

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of  
Application for International Broadcast  
Station License

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**File No:  
IHF-LIC-20200710-00002**

**SECOND INFORMAL OBJECTION AND REPLY TO OPPOSITION**

This second informal objection (“Second Objection”) and reply to Opposition is filed pursuant to §73.3587 of Commission Rules by Shortwave Solutions LLC (“Petitioner”), regarding the Application for International Broadcast License (IHF-LIC-20200710-000021) (“Application”) by TURMS Tech LLC (“TURMS”).

**Procedural Background and Prior Filings**

TURMS applied for the International Broadcasting Construction Permit<sup>1</sup> (“Permit”) underlying this application on 04/17/2017, the application was accepted for filing on 05/02/2017, and the International Bureau issued the Grant of Authority for construction effective 08/01/2017 with a construction deadline of 08/01/2020.

TURMS has filed the instant application to cover the Permit (“Application” or “Form 310”) on 07/01/2020. Petitioner filed an Informal Objection (“First Objection”) on 09/03/2020. TURMS filed a Opposition Response (“Response”) on 09/15/2020. Subsequently, on 12/03/2021, the Bureau staff contacted TURMS with a query regarding certain non-technical items in its Application, and conducted an initial conference call. On 12/09/2021, TURMS filed with the Commission a notice of *ex parte* “application discussion” titled Clarifications (“Clarifications”), in response to the Commission’s query.<sup>2</sup>

This Objection (“Second Objection”) is filed as a reply to the Response and Clarifications, and to inform the Commission of developments since the First Objection.

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<sup>1</sup> File IHF-C/P-20170417-00002.

<sup>2</sup> Attached hereto as “Exhibit A”.

## Introduction

The core question is whether TURMS's proposed operations constitute "Broadcasting", and, specifically, whether TURMS intends to provide private data transmission services. TURMS's "Clarifications" and "Responses" are non-responsive, and/or misleading.

Petitioner's argument is summarized as follows, and will be detailed forthwith:

- The definition of "Broadcasting" is well-settled and undisputed, and requires the signal to be intended for, and intelligible by, the general public.
- The Clarification and Response misleadingly *appear* to affirm such intent but fail to actually do so. Rather, TURMS's statements allow for transmission of "coded" but "unencrypted" data.
- TURMS' application is not credible:
  - TURMS appears to be affiliated with an Experimental licensee who explicitly intends to engage in data transmission.
  - Such data transmission is a lucrative and competitive business.
  - "Coded" private data transmissions are outside the scope of "broadcasting".
  - True broadcast to the "general public" requires giving up the lucrative data revenues.
  - TURMS's directors and officers have no broadcasting background, but extensive securities trading experience.
  - The Application is very similar to other applications explicitly intending for private data transmission.

### The Definition of "Broadcasting" Is Clear But TURMS's Intent Is Not

As noted in the First Objection (and undisputed by TURMS), the statutory definition of "Broadcasting" is "dissemination of radio communications intended to be received by the public..."<sup>3</sup> The Commission's interpretation of "*intent*" required in the above definition of "broadcasting" was developed over the past 80 years. The current standard was adopted in *Subscription Video*<sup>4</sup> proceedings and subsequently affirmed by the D.C. Circuit: "In making the determination as to whether a particular transmission constitutes 'broadcasting,' the Commission, following §3(o) and its history, must look to the licensee's intent."<sup>5</sup> The Commission adopted three "indicia of intent", specifically:

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<sup>3</sup> 47 U.S.C. § 153(7).

<sup>4</sup> Report and Order, *Subscription Video*, 2 F.C.C.Rcd. 1001 (1987).

<sup>5</sup> *National Association for Better Broadcasting v. FCC*, 849 F.2d 665 (D.C. Cir. 1988).

- (i) a non-proprietary decoder;
- (ii) no encryption; and
- (iii) no contractual relationship between the transmitter and intended recipient

Unless otherwise authorized by “subcarrier” or “multiplex”<sup>6</sup> authority, *all* of the licensee transmissions must be actually intended for the public.<sup>7</sup> Merely asserting this intent exists is insufficient, especially when the circumstances suggest otherwise. The burden of proof of the compliance with the “indicia of intent” falls on TURMS, as noted in the First Objection. Yet, in its Response, TURMS did not challenge the definition or the indicia of broadcasting, nor did it claim any applicable “subcarrier” authority but merely dismissed the Objection as “speculative discovery.”

