Cohen, Dippell and Everist, P.C.

Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Office of Engineering and Technology	)	ET Docket No. 16-191
Announces Technological Advisory	)	
Council (TAC) Noise Floor Technical	)	
Inquiry	)	

Comments on Behalf of
COHEN, DIPPELL AND EVERIST, P.C.

The following comments are submitted on behalf of Cohen, Dippell and Everist, P.C. ("CDE") and is in response to the Public Notice released June 15, 2016. CDE and its predecessors have practiced before the Federal Communications Commission ("FCC") for over 75 years in broadcast and telecommunications matters. The firm or its predecessors have been located in Washington, DC since 1937 and performed professional consulting engineering services to the communication industry.

The undersigned is licensed as a Professional Engineer in the District of Columbia and has been in continuous employment with this firm or its predecessors for over fifty (50) years.

These submissions are through the courtesy of Frederick R. Vobbe, Director of Engineering, Block Communications, Inc. The newspaper articles included are as follows:

- USA Today dated June 4, 2014 by Trevor Hughes entitled, "Pot Growers' Lights Interfering With Ham Radio Chats"

- Wall Street Journal, March 11, 2014 by Thomas Gryta entitled, "FCC Agents Trace Radio Interference to Doorbells, Videogames, Blankets"
- The Woodinville Weekly, dated May 27, 2014, The Northlake News/The Valley View, by Briana Gerdeman, entitled, "Resident Causing Radio Interference Faces Steep Fines"

Respectfully Submitted,

Donald G. Everist

Date: August 8, 2016

Attachment

Pot growers' lights interfering with ham radio chats

Trevor Hughes, USA TODAY *6:12 p.m. EDT June 4, 2014*

(Photo: Trevor Hughes, USA TODAY)

BOULDER, Colo. — A few years ago, retired electrical engineer Tom Thompson noticed it was getting harder and harder to hear his friends across the country talking to him on their ham radio sets.

So Thompson built a portable antenna system so he could walk his neighborhood and track down whatever was interfering with his radio transmission. The culprit? Marijuana grow operations, whose powerful grow lights can emit interference blocking radio broadcasts on the ham and AM spectrums.

The first grower he encountered wasn't pleased to know Thompson, now 73, could tell exactly what was going on. "He said 'what are you going to do, call the cops?' " Thompson said. "And I said, well no, it's a federal matter."

STORY: Pot growers face charges -- in state where pot is legal (/story/news/nation-now/2014/05/19/marijuana-washington-kettle-falls-five/9031751/)

With 22 states and the District of Columbia allowing medical marijuana, and Colorado and Washington permitting recreational use, there's been an explosion in the number of people growing their own pot, much of it indoors. With that growth has come increasing interference from the grow lights, which suck down huge amounts of electricity to shine upon budding marijuana plants. Growing pot indoors is usually more secure and gives the grower more control over light, water and insects, which results in higher-quality plants commanding a premium price.

The interference problems from one type of system have gotten so bad that the amateur radio association, ARRL (http://www.arrl.org/), filed a formal federal complaint on behalf of the country's 720,000 licensed ham operators. The problems are worst in Colorado and California, said Sean Kutzko, an ARRL spokesman.

The interference is caused by what are known as "ballasts," electronic systems controlling the grow lights. Unless they're properly shielded, the ballasts can throw off a wide range of interference. For ham radio operators in the area, it's like trying to have a conversation during an intense thunderstorm.

"We're not concerned about what people are using the grow lights for," Kutzko said. "But we're seeing numerous cases ... and that's causing us a problem. We just want to make sure the manufacturers are in compliance with FCC laws."

The Federal Communications Commission has the power to regulate anything that interferes with licensed radio transmissions, such as ham sets, but also cell phones and AM radios. It often sends letters to people suspected of causing interference, and also can send agents out to knock on doors, Kutzko said.

In a statement, FCC spokeswoman Kim Hart said she couldn't address the specific complaint filed by AARL, but said the FCC is aware of the problems caused by certain grow lights.Thompson said he's also tracked down interference from traditional halogen lamps and even a neighbor's camcorder.

Thompson said he recognizes that federal regulators probably have better things to do than force marijuana growers to change their lights, so he found his own solution: He created a $20 cable shield he gives out to anyone whose operation is interfering with his radio.

"If I can track this down, anybody can track this down," he said. "If I listen long enough, I can tell when they turn the lights off ... you can tell exactly when the harvest is."

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THE WALL STREET JOURNAL.

A-HED

FCC Agents Trace Radio Interference to Doorbells, Videogames, Blankets

When Signals Interfere With Cell Towers or Radio Broadcasts, Agents Crack Down

A Woodstock, N.Y., animal sanctuary's electric fence caused interference. *DEREK GOODWIN*

By **THOMAS GRYTA**

March 11, 2014 10:30 p.m. ET

A federal agent who shows up unannounced at a building along a Texas highway might be looking for any number of things: illicit drugs or immigration violations, say, or illegal firearms.

