

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In re Application of)	
)	
DPA Mac LLC)	IBFS File No. IHF-C/P-20201228-00010
)	
For Construction Permit to Build International)	
High Frequency Broadcast Station)	

To: International Bureau

OPPOSITION TO INFORMAL OBJECTION

DPA Mac LLC (“DPA Mac”) files this opposition in response to the informal objection filed by Shortwave Solutions LLC (“Shortwave”) in the above-captioned IBFS file number.¹ On December 28, 2020, DPA Mac applied for a construction permit to build an international high frequency (“IHF”) broadcast station in order to offer “a new, innovative, low-power . . . broadcasting service that supports data transmissions to foreign destinations.”² As of the date of this filing, the Commission has not placed the application on public notice.³

While it will more exhaustively address Shortwave’s concerns in the comment cycle that follows the above-captioned application’s placement on public notice,⁴ DPA Mac demonstrates

¹ See Informal Objection of Shortwave Solutions LLC, IHF-C/P-20201228-00010 (Apr. 22, 2021) (“Informal Objection”).

² Application of DPA Mac LLC for International Broadcast License, ECFS Inbox 73.702, Public Interest Statement and Waiver Request at 1 (Dec. 28, 2020) (“DPA Mac Application”); *see also* IBFS File No. IHF-C/P-20201228-00010.

³ See IBFS File No. IHF-C/P-20201228-00010 (indicating that, as of May 3, 2021, the Commission had taken no action on the application).

⁴ Out of an abundance of caution, DPA Mac files its opposition within the ten-day timeframe contemplated by Section 1.45 of the Commission’s rules because it is unclear whether Section 73.3587’s disclaimer that “[t]he limitation on pleadings and time for filing pleadings provided for in § 1.45 of the rules shall not be applicable” covers all “pleadings” or only “objections.” 47 C.F.R. § 73.3587; *see also* 47 C.F.R. § 1.45(b) (requiring that oppositions to a “request . . . be

below that Shortwave’s technical and legal arguments fail to cast reasonable doubt on DPA Mac’s application. Borrowing Shortwave’s own phrase, the objection is a “poorly disguised attempt”⁵ by a competitor to delay the Commission’s processing of the application, either to foreclose competition in the “transoceanic connections” in which Shortwave specializes⁶ or require the disclosure of information regarding DPA Mac’s commercially sensitive, innovative, proprietary technology. Accordingly, the objection should be ignored.

I. DPA MAC’S APPLICATION ADDRESSES THE USE-BASED AND TECHNICAL ISSUES RAISED BY ITS INNOVATIVE TECHNOLOGY AND PROPOSED SERVICE.

In an apparent attempt to delay the processing of DPA Mac’s application, Shortwave raises several use-based and technical issues that it asserts render DPA Mac’s application defective. As shown below, DPA Mac has made a good-faith effort to resolve the issues it has identified so that it may receive a construction permit to build an IHF broadcast station and, eventually, offer its innovative, low-power international broadcast service to the public.

filed within 10 days after the original pleading”); *Wireless Telecommunications, Inc. Application for Assignment of Broadband Radio Service Licenses WLK341, WNTI856, WMH868, WMI343, and WMH308 to Vermont Telephone Company, Inc.*, Memorandum Opinion and Order, 24 FCC Rcd 3162, n. 57 (WTB 2009) (“Because we are treating Utopian’s pleadings as informal objections, the procedural deadlines contained in Section 1.45 of the Commission’s Rules do not apply.”).

⁵ Informal Objection at 1.

⁶ See Shortwave Solutions, *Why Us*, <https://www.shortwave-solutions.com/> (“Shortwave Solutions offers the fastest solution in the market, providing infrastructure for transoceanic connections.”) (last accessed May 3, 2021). Shortwave Solutions has also filed an objection to similar applications seeking authority to operate in the United Kingdom, which has been rejected.