### **TURMS’s Clarification and Response Misleadingly *Appear* To Reaffirm Compliance**

In response to a FCC Staff inquiry, TURMS has provided the Clarifications as an *ex parte* notice, attached as “Exhibit A”. In its Response to First Objection, TURMS claims that the “core of its business plan [is] the transmission of such contents within the boundaries of DRM standard, following FCC and International Broadcasting rules and that such contents will be broadcasted to the general public.” [emphasis added]. In its Clarifications, TURMS states: “No encryption will be used, this is a general broadcast.”

These statements *appear* to imply that TURMS intends to transmit data that is intended for, and is usable by, the general public. However, they are far narrower than the factual affirmations that would actually confirm TURMS’s compliance with all three of the indicia of intent and thus are misleading.

### **TURMS Does Not Address “Coded” Transmissions or Indirect Subscription**

While TURMS’s assurance of lack of encryption<sup>8</sup> does address the second of the indicia, it does not address the first one, which requires a “non-proprietary decoder.” Plainly, while not “encrypted” as traditionally understood, transmitted content is still useless to the receiver if the receiver could not possibly make use of the content. Indeed, this is why the first prong of the indicia (requirement of a non-proprietary decoder) is not superfluous, and can be distinguished from the second prong (lack of encryption).

Two examples can illustrate this: Cable TV subscription service is encrypted, but has a non-proprietary decoder: one can purchase an off-the-shelf receiver, and using a CableCARD token, enjoy the programming.

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<sup>6</sup> None are applicable for International Broadcast, as further discussed on pp 7-8.

<sup>7</sup> See, e.g., *Broadcast Radio Subcarriers or Subsidiary Communications Authority (SCA)* fact sheet, available at <https://www.fcc.gov/media/radio/subcarriers-sca>

<sup>8</sup> Clarification at 1.

Conversely, the “encoded but not encrypted” example forbidden by the first prong is illustrated by *Bremer Broadcasting*,<sup>9</sup> in which the programming included the broadcasting of coded horse race results, while could only be intelligibly understood by the gambling “bookmakers” in possession of a so-called “scratch sheet” containing interpretations of the code. *Bremer Broadcasting* underpins the Commission’s precedent on broadcasting, and is cited in subsequent cases discussing the definition of broadcasting, including *Subscription Video*.

### **The Time Value of Information**

It is helpful to understand the business case for speedy data transmission. Being aware of certain events earlier than the public has an intrinsic monetary advantage. Technology has been applied to achieve such an advantage, since antiquity.<sup>10</sup> In all such cases, control of such information is essential - if information is provided to other parties, the value of information is destroyed. Codes are a way of such control, to prevent others from free-riding on valuable information transmitted to the general public. In other words, if information is truly available to the general public, the broadcaster cannot expect any ancillary subscription revenue - which drives the third prong of the indicia of intent.

But the idea of the “time value” of information is not new. Turning again to the *Bremer Broadcasting* case of “coded” transmissions, gambling on horse racing was the equivalent of “high frequency trading” of its time. As was recognized at the time, quoting the FCC Staff Report to Congress: “horse-racing information that gambling people need must be instantaneous and continuously instantaneous, [and] that the time lag created by printing would ruin the value of the information”<sup>11</sup> and “In the absence of complete, almost instantaneous, information the bookmaker must either refuse bets which are placed about the time a race is scheduled to start, or run the risk of accepting a bet on a horse which has already won the race. Further, he needs the rapid and periodic run-down on betting odds in order to estimate his possible losses and protect himself by the hedging operation [...]”<sup>12</sup>. In the same proceedings, it was noted: and “[...] fair to say that the Racing Form, the scratch sheets, serve the same purpose as the many services put out by the many concerns which serve the person who wants to buy stocks on the New York Stock Exchange.”<sup>13</sup>

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<sup>9</sup> *Bremer Broadcasting Co.*, 2 F.C.C. 79 (1935).