Or fluorescent lights.

Which was what the agent had in mind who walked into the Perfect Cuts salon in San Antonio last July. The lights were violating communications regulations.

The agent had used signal-tracking equipment to home in on the offenders and told the owner, Ronald Bethany, that his lights emitted radio signals that interfered with an AT&T Inc. cellphone tower.

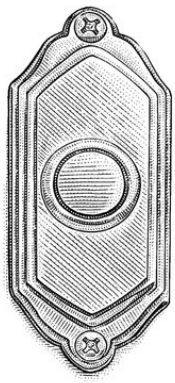
That violated Federal Communications Commission rules protecting airwaves licensed to AT&T, the agency determined. Mr. Bethany didn't have a license to operate on that frequency, the FCC agent told him, so his fixtures needed to go.

"I told them 'OK, but who is going to pay for this?' " Mr. Bethany says. "I've got to use the lights."

Interference can be serious business. In 2012, hedge-fund mogul Philip Falcone's wireless venture, LightSquared Inc., filed for Chapter 11 bankruptcy after the FCC determined it would interfere with GPS signals.

The mixed signals aren't always so weighty. In recent years, the FCC has issued warning letters directing people to stop operating cordless phones, television sets and wireless cameras.

Last June, an FCC letter to a Springfield, Ore., address warned that "harmful" interference had been traced to the property and that the operator may have to "cease operation" of the device: "possibly a bad doorbell transformer."



That 2013 letter lists other common culprits, including aquarium heaters. Similar letters in 2012 went to several operators of videogame consoles. "This unresolved problem," the letters typically warn, "could result in a monetary forfeiture."

The FCC can demand fines up to $16,000 a day or $112,500 an incident from people who aren't FCC licensees. Offenders usually rectify problems, the FCC says, often working them out with whomever is complaining.

Managing the radio spectrum "has been part of our core mission since the inception of the FCC in 1934," says Julius Knapp, head of the agency's Office of Engineering and Technology.

Most anything electrical can violate. "Incidental radiators," in FCC lingo, are devices like electric motors that aren't built to generate radio signals but do anyway. "Unintentional radiators" are designed to generate signals within devices like computers but aren't supposed to broadcast. "Intentional radiators" like cordless phones can transgress when they transmit outside intended frequencies.

Agents arrived at Shelton's Auto Lube and Auto Wash in Fortuna, Calif., in 2008 looking for signals disrupting AM broadcasts. They traced them to Shelton's carwash equipment.

"I didn't know anyone listened to AM radio anymore," says owner Odell Shelton. The FCC told him a driver complained about car-radio reception. It took a few days to find and fix the problem.

The government doesn't much care why interference happens. To the FCC, noise is noise.

In a 2013 letter, the FCC wrote to the owner of a plasma TV set after a ham-radio operator complained to the agency of interference. "Continued operation of the television," warned the letter, from which the TV owner's identification is redacted, "is not legal under FCC rules."

It doesn't matter how far bad signals extend. The FCC pressed Perfect Fit Industries into a consent decree in which the Charlotte, N.C., bedding maker agreed to develop a compliance plan and pay a $7,000 fine in 2005 after some of its electric blankets caused interference, FCC documents show. Perfect Fit didn't respond to inquiries.

"Just because it doesn't go very far," says the FCC's Mr. Knapp, "doesn't mean that we don't need to fix it."

Ham-radio operators are a frequent source of complaints. A 2012 FCC letter told a Pomona Park, Fla., resident to stop using a well pump that conflicted with

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- The Only Way to Double Your Phone's Battery Life (http://online.wsj.com/news/articles/SB10001424052702304250204579433091516464418)
- Comparing the Taxi Competitors (http://online.wsj.com/news/articles/SB10001424052702304250204579433113467536876)
- The App That Tells You How You Feel (http://online.wsj.com/news/articles/SB10001424052702303824204579421242295627138)
- Why the Rise of the Robot Workforce Is a Good Thing (http://blogs.wsj.com/digits/2014/03/10/why-the-rise-of-the-robot-workforce-is-a-good-thing/)

amateur-radio frequencies.

A 2009 letter warned Woodstock Farm Animal Sanctuary, Woodstock, N.Y., that its electric fence was causing interference for a ham-radio operator and noted it had been warned before.

"We didn't want our rambunctious, dark-colored, 2,000-pound steers pushing down the fence, wandering onto the adjacent state road and causing a deadly accident," says sanctuary co-founder Doug Abel.

"Right next door, our ham-radio-loving neighbor has a 60-foot high antenna that would allegedly pick up a clicking sound from our fence." He installed hardware to damp the signals.

