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October 1, 2012

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: Ex Parte Filing
RM-11663
WT Docket No. 11-69
ET Docket No. 09-234

Dear Ms. Dortch:

This is to advise that on September 28, Jose Martin, Executive Vice-President, PowerTrunk, Inc.; Patrick McPherson and Ken Keane, counsel for PowerTrunk, met with Charles Mathias, Special Counsel to Chairman Genachowski, regarding issues presented by the Petition for Rulemaking in the above-referenced proceeding.

The PowerTrunk representatives discussed the background to this filing including the Harris Corporation claim to the effect that Regional Planning Committee ("RPC") coordination of digital technologies using Mask B is "unworkable."[1] Among other things, we noted that the Commission's band plan for NPSPAC channels contemplates 12.5 kHz channel spacing, but 20 kHz authorized bandwidth. In other words, by Commission design, the channel plan for NPSPAC allows radiation of significant amounts of energy on adjacent channels. Thus, adjacent channel coordination is routinely required, and the RPCs have long been accustomed to dealing with this. It was also pointed out that neither OpenSky nor any other digital technology complies with TIA's recommendation on adjacent channel interference for NPSPAC channels owing to the aforesaid Commission design. See attachment for a depiction of the various technologies relative to NPSPAC (12.5 kHz spacing ) and non-NPSPAC (25 kHz spacing) channels.

[1] *See* Harris August 30, 2012 ex parte.

It was further noted that, despite Harris' complaints to RPCs regarding PowerTrunk equipment (e.g. Regions 8 and 29), none of the RPCs has been heard to express concerns about adjacent channel coordination of PowerTrunk equipment, much less that coordination of PowerTrunk's D-LMR is "unworkable."

We observed that D-LMR technology offered superior spectral efficiency vs. data throughput compared to Harris' Open Sky. This results in conserving scarce NPSPAC spectrum as the ratio between the respective technologies' physical bit streams is 1.875 (36 Kbits – PowerTrunk vs. 19.2 Kbits –OpenSky). The result is that PowerTrunk is roughly 40% more spectrum-efficient in NPSPAC than OpenSky in terms of data throughput vs. bandwidth used (i.e. it requires approximately half the frequencies to achieve the same performance). The spectrum conservation enabled by D-LMR benefits RPCs in conducting frequency coordination under the existing Part 90 rules -- especially since end-users in the U.S., including public safety organizations, are increasingly demanding advanced data-centric Automatic Vehicle Location applications (AVL), not only traditional voice-centric solutions.

Given the advantages of D-LMR, we suggested that the Commission may wish to consider developing a new mask or a different standard altogether. While it is PowerTrunk's view that Harris is seeking to use the FCC's processes in an effort to block competition, and that Harris' Petition should be dismissed owing to the lack of supporting test data, PowerTrunk has also suggested that real-world test data be collected to better inform Commission decision-making in this matter. Such data could be helpful for the Commission in determining what course to pursue.

Finally, with respect to interoperability, it should be noted that PowerTrunk is in the process of developing a multi-mode radio for which equipment authorization will be requested in the near future. By use of this technology, any question about the interoperability of D-LMR equipment on NPSPAC channels per Rule 90.203(i) will be resolved.

A copy of this letter is being filed in the above-referenced proceedings.

Sincerely,

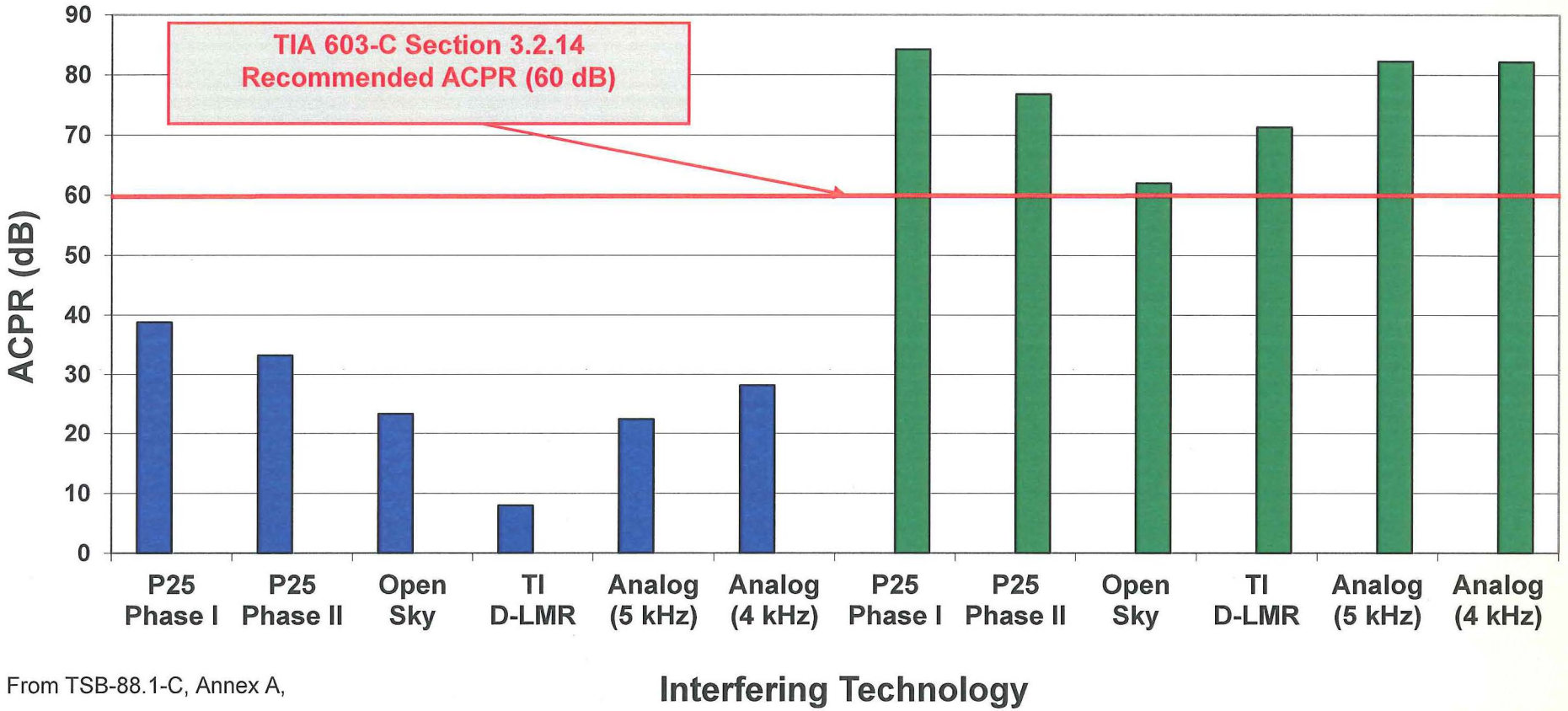
William K. Keane

Cc: Charles Mathias

PowerTrunk

# Interference and Frequency Coordination

## Adjacent Channel Power Ratio for Various Technologies at 12.5 kHz and 25 kHz Channel Spacing




From TSB-88.1-C, Annex A,

**All technologies shown above may cause harmful interference in the NPSPAC band (or any other frequency band) so all technologies need proper frequency coordination.**