelers to reach destination with ease of feeling at home. The ship is also integrated with a self assisted GPS system which allows the officials to track the location in emergency situations or when necessary , this ship is also said to have an auto pilot function which works with destination available routes available 24 hrs via 32mx satellite link.

The modern aircraft that we come across everyday is a common mode of air transport. It was not later than the invention of the first aircraft by the Wright Brothers that development started to take place rapidly. In the present the Boeing's and Airbuses that we see are an advanced version of the earlier aircraft. Initially Bernoulli's Principle was the most important factor in allowing an aircraft to leave the ground, his principle stated that "to bring in an air lift, the pressure on the bottom of the wing should be higher than on the top therefore creating a pressure difference to produce an upward thrust".

Following this principle earlier aircrafts were modeled but didn't prove to be efficient enough as in not much thrust was produced during experimentation whereas now due to advancement in technology we across better structures with greater efficiency. An example would be Airbus A380 which is said to have implemented the latest of technologies throughout to provide a safer and comfortable journey. The wings of this aircraft is said to be made of Carbon-fibre reinforced plastic, glass-fibre reinforced plastic and quartz-fibre reinforced plastic and additional weight to provide extra stability for a safer and powerful lift off.

The aircraft is also said to employ Integrated Modular Avionics (IMA) architecture which was first used in military aircrafts such as raptor F-22, Eurofighter typhoon. This system consists of a Integrity-178B Operating System and dedicated software housed in onboard processor modules and servers are connected to data communication networks using Avionics Full-Duplex Switched Ethernet with a star topology to communicate with the base station with the option of connecting to 15 satellites on the go with military

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satellite options in case of emergency. The server present on board aircraft assist the pilot efficiently by automatically performing calculations , showing navigation options rather than olden times where they had to refer to paper charts , manual booklets and handhelds.

This aircraft is equipped with a A380-841 Rolls-Royce Trent 900 engine which incorporating swept fan technology and provides a more than needed thrust with the efficiency. Talking about all of this now, we now wonder how far we have reached with the help of technology within no time. What is clear is technology will continue to change transportation and transportation will continue to change our lives.