Industry Trade Association Files Comments to FCC Further Notice of Proposed Rulemaking regarding Level Probing Radar Instrumentation

Williamsburg, VA, May 2012 – For Immediate Release. A group of member companies who manufacture radar level measurement instruments have joined together to obtain a change in the rules of the Federal Communications Commission which would permit the use of such equipment in open air applications.

The Notice of Proposed Rulemaking appeared in the Federal Register on April 30. Follow this link to read the Federal Register Notice. The FCC has released its proposed new rules for "level probing radars" (LPRs) in three bands: 5.925-7.250 GHz, 24.05-29 GHz, and 75-85 GHz. LPRs are downward-aiming radars used to determine levels of materials at industrial installations. Some are mounted inside tanks, to tell the operators how much liquid or solids are inside. Other LPRs are used outdoors – at quarries, for example, to measure piles of gravel, or at nuclear power plants, to monitor the water level in the ponds used to store highly radioactive fuel rods. There are thousands of potential applications. The new rules would apply equally to in-tank and outdoor radars. In its comments, MCAA urged the FCC to preserve the ability to provide equipment under the existing Code Section 15.209 which deals with the 6 gHz band.

The FCC is easing its way into this area very gradually. More than two years ago, it proposed rules to allow in-tank radars in the 77-81 GHz band, and granted a waiver pending the rulemaking. Without having reached a decision on the original questions, the present Further Notice of Proposed Rulemaking expands the proceeding to add outdoor LPRs and more frequency ranges. Up in the nosebleed part of the spectrum, the FCC had earlier proposed radars for airport use at 78-81 GHz, to detect debris on the runways, and a relaxation of the vehicle radar rules at 76-77 GHz to allow non-vehicle applications and higher power.

An LPR typically transmits a train of very short pulses, with relatively long separations in between. For historical reasons, the FCC's technical rules are more hospitable to continuous transmissions, such as those used to carry voice and data signals. The same rules, when applied to a pulsed transmission, effectively require operation at greatly reduced power. That lower power is sometimes adequate for measurement of highly reflective surfaces, but otherwise has largely prevented the successful operation of LPRs.

The newly proposed rules, being specifically geared to LPRs, should allow the downward-aiming transmitter to provide adequate power for a wide variety of applications. To protect other spectrum users from interference, the FCC has proposed much more stringent limits on radio-frequency emissions from the sides of the device and upward. Those stray emissions can be due either to properties of the antenna or to reflections from the material being measured. In the 24.05-29 and 75-85 GHz bands, they are limited to the same very low levels that are permitted for an iPad or a digital toy: 70 billionths of a watt. In the 5.925-7.250 GHz band they must be lower still, at about 3 billionths of a watt.

Attorney Mitchell Lazarus of the firm of Fletcher, Heald & Hildreth prepared a Petition for Rule Change in 2010 but it was not filed because FCC officials elected to issue their own rulemaking—based on MCAA's recommendations. Legal counsel believes that we achieved about 85% of our goal. Although MCAA members waited a year for the FCC to complete its work, the process should still reduce the time (and expense) of reaching the MCAA objective. The Association filed comments on behalf of members on May 30 and will review the comments filed by other interested parties and reply appropriately before the next deadline of June 29. The Association members agreed to exclude installation of this

equipment around certain radio astronomy sites. Many groups which have interests in the frequencies, bands and emissions levels will comment on the proposal as well.

MCAA exists to help the management teams of process and factory automation product and solution providers run and grow successful businesses by offering timely, unique and highly specialized resources acquired from shared management benchmarks where proprietary company information is secure and strategies—like advocacy with regard to regulations affecting level probing radar instrumentation. For more information, contact MCAA at mcaa@measure.org or 757-258-3100.

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