

Mark Briggs

From: Andrew Leimer <Andrew.Leimer@fcc.gov>
Sent: Friday, December 16, 2011 11:39 AM
To: Mark Briggs
Cc: Rashmi Doshi
Subject: RE: DFS alternate procedures for traffic (client devices) - addition of more models

Hello Mark,

The FCC approves your alternative streaming proposal for the client device. As Rashmi indicated, we cannot give a blanket approval at this time until Android streaming issues are further examined. NTIA is currently running tests on alternative streaming file formats (AVI, MPG4, and WMV). These files will most likely be added to the NTIA web site when approved. Please inform us if you are aware of any general Android streaming issues. These issues will be considered in the review.

Regards,

Andy Leimer
FCC/OET/EAB

From: Mark Briggs [mailto:Mark.Briggs@ccsemc.com]
Sent: Friday, December 16, 2011 3:14 AM
To: Andrew Leimer
Cc: Timothy M. Dwyer
Subject: RE: DFS alternate procedures for traffic (client devices) - addition of two more models

Good morning Andy –

The TCB is ready to issue grants pending approval of the alternate method for the latest device in the series. If I had known how many devices would be tested I would have asked for a series/platform approval rather than specific FCC IDs from the outset.

Please let us know if we can go ahead and issue grants based on the existing authorization.

Mark

From: Mark Briggs
Sent: Friday, December 09, 2011 10:59 AM
To: 'Andrew Leimer'
Cc: Douglas Anderson; Tina Chu; Michael Heckrotte; Rashmi Doshi; Timothy M. Dwyer
Subject: RE: DFS alternate procedures for traffic (client devices) - addition of two more models

Hi Andy,

There are more devices to add to this request for the alternate streaming method. The first has FCC ID: A3LSHWM410K. Is there a way to obtain a “blanket” approval for Samsung tablets operating with the Android OS?

Thanks,

Mark

From: Andrew Leimer [mailto:Andrew.Leimer@fcc.gov]
Sent: Friday, October 21, 2011 10:21 AM
To: Mark Briggs
Cc: Douglas Anderson; Tina Chu; Michael Heckrotte; Rashmi Doshi
Subject: RE: DFS alternate procedures for traffic (client devices) - addition of two more models

Hello,

The FCC has approved your alternative streaming proposal. Please be sure to include the proposal as an exhibit in the filing(s).

Regards,

Andy Leimer
FCC/OET/EACB

From: Mark Briggs [mailto:Mark.Briggs@ccsemc.com]
Sent: Friday, October 21, 2011 2:26 AM
To: Andrew Leimer
Cc: Douglas Anderson; Tina Chu; Michael Heckrotte; Rashmi Doshi
Subject: RE: DFS alternate procedures for traffic (client devices) - addition of two more models

Hi Andy,

Samsung have two more devices that need to use the same streaming procedure as the three devices listed in the original request and proposed test plan. The two devices, which both use the Android OS, are:

FCC ID: A3LGTP6200L, a Cellular/PCS GSM/GPRS/EDGE, Cellular/PCS WCDMA Tablet with 802.11abgn, BT3.0
FCC ID: A3LSWDSC02D, a Cellular/PCS GSM/GPRS/EDGE Tablet with 802.11abgn, BT3.0

Please let me know what you need to proceed with approving the plan for these additional models. I have attached the original proposal to this email.

Many thanks,

Mark

Mark Briggs
Director, UL CCS Certification Program
UL Verification Services, WiSE Business Segment
(Wireless, Interoperability, payment Security, & EMC)

Mobile: 503 702 5892

From: Andrew Leimer [mailto:Andrew.Leimer@fcc.gov]
Sent: Monday, October 03, 2011 9:55 AM
To: Mark Briggs

Cc: Douglas Anderson; Tina Chu; Michael Heckrotte; Rashmi Doshi
Subject: RE: DFS alternate procedures for traffic (client devices)

Hello,

The alternative streaming method proposal using a FTP file transfer has been approved. Be sure to include the proposal document (attached) and approval in the application exhibits.

Regards

Andy Leimer
FCC/OET/EACB

From: Michael Heckrotte [mailto:michael.heckrotte@ccsemc.com]
Sent: Friday, September 30, 2011 2:14 PM
To: Andrew Leimer
Cc: Douglas Anderson; Tina Chu; Mark Briggs
Subject: RE: DFS alternate procedures for traffic (client devices)

Andy,

We suggested the WAV file but this is also not supported, for the same reason. The problem is that the Android system does not interface with some parts of the computer world. Specifically, a player type application on Android cannot link to, thus subsequently stream, a file on a network.

