

results, the Coalition submits that the issues raised in Paragraph 15 of the NPRM should instead be considered by the Media Bureau in connection with MM Docket No. 93-177.

The Coalition consists of the broadcasters, broadcast engineering consultants, and broadcast equipment manufacturers identified on Attachment A. On May 4, 2007, the Coalition submitted on an *ex parte* basis its recommendations to the Commission (“Coalition *Ex Parte* Submission”) in connection with the Commission’s long-pending Further Notice of Proposed Rulemaking in MM Docket No. 93-177 that was initiated in order to consider the use of computer modeling as a means of verifying AM directional antenna performance. In that submission, the Coalition proposed modifications to Section 73.151 and Section 73.61 of the Commission’s rules and the adoption a new Section 73.155 to allow the analysis of AM directional antenna performance by moment method computer programs and certain “internal” array parameter measurements.

As a corollary to these proposed procedures for establishing and maintaining the operation of AM directional antenna arrays, the Coalition also proposed a new rule that would harmonize the disparate treatment afforded under Section 22.371, Section 27.63, and Section 73.1692 with respect to disturbances caused to AM stations as a consequence of construction near or installation on an AM broadcast antenna system or tower. The Coalition proposed that this new rule, a copy of which is included at Attachment B, would replace Section 22.371, Section 27.63, and Section 73.1692, and be included under Part 17. On May 23, 2007, the Media Bureau released a Public Notice soliciting comments on Coalition’s recommendations. *Comment Sought On Proposed Rules Permitting Antenna Modeling To Verify AM Directional Antenna Performance*, Public Notice, MM Docket No. 93-177 (DA 07-2143; released May 23, 2007).

The Coalition applauds the Commission for its recognition of the importance of protecting AM broadcast stations whose antenna patterns can be adversely affected by the construction or alteration of nearby antennas or antenna structures. However, the Coalition would like to make clear that the Commission’s proposed rule does not impose any new obligations on Part 90 licensees with respect to disturbances caused to AM broadcast antenna patterns. Indeed, it is long-standing Commission policy that all FCC licensees, regardless of service, have an obligation to remedy interference caused to existing stations. The Commission’s “newcomer policy,” first announced in *Midnight Sun Broadcasting Co.*, 11 FCC 119 (1947) (broadcaster responsible for resolving interference caused by its new facilities to other preexisting facilities in close proximity) provides that a “newcomer [is] responsible, financially or otherwise, for taking whatever steps that may be necessary to eliminate objectionable interference to an existing facility.” *Athens Broadcasting Company, Inc.*, 42 RR 2d 1659 (1978) (citing *Radio Station KCRC, Enid, Okla.*, 15 FCC 2d 769 (1968), *Sudbrink Broadcasting of Georgia, Inc.*, 65 FCC 2d 691 (1977) (“*Sudbrink*”). That policy has been applied to a variety of services, including wireless cable (*see Amendment of Parts 1, 21 and 74*, 14 FCC Rcd 12764 (1999) (explaining that interference protection rights within the MDS and ITFS services are based on a “first in time, first in right” philosophy)), licensees under Part 22 (*see Revision of Part 22 of the Commission's Rules Governing the Public Mobile Services*, 9 FCC Rcd 6513, 6558 (1994) (explaining that under 47 C.F.R. Sec. 22.371, Public Mobile Services licensees who construct or modify towers in the immediate vicinity of AM broadcast stations are obligated to take all necessary steps to correct interference problems caused by the new or modified construction)), licensees under Part

73 (*see Sudbrink* at ¶ 5 (in interference dispute between two broadcast stations, “it is clear that the ‘newcomer’ is responsible, financially and otherwise, for taking whatever steps may be necessary to eliminate objectionable interference”)); licensees under Part 74 (*see* 47 C.F.R. Section 74.703(d) (“When a low power TV or TV translator station causes interference to a CATV system . . . the earlier user, whether cable system or low power TV or TV translator station, will be given priority on the channel, and the later user will be responsible for correction of the interference”)) and licensees Part 101 (*see* 47 C.F.R. Section 101.105 (establishing interference protection criteria under which fixed microwave services must protect existing or previously applied for systems)).

