CASE REPORT - EB-07-SF-057

Run Date: 9/8/2009

Start Date: 4/11/2007
ClosedDate: 5/22/2007 Status: CLOSED Region: RF Office SF SolDate: Type:
HQ#: Suspense Date 7/1/2007 Complainant: [redacted] Federal Aviation Administration
Case Agent: [redacted] Response Time: 1 DAY(S) Subject: Irving Levine

COMPLAINANT					SUBJECT	
Name/F-L:	[redacted]	Geo: NVR	nvr Geo		Name/F-L:	IRVING LEVINE
Company:	FEDERAL AVIATION ADMINISTRATION	Freq: 2780.0000	Fre		Company:	
Address:		Call:	Call		Address:	[redacted]
City:	Los Angeles ST CA	Method: PHONE	- - 0 FRN		City:	Reno ST: NV
Pri Phone:	[redacted] Zip	Entity: Archived	Archived Ent		Pri Phone:	Zip [redacted]
Fax/Aux:		To: Archived	Archived Fro		Fax/Aux:	
Email:		Safety: Non-Safety	None Spec		Email:	
Phys. Add.:		Complt: YES	FAAIX Util		Phys.Add.:	
		IX: YES	Loc:			
		Confid: NO	Mas			
		Cong.: NO	ASR			
		InfoTrs: NO	Lat			
			Lng			
			Reno XCit			
			NV XState			

Complainant Notes

[redacted] AA
[redacted] FAA
Apple contact: [redacted]

Subject Notes

Case Summary:

Received report from FAA that it was receiving IX to RADAR operations in Reno, NV.

WORK EVENTS

EventDate	Agen	Event Type	WeUtility
4/11/2007	[redacted]	OPEN	

Prob.Resolution: [redacted] called and said the FAA has been having some IX to their RADAR in Reno. He is in Annapolis, MD at a conference and didn't have much details. In the past they had some IX from a Multipoint Distribution System and wonder if that might be the case again. The IX is occurring in the mornings for about an hour from 8:30 am to 9:30 am. The IX is at a bearing of 180 to 185 degrees. The tech in Reno, [redacted], was not able to see the IX with just a s/a so wasn't able to do any further df. The bearings were obtained from turning the RADAR off and using the system to act as there receiver. They have another tech flying in on Saturday taking an amp and portable "more powerful" antenna. The tech, [redacted], will be working on the case on Sunday. [redacted] apparently did a report on the IX and we can have that sent to us. If [redacted]s not able to find the IX on Sunday, Sidney is wondering if we will have someone available to come up on Monday to work on the IX. [redacted]is planning on being around until at least Wednesday.

4/11/2007 [redacted] UPDATE

Prob.Resolution: Discussed case with FAA[redacted] IX is to Reno terminal radar on Ch A at 2780 MHz. Is taking consistent hits every morning. Causes radar display to strobe at 180-185 deg. FAA tech has run radial with s/a but cannot detect. IX is intermittent but seems to be fairly consistent in the morning hours. FAA Reno has done a poor job of logging events. Part of the problem is that they can log when seen on Ch A, but once they shift to Ch B they do not have a way of monitoring CH A to determine IX activity.

FAA is planning to shut the radar down on Sun so observations can be made by FAA team (NJ tech and Sacto tech). [redacted] requests that we participate.

FAA is trying to avoid a full outage. They have had to shift to Ch B numerous times and do not like being without a backup radar channel. IX has been up for several weeks (more than a month).

FAA contacts will be [redacted] and [redacted]

4/12/2007 [redacted] UPDATE

Prob.Resolution: Called [redacted] and left a message on his voice mail about 10:45

Called [redacted] He is shipping an investigation package to Reno. It consists of an analyzer, amplifier, antenna and a DF system. He is arriving in Reno at about 3 pm Saturday. He said that he has done some preliminary research of licensees in the area; there are a lot. He looked out as far as Slide Mountain and has 40 pages on just that mountain top if I understood him correctly.

They do not have a real good idea of a pattern for the problem. The radar system automatically switched frequencies if there is a problem. He plotted the location of the transmitting/receive site and it is west of the main runway near where the third runway crosses.

The radar antenna has a gain of about 25 dBM and a working noise floor of about 60 dB. The local tech [redacted] was able to see the signal about 20 db above the noise floor, -40 dB but had about an amp with about 3 dB of gain plus the 25 dB of the antenna.

4/13/2007 [redacted] UPDATE

Prob.Resolution: Received email copies of the technical report of the problem from [redacted] and [redacted]. Reviewed same. Seems there is a second problem with a 340 degree azmith. 185 problem has been ocurring since mid February.

4/14/2007 [redacted] ON SCENE

Prob.Resolution: Traveled to Reno. Upon arrival, spent three hours driving the line of bearing looking above and below the radar frequency. Theory is that the signal may be on all the time and drifting in and out of the receiver band pass. No signal located.

4/15/2007 [redacted] ON SCENE

Prob.Resolution: Met with FAA representatives and their RFI folks. Radar operates in a redundent mode on 2.71 and 2.78 GHz. There is a five microsecond delay on the receiver before it recovers and is able to receive. This equates to about a half mile blind spot around the radar site. The receive threshold is -108 DB so any signal above that level is likely to cause interference. Rotation rate is about every 4.8 seconds. Channel A is 2.78 channel B is 2.71. Receive band pass is 1.6 Mhz so + or minus 800 Khz.

Also obtained logs of activity times for the previous week or two.

At nine am the strobing started. Left the building and lit off the equipment but the interference only lasted a minute.

FAA rep. similarly equipped. They were using a 23 DB gain antenna along with a 35 db ampifier and the same model R/S analyzer.

Divided the radial in half I worked closer to the radar station while [redacted] took the area farther out.

No more activity during the day. But got called at 9:00 pm that the strobbing was on again. It was off before I got out of the parking lot.