<sup>10</sup> See, e.g.: Laughlin et al., *Information Transmission Between Financial Markets in Chicago and New York*, Financial Review (2014) at 2-3, available at [https://economics.sas.upenn.edu/sites/default/files/filevault/event\\_papers/LAG\\_final.pdf](https://economics.sas.upenn.edu/sites/default/files/filevault/event_papers/LAG_final.pdf).

<sup>11</sup> *Transmission of Gambling Information: Hearings Before a Subcomm. of the Senate Comm on Interstate and Foreign Commerce on S. 3358*, 81st Cong, 2d Sess (1950) (F.C.C. Staff Report on Extent of Communications Facilities Used In Dissemination of Racing Information)

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*, (Statement of Hon Thomas D’Alessandro, Jr., Mayor of Baltimore, MD).

Substituting “market-makers” for “book-makers”, the use case closely parallels the trading industry, and Commission’s precedent is relevant here. Quite similarly, the necessary “decoder” sheets were not sold by the station, but by a third party.

The gambling cases resulted in the Commission designating for hearing an application by *Port Frere Broadcasting*<sup>14</sup>. The hearing examiner held as follows, explicitly quoting *Bremer* and distinguishing it:

In re *Bremer Broadcasting Company*, 2 F.C.C. 79, the Commission found:

[..] Station WAAT followed a code system in broadcasting horse racing results. Intelligible reception thereof was restricted to a particular group which had subscribed to a so-called scratch sheet containing interpretation in the code. That was a violation of the Commission’s regulations and the station license which authorized dissemination to the general public, and not particular individuals or classes thereof. Clearly, such broadcasting is not in the public interest.

The facts of the instant case are to be distinguished from those in the *Bremer* case. In announcing the winners of horse races, Station WTUX always used both the name of the horse and the identifying number. [...] the results could be understood by the general public and intelligible reception was not limited to the particular group of listeners who had copies of the Armstrong “scratch sheet”.

The holding makes it very clear that the information must not only be *transmitted* to the general public, but also be *understood by* the recipient, and establishes the standard of “intelligible reception”.

Currently, the “high-frequency trading” industry is the main user of low latency transmission services; it is a very lucrative and highly competitive business.<sup>15</sup> It is well-known that HF frequencies are preferred for long-distance communications: “High-frequency radio waves send data at almost the speed of light. That performance is similar to microwave, the technology most commonly used today by traders. But shortwave has a big advantage: It can travel at that speed for very long distances.”<sup>16</sup>

### **DRM Compliance Does Not Assure Intelligibility**

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<sup>14</sup> *Port Frere Broadcasting Co., Inc. (WTUX)*. 5 R.R. 1137 (1949).

<sup>15</sup> As noted in First Objection, Petitioner discloses an affiliation with one of TURMS’s competitors.

<sup>16</sup> *Companies Pitch Shortwave Radio to Shave Milliseconds Off Trades*, Bloomberg BusinessWeek (June 17, 2020), archived at <https://archive.md/80BAE>.

Turning back to TURMS's assertion of its intent to broadcast "within the boundaries of DRM standard," it should be noted that compliance with those "boundaries" does not ensure the "intelligible reception" required for a broadcast. Rather, DRM merely specifies the method of modulation of the signal, and includes "datacasting" as a method of modulation of application data, to be embedded in the DRM station's stream.

For example, the applications defined in DRM, and supported by major DRM receiver manufacturers include: (i) "electronic program guide" channels listing current and upcoming programming, (ii) "Journaline", providing hierarchically-structured text information that can be rendered on the full receiver screen, or displayed as a scrolling news chevron, (iii) video slideshows that can be used to transmit weather information. Certainly, such programming would comply with all three indicia of broadcasting, and would be authorized under § 73.758.

However, DRM also standardizes modulation for proprietary applications, and "DRM data applications directory" expressly distinguishes between "openly specified applications" and "proprietary applications."<sup>17</sup> The specification further describes how such proprietary applications can provide data within the DRM broadcast as "files," "packetized data," or a "transparent data stream." In this case, clearly, the data is meaningless and unintelligible to the receiver.

