

2/24/2010

**Regarding: Amateur Radio Communications Amendments to Land Development Code and Local Coastal Program.**

Ladies and Gentlemen,

I am one of the founders of Qualcomm, and presently serve as Qualcomm's chief scientist.

Qualcomm employs 11,354 people in the city of San Diego.

I am a long time resident of San Diego.

The proposed increased regulation of amateur radio antennas will establish a hostile environment for amateur radio in San Diego. In short: Why the hostility?

Perhaps you don't realize the onerous nature of the proposed regulations. Perhaps you are reacting without an understanding of the *benefits* of amateur radio to San Diego.

I will describe a few reasons why it is in San Diego's interest to be friendly to amateur radio, and then examine several of the troubling sections of the proposed amendment.

**Emergency communication / Self-Reliance**

Many will tell you about the benefits of amateur radio in emergency situations. In this regard I will give you only one personal story.

In the devastating fire of 2007, it was difficult to get good current information from official sources. Official city & county web sites were overloaded, mostly inaccessible, and infrequently updated. On this issue, the city & county government really failed us. Reverse 911 failed. At my home the call never came (although it should have, as my neighborhood was officially evacuated). The official sources provided by the city and county of San Diego simply did not work for me.

On television I saw reporters constantly talking, but almost never reporting specific information about fire locations that were relevant to me. Reporters appeared frequently in live shots in front of something burning, but almost never said what street they were on. This was really frustrating. I wanted to know the progress of the fire as it was approaching *me*. I was desperate to know. Television didn't work for me.

Here's what did work for me: Amateur radio.

Using amateur radio, I was able to communicate directly with other individuals, hear discussion among other individuals describing the movement of the fire, smoke conditions, road conditions, traffic, etc. Using amateur radio I was able to follow and know the status of friends, and I was able to know when I should evacuate.

I wish the poor people in hurricane Katrina had more amateur radio. The people of New Orleans learned the importance of self-reliance. The government doesn't always bail you out.

A worse event than the 2007 fire could occur here in San Diego. When it comes, you will wish you had more amateur radio.

Amateur radio allows *individuals* to communicate, without reliance on a cellular or other phone companies, or a local governments. It therefore works when phone companies and governments fail their constituents. Amateur radio is about self-reliance. A good thing in an emergency.

## **Qualcomm**

Qualcomm was built on the art and science of radio communication. Our employees practice this art and science daily in the design and support of our many products. As we built our technical staff over many years, I have given considerable thought to the manner in which these skills are obtained.

The basic education about radio for most engineers of course comes from the university. My father called this sort of knowledge *book learnin'*, a slightly derogatory term intended to poke fun at the awkward lack of practical understanding or intuition that a person with only academic background exhibits.

How does one get practical understanding and intuition in the many disciplines behind the art and science of radio? My answer: Participation in amateur radio.

Amateur radio is really misnamed. It is really *individual* radio. The use of radio by and for the individual. Individuals design, build, and operate radio stations. (Some people do all three, some do only one.) Doing these things themselves, amateur radio operators learn the associated science,

engineering, and skills. For many people, amateur radio has been the activity that first sparked an interest in engineering and electronics.

In my 38 year professional career, I've hired a lot of engineers. I've learned to place a tremendous weight on the presence of amateur radio experience. Amateur radio operators are much more likely to have the natural curiosity, interest in radio science, and self-reliance we need.

If you want to encourage the wireless industry, and its economic benefits to San Diego, one way is to be friendly to amateur radio.

### **Proposed Amendment is Onerous and Poorly Drafted**

You should fear the confusion, huge costs to individual citizens, and lawsuits which the proposed amendment will bring. To make this clear, I have included a few examples.

Your staff means well, but I fear they are used to writing regulations for the construction of buildings and other large projects where the owner may in the ordinary course of business hire architects and lawyers to joust with the city's processes. Amateur radio operators on the other hand are *individuals*, with much more limited resources. Responsible regulation in this case must be much simpler and finite.

Para 126.0404 defines the situations in which a deviation may be approved. Unfortunately, it would appear from this paragraph's wording that the intent of the city is to never approve any deviation. Instead of a concrete set of conditions, this paragraph says that in order to be approved the deviation must be necessary to *reasonably accommodate amateur radio communication*.