A. In its application, DPA Mac sought waiver of the provision in 47 C.F.R. § 2.106 that it believes is necessary.

Shortwave's objection includes the assertion that DPA Mac did not request a waiver of Sections 2.106 (*i.e.*, the Table of Frequency Allocations) and 73.701(a) of the Commission's rules.⁷ At this stage in the application process, before DPA Mac's application has been put on public notice, such an argument is merely introduced to delay the application's processing. DPA Mac has been transparent about its effort to bring its innovative, low-power IHF broadcasting service to market, following established Commission licensing processes and seeking waiver of the provisions that DPA Mac believes are necessary. As part of this process, DPA Mac has sought waiver of footnote US136(b)(2) in the Table of Frequency Allocations.⁸

Additionally, DPA Mac fails to see how waiver of Section 73.701(a) is necessary. Section 73.701(a) simply defines "international broadcast station."⁹ As DPA Mac stated in its application, it will "broadcast timely, accurate U.S. financial news internationally from the United States to the general public located in foreign countries."¹⁰ Furthermore, DPA Mac has already demonstrated proof of concept via its affiliate, 3DB Communication Inc. ("3DB"),¹¹ showing that an off-the-shelf digital radio mondiale ("DRM")¹² radio with a "commercial off-

⁷ See Informal Objection at 1 (under Argument 1); *see also* 47 C.F.R. §§ 2.106, 73.701(a).

⁸ See DPA Mac Application, Exhibit 1, at 17-18; *see also* 47 C.F.R. § 2.106, US136(b)(2).

⁹ See 47 C.F.R. § 73.701(a).

¹⁰ DPA Mac Application, Exhibit 1, at 1.

¹¹ See, *e.g.*, Call Sign WI2XXG, ELS File No. 0188-EX-CR-2021, Exhibit 1 ("3DB successfully transmitted signals using the Digital Radio Mondiale (DRM) standard from Chicago to London."). Additional information demonstrating proof of concept is on file with the applicant.

¹² DRM is "the universal, openly standardised digital broadcasting system for all broadcasting frequencies," including shortwave radio frequencies, and results in "greener, clearer, wider, bigger, better quality & audio content." See DRM, *What is DRM*, <https://www.drm.org/what-is-drm/> (last accessed May 3, 2021).

the-shelf” (“COTS”) Buddipole antenna can receive and decode the transmission in London and in Frankfurt, consistent with the requirements of an international broadcast.

B. To support its allegation that DPA Mac will be unable to provide a usable service, Shortwave utilizes arbitrary technical parameters that create fundamental mistakes in its analysis.

In its informal objection, Shortwave purports to show that DPA Mac’s proposed transmitter power levels are insufficient to provide adequate service,¹³ but its analysis makes unfounded, unjustified assumptions that skew the results. For example, Shortwave runs simulations on the Voice of America Coverage Analysis Program (“VOACAP”)¹⁴ that relies on a 55 dB signal-to-noise ratio (“SNR”) and 500 watt output power.¹⁵ The assumed SNR is extremely large and the output power is extremely low – a combination that guarantees failure and is not realistic. Shortwave provides no reason for selecting these unrealistic, destined-to-fail parameters. Furthermore, Shortwave cannot run its analysis using *DPA Mac*’s technical parameters, which remain proprietary commercial information and the public disclosure of which would result in competitive harm to DPA Mac.

Shortwave also claims that “DPA’s signal can only be received by DPA in the UK, under [the] following conditions”: (1) the receiver “is a full-size Yagi antenna (50 ft across), at a mast at 65ft above ground”; (2) “DPA transmitting only the ‘sideband data’ – not DRM broadcast proposed”; and (3) “even then, only at one specific low-noise site – without which DPA cannot operate.”¹⁶ This is false. As it currently does not have a license, DPA Mac was not transmitting.

¹³ See Informal Objection at 4-7.

¹⁴ See VOACAP, *VOACAP Quick Guide*, <https://www.voacap.com/>.

¹⁵ See Informal Objection, Attachment 1 (“Radio Propagation and Availability Charts”).

¹⁶ Informal Objection at 5.