4/16/2007 [redacted] ON SCENE

Prob.Resolution: Signal on for short durrations maybe a minute at a time. At 7:00 AM 11:00 am 3:00 pm then at 5:45 and about 6:00 pm. Neither [redacted] or agent hora were able to hear the signal.

Tried going to high ground to locate. Sept 360 degrees at the three o'clock event and not signal observed.

4/17/2007 [redacted] ON SCENE

Prob.Resolution: Signal on again for short durations - one or two minutes at most. Tried again for high ground and made arrangement to go to the top of Rattlesnake mountian. Faa rep went with me. Rattlesnake mountain is just off the airport and to the east. It gives about a 700 ft or higher view of the Reno area. On the way up, about 11AM the signal came up. We called [redacted]

[redacted] observed a signal above the radar 2.7816 GHz that came up and drifted around and in and out of the band pass. He was about 4 - 5 miles along the bearing line. Met with [redacted] at the Arrow Creek Golf Course Gated Community.

[redacted] departed about 4:30 PM as he has a flight in the morning and needed to pack his gear and return his rental etc.

Signal up and is causing interference. Time is about 5:00 pm Started to Track with the DF and eliminated the immediate area. Went off before I could track it down. On about 3 three minutes. Am proabably within a half mile or closer.

No further activity. This date.

4/18/2007 [redacted] IX RESOLVED

Prob.Resolution: Signal was on at 7:10 I was about a mile from the suspect location.

Signal came on again at about 8:15 and stayed on long enough for me to isolate to a house, but went off the air before I could be certain. Location appears to be [redacted]. Called [redacted] and provided license plates asking for infromation on the residents.

About 9:30, signal came up and I was able to watch it drift into the radar band pass. Received a call from the FAA that inteference was active. Drove to the residence and with the aid of an analyzer and a horn determined that the sigal was strongest at the right portion of the residence. A Male resident, Mr Irv Levine, came out to see what was amiss.

The agent identified himself, explained what was going on and asked permission to bring in some portable equipment to locate the signal. Mr. Levine granted permission. Upon entering the residence he took the agent into an office space to just inside and to the right of the entry. The signal peaked when entering the room. Using a horn antenna the agent checked the two computers and found the singal strongest at a 17 inch apple I-mac. Checking the cable and an attached printer (the printer was not on), confirmed that the signal source was the Imac. The computer was connected to the internet through a DSL connection. Turning the machine off caused the interfering signal to go away.

The agent asked Mr. and Mrs. Leving to turn it back on. Shortly, after about 2-3 minutes, a signal measuring about -79 DB came back on. It was drifting up and down the spectrum. This time it did not drift into the radar receiver's band pass.

The Levine's then called the 800 Apple assist line who after speaking to the agent made an appointment with the local Apple store about 10 minutes away.

Further interviewing revealed that Mrs. Levines use of the computer approximately coincided with recent interference times. On Sunday she checked email about 9 am when she arose and 9 pm when she retired for the evening. Similarly about four times on Monday coinciding approxamately with the interference. Finally she had been using the Imac when I was attempting to locate the signal source.

Photographed the computer, recorded the make, model number and serial numbe of the computer. It was a 17 inch I-Mac Serial number W864610VWRW.

The residence is along the 180 to 185 (magnetic) cone where the interference source showed up on the radar screen.

With the residence in line with the interfence bearing, the times of use coinciding with the interference, the signal from the computer synchronizing to the interference, the agent wrote a NOUO and gave a copy to Mr. Levine and departed the residence. Also informed him that he would be getting a formal citation at a later date. Mr. and Mrs. Levine were also verbally warned against operating the computer until it was checked and no longer caused interfernce.

Drove to the FAA TRACOM and informed them the source was found and disabled.

Called supervisor who sent me to the Apple store where the computer was to be taken. - he wanted a photograph of the label and to make sure that the apple store did not check the computer and return it as functioning correctly. Arrived at the apple store and met with the manager, [redacted], who took me to the back where the machine had not as yet been turned on. Photographed the label and discussed the situration.

Manager agreed that the machine should be sent out for evaluation.

Departed Reno.

Checked Cell phone after arriving at residence to find telephone call from one [redacted] of Apple computer (Sacramento). He requested that I come back up and check the machine for emissions before they return it to the owner. They replaced the two wireless cards inside the machine... [redacted] indicated that by serial number the computer should have a processing speed of 2.0 GHZ but could be operating at 2.16b gig.

Told him that was unlikely I could return to Renol, but I would have someone from the FAA call him so they could test with the apple people that the machine did not cause interference.

Called the FAA and spoke with [redacted] who agreed to make arrangements for testing.

4/19/2007 [redacted] UPDATE

Prob.Resolution: After a discussing this matter with District Director, Called [redacted] at Apple Computer in Sacramento. [redacted] Requested that they ship the computer to Sacramento with original wireless cards. He agreed but he said that it will go to Apple HQ Cupertino lab. Said we may want take some measurement on the machine.

Prepared report for [redacted] Provided photos of equipment and OET cert info.

4/19/2007 [redacted] UPDATE

Prob.Resolution: Discussed case with [redacted] Reviewed and discussed case summary with [redacted] and [redacted] Provided update to [redacted] and [redacted]

Advised FAA - [redacted] regarding the results of the FCC Investigation and that the IX had been located and eliminated.

4/25/2007 [redacted] UPDATE

Prob.Resolution: draft citation sent to [redacted]

4/26/2007 [redacted] UPDATE

Prob.Resolution: Called apple to see if the computer reached cupertion as yet and been tested. [redacted] says it is still in transit...

5/11/2007 [redacted] UPDATE

Prob.Resolution: Called [redacted] @ apple in Sacramento. Last time we talked, about two weeks ago the computer was in transit to cupertino. [redacted] said the machine is now in cupertino although he does not know the status. Advised we do want to see the machine to take measurement and would like to know the actual cause.

5/16/2007 [redacted] UPDATE

Prob.Resolution: Called [redacted] @ apple asking for status of the computer and additionally a contact number in Cupertion to schedual a visit.