Notably, the DRM specification contains no standard for the "datacasting" of "financial data" proposed by TURMS<sup>18</sup>. Thus, by definition, such data could not be intelligible to a receiver, and would fail the "non-proprietary encoder" prong of the *Subscription Video* indicia of broadcast.

### **Coded Transmissions of Financial Data are Not Broadcasting**

Notably, just like racing results, the shortwave private data transmissions involve small amounts of data. As noted in the IEEE Spectrum: "[...] they won't be able to transmit very much information about price shifts—perhaps just a few bytes at a time (presumably well encrypted)."<sup>19</sup> Notably, no encryption is necessary, as long as the recipient lacks the "code." Just like horse racing, receiving that "Horse 1" has won the race is insufficient to constitute a "broadcast" without other information from the transmitter, selectively distributed to listeners - directly, or via the "third parties."

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<sup>17</sup> "Digital Radio Mondiale (DRM); Data applications directory TECHNICAL SPECIFICATION", ETSI TS 101 968 V1.4.1 (2020-11), paragraph 4.3.2.1: "The values 0x0000 to 0x7FFF are reserved for openly specified applications. The values 0x8000 to 0xFFFF are reserved for proprietary applications".

<sup>18</sup> Response, at 2.

<sup>19</sup> David Schneider, "Wall Street Tries Shortwave Radio to Make High-Frequency Trades Across the Atlantic", IEEE Spectrum (2018), <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8389174>

## Similar Applications Intent to Transmit Private Information

TURMS's application is especially peculiar given the lack of interest in International Broadcasting for the past two decades, and the lack of any appreciable market therefor. As of the filing of this Objection, there are three applicants for International Broadcasting licenses, each purporting to provide "financial news broadcasting": TURMS, Parable Broadcasting Company LLC<sup>20</sup> ("Parable") and DPA MAC LLC<sup>21</sup> ("DPA").

In the First Objection, Petitioner noted the similarity of TURMS's application to that of Parable (at the time, the only other applicant for an International Broadcasting license). TURMS dismissed this similarity as "speculative." Nonetheless, the Commission can and should take notice of the common pattern: broadcasting digital audio news with intent to transmit ultra-low-latency market data from transmitters **located adjacent to financial exchanges**.

It is notable that the other two applicants (DPA and Parable), in their responses to objections from other members of the public, have explicitly stated their reliance on "auxiliary" use of DRM channel to transmit private information<sup>22 23</sup> and claim that such use is permissible under "datacasting" rules. It is not. However, because TURMS does not make that same claim, is not addressed further in this Objection<sup>24</sup>.

## "Rockland Wireless's" Experimental License

In addition, as further evidence of the connection to the "low-latency data transmission" business, Petitioner would like to call attention to the Experimental License (call sign WK2XJK<sup>25</sup>) granted to Rockland Wireless, LLC ("Rockland"). The WK2XJK station is located at the same Alpine, NJ antenna site used by TURMS, and the application lists identical "SteppIR" tunable antennas, pointed at the same azimuth, using similar HF frequencies<sup>26</sup>.

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<sup>20</sup> File IHF-C/P-20200427-00001.

<sup>21</sup> File IHF-C/P-20201228-00010.

<sup>22</sup> Parable Opposition to an Informal Objection from Bennett Z. Kobb, 2020/07/24, File IHF-C/P-20200427-00001.

<sup>23</sup> DPA Opposition to an Informal Objection from Bennett Z. Kobb, 2021/05/03, File IHF-C/P-20201228-00010.

<sup>24</sup> Further history, case law and F.C.C. precedents referencing definition of Broadcasting, "datacasting", the indicia, and lack of "subcarrier" authority for "International Broadcast" Service are detailed on pp. 2-3 of the Petitioner's Second Objection filed on 07/19/2021 in File No IHF-C/P-20201228-00010.

<sup>25</sup> File No 0566-EX-CN-2019 and 0472-EX-CR-2021.