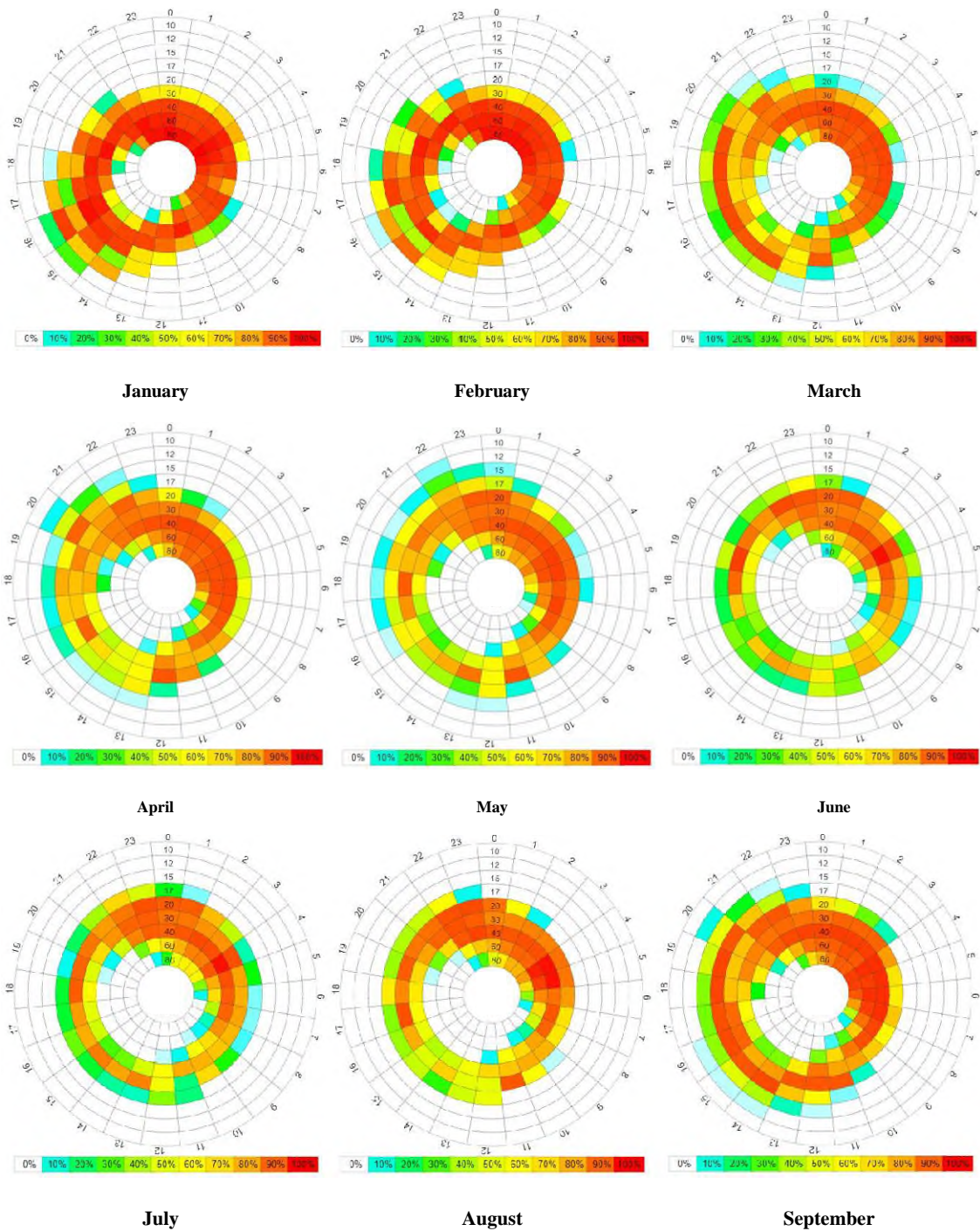
Rather, its affiliate, 3dB, transmitted pursuant to its experimental license. The receptions were made with a Buddipole antenna, transmitting DRM data, as shown here:

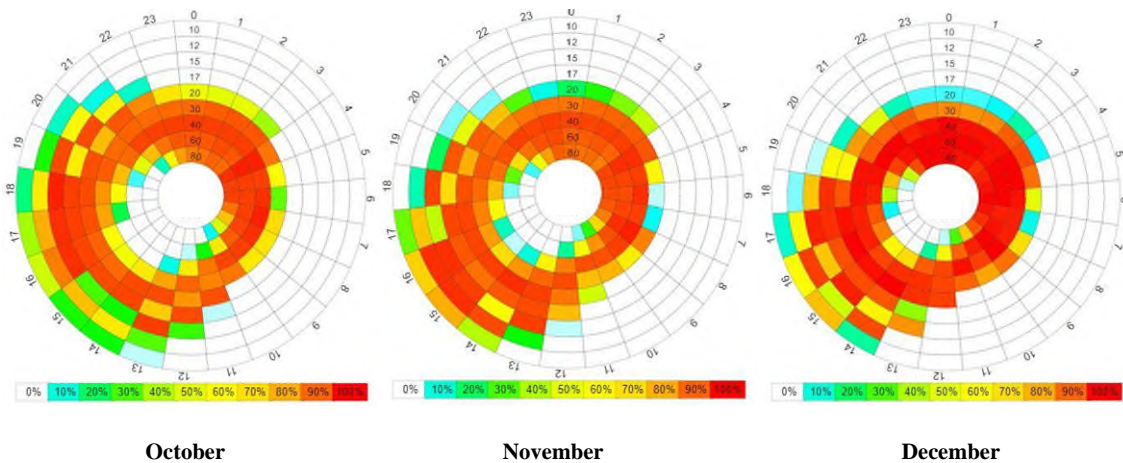


Furthermore, as shown in Figure 5 below, DPA Mac has performed a thorough analysis demonstrating that the current transmission site is suitable for HF reception. The red and orange blocks show where the likelihood of successful reception is greater than 80% using a particular wavelength (*e.g.*, 80, 60, 40 meters) at a particular time of day (*e.g.*, 0:00, 1:00, 2:00). Given the number of red and orange blocks, the chart shows that DPA Mac will be able to provide a nearly continuous broadcast for all twelve months of the year. This showing directly contravenes Shortwave's conclusion that "there is barely a single hour of the day with > 50% probability of instantaneous SNR meeting requirements."¹⁷ As the chart makes plain, the overwhelming majority of hours have an 80% or greater probability of instantaneous SNR meeting requirements year-round.

¹⁷ *Id.* at 6 ("This basic analysis was completed here, by calculating the probability of instantaneous SNR meeting requirements for a Chicago-Paris circuit over the next 12 months. All possible ambiguities were resolved in favor of DPA – in other words, this is the best-case scenario. As it can be seen, there is barely a single hour of the day with > 50% probability of instantaneous SNR meeting requirements.").

Figure 5: Probability of Successful Transmissions in IHF Band





Shortwave also asserts that DPA Mac’s signal-to-noise ratio is insufficient for standard DRM equipment, noting in particular that DPA Mac failed to include 5 dB in its calculations.¹⁸ However, Shortwave relied on an isotropic antenna featuring a gain of 0 dBi.¹⁹ Every off-the-shelf antenna – like the Buddipole – has a gain of at least 5 dBi. Finally, Shortwave attempts to evaluate the quality of the signal despite the DRM standard’s failure to define the quality of the audio. As the above information shows, Shortwave’s analysis supporting its contention that DPA Mac will be unable to provide a “usable” broadcast service is based on arbitrary assumptions that inappropriately skew the conclusions.

C. Shortwave’s contention that “[o]ther waiver requests are not in the public interest,” which deals only with Section 73.751(c), fails to acknowledge how the potential loss of service abroad is material to the Commission’s analysis.