5/18/2007 [redacted] UPDATE

Prob.Resolution: [redacted]lled this morning. He was in Fresno all week and did not check voice mail until returning to his office this morning. He told me that someone from Apple should call me today or Monday at the latest. He did not have a number to give me.

Immediately after his call, and I mean I barely placed the phone on the receiver, the phone rang and it was [redacted] of the EMC unit. They ran tests with the machine and found no problems. However, I asked if they had cracked the machine and run the tests with the machine open. They had not. Also the store in Reno cracked the case and replaced the two wireless cards, Airport and Bluetooth.

Want to say the case uses a Mylar seal impregnated with a ferrous material to create the seal around the case. At least that is the way I understood it. When one opens the case, the seal is destroyed. They did check the seal and found it to be intact. However they and I are not sure if the apple store in Reno would have replaced the seal when they cracked the case to replace the cards.

They do have all of the original equipment that came with the machine: wireless keyboard and mouse plus the original wireless cards.

Anyway they are amenable to having us go down and inspect the unit. They are pretty much free Wed. through Friday mornings next week. Told them I would try to schedule for Wed morning and would call back either later today or Monday to schedule.

Oh, and yes I did get a number for [redacted]

5/21/2007 [redacted] UPDATE

Prob.Resolution: Called Apple Inc. and spoke with [redacted] The appointment is set for 9:30 on Wed. Location is as 20650 Valley Green Drive in Cupertino. From there we will drive to the anechoic chamber site and examine the machine.

Did ask, and learned, that they have a program that exercises all parts of the computer when they are testing it. The program writes and reads to all the various internal output devices and ports. Also [redacted] described the gasket for the case to be similar to a silver coated potato chip bag.

5/21/2007 [redacted] UPDATE

Prob.Resolution: [redacted]eleases citation.

5/22/2007 [redacted] CLOSED Archived

Prob.Resolution: Citation released and mailed.

5/23/2007 [redacted] UPDATE

Prob.Resolution: [redacted]and [redacted]visited Apple Computer 10 meter anechoic chamber and spoke with [redacted]l. [redacted]demonstrated how a DUT is tested and went through the tests with the suspect computer. Did not identify the cause for the IX on 2.781 GHz - no IX seen. Under testing the aircard frequency was apparent on 2.4 GHz and also the first harmonic on 4.8 MHz. Initial test were in peak detection mode and only these frequencies were noticeable above the limit line. Also spoke with [redacted] who is the RF engineer. Field strength measurements were being made with a horn antenna and a notch filter for 2.4 GHz was placed in line just before the amp and after the horn antenna. This showed the aircard notched out but the harmonic remained but at a lower level. The peak value was exceeding the limit line. A carrier was also now evident at 1.79 GHz, this was probably the microprocessor. Measurements were made on the harmonic to determine its average power and was found to be well within the required limits for FCC certification. Al their equipment is calibrated, analyzers each year.

6/4/2007 [redacted] UPDATE

Prob.Resolution: Response received 6/4/07. Response and case passed to [redacted]

RULES VIOLATED

6. Pursuant to Sections 4(i), 4(j), 308(b) and 403 of the Act, Levine is directed to provide the documents and information specified herein, within 30 calendar days from the date of this Citation:

a. Explain efforts made to discontinue operation of the device until the device has been replaced.

b. Send a statement on the actions taken to ensure the interference will not recur.

7. Levine may request an interview at the closest FCC Office, which is Federal Communications Commission, 5653 Stoneridge Drive, Suite 105, Pleasanton, California 94588.[7] You may contact this office by telephone, (925) 416-9717, to schedule this interview, which must take place within 14 days of this Citation. Levine may also submit a written statement to the above address within 14 days of the date of this Citation. Any written statements should specify what actions have been taken to correct the violation outlined above. Please reference file number EB-07-SF-057 when corresponding with the Commission.

8. Any statement or information provided by you may be used by the Commission to determine if further enforcement action is required.[8] Any knowingly or willfully false statement made in reply to this Citation is punishable by fine or imprisonment.[9]

9. **IT IS ORDERED** that copies of this Citation shall be sent by First Class U.S. Mail and Certified Mail, Return Receipt Requested to Irving Levine at his address of record.

FEDERAL COMMUNICATIONS COMMISSION

Thomas N. Van Stavern
District Director, San Francisco District Office
Western Region
Enforcement Bureau

copies attached showing replacement by Apple of computer causing interference

[7] 47 U.S.C. § 503(b)(5).

[8] *See* Privacy Act of 1974, 5 U.S.C. § 552a(e)(3).

[9] *See* 18 U.S.C. § 1001 *et seq.*

Apple Store, Summit Sierra
13925 S. Virginia St Space # 220
Reno, NV 89511
summitsierra@apple.com
775–333–5460

April 19, 2007

IRVINE LEVINE

old computer causing interference

IMac **17/2.0/1G/160/SD/AP/BT/WLKBM** Part Number:MA758LL/A Serial Number:W8646 10VWRW	**($ 1,259.00)**

IMac **17/2.0/1G/160/SD/AP/BT/WLKBM** Part Number:MA758LL/A Serial Number:QP7 1102LWRW Warranty effective through Apr. 17, 2008 Return Date:May. 03, 2007 $ 125.90 fee if opened For Support, Visit:– APPLE.COM/SUPPORT	**$ 1,259.00**

replacement computer provided by Apple

Sub–Total	$ 0.00
Total	**$ 0.00**

R186103331 7

Tell us about your experience at the Apple Store. Visit www.apple.com/feedback/retail.html

GENIUS BAR

Please retain this document for your records.