Although the Coalition fully supports the Commission’s efforts, the rule proposed by the Commission, as well as Section 22.371 and Section 27.63, the rules on which the proposed new rule is based, rely on outdated magnetic field measurement techniques to establish whether the construction or modification would affect an AM directional or non-directional pattern. As explained in the Coalition *Ex Parte* Submission:

... the present process of relying on field strength measurements to verify antenna system performance is fundamentally flawed, particularly in urban areas and other realistic environments where field strength measurements are especially unreliable. As the FCC is well aware, field strength measurements are subject to variation caused by, among other things, proximity effects, scattering, seasonal changes in ground conductivity, and land development along propagation paths. The ambiguous nature of the measured data necessarily results in an oversimplified analysis. Indeed, any attempt to perform a meaningful statistical analysis on the relatively small number of data points plotted along one measurement radial is doomed by the large number of variables that may have influenced that data.

Coalition *Ex Parte* Submission at 2. In light of the well documented limitations of field strength measurements, the Coalition proposed in its recommendations to the Commission in MM Docket No. 93-177 to allow the certification of AM antenna system

performance by moment method numerical analysis and measured internal array parameters. The Coalition also determined that a new procedure, using the same moment method techniques, is the most appropriate method for establishing whether construction or modification of antennas or support structures will adversely affect nearby AM antenna systems. It is noteworthy that the Media Bureau has accepted this type of analysis on behalf of Part 73 and Part 74 applicants in connection with the construction or alteration of antennas or antenna structures since shortly after the adoption of Section 73.1692 (Broadcast station construction near or installation on an AM broadcast tower). The Coalition's proposed rule in Part 17 also establishes the appropriate area within which an analysis is required, which is based on the electrical height and distance in wavelengths from the AM antenna.

The Coalition believes that the Media Bureau is the most appropriate forum in which to consider the adoption of rules relating to the protection from disturbance of AM broadcast station antenna patterns. Because the Media Bureau has commenced its review of the recommendations submitted by the Coalition in MM Docket No. 93-177, and has solicited public comment on the Coalition's proposed new and modified rules, including its proposed new rule under Part 17 concerning construction near or installation on an AM broadcast antenna system or tower, the Coalition respectfully submits that the issues raised in Paragraph 15 of the NPRM should be considered by the Media Bureau in MM Docket No. 93-177. Such a course not only would avoid confusion and potentially inconsistent results by consolidating the review of these interrelated issues under the Media Bureau, but also would conserve scarce Commission resources by eliminating unnecessary duplication of efforts.

Respectfully submitted,

**AM DIRECTIONAL ANTENNA
PERFORMANCE VERIFICATION
COALITION**



By: John D. Poutasse

Leventhal Senter & Lerman PLLC
2000 K Street, NW
Suite 600
Washington, DC 20006-1809
(202) 416-6774

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Their Attorneys

ATTACHMENT A

AM DIRECTIONAL ANTENNA PERFORMANCE VERIFICATION COALITION

Broadcasters

Beasley Broadcast Group, Inc.
Bonneville International
Buckley Broadcasting Corporation
CBS Radio Inc.
Citadel Broadcasting Company
Clear Channel Radio
Cox Radio, Inc.
Crawford Broadcasting Company
Cumulus Media Inc.
Emmis Communications Corp.
Entercom Communications Corp.
Entravision Communications Corporation
Family Stations, Inc.
Journal Broadcast Group
Lincoln Financial Media
Morris Communications Company, LLC
Multicultural Radio Broadcasting, Inc.
Peak Broadcasting LLC
Radio One, Inc.
Regent Communications
Saga Communications
Salem Communications Corporation
The Walt Disney Company

Consulting Engineers/Equipment Manufacturers

Carl T. Jones Corporation
Cavell, Mertz & Associates, Inc.
Communications Technologies, Inc.
du Triel, Lundin & Rackley, Inc.
Edward A. Schober, P.E., Radiotechniques Engineering, LLC, Consulting Engineers
Hammett & Edison, Inc.
Hatfield & Dawson Consulting Engineers, LLC
Khanna & Guill, Inc.
Radiotechniques Manufacturing, LLC
Sellmeyer Engineering

ATTACHMENT B

New Rule Proposed Under Part 17

Construction near or installation on an AM broadcast antenna system or tower.