Though a section of Shortwave’s objection is titled “Other waivers are not in [the] public interest,”²⁰ the section solely discusses DPA Mac’s request to waive Section 73.751(c)’s

¹⁸ *Id.* at 5.

¹⁹ *Id.*

²⁰ *Id.* at 8.

minimum power requirement.²¹ Shortwave states that the rule's minimum power requirement is not intended to protect other broadcasters from DPA Mac's signal, but rather to protect *DPA Mac* from other broadcasters' signals.²² In point of fact, every authorized broadcaster in the international high frequency service can lose service due to locally generated interference at any time. Moreover, the Commission regularly participates in international frequency coordination meetings for numerous public policy reasons, including maximizing U.S.-authorized broadcasters' access to clear channels and minimizing any potential harmful interference to or from foreign high-frequency broadcasters. Contrary to Shortwave's claims, the Commission does not pursue one objective above all others. In any case, DPA Mac's innovative lower-power technology advances each of the Commission's goals for high frequency broadcasting by maximizing use of the spectrum, minimizing potential harmful interference to other broadcasters, and ensuring DPA Mac can render service. Therefore, Shortwave's opposition to more efficient, lower power operations in the band are immaterial to the Commission's analysis of the application.

II. SHORTWAVE'S CONTENTION THAT DPA MAC'S APPLICATION VIOLATES SECTIONS 1.934(d)(1)-(2) AND 73.731(a)(4) FAILS TO ACKNOWLEDGE THE COMMISSION'S DISCRETION WHEN PROCESSING THE APPLICATION.

In addition to raising use-based and technical issues, Shortwave argues that DPA Mac's application is defective under Sections 1.934(d) and Section 73.731(a)(4) of the Commission's rules.²³ Section 1.934(d) states that "[t]he Commission *may* dismiss without prejudice an

²¹ See 47 C.F.R. § 73.751(c); *see also* DPA Mac Application, Exhibit 1, at 20 (requesting waiver of 47 C.F.R. § 73.751(c)).

²² See Informal Objection at 8 ("The problem is not interference from DPA to other broadcasters. The problem is interference to the marginal DPA signal from other broadcasters.").

²³ See *id.* at 9 (citing 47 C.F.R. §§ 1.934(d)(1)-(2)) and 7, 12 (citing 47 C.F.R. § 73.731(a)(4)).

application that it finds to be defective.”²⁴ Meanwhile, Section 73.731(a) states that “[a] license for an international broadcasting station will be issued only after a satisfactory showing has been made.”²⁵ The provisions’ separate use of the words “may” and “satisfactory” demonstrate the Commission’s wide discretion in processing an IHF application. Currently, the Commission has not placed DPA Mac’s application on public notice, nor has DPA Mac yet sought Commission feedback on its filing. Accordingly, any suggestion that the Commission should dismiss the application at this stage is premature. Notably, even Shortwave appears to fully agree with this assessment,²⁶ undermining its own arguments on this issue.

III. DPA MAC’S INTERACTIONS WITH THE COMMISSION HAVE BEEN TRANSPARENT AND HAVE THUS NOT “LACKED CANDOR.”

A. DPA Mac did not lack candor with regards to the certifications of compliance made with respect to certain Part 73 rules.

Shortwave asserts that DPA “appears to have lacked candor in certifications of compliance”²⁷ regarding the following provisions in the Commission’s rules:

- (1) Section 73.731(a), which states that a license “will be issued only after a satisfactory showing” that the applicant satisfies several criteria;²⁸
- (2) Section 73.753, which describes the antenna requirements for international broadcasting stations;²⁹ and

²⁴ 47 C.F.R. § 1.934(d) (emphasis added).

²⁵ 47 C.F.R. § 73.731(a).

²⁶ See Informal Objection at 12 (“DPA may be able to address multiple deficiencies in its application.”).

²⁷ *Id.* at 1; see also 47 C.F.R. §§ 73.731(a), 73.753, and 73.758.

²⁸ 47 C.F.R. § 73.731(a).

²⁹ 47 C.F.R. § 73.753 (“Antenna Systems”).

