03/27/2007

In reference to

Applicant: Cisco Systems Inc
Correspondence Reference Number: 37202
731 Confirmation Number: TC622843
Date of Original Email: 03/27/2007

FCC ID: LDK7900001

Response by Cisco Systems

-----Original Message-----
From: Generic Office of Engineering Technology
[mailto:oetech@fccsun27w.fcc.gov]
Sent: Tuesday, March 27, 2007 9:02 AM
To: Andy Griffin (agriffin)
Subject: FCC Equipment Authorization System

To: Andrew Griffin
From: Andrew Leimer
              Andrew.Leimer@fcc.gov
           FCC Equipment Authorization Branch

Re: FCC ID: LDK7900001

Applicant: Cisco Systems Inc
Correspondence Reference Number: 37202
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Subject: FCC Equipment Authorization System

1) Please verify that the NTIA Matlab program and hopping sequence
files were used for the testing setup. If not, provide NTIA and FCC
approval for the use of an alternative test procedure.

**Answer: No we used an alternate file which we discussed with the FCC
lab and NTIA.**

**Below is the response from the FCC lab which Cisco forwarded to the lab
performing the DFS testing for the client. No additional questions were
raised by either NTIA or FCC lab.**

> **From:** Rashmi Doshi [mailto:Rashmi.Doshi@fcc.gov]
> **Sent:** Wednesday, October 18, 2006 9:41 AM
> **To:** David Case (davecase); Joe Dichoso; Andrew Leimer
> **Subject:** RE: DFS client
>
> Dave:

We think this might work. We are going to make sure NTIA does not have any issues with this. We may still have some questions about the equivalent load conditions, since SIP packets for VoIP may behave differently than the UDP for the MPEG stream. Do you guys have some idea on what the differences may be?

Thanks,

Rashmi

Rashmi

They switched to using MET labs.

The solution we came up with is to modify the standard video file to a wave file and send it as an audio file to the phone. It runs the same length and same level of exercising of the system but adds an audio part for the phone to simulate phone traffic instead of just video being sent to a laptop.

David A. Case NCE, NCT

2) The DFS test report states that the NTIA MPG2 file was converted to an audio format for streaming. This is not the approved procedure for data streaming. Explain how this was done. Alternative streaming procedures must be approved by the FCC and NTIA. (Note: the NTIA web site now has a WAV file that is approved for cases where the MPG2 file cannot be used. It runs for about 13 minutes. In the case where the approved files cannot be used contact the FCC before proceeding with testing).

Answer: : We used a modification to this test file since the device under test could not display the video since this is a 802.11 wireless phone. We used Adobe Audacity to convert the NTIA video file to audio WAV for testing the DFS. We estimate the loading to be the similar to the actual loading we get from the NTIA file.

Since we are only testing to demonstrate the client card works as part of the DFS system and we are not testing to verify that the master meets all DFS requirements, then testing the detection of each signal is irrelevant for this test since we are not testing for DFS detection

of the EUT. The only real issues of concern for any client card
without DFS detection capabilities is as follows:

1) Verify the card cannot transmit in ad-hoc mode
2) Verify that the card cease any and all transmissions when
   instructed by a master who has detected the radar.
3) Verify that the card moves off channel in the allotted time.

In theory any of the RF radar signals used to trigger the master to
send out control signals for the client should be sufficient as long as
the client responds in the time allotted in accordance with the
requirements as stated in the test procedure since that is all that is
being evaluated.

The Access point used for testing previously was audited by the FCC lab
and issued a FCC grant.

3) How is the user prevented from disabling DFS and/or transmitting in
frequencies not authorized in United States?

**Answer: The system is client only and does not have radar detection
capabilities. It cannot control the access point so it cannot turn off
DFS. The software provided does not support uncontrolled transmission
and there is no ad-hoc mode.**

FYI: In future filings submit expanded plots for the channel
transmission closing time demonstrating that the device vacates the
channel in the required 200 ms. These plots should not have a sweep
greater than 600 ms. (It was noted that your expanded plots are for 3
seconds).

Answer: We will do so.

The items indicated above must be submitted before processing can
continue on the above referenced application. Failure to provide the
requested information within 30 days of the original e-mail date may
result in application dismissal pursuant to Section 2.917(c).

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exhibit has been submitted must also be submitted via Submit
Correspondence. Also, please note that partial responses increase
processing time and should not be submitted.

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