1-800-APL-CARE
Date: 2007-04-18

Apple Store Summit Sierra
Tel. 775-333-5460
www.apple.com/support

Genius Bar Work Authorization

Customer Information

Repair No: R11556718

[redacted] levine
[redacted]

Daytime Phone: [redacted]
Evening Phone:
Email Address: [redacted]

reno, NV [redacted]

Product Information

Model: IMAC (17-INCH LATE 2006)

Serial No: W864610VWRW

Date of Purchase: 12/23/2006

Warranty Status: In Warranty

Problem Description/Diagnosis

FCC reports computer is broadcasting illegal signal that is interfering with air
ISSUE: FCC reports computer is broadcasting illegal signal that is interfering with airport radar
ACCIDENTAL OR COSMETIC DAMAGE: no
POSSIBLE LIQUID DAMAGE: no
STEPS TO REPRODUCE: see letter from FCC attached
PROPOSED RESOLUTION: investigate
DATA TRANSFER NECESSARY: __no__(initial here)
ESTIMATED COMPLETION DATE: 4/21/2007

Hunter Halcomb - Summit Sierra/R186 - 7753335460 - Jason Rowe

Apple received computer causing interference

Repair Estimate

Quantity	Item Number	Description	Amount Due
1	*718908346761*	HARDWARE REPAIR-LEVEL 2	$ 0.00

Totals : $ 0.00

If you do not authorize repair, a labor fee will be charged.

_____ [Initial here] I acknowledge that service may be subject to a $100 USD diagnostic fee as described in the attached Repair Terms and Conditions, and agree that either I have made a backup copy of my data and removed any confidential, proprietary or personal information and removable media such as floppy disks, CDs or PC cards, or I have assumed the risk that such information or media may be lost, corrupted or compromised during service or repair. I further acknowledge and agree that Apple cannot guarantee the safety, security or integrity of any data that remains on my computer while undergoing service or repair and that Apple shall not be liable for any loss, corruption or breach of such data, including any confidential, proprietary or personal information or removable data.

Notice to Consumer: Please read important information on back.
The terms and Conditions of this agreement can be found on the reverse side of this page. Please read and understand all these Terms and Conditions before signing this Agreement
I acknowledge that I have read, fully understand, and agree to all the Terms and Conditions of this Agreement.

Customer name :_____ Received By:_____

Signature: _____ Date: _____

Important! See Terms and Conditions on the back.
800-APL-CARE, www.apple.com/support

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	File No.: EB-07-SF-057
Irving L. Levine	)	Citation No.: C20073296005
Reno, Nevada 89511	)	

CITATION

Released: May 22, 2007

By the District Director, San Francisco District Office, Western Region, Enforcement Bureau:

1. This is an Official Citation issued pursuant to Section 503(b)(5) of the Communications Act of 1934, as amended ("Act"),[1] to Irving Levine for violation of Section 15.5(b) of the Commission's rules ("Rules").[2]

2. Investigation by the Enforcement Bureau's San Francisco Office revealed that on April 18, 2007, Irving Levine operated a desktop computer, a Part 15 device,[3] which caused interference to a Federal Aviation Administration radar station.

3. Section 15.5(b) of the Rules states "[o]peration of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused . . . ."[4] Levine's operation of the desktop computer violates this section.

4. The San Francisco Office received a complaint of interference to radar reception at Reno Tahoe International Airport, Reno, Nevada. A San Francisco agent used radio direction finding techniques to determine that the source of the interference was at Levine's residence and an on-off test confirmed that the computer generated a spurious radio signal that caused the interference.

5. Violations of the Act or the Commission's Rules may subject the violator to substantial monetary forfeitures,[5] seizure of equipment through *in rem* forfeiture action, and criminal sanctions, including imprisonment.[6]

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[1] 47 U.S.C. § 503(b)(5).

[2] 47 C.F.R. § 15.5(b).

[3] 47 C.F.R. § 15.1 *et seq.*

[4] 47 C.F.R. § 15.5(b).

[5] 47 C.F.R. § 1.80(b)(3).

[6] 47 U.S.C. §§ 401, 501, 503, 510.

Mr & Mrs Irving Levine
[redacted]
Reno, NV [redacted]

RENO NV 895
PM
MAY 30

FCC
5653 Stoneridge Dr Suite 105
Pleasanton CA 94588-8543

94588+8543-30 C088

FEDERAL COMMUNICATIONS COMMISSION
ENFORCEMENT BUREAU

Mailing Record

DATE:	4/23/07	**CASE #:**	**EB -07 - SF - 057**	**AGENT:**	TV
SUBJECT:	Irving L. Levine				

Mailing Address:

Irving L. Levine
[redacted]
Reno, NV [redacted]

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:

Postage	$ 41
Certified Fee	265
Return Receipt Fee (Endorsement Required)	215
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 5.21

Postmark Here
RNO CA 89508
MAY 22
USPS

Name (Please Print Clearly) (To be completed by mailer)
Irving L. Levine
Street, Apt. No.; or PO Box No. [redacted]
City, State, ZIP+ 4
Reno, NV [redacted]

PS Form 3800, July 1999 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Irving L. Levine
Reno, NV [redacted]

RECEIVED
JUN 05 2007
FCC SAN FRANCISCO

COMPLETE THIS SECTION ON DELIVERY

A. Signature [redacted] ☐ Agent ☐ Addressee
B. Received by (Printed Name) [redacted] C. Date of Delivery 6/5/07
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7099 3220 0002 6510 9735

PS Form 3811, February 2004 Domestic Return Receipt

102595-02-M-1540

UNITED STATES POSTAL SERVICE.

Find a ZIP + 4® Code By Address Results

You Gave Us
[redacted]
RENO NV

Lookup Another ZIP Code™

Full Address in Standard Format

[redacted]
RENO NV [redacted]

Mailing Industry Information

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Rate Calculator

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Yellow Pages
Find a business nationwide.
White Pages
Find a residence nationwide.

powered by Switchboard

Postal Inspectors
Preserving the Trust

Inspector General
Promoting Integrity

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	File No.: EB-07-SF-057
Irving L. Levine	)	Citation No.: C20073296005
Reno, Nevada 89511	)	

CITATION

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[4] 47 C.F.R. § 15.5(b).

