RECOMMENDATION ITU-R SNG.1070*

An automatic transmitter identification system (ATIS) for analogue-modulation transmissions for satellite news gathering and outside broadcasts

(1994)

The ITU Radiocommunication Assembly,

considering

a) that radio-frequency interference to and from satellite news gathering (SNG) and outside broadcast (OB) video uplinks may occur from and to other carriers transmitted via satellite;

b) that this interference is most frequently caused by operator error;

c) that the interference may inhibit the reception of time-sensitive information;

d) that it is difficult today to precisely identify the source of such interference within a short period of time;

e) that there has been no uniform internationally-recognized technical methodology for identifying the source of such interference;

f) that technologies exist that will permit precise identification of interference sources in a short period of time;

g) that the ability to identify rapidly the source is essential to eliminate harmful interference;

h) that other technologies exist to more accurately locate sources of interference to satellite systems. However, these require more time,

recommends

1 that satellite news gathering and outside broadcast uplink analogue transmissions have an automatic transmission identification system (ATIS);

2 that the system used should be cost-effective, inexpensive, and easy to implement;

3 that the ATIS be a system which provides the capability as indicated in Annex 1;

4 that the ATIS system as defined in Annex 2 can be used for transmissions of NTSC signals (see Notes).

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* Radiocommunication Study Groups 4 and 9 made editorial amendments to this Recommendation in 2001 in accordance with Resolution ITU-R 44 (RA-2000).

NOTE 1 – For other TV/FM transmission standards, an ATIS system should be defined as expeditiously as possible; the applicability of the ATIS system as described in Annex 2 needs to be evaluated.

NOTE 2 – Implementation of ATIS should be carefully examined and decided by both the SNG operator and space segment provider.

NOTE 3 – The potential use of an ATIS system such as described in Annex 2 may be of limited use with some satellite systems, e.g. the INTELSAT System because of the careful control maintained over network operations.

ANNEX 1

General characteristics of the ATIS

All SNG and OB transmissions carrying analogue broadband video information should be identified through the use of an automatic transmitter identification system having the following characteristics:

a) an encoder which is integrated into the uplink transmission chain in a method that cannot easily be defeated;

b) the ATIS signal should be automatically activated whenever any RF emissions occur, and it should be continuously repeated;

c) the ATIS signal should consist, at a minimum, of the following:

- an earth station call sign, including the ITU country abbreviation;
- a telephone number in international format (International format: + Country Code + City or Area Code + Number) providing immediate access to personnel capable of resolving ongoing interference or coordination problems with the stations.

ANNEX 2

An example of an ATIS used for NTSC signal transmissions

1 The ATIS signal should be a separate subcarrier which is automatically activated whenever any RF emissions occur. The ATIS information should continuously repeat.

2 The ATIS signal should consist of the following:

– one of an extended family of subcarrier signals generated at 7.1 MHz ± 25 kHz and 8.3 MHz ± 25 kHz and injected at a level no less than –26 dB (referenced to the unmodulated carrier);

– the subcarrier deviation should not exceed 25 kHz peak deviation.

3 The protocol should be the International Morse Code keyed by a 1 200 Hz ± 800 Hz tone representing a mark and a message rate of 15 to 25 words per minute. The tone shall frequency modulate the carrier signal.

4 Frequency of repetition: 25-30 s.