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North American Broadcasters Association (NABA)

PRELIMINARY DRAFT NEW RECOMMENDATION

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 notes that the United Nations Convention of the Rights of persons with disabilities (CRPD), now adopted by over 142 administrations around the world is dedicated to breaking down barriers in Information and Communications Technologies (ICTs) on a global basis to better serve the estimated 650 million people worldwide with sensory disabilities. The International Telecommunication Union - Radiocommunication Sector (ITU-R) has recognized the fundamental importance of *Bridging the disabilities Digital Divide* as a threshold initiative to improve access for all. The ITU-R has the opportunity to harmonize new digital broadcast service options to those with disabilities, through recognition and adoption of new service models by appropriate Study Group 6 work, to support a new ITU-R Recommendation formally establishing the parameters of such service innovations.

The following Annex contains a preliminary draft new Recommendation submitted for consideration by the Working Party.

Annex: 1

Annex

PRELIMINARY DRAFT NEW RECOMMENDATION

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 analog 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 analog FM listeners using existing technology.

Bringing captioning 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 makes recommendation that all consumer digital radio receivers capable of receiving transmissions described in Recommendation ITU-R BS.1114 as well as traditional analog FM services, support a standardized captioning display that is based on ITU-R recommendations.

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-TSB System; and Digital System C, also known as the IBOC DSB System;

- h) that traditional analog frequency modulation (FM) analog transmissions are capable of transmitting captioning;
- i) 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 be identified in all systems to support captioned radio with a minimum 500 bits/second capacity, as described in Annex 1, Annex, 2 and Annex 3;

2 that, in the case of programmes intended for radio broadcast using traditional, analog FM methods, account should be taken in the guidelines for captioning described in Annex 4,

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 or traditional analog FM be strongly encouraged to produce receivers that display captioning in a way consistent with ITU-R recommendations;

2 that, where possible, programmes are transmitted with captioning as an integral part of the broadcast.

Annex 1

Captioned audio programmes for transmission using ITU DSB system A

Table 1 shows the properties of four 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	Type	Flexible Service Mode	500 bit/sec capacity	Suggested Code Groups
DAB	New Band	Yes	Yes	Layer II Ancillary Data
DAB+	New Band	Yes	Yes	Layer II Ancillary Data
DMB	New Band	Yes	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	Type	Flexible Service Mode	500 bit/sec capacity	Suggested Code Groups
ISDB-TSB	New Band	Yes	Yes	Layer II Ancillary Data

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	Type	Flexible Service Mode	500 bit/sec capacity	Suggested Code Groups
HD Radio	FM Hybrid	Yes	Yes	AAS - CC Service Token

Annex 4

Captioned audio programmes for transmission using traditional analog FM

Table 4 shows the properties of the traditional analog FM system with regard to its capability of transmitting captioning at a minimum 500 bits/second rate

TABLE 4

Digital Radio System	Type	Flexible Service Mode	500 bit/sec capacity	Suggested Code Groups
RDS	FM Hybrid	Yes	Yes	8A