The other streaming method that was proposed by the applicant, and apparently might work, was to display a U-Tube video. Given that this would [probably] be displayed in a browser-type application, we don't know what, if any, caching or bursting might occur, or what data rate might be in effect.

In conclusion our analysis was that the FTP file transfer was more repeatable and controllable, since all components of the system are local and the setup we used allowed us to select a known data rate.

Best Regards,
Mike

From: Andrew Leimer [mailto:Andrew.Leimer@fcc.gov]
Sent: Friday, September 30, 2011 8:39 AM
To: Mark Briggs
Subject: RE: DFS alternate procedures for traffic (client devices)

Mark,

- 1) What streaming methods are available on the Android system for video streaming?
- 2) Could this device stream the NTIA WAV file?

Andy

From: Andrew Leimer
Sent: Friday, September 30, 2011 10:44 AM
To: 'Mark Briggs'
Subject: RE: DFS alternate procedures for traffic (client devices)

Mark,

I have received the document. I will be discussing this with Rashmi today. I will recommend that we approve the proposal and see if I can convince management to skip NTIA coordination. I will get back to you shortly.

Andy

From: Mark Briggs [mailto:Mark.Briggs@ccsemc.com]
Sent: Friday, September 30, 2011 10:05 AM
To: Andrew Leimer
Subject: RE: DFS alternate procedures for traffic (client devices)

Hi Andy,

Just checking in to confirm that this was received. Of course the applicant's filing, which is imminent, will be urgent so your best guess at processing time for this request would be appreciated so I can set their expectations up front.

Thanks,

Mark

From: Mark Briggs
Sent: Tuesday, September 27, 2011 1:54 PM
To: 'Andrew Leimer'
Cc: Douglas Anderson; Michael Heckrotte
Subject: RE: DFS alternate procedures for traffic (client devices)

Hi Andy,

Please see attached document outlining the proposed traffic loading method. Let me know if you need additional information and when you think we might have this approved.

Thanks a lot,

Mark

From: Andrew Leimer [mailto:Andrew.Leimer@fcc.gov]
Sent: Friday, September 16, 2011 7:17 AM
To: Mark Briggs
Subject: RE: DFS alternate procedures for traffic (client devices)

Hi Mark,

You can go either route – KDB or E-mail directly to me. Either method is acceptable since the exhibit will end up in the application for the record. If you choose to E-mail, copy Joe Dichoso. If this alternative streaming method is similar to a past proposal, reference the FCC ID in the cover letter. This will speed things up and possibly avoid the NTIA approval step.

Regards,

Andy Leimer
FCC/OET/EACB

From: Mark Briggs [mailto:Mark.Briggs@ccsemc.com]
Sent: Thursday, September 15, 2011 6:39 PM
To: Andrew Leimer
Subject: DFS alternate procedures for traffic (client devices)

Hi Andy

We are going to see a series of products that will not support the Windows Media player and video streaming of the mpeg file (either because the operating system does not support the Windows media player and/or the OS does not support the mpeg file format).

I think this requires the submission of a KDB to the FCC to describe a proposed alternate method for exercising the system during DFS tests for channel closing and channel move times, and non-occupancy time. Could you please confirm that this is still the case? If it is, what is the turnaround time and does NTIA still need to be involved?

Thanks for any advice you can give ... hope to see you in Baltimore at the end of October!

Best wishes,

Mark Briggs
Director, UL CCS Certification Program
UL Verification Services, WiSE Business Segment
(**W**ireless, **I**nteroperability, **p**ayment **S**ecurity, & **E**MC)

Mobile: 503 702 5892

Proposal for Alternate DFS Test Procedure for Samsung,
Model GT-P6210, FCC ID: A3LGT-P6210
Model GT-P6200, FCC ID: A3LGT-P6200
Model SGH-T869, FCC ID: A3LSGHT869

Product Description:

The devices are a series of 7" Tablet PCs that support 802.11a operation in the DFS bands as client-only devices. They do not have radar detection capabilities and, as such, only support an infrastructure mode of operation and do not support ad-hoc networks in the DFS bands.