<sup>26</sup> Petitioner observed the site on multiple dates in 2021, and only one pair of antennas was installed - raising further questions of candor. Rockland applied for license renewal on 08/12/2021.

Experimental licenses are commonly used in order to develop technology for “low latency” data transmission.<sup>27</sup> To transmit private information “within confines of the DRM standard” requires development of techniques to insert an arbitrary data stream into DRM broadcast, and thus requires an experimental license. Notably, Rockland, per its own filings, is **explicitly** engaged in the “competitive data transmission”<sup>28</sup> business—not broadcast. If, as the above information suggests, Rockland’s operation is related to TURMS and its license is connected to experimenting with technologies that TURMS has constructed at the same location, then it provides evidence Rockland’s “competitive data transmission” is, at best, likely to be the “encoded” third party content that TURMS is proposing to “broadcast” at that location—and at worst, Rockland is merely an alter ego of TURMS. In either case, *any* relationship between Rockland and TURMS is prima facie evidence of TURMS’s intent of transmission *not* intended for the general public—and thus, not broadcasting.

In addition to the activities and similarities between the intended transmissions occurring from the same site, the timing of events and applications by TURMS and Rockland shows additional evidence for a relationship between these entities:<sup>29</sup>

04/11/2017: TURMS applies for Broadcast Construction Permit<sup>30</sup>

08/01/2017: Commission grants Broadcast Construction Permit<sup>31</sup>

07/15/2019: Rockland applies for an Experimental License<sup>32</sup>

08/19/2019: Commission grants Rockland’s Experimental License<sup>33</sup>

08/21/2019: TURMS begins construction of its station<sup>34</sup>

It is notable that TURMS received a construction permit in August of 2017, but did no work at that site for over ***two years***. Then, all of a sudden, TURMS commenced its construction only ***two days*** after Rockland received its Experimental License at the same site. This timing begs for further explanation.

### **The Transmitter Bears Responsibility for Third Party Content**

TURMS states in its Response: “TURMS will broadcast third party contents, and it’s not and will never be in the position of imposing its own interpretation of what is ‘public interest’ to

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<sup>27</sup> See, e.g., *HFT Traders Dust Off Century-Old Tool in Search of Market Edge*, Bloomberg News (June 18, 2018), archived at: <https://archive.md/qEn2Q>

<sup>28</sup> Rockland Request for Confidentiality, File No 0566-EX-CN-2019.

<sup>29</sup> “Rockland Wireless” filings with Commission are filed confidentially, and Rockland is an opaque entity with no public records. To be clear, Petitioner does not have a definite proof of the relationship between Rockland and TURMS.

<sup>30</sup> File No IHF-C/P-2017-0417-00002.

<sup>31</sup> *Id.*

<sup>32</sup> File No 0566-EX-CN-2019.

<sup>33</sup> *Id.*

<sup>34</sup> Application, Form 310, Box 1.

anyone. The way TURMS can serve public interest is making WIPE station available to the USA Authorities to broadcast contents they believe will serve public interest of anyone under the target area of reception”<sup>35</sup>. Clearly, this shows a lack of understanding of the responsibility of the licensee for third-party content, regardless of whether it is provided under “advertising,” “time-sharing,” or “Local Marketing Agreement.” Whether or not a third party believes in “public interest of anyone under the target area of reception” is irrelevant. The licensee, TURMS, is a trustee of the public airwaves; it has a non-delegable duty to operate in the public interest and to comply with applicable Rules at all times. Transmission of content that is not intended for the general public would violate that duty without regard to whether it was produced directly by TURMS or provided by a third party.

### **Trading Experience and the Business Case**

TURMS is owned by Emcor Securities Inc (“Emcor”).<sup>36</sup> Emcor is a SEC Registered Investment Advisor (RIA) and formerly a FINRA-registered broker-dealer. The Commission can take further note that the directors and officers of TURMS do not claim any broadcasting experience, but certainly have substantial business experience, and are aware of the business of trading and data transmission.