[5] 47 C.F.R. § 1.80(b)(3).

[6] 47 U.S.C. §§ 401, 501, 503, 510.

6. Pursuant to Sections 4(i), 4(j), 308(b) and 403 of the Act, Levine is directed to provide the documents and information specified herein, within 30 calendar days from the date of this Citation:

a. Explain efforts made to discontinue operation of the device until the device has been replaced.

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FEDERAL COMMUNICATIONS COMMISSION

Thomas N. Van Stavern
District Director, San Francisco District Office
Western Region
Enforcement Bureau

[7] 47 U.S.C. § 503(b)(5).

[8] *See* Privacy Act of 1974, 5 U.S.C. § 552a(e)(3).

[9] *See* 18 U.S.C. § 1001 *et seq.*

FEDERAL COMMUNICATIONS COMMISSION
ENFORCEMENT BUREAU
Western Region
San Francisco Office
5653 Stoneridge Dr, Ste 105
Pleasanton, CA 94588-8543

HAND DELIVERED

At: IRV LEVINE
[redacted]
RENO, CA

Date: April 18 2007

RE: NOTICE OF UNLICENSED RADIO OPERATION

To: IRV LEVINE

On 4/18/2007, agents of the Federal Communications Commission ("FCC") noted the following conditions regarding the radio station located at [redacted]:

[ ] Your refusal to allow an inspection of your radio equipment in violation of Section 303(n) of the Communications Act of 1934, as amended. (*See* 47 U.S.C. § 303(n)).

[ ] A valid FCC radio station license for your radio transmissions on _____ was not in evidence at the time of attempted inspection. Operation of a radio station without proper Commission authorization is a violation of Section 301 of the Communications Act of 1934, as amended. (*See* 47 U.S.C. § 301)

[✓] Radio stations must be licensed by the FCC pursuant to 47 U.S.C. § 301. The only exceptions to this licensing requirement are for certain transmitters using or operating at a power level that complies with the standards established in Part 15 of the Commission's rules, 47 C.F.R. §§ 15.1 *et seq.* In addition, the frequency band 2690 MHz to 2900 MHz is restricted and no low power communication devices may be certified under Part 15, 47 C.F.R. § 15.205. Thus, your station is operating in violation of 47 U.S.C. § 301. **The signal(s) present a safety hazard to the operation of aircraft since FAA radar is being affected.**

[ ] Spurious radio signals associated with the operation of this station were detected on the frequency(ies) of _____ _____. The spurious signal(s) is(are) within the radio frequency band assigned for communications between aircraft and/or aircraft and aviation ground facilities. **The signal(s) may present a safety hazard to the operation of aircraft since air/ground communications could be affected.**

[ ] Spurious radio signals associated with the operation of this station were detected on the frequency(ies) of _____ _____. The(se) spurious signal(s) is(are) within the frequency band assigned for _____ _____, and could interfere with licensed or other authorized radio communications.

You are hereby warned that operation of radio transmitting equipment without a valid radio station authorization and/or refusal to allow inspection of your radio station constitutes violation of the Federal laws cited above and could subject the owner of this illegal operation to the severe penalties provided, including, but not limited to, substantial civil forfeitures, a maximum criminal fine of $100,000 and/or one year imprisonment, or arrest of the equipment for the first offense (*See* 47 U.S.C. §§ 501, 503 & 510).

UNLICENSED OPERATION OF THIS RADIO STATION MUST BE DISCONTINUED IMMEDIATELY.

You have ten (10) days from the date of this notice to respond to this letter with any evidence that you have authority to operate granted by the FCC. Your response should be sent to the address listed in the letterhead. Under the Privacy Act of 1974, 5 U.S.C. § 552a(e)(3), we are informing you that the Commission's staff will use all relevant material information before it to determine what, if any, enforcement action is required to ensure your compliance with FCC Rules. This will include any information that you may disclose in your reply.

When delivered in person, this notice must be acknowledged.
Signing for this document is not an admission of guilt.

[redacted]
Received by

4/18/2007
Date

[redacted]
Issuing Agent
Federal Communications Commission
San Francisco Office

See Reverse for More Information

EXCERPTS FROM THE COMMUNICATIONS ACT OF 1934, AS AMENDED

Section 301. License for Radio Communication or Transmission of Energy

It is the purpose of this Act, among other things, to maintain the control of the United States over all the channels of radio transmission; and to provide for the use of such channels, but not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority, and no such license shall be construed to create any right, beyond the terms, conditions, and periods of the license. No person shall use or operate any apparatus for the transmission of energy or communications or signals by radio (a) from one place in any State, Territory, or possession of the United States or in the District of Columbia to another place in the same State, Territory, possession, or District; or (b) from any State, Territory, or possession of the United States, or from the District of Columbia to any other State, Territory, or possession of the United States; or (c) from any place in any State, Territory, or possession of the United States, or in the District of Columbia, to any place in any foreign country or to any vessel; or (d) within any State when the effects of such use extend beyond the borders of said State, or when interference is caused by such use or operation with the transmission of such energy, communications, or signals from within said State to any place beyond its borders, or from any place beyond its borders to any place within said State, or with the transmission or reception of such energy, communications, or signals from and/or to places beyond the borders of said State; or (e) upon any vessel or aircraft of the United States (except as provided in section 303(t)); or (f) upon any other mobile stations within the jurisdiction of the United States, except under and in accordance with this Act and with a license in that behalf granted under the provisions of this Act.

Section 303. General Powers of The Commission

Except as otherwise provided in this Act, the Commission from time to time, as public convenience, interest, or necessity requires shall-

(n) Have authority to inspect all radio installations associated with stations required to be licensed by any Act, or which the Commission by rule has authorized to operate without a license under Section 307(e)(1), or which are subject to the provisions of any Act, treaty, or convention binding on the United States, to ascertain whether in construction, installation, and operation they conform to the requirements of the rules and regulations of the Commission, the provision of any Act, the terms of any treaty or convention binding on the United States and the conditions of the license or other instrument of authorization under which they are constructed, installed, or operated.

