

ARCC C-Notes

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Are You About To Lose Your Repeater Site?

Something to think about this month. I have systems at two “managed” towers and have had “obtuse” questions from the management in the past month or so. In both cases they were looking to identify and eliminate excess / unused antennas, mounts and cables from the towers. Couple this with the AT&T win of the First Net contract and you may want to go “Hummmmm”.

I am told that the on-tower load of a band 14 (700 MHz) installation; radios up behind or part of the sector antennas, steel work and the like, is up there with that of a small Volkswagen. Tower static loading can quickly become a major issue. This also applies to LTE upgrades; more weight up on the tower threatening to exceed the tower’s static load limits.

Currently, I am aware of two local towers that have had to turn away paying customers due to the fact that they are already overloaded under TIA 222 G. When TIA 222 H becomes the “law of the land” the overload situation will get far worse as Rev H dramatically increases ALL of the tower loading limits.

Now then, if AT&T is looking for space to site the First Net network the towers they want to use are going to face a possible overload situation and every pound removed from the tower is another pound available for Band 14 equipment.

Which brings us to: (With permission of the Author)

Will You Lose Your Repeater Site?

George Odom Sr. (K4ETN) on July 10, 2016

(<http://www.eham.net/articles/36596>)

Will you lose your repeater site? -- We all, at one time or another have heard of this happening. Yes, it's true. So why, you ask.

My impetus for writing this article is that today I found out our club has until the end of the day this Wednesday to remove our repeater from the site it has been on for over 30 years.

Oh, we can stay on site. But we will have to pay. And pay dearly we would. \$700/month is not in our clubs budget.

Here's how it breaks down:

- 22 feet vertical tower space @ \$25/ft.
(That's under 100 feet AGL, over 100 feet the cost goes up)
- 3 square feet of floor space @ 25/sq. ft.
- Total per month site space- \$700.00

Let's go back at least to the 1960's. Long ago there were privately owned two-way radio shops. These were affiliated with the major two way radio manufacturers.

Many of these owners were hams also, and for them gratis use of their site and tower space wasn't a big deal to them. They wanted to give back to the hobby.

Time marches on. Enter the 1990's. The shop owners are now older. Cell phones are taking over the personal communications market. Nextel comes out with Direct Connect. Wow two way radio and a phone all in a small package!

So, Jims Two Way shop starts to feel the pinch. No new customers that need a base and 3 to 5 mobile radios at \$10/month on a community repeater. Jim starts losing customers because all of their employees now have their own personal phone.

You do see where this is going, right?

So Jim is contacted by ABT Tower Management Company out of DeadEnd, Nebraska. Would you like to sell your tower site Jim?

This is a company of investors who see the future of PCS (Personal Communications Services, read cellular.) They will pay Jim a lot of money and maybe agree to let him keep a certain amount of floor space and tower space for a couple of community repeaters and antennas for a couple of years and then Jim will have to pay for the site just like everyone else.

So, they waved a check at Jim for a lot of money. More than he would make renting out time on a couple of community repeaters. And he took it. Oh, btw the ham repeaters have to go. They aren't producing revenue.

Every foot of vertical space on a tower has to produce monthly revenue. That's why they are in business.

Anyone who has repeaters on a gratis site had best be thankful because this is sign of the times. There is no free lunch anymore.

Your equipment and installation had better be on par with commercial standards. Installation, grounding, lightning protection and the use of circulators, isolators and pass cavities need to pass muster.

Poor engineering practices that cause mixing and interference will get your machine booted off the mountain faster than you can drive down.

Good housekeeping is another item. Cabling run willy nilly, unsecured feedlines, no lightning protection or improperly installed will again put your site space at risk.

If you are getting a free ride, at least do a professional job on your equipment installation. Everyone will thank you.

So here we are, on Wednesday morning we will be taking down our equipment. Fortunately our tech committee has been looking for another site. And we have one. It took a lot of work, and we are at minimum a couple of weeks away, maybe a month from getting the repeater back on the air at its new home.

We will lose 40% of our coverage area due to the new site being 1300 feet lower. It is what it is.

We have to submit a technical document to the building manager. Agree to all the rules they have set forth and every facet must meet with their approval.

Hopefully we will survive for a long time at our new site.

Which brings us to this: If you are on a commercial site, you are at risk. If lose your site and move to another without having filed a Coordination Modification Form you are in violation of the terms of your coordination. It doesn't matter why you moved, it is the fact that you moved from your coordinated location which invalidates your coordination.

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