As noted above, if data transmitted were truly available to the general public, its value would be minimal, and there would be no business case to expect additional revenue. This is explicitly stated by DPA Mac, another applicant who openly disclosed its intent to transmit private data for a fee and its expectation of financing the broadcasting operation from these fees: “DPA Mac to finance its commercial-free audio broadcast with revenues earned from providing its ‘low latency digital data transmission service’ to ‘investment and commercial banks, proprietary trading companies[,] and security exchanges, among others’.”<sup>37</sup>

It should be noted that the costs of setting up an International Broadcast Station are substantial, and “could easily exceed one million dollars.”<sup>38</sup> TURMS would like the Commission to believe that, without the private data transmission revenues and without having any broadcasting experience, TURMS’s principals intend to recoup these costs by purely broadcast operations. That seems highly implausible.

Rather, there are two possibilities, only one of which is credible:

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<sup>35</sup> Response, at 2

<sup>36</sup> Permit Application, Form 309, Exhibit 1, Section II.

<sup>37</sup> File No IHF-C-P-20201228-00010, Form 309, Narrative Statement, at 13.

<sup>38</sup> “Fact Sheet on Building a High Frequency (Shortwave) International Broadcasting Station”, available at [https://www.fcc.gov/reports-research/guides/fact-sheet-\[REDACTED\]-high-frequency-shortwave-international-broadcasting-station](https://www.fcc.gov/reports-research/guides/fact-sheet-[REDACTED]-high-frequency-shortwave-international-broadcasting-station).

First, what TURMS claims is that a company without any experience in broadcasting decides to construct the first International Broadcast station in 20 years dedicated to “financial news” programming, and “data broadcast to the general public,” foregoing any subscription revenues, but somehow able to recoup the setup costs by broadcast operations alone.

The second possibility, apparent from digging into the facts and associated entities, is that TURMS instead lacked candor in its filings, and that its application for “International Broadcast” is merely a pretext for private data transmission business.

### **TURMS Bears the Burden of Proof**

TURMS bears the burden of proof of showing the “public interest” and its intent to broadcast to the “general public” as required by Section 73.701(a). As noted in the First Objection, the Commission has adopted the *Subscription Video* indicia to discern such intent,

TURMS could have very quickly put this matter to rest by stating that it fully complies with the *Subscription Video* indicia. For example, it could have stated that i) TURMS does not intend to engage (directly or indirectly) in the data transmission business, and ii) that TURMS “transmissions within confines of DRM standard” do not contain any data that is not fully described in the DRM specification *itself*. But TURMS did not do so. Instead, TURMS made much narrower statements of “lack of encryption” and “compliance with DRM standard” thus misleading the Commission and the public by failing to address the precise issues that would determine whether or not it is broadcasting.

Respectfully submitted,

/s/

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# EXHIBIT 1

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December 9, 2021

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
45 L Street, NE  
Washington, DC 20554

Re: Ex Parte

Turns Tech Application

Discussion (IHF-LIC-20200710-00002)

Dear Ms. Dortch:

This letter is a follow up to the December 3, 2021 letter regarding clarifications of general non-technical items for the pending Turns Tech application shown above.

The following attachment is the list of clarifications to the general non-technical items and the appropriate responses from the applicant.

If there should be any questions, please do not hesitate to contact the undersigned.

Sincerely,

  
Donald G. Everist

DGE:cc  
Enclosure  
cc: Alex Pilosov  
Brandon Moss

CLARIFICATIONS

(December 2021)

Clarification

- Clarification is requested regarding the audio and data content description of the general service to be provided, if known?

**Response:**

Airtime will be sold to anyone interested in broadcasting his contents. Editorial line will focus on contemporary topics, no religious or political contents. More specifically the target we're looking for is global news and financial information, CNBC style programs.

Clarification

- Will encryption be used in the transmitted signal?

**Response:**

No encryption will be used, this is a general broadcast.

Clarification

- Will there be a contract for the reception of the signal required?

**Response:**

No contract will be required for the reception.

Clarification

- Will a DRM receiver be required for either or both the audio or the data?

**Response:**

A DRM receiver will be required for both audio and data.

Clarification

Will the proposed transmitter site receive other international HF signals to be rebroadcast on the intended operation?

**Response**

No.