Section 333. Willful or Malicious Interference

No person shall willfully or maliciously interfere with or cause interference to any radio communications of any station licensed or authorized by or under this Act or operated by the United States Government.

Section 501. General Penalty

Any person who willfully and knowingly does or causes or suffers to be done any act, matter, or thing, in this Act prohibited or declared to be unlawful, or who willfully or knowingly omits or fails to do any act, matter, or thing in this Act required to be done, or willfully and knowingly causes or suffers such omission or failure, shall, upon conviction thereof, be punished for such offense, for which no penalty (other than a forfeiture) is provided in this Act, by a fine of not more than $10,000 or by imprisonment for a term not exceeding one year, or both; except that any person, having been once convicted of an offense punishable under this section, who is subsequently convicted of violating any provision of this Act punishable under this section, shall be punished by a fine of not more than $10,000 or by imprisonment for a term not exceeding two years, or both.

Section 503. Forfeitures in Cases of Rebates and Offsets

...

(b)(1) Any person who is determined by the Commission ... to have--

...

(B) willfully or repeatedly failed to comply with any of the provisions of this Act or of any rule, regulation, or order issued by the Commission under this Act or under any treaty, convention, or other agreement to which the United States is a party and which is binding on the United States;

...

shall be liable to the United States for a forfeiture penalty.

...

Section 510. Forfeiture of Communications Devices

(a) Any electronic, electromagnetic, radio frequency, or similar device, or component thereof, used, sent, carried, manufactured, assembled, possessed, offered for sale, sold or advertised with willful and knowing intent to violate Section 301 or 302, or rules prescribed by the Commission under such sections, may be seized and forfeited to the United States.

Case Summary EB-07-SF-057

[redacted]

April 19, 2007

Agent [redacted] was dispatched to Reno, Nevada on Saturday April 14, 2007 to assist the FAA in tracking down interference to the FAA's air traffic control radar, Channel A on 2.78 GHz. The FAA provided an accurate direction for the source. It was located on an azimuth of 180- 185 degrees magnetic.

The FAA brought in a team of their own to work on the problem, [redacted] from New Jersey. We found that other than the MDDF, we were similarly equipped. We decided to divide the area in half so we could cover the territory along the 180 – 185 degree azimuth line more quickly. The signal was no longer on for minutes to hours as first reported, but starting Sunday morning, was on randomly for maybe a minute to two minutes at a time.

Sunday the signal was active twice with neither vehicle able to hear the signal to locate the source. Monday was similar except that the signal was active four times. Tuesday the FAA team heard the signal near the Arrow Creek Golf Course gated community. Both teams went to that location. The FAA team left to pursue other commitments. The FCC stayed and eliminated one area of the complex when the signal came up around 5:00 P.M.

On Wednesday morning the signal was more active and agent [redacted] was able, to discern that the signal when active, was drifting in and out of the 1.6 MHz band pass of the radar system. The MDDF was able to localize the signal to a house at [redacted] and using a 1.5 GHz – 4 GHz horn and a spectrum analyzer further narrow the search area to the right of the house. Agent [redacted] met with [redacted] the owner of the residence, who granted permission to search for the source.

Upon entering the residence, Agent [redacted] used a Rhode and Schwartz analyzer and a small horn antenna to localize the source to a 17 inch I-Mac Computer. Although there was not interference at the time, On/off tests, questioning the residents about their use times, as well as the residence being along the 180 – 185 azimuths confirmed that this was the source. The use times roughly coincided with the times of interference. The agent also observed the signal drift into the receive band pass when the FAA was receiving interference. The time was about 11 on April 18, 2007.

Mr. and Mrs. Levine immediately contacted Apple computer to have the system checked and repaired. Mrs. Levine then took the computer to the local Apple store for repair that morning. This was confirmed on scene by agent [redacted]. Apple computer's [redacted] contacted agent [redacted] who answered his questions. [redacted]s and Agent [redacted] arranged to ship the device to Apple's main facility in Cupertino, CA, for further evaluation.

