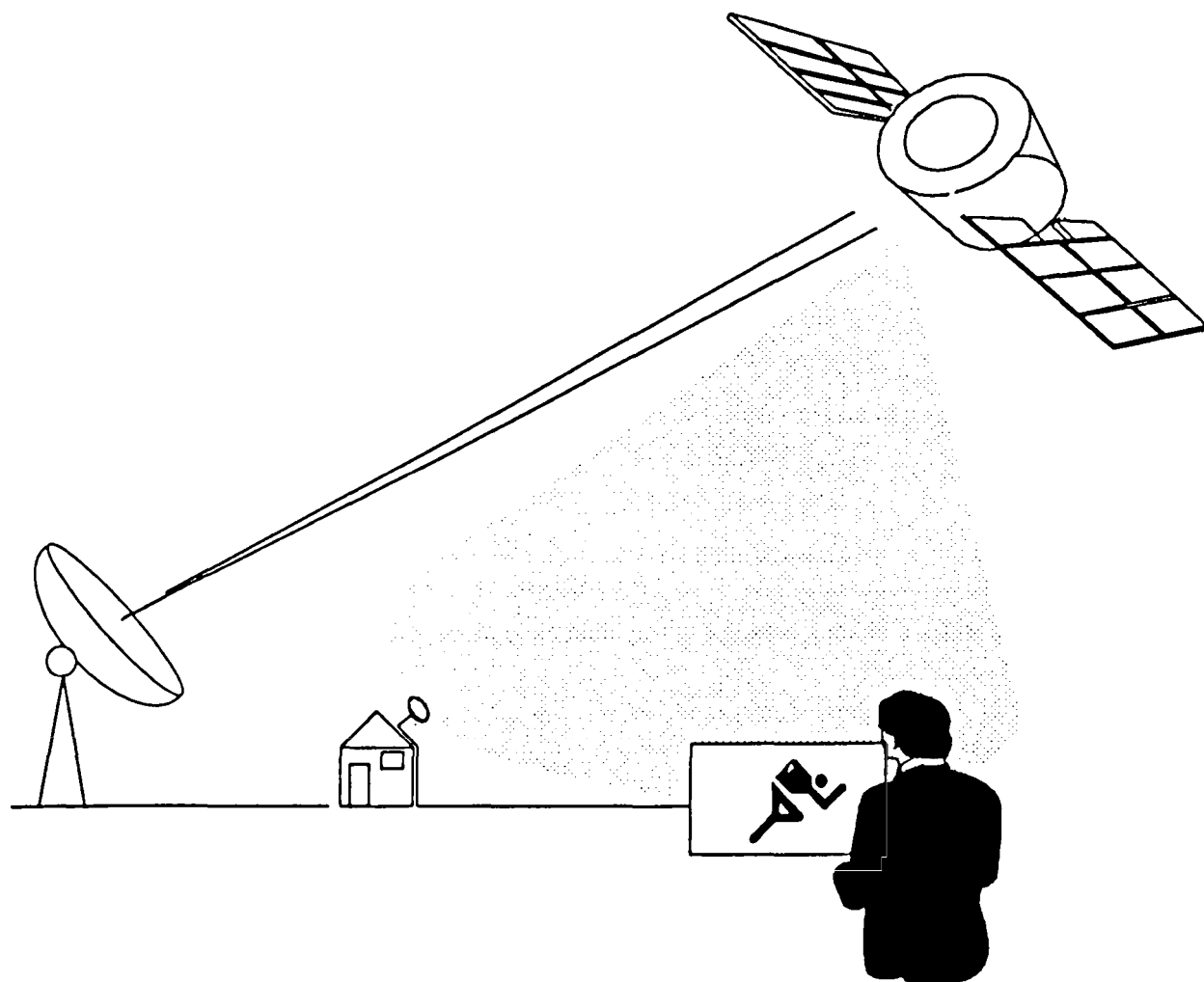




INTERNATIONAL TELECOMMUNICATION UNION

# 1992 - CCIR RECOMMENDATIONS

(New and revised as of 15 September 1992)



RBO SERIES  
**BROADCASTING-SATELLITE  
SERVICE**  
(SOUND AND TELEVISION)



INTERNATIONAL RADIO CONSULTATIVE COMMITTEE  
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## Recommendation 788 (1992)

### Coding rate for the wide RF-band HDTV broadcasting-satellite service

Extract from the publication:

*CCIR Recommendations: RBO series: Broadcasting-Satellite Service (Sound and television)*  
(Geneva: ITU, 1992), p. 105

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## RECOMMENDATION 788\*

CODING RATE FOR THE WIDE RF-BAND HDTV  
BROADCASTING-SATELLITE SERVICE

(Questions 92/11 and 100/11)

(1992)

The CCIR,

*considering*

- a) that digital studio quality HDTV signals require about 1 Gbit/s for an interlace picture and about 2 Gbit/s for a progressively scanned picture;
- b) that bit-rate reduction can be achieved by source coding which could, at its best, provide virtually transparent picture quality free of any remaining perceptible coding artifacts;
- c) that satellite broadcasting of HDTV signals should aim at being compatible with hierarchical levels of the digital network, e.g. 140 Mbit/s;
- d) that practical satellite emissions will require a substantial reduction of these bit rates given the demands on the radio-frequency spectrum and other technical and economic aspects;
- e) that several bit-rate reduction techniques are continuously being investigated by various administrations in the three ITU regions;
- f) that WARC-92 has allocated the bands 21.4-22 GHz in Regions 1 and 3 and 17.3-17.8 GHz in Region 2 to the broadcasting-satellite service, for HDTV,

*recommends*

1. that at present:
  - when a virtually transparent picture quality is desired for reception of BSS HDTV emissions, the coding of the vision signal requires around 110 Mbit/s;
  - another 10 to 30 Mbit/s would be required for programme sound, ancillary data, framing, synchronization and baseband error correction;
2. that members of the CCIR involved in the development of bit-rate reduction techniques be encouraged to continue their efforts with the aim to meet the same picture quality with bit rates lower than 140 Mbit/s.

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\* Note from the Director, CCIR – Report 1075 was used as the basis for this Recommendation.