(3) Section 73.758, which describes the system specifications for digitally modulated emissions.³⁰

Section 73.731(a) requires the Commission to make a policy-based judgment as to whether an applicant has made a “satisfactory showing.” As Shortwave acknowledges, DPA Mac has been “very clear about [its proposed service],”³¹ rendering moot questions regarding why DPA Mac applied for a license and how it would operate pursuant to the license. Meanwhile, the argument that DPA Mac failed to properly certify compliance with Sections 73.753 and 73.758 amounts to nitpicking. For example, Shortwave states that the application “lists four antennas on Form 309” but “only shows two” in supporting Exhibit 11.³² While Shortwave’s argument about candor with respect to Section 73.758 is ultimately vague, Shortwave appears to suggest that information regarding emissions designators and requested center frequencies violated the Commission’s candor requirement.³³

Simply stated, these arguments attempt to magnify the importance of perceived discrepancies in DPA Mac’s application and should therefore be easily dismissed. DPA Mac offered an exhaustive description of its system and, in any case, Shortwave fails to explain how such “violations,” even if true, would warrant return or dismissal of the application. DPA Mac has shared the information it believes is required by the FCC Form 309, including internal block diagrams and plans, and included Exhibit 1 to provide additional context for its proposed service.

³⁰ 47 C.F.R. § 73.758 (“System Specifications for Digitally Modulated Emissions in the HF Broadcasting Service”).

³¹ Informal Objection at 2.

³² *Id.* at 9.

³³ *See id.* at 1 (“DPA appears to have lacked candor in certifications of compliance with . . . § 73.758.”), 9 (describing requested emissions designators and center frequencies in arguments 4(a) and 4(b)).

Should the Commission have questions about the application, DPA Mac would be happy to speak with staff or file supplementary material.

B. DPA Mac has not lacked candor regarding its ownership structure or issues of *de facto* control.

In its final argument, Shortwave states that DPA Mac “appears to be *indirectly* controlled by Raft Technologies – a company registered in Israel.”³⁴ Asserting an “interlocking relationship” between DPA Mac and Raft Technologies,³⁵ Shortwave states that “it is puzzling why Raft attempted to conceal its ownership.”³⁶ Ultimately, however, there is nothing puzzling about the relationship between DPA Mac and Raft Technologies. DPA Mac, a U.S.-based entity, and Raft Technologies, an Israeli corporation in good standing, have entered into arm’s length commercial agreements, including a technical and service advisory agreement, as permitted under Commission precedent.³⁷ Both parties have observed and continue to observe these commercial agreements.³⁸ Separately owned and operated, Raft Technologies has no investment interest in DPA Mac, and DPA Mac has no investment interest in Raft Technologies.

³⁴ *Id.* at 10 (emphasis in original).

³⁵ *See id.* at 10-12.

³⁶ *Id.* at 12.

³⁷ *See Application of WGPR, Inc. and CBS, Inc. for Assignment of License of WGPR-TV, Detroit, Michigan*, Memorandum Opinion and Order, 10 FCC Rcd 8140 (1995) (“The touchstone of control . . . is not divining who executes the station’s programming, personnel and finance responsibilities, but who establishes policies governing the three areas and exercises ultimate control.”).

³⁸ If Raft Technologies were to exceed the 25% benchmark for investment set out in section 310(b)(4) of the Communications Act of 1934, as amended, or were otherwise deemed to be in control of DPA Mac, it would file a petition for declaratory ruling asking the Commission to allow it to exceed the statutory benchmark.

IV. CONCLUSION

In its informal objection to DPA Mac's application for a construction permit, Shortwave relies on a variety of technical and legal arguments to delay the Commission's processing of the application. None of Shortwave's arguments warrant further delay. The technical arguments rely on incorrect assumptions; the legal arguments fail to raise issues that have not already been addressed or will be addressed following public notice of the application. Accordingly, DPA Mac looks forward to working with the Commission to fully resolve any questions about its application.

Respectfully Submitted,

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