The words "reasonably accommodate" were an attempt to appear in compliance with Federal Communication Commission ruling PRB-1, but the words "must be necessary" are problematic. The proposed regulations give no guidance what the test of necessity will be. With no actual specific rule, this paragraph is nothing more than word play. I can imagine standing before the planning commission, plans in hand, being told that I have not *proven* my deviation *necessary* while you admit that there is no method provided by which I could complete such a proof. If necessity is not defined, then it must be matter of opinion. I cannot prove something which is a matter of opinion. This is Kafkaesque. San Diego should not be the city of Kafkaesque regulation.

Perhaps staff misread PRB-1. Its intent is clearly to require the city to reasonably accommodate amateur radio operators. Its intent is not that amateur radio operators should be required to prove necessity. In fact, such is the sort of local regulation that PRB-1 is specifically intended to discourage. Members of the planning commission are urged to read Federal Communications Commission ruling PRB-1 to fully appreciate this twist. Your staff's word play may be setting you up for legal conflict down the road. Surely it is not your intent.

Para 141.0421( C ) of your proposed amendment dictates that antennas near airports must not conflict with FAA regulations. However, if FAA regulations already cover this issue, then there is no need for San Diego city regulations which say I must comply with federal regulations. I must already comply with federal regulations. This would seem to be a redundant entanglement. In addition Federal Communications Commission (FCC) regulations, specifically 47CFR97.15 requires me to coordinate tall amateur radio antennas near airports with the FAA already. San Diego regulations should not be littered with statements that say I must comply with various federal government agency regulations with which I must already comply.

Para 141.0421(E) of your proposed regulation dictates a clearance distance between amateur radio antennas and overhead electrical conductors. This would appear to be already covered by the National Electrical Code (NEC) 810.18 . Redundant. Unless electricity works differently in San Diego than elsewhere, it seems reasonable to allow the NEC to control such issues.

Para 141.0421(H) indicates that certain antennas operated *without structural supports* shall be exempt from permit review. While the intent of the paragraph is appropriate, the wording is faulty. No antenna has yet been designed which can stay in place *without structural supports*. Perhaps it would have to float in mid-air to comply with this exemption. If it were clear that it is the support structures, and not the antennas themselves which are being regulated, perhaps the seemingly impossibility could be avoided.

Para 141.0421(G) requires a building permit for *any* ground mounted amateur radio antenna structures. The drafter clearly did not realize the wide range of sizes and shapes of antennas. For example, if I plant an 8' bamboo pole in the ground in my back yard, with a 1' long antenna on top of it, your proposed rules indicate that I need a building permit. No more consequential than a Tiki torch! (which does not presently require a building permit.)

The intent of 141.0421(H) was to be a de minimis rule. In other words, it was intended to indicate that certain kinds of antennas are of no consequence, and therefore should be excluded from these new regulations. That's a good idea, but it did not go far enough. 141.0421(H) was intended to cover wire antennas, such as might be strung between a tree and a house. There are many other similarly inconsequential antennas which should be similarly exempted. 141.0421(G)(2) is also a de minimis rule, but this time stated in the negative. It exempts small roof-mounted antennas, similar in nature to ordinary television antennas.

A proper de minimis rule would simply and clearly state a set of conditions under which no permit would ever be required. (Each stated in the positive, rather than some stated in the positive and some stated in the negative) This would make it clear that costly regulatory processes are never intended for small or otherwise inconsequential antennas.

### **What's good for the goose...**

While you are proposing the requirement of building permits for small amateur radio antennas, I note that you allow SDG&E to mount antenna structures on the sidewalks, all over San Diego. You have probably seen them. SDG&E's green ground-mounted transformer boxes often have a pole next to them (sometimes 15' or 20' tall) with an antenna on top. These antenna structures are *often directly in front of homes*, and I believe this is being done without permits, without any neighborhood review, etc.

If you really believe that antennas have such horrible visual impact that they require neighborhood reviews, then these same regulations should apply to SDG&E.

I would go as far as to say that the worst possible location from the standpoint of visual impact would be on the sidewalk in front of my home. And yet, you seem to allow this with no concern.

Good regulation should be fair. What is the justification for a more onerous regulation of individuals than a large corporation?

I hope that you will reject the presently proposed amendments.

The San Diego amateur radio community is willing and able to work with the city to establish a better approach.

Thank you,

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