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North American Broadcasters Association (NABA)

PRELIMINARY DRAFT NEW RECOMMENDATION ITU-R BS.[CAP.RAD]

Developmental Digital Radio Broadcast Service: Captioned Radio

The North American Broadcasters Association (NABA, www.nabanet.com) is an association of broadcasters in Canada, Mexico and the United States, and the NABA Technical Committee is its standing technical body. NABA is thus in a position to present the technical viewpoints of the most authoritative association of professional North American Broadcasters in television and sound programme production, post-production, and distribution for terrestrial, satellite, and cable broadcasting.

NABA is a Sector Member of ITU-R and a long-time participant in ITU-R Study Groups, Working Parties, Task Groups, Rapporteur Groups, etc. NABA numbers among its members Chairmen, Vice-Chairmen and members of the above groups. NABA also participates widely in the ITU work on radio, television and multimedia services.

NABA has made progress with its members and others in reviewing and revising the Annex and believes that the following text is prepared for submission.

Accordingly, NABA suggests that the following Annex be adopted as a draft new Recommendation by the Working Party.

Annex: 1

Annex

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DRAFT NEW RECOMMENDATION ITU-R BS.[CAP.RAD]

Developmental Digital Radio Broadcast Service: Captioned Radio

Summary

Digital Radio Systems of multiple types are now operational on a number of continents, with scores of countries engaged in offering new digital radio services as the world moves towards digital transmission upgrades for the legacy analogue broadcast transmission medium. Each Digital Radio System in operation supports multiple flexible service modes capable of supporting transmission of live captioning, where available from producers. In addition, it is technically possible to bring captioning to analogue FM listeners using existing technology.

Bringing captioning options to radio will enable the hundreds of millions of deaf and hard of hearing individuals worldwide to finally have access to the live radio medium that is a dominant form of daily mass communications around the world for their hearing counterparts. This audience could then consume radio by reading the captioned text, appropriately displayed on the listener's digital consumer receiver, consistent with ITU-R Recommendations.

Scope

This document recommends that digital radio receivers capable of receiving transmissions described in Recommendation ITU-R BS.1114 as well as traditional analogue FM system(s), could optionally support a captioning display.

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DRAFT NEW
RECOMMENDATION
BS.[CAP.RAD]¶
Digital radio broadcast service,
captioned radio¶

The ITU Radiocommunication Assembly,

considering

- a) that there are an estimated 650 million people worldwide with sensory disabilities;
- b) that the United Nations *Convention on Rights of People with Disabilities* (CRPD) Article 9 goal is to: *Promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies and systems become accessible at minimum cost;*
- c) that the ITU-Radiocommunication Sector has recognized the fundamental importance of *Bridging the disabilities Digital Divide* as a threshold initiative to improve access for all;
- d) that Digital Radio Systems of multiple types are now operational on a number of continents;
- e) that each Digital Radio System in operation supports multiple flexible service modes that in theory are capable of supporting transmission of live captioning;
- f) that to implement those digital radio service modes will enable hundreds of millions of deaf and hard of hearing individuals worldwide to have access to the live radio medium;

g) that Recommendation ITU-R BS.1114 describes Digital Sound Broadcasting (DSB) System A, also known as the Eureka 147 Digital Audio Broadcasting (DAB) System; Digital System F, also known as the ISDB-T_{SB} System; Digital System C, also known as the IBOC DSB System[, and Digital System G*, also known as DRM+];

h) that traditional analogue frequency modulation (FM) analogue transmissions are capable of transmitting captioning as described in Recommendation ITU-R BS.693 known as the Radio-Data System (RDS) and described in Recommendation ITU-R BS.1194 System A known as the Data Radio Channel (DARC) System;

j) that consumer radio receivers are widely available today that have been shown as configurable to display captioning,

recommends

1 that, in the case of programmes intended for radio broadcast included in Recommendation ITU-R BS.1114, appropriate modes should be identified in all systems to support captioned radio with a minimum 500 bits/second capacity, as described in Annex 1, Annex 2, Annex 3[, and Annex 4*];

2 that, in the case of programmes intended for radio broadcast using traditional, analogue FM methods, account should be taken in the guidelines for captioning described in Annex 5,

further recommends

1 that manufacturers of consumer radio receivers employing any or all of ITU DSB System A, ITU DSB system F, ITU DSB system C[, ITU DSB system G*] or traditional analogue FM be strongly encouraged to produce receivers that display captioning in a way consistent with ITU-R recommendations;

2 that broadcasters be strongly encouraged to transmit programmes with captioning as an integral part of the broadcast.

* *Editorial note: At the time of the adoption and approval of this recommendation, attention should be drawn to the status of the revision of Recommendation ITU-R BS.1114 so as if the latter is not adopted and approved, any reference to “System G” should be deleted from the whole document, otherwise the appropriate appellation of this “System G” need to be included in the relevant parts of the document.*

Annex 1

Captioned audio programmes for transmission using ITU DSB System A

Table 1 shows the properties of three ITU DSB System A implementations with respect to their capability of transmitting captioning at a minimum 500 bits/second rate.

TABLE 1

Digital Radio System	500 bit/sec capacity	Suggested Code Groups
DAB	Yes	Layer II Ancillary Data
DAB+	Yes	Layer II Ancillary Data
DMB	Yes	Layer II Ancillary Data

Annex 2

Captioned audio programmes for transmission using ITU DSB System F

Table 2 shows the properties of the ITU DSB System F with regard to its capability of transmitting captioning at a minimum 500 bits/second rate.

TABLE 2

Digital Radio System	500 bit/sec capacity	Suggested Code Groups
ISDB-T _{SB}	Yes	Independent PES

Annex 3

Captioned audio programmes for transmission using ITU DSB System C

Table 3 shows the properties of the ITU DSB System C with regard to its capability of transmitting captioning at a minimum 500 bits/second rate.

TABLE 3

Digital Radio System	500 bit/sec capacity	Suggested Code Groups
HD Radio	Yes	AAS - CC Service Token

Annex 4

Captioned audio programmes for transmission using ITU DSB System G**

Table 4 shows the properties of the ITU DSB System G with regard to its capability of transmitting captioning at a minimum 500 bits/second rate.

TABLE 4

Digital Radio System	500 bit/sec capacity	Suggested Code Groups
DRM+	Yes	MSC

Annex 5

Captioned audio programmes for transmission using traditional analogue FM

Table 5 shows the properties of traditional analogue FM Systems with regard to its capability of transmitting captioning at a minimum 500 bits/second rate

TABLE 5

Digital Radio System	500 bit/sec capacity	Suggested Code Groups/Features
RDS	Yes	ODA
DARC	Yes	Mode 1 transmission data or Short Message Channel

** The retention or otherwise of Annex 4 depends on whether or not revision to Recommendation ITU-R BS.1114 is adopted and approved.