(a) *Construction near an AM broadcast antenna system.* All Commission licensees that construct or make a significant modification to an antenna tower or support structure in the immediate vicinity of an AM antenna system are responsible for measures necessary to correct disturbances of the AM antenna radiation pattern that causes operation of the AM station outside of the radiation parameters specified by the FCC, if the disturbance occurs as a result of such construction or modification. The proponent of such construction or modification shall notify the licensee of the AM station in advance of the proposed construction or modification.

(1) In most cases, the addition of one or more antennas to an existing antenna tower or support structure will not affect a nearby AM antenna system. A significant modification to an antenna tower or support structure is defined as follows:

(i) with respect to an antenna tower or support structure that is in the immediate vicinity of an AM antenna system, any change, including the addition or removal of an antenna or mounting platform, that would alter the structure's effective electrical height by 5 degrees or more at the AM station's carrier frequency, as determined by moment method analysis; or

(ii) the addition of one or more antennas or a transmission line to an antenna tower that has been detuned or base-insulated in order to prevent disturbances of the radiation pattern of such AM antenna system as a result of the requirements of this section, or a previously applicable FCC rule.

(2) An antenna tower or support structure is in the immediate vicinity of an AM antenna system if it is greater than 60 electrical degrees in height in the case of a nondirectional antenna, or 45 electrical degrees in height in the case of a directional antenna, at the AM station frequency, and is located at a distance no greater than the lesser of 10 wavelengths or 3 km from any element of an AM directional antenna or less than 1 wavelength from an AM omnidirectional antenna.

(3) Licensees proposing construction of or a significant modification to an existing antenna tower or support structure in the immediate vicinity of an AM antenna system shall examine the potential effects thereof using a moment method analysis. The moment method analysis shall consist of a model of the AM antenna together with the potential reradiating antenna tower or support structure in a lossless environment. The construction or modification shall be deemed to have no adverse affect on the AM antenna system, and no remedial measures will be required, if the model shows that:

- (i) the omnidirectional radiation pattern of the AM station would not be made non-circular by more than 2 dB; or
- (ii) the theoretical radiation pattern of an AM directional antenna would not be distorted outside the licensed standard or augmented radiation pattern.

With respect to an AM station that was authorized pursuant to a directional proof of performance conducted with field strength measurements, the proponent of the construction or modification may, in lieu of the showing described in Paragraph (3)(ii), demonstrate through measurements taken both prior to and upon completion of the construction or modification that (A) the monitor point values of the AM directional antenna do not exceed the licensed values, or (B) in the event that the pre-construction or modification monitor point values exceed the licensed values, the post-construction or modification monitor point values do not exceed the pre-construction or modification monitor point values. Alternatively, the proponent may file for authority to increase the relevant monitor point value after performing a partial proof of performance in accordance with §73.154 that establishes that the licensed radiation limits on the applicable radial are not exceeded.

(4) Absent a showing of no adverse affect as described in Paragraph 3, the proponent of the construction or significant modification shall be responsible for the installation and continued maintenance and proper operation of any detuning apparatus necessary to restore proper performance of the AM antenna system.

(b) *Installation on an AM antenna tower.* A licensee of an AM station employing an omnidirectional antenna shall conduct an antenna impedance measurement after the completion of construction, and if the results show changed conditions, the licensee shall file an application on FCC Form 302-AM to return to direct power measurement. Prior to commencing construction, the licensee of an AM station employing a directional array shall request Special Temporary Authority pursuant to §73.1635 for operation of the antenna system. If the construction and any necessary adjustments to the antenna system result in antenna monitor parameters that are not within the tolerances specified by §73.62(a) or, where applicable, monitor point field strength limits specified in the station license, an application on FCC Form 302-AM (including a tower sketch of the installation) shall be filed with the Commission for the AM station, including antenna measurements as follows:

- (1) if the license was granted pursuant to a proof of performance employing field strength measurements, a partial proof of performance (as defined by §73.154(a)); or
- (2) if the license was granted pursuant to §73.151(a), a new analysis using the modified antenna characteristics shall be performed in accordance with that section.