

AERONAUTICAL CHARTS AND PLATES CIRCA1992

Capt. M.P. "Pappy" Papadakis

© 1992

Airplanes fly instrument flight rules by reliance on a specialized set of maps and plates. Navigating is accomplished by flying along electronic highways in the sky. These routes are drawn connecting ground based navigation facilities known as V.O.R. (voice, omni, range) stations) or VOR/D.M.E. (distance measuring ,equipment) together.

These flight highways are given two different names JET AIRWAYS and VICTOR airways. The major difference between the two is that the Victor airways are low altitude devices, while the jet route structure is for altitudes 18,000 feet and greater. Altitudes higher than 17,000 feet are abbreviated and called flight levels. (Thus 18,000 feet is flight level 180). The other difference is that the radio V.O.R. transmitters placed on the jet system are uniformly a powerful variety, and the stations are placed further apart.

The rules to flying these instrument airways are roughly identical. A pilot must attempt to fly the route assigned, remain close to centerline, and maintain altitude and assigned airspeed.

Progress is controlled and monitored by a ground radar facility known as Air Route Traffic Control Centers or the "CENTER ". Sometimes, traffic permitting the controller may authorize direct routes between stations (off airways). There are Regional centers scattered throughout the United States. They maintain radio contact and control of all airplanes using the system while flying instrument rules. The maps and charts are issued and updated frequently as the system changes. Often some changes occur between dissemination of the maps. When this occurs the F.A.A. issues N.O.T.A.M.s (notice to airmen) advising of the changes to the air route structure. Airlines routinely attach N.O.T.A.M.s to the flight plan. Civilians are responsible for checking for them as part of the pre flight planning procedures.

It is the pilots' responsibility to have a complete up to date navigation bag sufficient to cover the route of flight and contingency landings. The charts are dated. Major terminal airports (those where air traffic is heavy) have specialized routings for arrival and departure. They are called S.T.A.R.s and S.I.D.s (standard terminal arrival routes)(standard instrument departures). These routings prescribe and create an orderly and safe flow of traffic in and out of large cities. These routes must be adhered to. The final segment of a flight is the instrument approach plate. This plate depicts the variety of instrument approach to be flown, and the minimums allowed descending to. This chart has plan view and a profile view depicting the approach to be flown. There is much critical information placed within the maps and charts and plates.

It is axiomatic that it is the sudden stop that kills people in aviation accidents. Running in to obstacles such as buildings, T.V. antennas and mountains are always bad news and usually the beginning of a law suit.

These charts, S.I.,D.s, S.T.A.R.s, and approach plates are supposed to depict and provide appropriate information to avoid obstacles and terrain. Such is not always the case. In the United States, "lower 48" there is nothing protruding into the high altitude Jet structure. The same can not be said for the Victor airways or S.I.D, S.T.A.R. or approach plates. The depiction closest to landing and take off will always have obstacles that need to be warned about through appropriate depiction within the plate or chart. Occasionally the charts and approach plates are mistaken, and occasionally the mistake becomes the proximate cause of an accident.

The primary private supplier of these charts is JEPPESEN Sanderson, a subsidiary of Times, Mirror Company. They are located in Denver, Colorado. The other major publisher of aeronautical charts and approach plates is the United States Government. When mistakes in the plates occur and cause an accident the producer may be sued.

In the case of the private company, the cause of action may be in Negligence, Strict Product Liability in Tort (402a) or Strict Product Liability in Misrepresentation. (402b) The key for the plaintiff to show is that the chart is in fact a product, then the other elements are simple. It was defective, it caused an unreasonable risk of harm not contemplated by the average user, it caused the accident. The manufacturer has attempted to suggest that the product is a service, and therefore not amenable to strict products liability actions.

When the government becomes a defendant in a lawsuit concerning misinformation in publications the only action that can be brought is for Negligence through the F.T.C.A. The result depends on a determination as to whether the mistake or omission was a discretionary function.