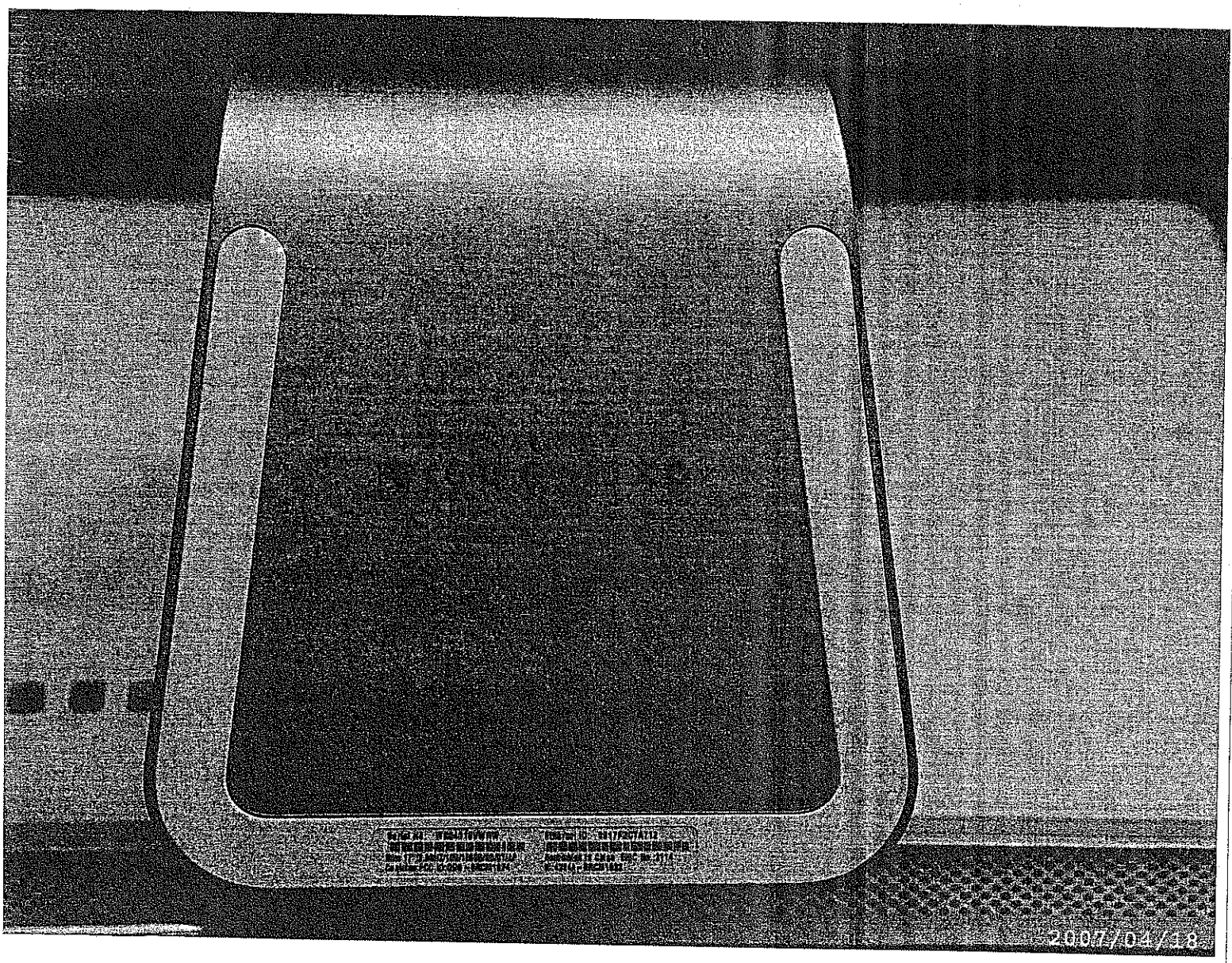
There are no further reports of interference from the FAA.

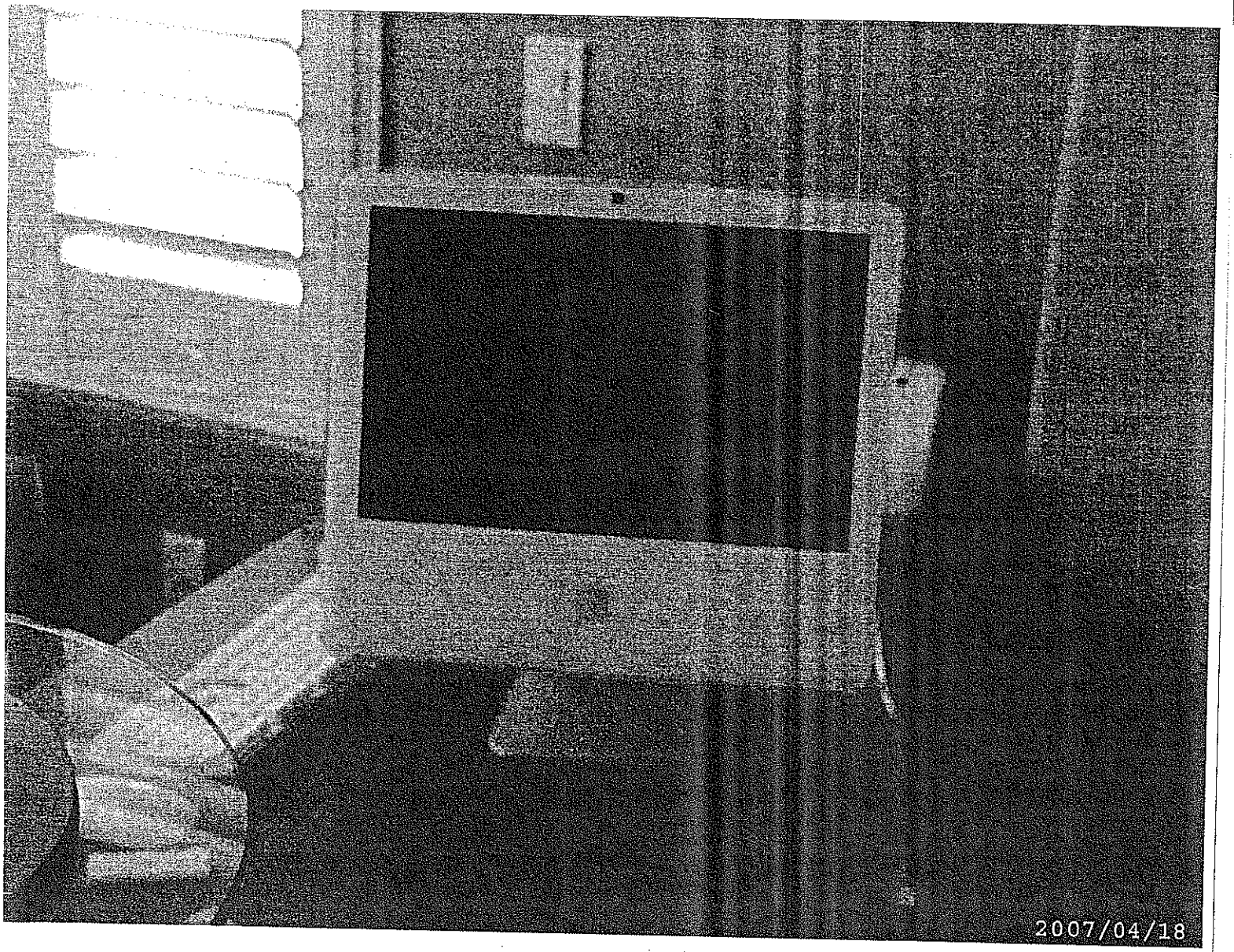
The FCC ID number on the computer, QDS-BRCM1024, relates to a certification for the air card associated with the device. This FCC Grant of Authorization authorizes the air card to operate on 2.412 – 2.462 GHz and 5.745 – 5.625 GHz. The user had the Apple computer connected to the internet by DSL, not the internal air card.

