Recommendation T/SF 49 (Copenhagen 1987)

SERVICES AND FACILITIES ASPECTS OF A SYSTEM FOR PUBLIC CORRESPONDENCE FOR CIVIL AVIATION

Recommendation proposed by Working Group T/WG 7 "Services and facilities" (SF)

Text of the Recommendation adopted by Commission "Telecommunications":

"The European Conference of Posts and Telecommunications Administrations,

considering

(a) the development of public mobile services in land and maritime public transports,

(b) the non-existence at the present day in Europe of an automatic public correspondence service for aircraft when such a service exists in USA and will shortly be put into service in Japan and Canada; this disparity being partly caused by provisions of Radio Regulations for Region 1 (Europe-Africa),

(c) the plan of INMARSAT Organization to set up a global service in the 1990s for aircraft over the Atlantic Ocean,

(d) the market survey made in United Kingdom in 1984 which indicates not only the existence of a demand but also that the expected volume of that demand is probably too important for a satellite only system,

(e) the advantages and disadvantages of satellite and terrestrial systems, i.e.:
- for satellite system:
  + easy worldwide coverage, excluding polar areas,
  + facility to call and aircraft the position of which is not known,
  + existence of an established international organization,
  − low capacity, − higher costs } with our present knowledge,
  − technical problems for aircraft antennas,
- for terrestrial systems:
  + more efficient use of spectrum,
  + no important technical problems,
  + relatively low price,
  − limited coverage of oceans and polar areas,
  − charging and accounting problems that may arise (ref. consideration (f)),

(f) the impossibility of setting up such a service in Europe without a coordination of the Administrations in the fields:
- of frequencies and the regulation of them,
- of technical solutions for compatibility of at least part of the equipment,
- of administrative procedures specially for collecting call charges,

recommends

the study and development of a public correspondence service for aircraft flying over Western Europe, and with this aim in view:
- on the one hand to follow the projects of communications satellite systems fitted for public correspondence with aircraft,
- on the other hand to study a European terrestrial system able to complement the projected satellite system in areas where it would be necessary.

The service should provide user requirements and operational characteristics as given below.

Its settlement has technical and institutional aspects to be studied by appropriate groups of CEPT."

1. GENERAL CONSIDERATIONS

1.1. The public correspondence service for aircraft allows them to connect to national or international public switched networks.

1.2. It should have enough capacity to meet the foreseable demand for the next 20 years.

1.3. The quality of service should be comparable to that of land mobile services.

1.4. The service by passengers must not cause expenses for airlines which cannot be compensated.

1.5. The service must be available for commercial and private aircraft.

1.6. The systems must not cause harmful interferences for aircraft safety.

2. FUNCTIONAL REQUIREMENTS

2.1. The utilization of the service must not cause extra duties for the crew of the aircraft.

2.2. The operation must be fully automatic and as similar as possible to that of the networks the system allows to connect.

2.3. The systems should allow connection to:
— public switched telephone networks in full duplex;
— telex networks;
— data networks.

Aircraft could be fitted for one or many of those possibilities.

2.4. No limitation in call destination will be allowed other than those existing in the fixed networks.

2.5. The minimum service is to allow calls from aircraft to the ground. It would, however, be desirable to allow calls from the ground to the aircraft as well, but for commercial aircraft this may be restricted only to the aircrew.

2.6. The captain of the aircraft must have at any time the right to suspend the public correspondence service and to break current calls, if possible after warning users.

3. COVERAGE

3.1. In the areas in which the service is in use the coverage must be continuous, at least along air routes.

3.2. In those areas the service should not be interrupted when the aircraft crosses national borders.

3.3. That continuity of the coverage is only for aircraft flying over 3,000 meters of altitude. It is desirable to have also coverage for aircraft flying under 3,000 meters in approach area of the main airports.
It would be desirable that gangways at airport terminals should have the capability of providing a link to aircraft tied to the public network for use of passengers while awaiting takeoff.

3.4. In terrestrial system, it is desirable not to interrupt the current calls when the aircraft leaves the range of a radio base station and enters into the range of another.
A hand-over procedure must be considered.
Nevertheless if that procedure would involve a significant increase of the charges for the service it should not be provided. On this case the minimum period of continuous contact with any one ground station should be 15 minutes.

3.5. It is desirable position of aircraft be continuously registered in a file, with remote access, to indicate the means to join them.

4. QUALITY OF SERVICE

4.1. The quality of service offered must be comparable to that provided by fixed networks, or at least of land mobile services.
A slight fall in quality would be acceptable only if it generates a considerable fall in the costs of investments or in spectrum efficiency.

4.2. The rate of unsuccessful calls must not exceed 5% in the designated service areas.

4.3. The secrecy of telephone communications should equal to in the most advanced land mobile services.
It would be desirable to have the option of encryption.

5. AIRBORNE EQUIPMENT

5.1. The airborne equipment should be designed, perhaps in a modular way, in order to provide the number of channels adapted to the size and the use of the aircraft.

5.2. It is desirable the airborne equipment could be used also for other tasks.

5.3. When an aircraft is fitted for different systems, terrestrial or satellite, a significant part of the equipment should be common, at least equipment used by passengers and charges collecting mechanism.

5.4. Commercial aircraft passengers should have possibility to call at their seat using:
— either a cordless telephone removed from a cabinet (after having inserted a credit card),
— or a telephone handset near their seat,
— or a similar device.

5.5. The payment of communications should be made only by means of approved credit cards or telecommunication cards. Data for charging could be transmitted to the base station.

5.6. For telex and data transmission services similar procedures should be provided.

5.7. Size and weight of airborne equipment should be minimal; its setting up and maintenance must not cause constraint for the running of aircraft.