Private signal sleuths, too, hunt down errant emissions. Jay Jacobsmeyer, president of wireless-engineering consultants Pericle Communications Co., investigates interference at 150 to 200 cell sites a year, mostly for wireless clients. His team last November faced a puzzling signal in San Diego that would pop up, disappear for weeks, then resume.

Using directional equipment, it identified a cordless phone on a yacht that occasionally visited, Mr. Jacobsmeyer says. The skipper agreed not to use the system in port.

Radio hobbyist Tom Thompson of Boulder, Colo., last year tracked a signal using a homemade contraption. After knocking on the suspect's door, he traced it to ballasts on marijuana grow-room lights. He says he built a filter that the grower

agreed to use.

Ballasts are frequent offenders. Makers of the components, which regulate electricity to bulbs, test them for FCC compliance. Some interfere anyway.

Ballasts earned Brookfield Office Properties Inc., the real-estate company, a citation last month at one of its Los Angeles buildings where lights were interfering with a Verizon Communications Inc. cell site. The FCC had warned Brookfield in May, asking for progress reports, but it received none, the new letter said. It warned of fines and possible equipment seizure or jail time.

A spokeswoman for Brookfield says it tries to resolve issues regarding its properties but doesn't comment on "regulatory matters."

The lights at Perfect Cuts in San Antonio came from General Electric Co., which in 2011 found some of its ballasts caused interference, a spokesman says. GE has offered to replace those ballasts free of charge.

Mr. Bethany says he initially declined GE's offer. But when an FCC letter after the agent's visit mentioned a possible $16,000-a-day fine, he swapped ballasts.

He still doesn't see why he needed to, given that his 18-year-old shop predates the cell tower. "I was here first."

Write to Thomas Gryta at thomas.gryta@wsj.com

The Woodinville Weekly
The Northlake News | The Valley View
Community Newspapers Since 1976

RESIDENT CAUSING RADIO INTERFERENCE FACES STEEP FINES

27 May 2014 10:48 | Written by Briana Gerdeman |

A Woodinville man was cited by the Federal Communications Commission for causing radio interference, apparently caused by a lighting device. He faces fines of up to $16,000 per day if he doesn't stop the interference.

The FCC began investigating Thomas Edward Rogers about a year ago, after amateur radio (also known as ham radio) operators complained about the interference. FCC agents visited his property twice to measure the radio signals. According to the citation, Rogers hasn't responded to the FCC's multiple attempts to contact him by phone and in writing over the past year.

The Weekly's attempts to contact Rogers were also unsuccessful. The Seattle Office of the FCC also didn't respond to requests for comment.

Grant Hopper, an attorney and ham radio operator in Everett, is a member of the Snohomish County Hams Club. As a volunteer counsel for the American Radio Relay League (ARRL), "I assist amateurs in dealing with exactly these sorts of problems," he said.

Hopper explained that it's not uncommon for consumer devices to cause radio interference because the appliances are poorly made, but this case is worse than most.

"This is not an ordinary case of just a little bit of interfering noise," he said. "...This is pretty close to the equivalent of someone screaming in a quiet room."

Fluorescent lights use a device called a ballast, which jump-starts the ionization of the light, taking ordinary wall current and helping the light start operating, Hopper said. However, the ballast can cause radio interference, especially if it's cheaply made.
The radio interference emanating from the device is probably causing problems with WiFi and AM and FM radio, Hopper said. It could also interfere with the efficient operation of cell phones, making the difference between a good and a bad connection or causing the phone to use more power and drain the battery more quickly. In a typical case, interference can be heard a few houses away; Hopper believes the interference from Rogers' house can be heard up

to half a mile away “When you consider that somebody’s life may be on the line...We have several local hams involved in rescue,” Hopper said.

For example, a helicopter flying overhead might not be able to make contact with the base, said Kim Torp-Pedersen, a ham radio operator in Bellevue and a member of the Western Washington Regional Interference Committee, which seeks peaceful solutions to interference problems.

Both Hopper and Torp-Pedersen said this case is especially vexing because the interference is on the 40 meter frequency, which works better and is used more often at night — the same time lights are on, causing interference.

Hopper said ARRL, after receiving an anonymous complaint about the interference from Rogers’ property, sent a courtesy letter to Rogers offering to help resolve the problem. When he didn’t respond, ARRL turned the investigation over to the FCC, which issued a citation when Rogers didn’t respond.

“That’s kind of a serious step,” Hopper said. “Mostly, because people are responsive and want to work things out, the FCC will take a lesser step.”

According to the citation, Rogers has 30 days after the citation was issued on April 23 to respond to the FCC, saying that he has stopped operating the incidental radiators and describing the actions taken to eliminate harmful interference. The FCC couldn’t be reached to determine whether or not Rogers responded.