This Apple computer is a class B computing device and the peripheral and CPU computing board may be certified via a Declaration of Conformity, pursuant to 47 CFR 15.101, which does not have to be filed with the FCC, pursuant to 47 CFR 2.906.

The processing speed for this Apple computer, according to the Apple web site is either 1.83 GHz or 2.0 GHz. Neither of which is the 2.78 GHz frequency the computer was emitting.

EB-07-SF-057




2007/04/18

FEDERAL COMMUNICATIONS COMMISSION
ENFORCEMENT BUREAU

CASE NOTES

DATE:	4-12-2007	TIME: 10:50	☒ AM ☐ PM ☐ PST ☐ PDT	CASE #:	EB - 07 - SF - 057
SUBJECT:					
CONTACT PERSON	[redacted]			AGENT:	[redacted]
Phone:	[redacted]	FAX:	- -	Email:	
TYPE:	☐ On-Scene Investigation	☐ On- Scene Inspection	☒ Telephone Call	OTHER:	

Talked to [redacted] He is shipping a package to Reno. It consists of a 4 bin antenna, Analyzer, Amplifier & a DF system. Arrives in Reno About 8:10 On saturday & staying @ the Residence Inn near 80.

Sig on the Radar system is weak. Noise floor is about -60 and the signal is maybe -40 db. However there is maybe 50-55 db of gain between the antenna and an amplifier (25 db antenna & 30 w/the LNA)

FEDERAL COMMUNICATIONS COMMISSION
ENFORCEMENT BUREAU
CASE NOTES

DATE:	4/11/07	TIME:	☐ AM ☐ PM ☐ PST ☐ PDT	CASE #:	EB-07-SF-057
SUBJECT:					PAGE OF
CONTACT PERSON	[redacted]			AGENT:	[redacted]
Phone:	Cell [redacted]	FAX:	- -	Email:	
TYPE:	☐ On-Scene Investigation	☐ On-Scene Inspection	☐ Telephone Call	OTHER:	

Heads up —

Has Taken Rd 2780 MHz out to channel

CH 8 HITS IN MORNING Lo

CONSISTENT

STROBE @ 180 & 185°

→ TECH HAS BEEN THERE S/A and Horn

BUT COULDN'T DETECT

Drove radial ... not picked up / no AMPS

→ FAA TECH could have ~~Sunday~~ Sat - Sunday

sat thru Sunday

full outage sat outage

~~Has~~ several weeks → no ...

at that time

Radar only Sunday

→ Radio Dept [redacted]

Sat nite → NJ

[redacted]

[redacted] at site ([redacted]

[redacted]

intermittent

fairly consistent in morning

→ 1/2 hour one at time

→ can't ... every day

[redacted]

Annapolis Maryland

FAA

Case in Reno

Multipoint Distribution System
180 - 185° from RADAR
During Morning for about 1 hr.
8:30 - 9:30 am
Tried DF'ing
if they take CH down can
see IX through RADAR system
Can't see it on a S/A
Tech going there on saturday and
working on Sunday

[redacted] will keep us up to date on Status.

[redacted] will be there through Wed

[redacted] - tech
did do report

COPY

FEDERAL COMMUNICATIONS
COMMISSION
WASHINGTON, D.C. 20554

COPY

GRANT OF EQUIPMENT
AUTHORIZATION
Certification

Broadcom Corporation
190 Mathilda Place
Sunnyvale, CA 94086
United States

Date of Grant: 10/24/2006

Application Dated: 07/06/2006

Attention: Daniel Lawless , Manager, Compliance Engineering

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: QDS-BRCM1024
Name of Grantee: Broadcom Corporation
Equipment Class: **Digital Transmission System**
Notes: **Broadcom 802.11ag/Draft 802.11n Wireless LAN PCI-E**

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
	15C	**2412.0 - 2462.0**	**0.4**		
	15C	**5745.0 - 5825.0**	**0.265**		
	15C	**2412.0 - 2462.0**	**0.489**		
	15C	**5745.0 - 5825.0**	**0.406**		

Limited Modular Approval (LMA). Power listed is the maximum combined peak conducted output power. 5.15-5.25 GHz band is limited for indoor operation only. Device is a PCI-E Mini Card operating in 2x2 Spatial Multiplexing/Cyclic Delay Diversity MIMO configurations and single-stream legacy modes as described in this filing. Approval is limited to OEM installation only. In mobile RF exposure conditions, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons. OEM integrators must be provided with antenna installation instructions. OEM integrators and end-users must be provided with transmitter operation conditions for satisfying RF exposure compliance. This grant is valid only when the device is sold to OEM integrators and the OEM integrators are instructed to ensure that the end user has no manual

instructions to remove or install the device. The antenna(s) used for this transmitter must not be collocated or operating in conjunction with any other antenna or transmitter within a host device, other than as described in filings under this FCC ID. Use in portable RF exposure conditions is limited to the specific product and antenna configurations evaluated in filings under this FCC ID. The highest reported body SAR values per band for this FCC ID are: 2.4 GHz 0.78 W/kg; 5.3 GHz 0.32 W/kg; 5.8 GHz 0.33 W/kg.

Mail To:
Michael Heckrotte,
COMPLIANCE CERTIFICATION SERVICES
561F MONTEREY ROAD
MORGAN HILL, CA 95037

EA648338

COPY

FEDERAL COMMUNICATIONS
COMMISSION
WASHINGTON, D.C. 20554

COPY

GRANT OF EQUIPMENT
AUTHORIZATION
Certification

Broadcom Corporation
190 Mathilda Place
Sunnyvale, CA 94086
United States

Date of Grant: 10/24/2006

Application Dated: 07/06/2006

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EA648338