The Android operating system resident on the devices does not support the Windows based Media Player or the format of the streaming video file specified in FCC 06-96.

The WLAN (802.11a) interface and operating system\drivers are the same across all three models so the model GT-P6210 version will be tested and the results will be considered representative of the three devices. The plots included in this document were obtained from the test configuration on the model GT-P6210. Preliminary tests were performed on the other two models to confirm there were no significant differences between the three.

Proposed Alternate Method:

Since the operating system will not support the preferred method for data transfer from master to client device, we propose performing the DFS test while the system is performing a FTP file transfer. The file transfer from the master device to the client device under test will consist of a 4.2Gbyte compressed data folder containing multiple copies of a 418 Mbyte file.

General Test Setup Procedure:

- 1) *Connect FCC approved Master AP to a network, via wired Ethernet, that allows connection to an FTP server.*
- 2) *Associate the EUT with the Master AP*
- 3) *Launch the FTP application on the EUT*
- 4) *Connect to the FTP server application to the FTP server hosting the file*
- 5) *Initiate an FTP download of the file from the host*
- 6) *Monitor the channel loading during transfer*
- 7) *Reduce the maximum allowed data rate for the Master AP, using the AP's GUI interface.*
- 8) *Repeat steps 5 - 7 until the channel loading is as close to 20% as possible.*
- 9) *Record the data rate setting on the Master AP and the channel loading.*
- 10) *While the system is performing an FTP transfer using the settings from item 9 above, perform the Channel Closing Transmission Time and Channel Move Time measurements as required by FCC 06-96 using a radiated test.*

Results:

Testing showed that the minimum target of 20% channel loading was achieved by setting the Master AP to the lowest allowed data rate for 802.11a, 6Mb/s (MCS 0) in combination with setting the FTP transfer software to a speed limit of 150kbps for a channel bandwidth of 20MHz (see figure 1 below) and 450kbps for a channel bandwidth of 40MHz(see figure 2 below). At these settings approximate traffic loading levels were 25.2% for a channel bandwidth of 20MHz and 29.75% for a channel bandwidth of 40MHz. DFS testing will be performed using these conditions.

