

QUESTION ITU-R 49-1/6*

Conditional-access broadcasting systems

(1990-1993-2003-2007)

The ITU Radiocommunication Assembly,

considering

- a) that access to broadcast programmes intended for the public may be conditional upon the viewer meeting some requirements set by the programme originator or service distributor resulting in a need in the receiver and in the recorder of an additional signal processing circuit, which can be controlled by a “key”;
- b) that for this purpose the signal has to be processed before transmission;
- c) that the specific processing of the signal for transmission for this purpose becomes part of the signal characteristics to be taken into account for broadcasting planning;
- d) that there may be a need to keep the signal in a scrambled format to allow secure transfer from the receiver to a recorder or any other equipment so that programme access can be controlled at any time to allow integral implementation of rights management through the programme presentation chain;
- e) that there would be clear advantages for broadcasters and users in having common conditional-access systems;
- f) that proponents of new broadcast signal formats should take into account conditional-access technology;
- g) that the conditional-access process comprises scrambling/descrambling and control functions, and that there is a need for a clear interface between the access control and descrambling functions in the receiver;
- h) that there are different ways to implement the conditional access control functions (i.e. within the equipment, through a smart card, etc.) but this should not impact integral implementation of rights management through the programme presentation chain;
- j) that conditional-access systems may influence the quality and performance of the various broadcasting services in a number of ways,

* This Question should be brought to the attention of Telecommunication Standardization Study Group 9 and the ISO/IEC.

decides that the following Question should be studied

- 1 What conditional-access control systems should be employed to provide security for picture, sound and data broadcast services against unauthorized access?
- 2 What particular scrambling methods should be used for vision, sound and data signals to meet the security requirements, appropriate to the broadcasters and to minimize the complexity of the home equipment?
- 3 What optimum configuration for a physical interface between the conditional-access control function and the descrambling function in the receiver or any other presentation equipment should be recommended?
- 4 What is the most effective way to implement the conditional access scrambling and control functions such that the implementation of rights management through the programme presentation chain is not impacted?
- 5 What are the effects of the scrambling and descrambling processes on the quality of the reconstituted picture, sound and data signals?
- 6 What is the susceptibility of scrambled signals and encrypted data to impairments in signal processing, distribution and broadcasting?
- 7 What methods of scrambling and addition of encrypted data to the broadcast signal multiplex are compatible with existing protection ratios?

further decides

- 1 that the results of the above studies should be included in (a) Recommendation(s);
- 2 that the above studies should be completed by 2010.

Category: S2