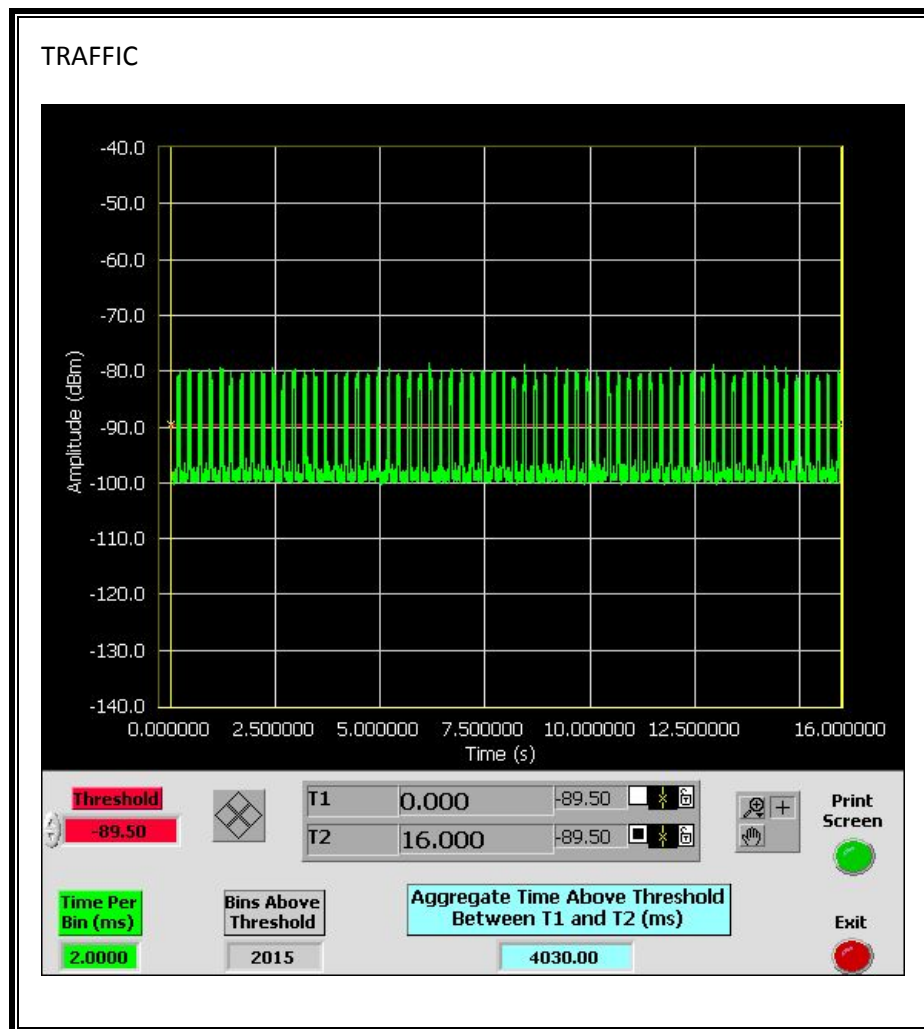


Figure 1 – 20MHz Channel Bandwidth Traffic Loading at 6 MB/s

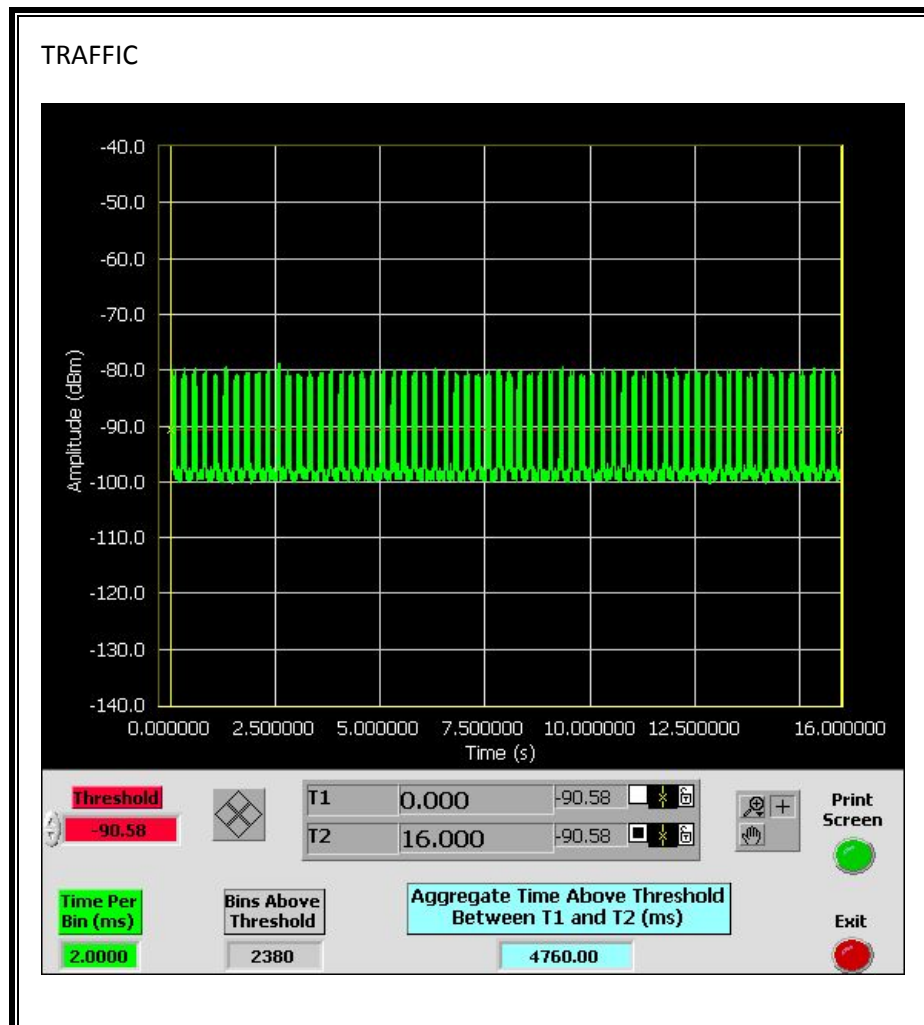


Figure 2 – 40MHz Channel Bandwidth Traffic Loading at 6 MB/s

Results from the DFS testing will be reported in the final DFS report submitted as part of the application.

Conclusion:

The proposed method loads the channel sufficiently to allow the channel closing and channel move times for the client device under test to be measured appropriately.