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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: CS Docket No. 97-80 (Commercial Availability of Navigation Devices)

Dear Ms. Dortch:

In its Second Report and Order in CS Docket No. 97-80,¹ the Commission directed certain multiple system operators (“MSOs”) to file periodically with the Commission “reports detailing CableCARD deployment and support” as well as “the effort to develop and deploy a multistream CableCARD.” The Commission noted that the “cable operators may file separate reports or a joint report.” As a matter of convenience, NCTA has compiled the individual company reports and is submitting them as attachments to this letter. Should the Commission have questions about any of these reports, please contact me and I will ensure that the questions are forwarded to the appropriate person at the relevant company for a response.

CableCARD Deployment and Support. The five MSOs which are required to report today – Comcast Corporation, Time Warner Cable, Cox Communications, Charter Communications, and Cablevision – serve nearly 80% of the cable subscribers in the country and have deployed over 241,000 CableCARDS. When the CableCARDS deployed by the next five largest companies are included, *there have been over 271,000 CableCARDS deployed by the ten largest cable operators who serve approximately 90% of the cable subscribers in the country.* In addition to this deployment of CableCARDS, as of June 15, 2007, 26 consumer electronics (“CE”) manufacturers have had over 568 Unidirectional Digital Cable Ready Product (“UDCP”) models (such as Digital Cable Ready DTV sets) certified or verified for use with CableCARDS.

Multistream CableCARDS. The Commission also asked for periodic reports on the “effort to develop and deploy a multistream CableCARD.” As reported in our March 30, 2006 report, CableLabs has qualified a Multistream CableCARD device from CISCO/Scientific-

¹ *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices, Second Report and Order, 20 FCC Rcd 6794 (2005).*

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Atlanta. And in June 2006, CableLabs Qualified a Multistream CableCARD device from Motorola. So, both Motorola and CISCO/Scientific-Atlanta MultiStream CableCARDs are now qualified.

The Multistream CableCARD will operate in a backwards compatible, single-stream manner with a single stream device (*e.g.*, in a unidirectional digital cable ready device (“UDCP”)) or in the multi-stream manner when paired with a multi-stream device (*e.g.*, OCAP 2.0 devices). To greatly facilitate rapid development of the Host Multistream CableCARD interface, the HPNx Pro test tool is also commercially available to manufacturers.

Moreover, on November 13, 2006, CableLabs announced that, with the assistance of consumer electronics parties including representatives from TiVo, Motorola, Soleki Systems Corporation, Digeo Interactive, Digital Keystone, and ViXS, it had reached an agreement on new testing procedures to verify UDCPs that have an M-Card interface which permits the use of an M-Card in multi-stream mode. In order to expedite the availability of such a test suite, CableLabs posted it at the CableLabs’ web site, www.cablelabs.com/udcp. In January, 2007, CableLabs began to offer testing of UDCPs for conformance to the M-Card interface test suite as it does for UDCP conformance to the single-stream CableCARD interface. CableLabs verified a TiVo DVR as the first UDCP with an M-Card interface in March, 2007.

If you have any questions about the information being submitted with this letter, please do not hesitate to contact me.

Respectfully submitted,

/s/ **Neal M. Goldberg**

Neal M. Goldberg

cc: Brendan Murray
Julie M. Kearney
Robert Schwartz

Cablevision Systems

FCC CableCARD Quarterly Report

March – May 2007

Introduction: CableCARD technology, which enables digital televisions to display encrypted programming, has been available to 100% of Cablevision customers since July 1, 2004. The installation and service of CableCARDS is a routine practice and has been fully incorporated into the business. As with all technical service issues, each occurrence is logged into an automated database for escalation and resolution.

1. Current Number of CableCARD Subscribers: 12,673 (as of June 8, 2007). A 10% increase in deployment from the 2006 4th quarter report. Cablevision is supporting 788 TiVo Series 3 HD Recorders on the plant network.

2. Number of CableCARDS in Inventory: 17,880 [5,207 in reserve (non-deployed) inventory].

3. How are CableCARDS deployed: All CableCARDS are professionally installed.

4. Percentage of Installs: 100% of installs are professional installs requiring a truck roll

5. Average Number of Truck Rolls to Install a CableCARD: 1.2

6. Monthly Lease rate for CableCARD: \$1.25

7. Average installation Cost (if applicable): Professional install fee is \$46.95.

8. Number of problems encountered with CableCARDS: 2,523 installation and post-installation Remedy tickets were opened during the period of April 1, 2007 through June 8, 2007.

1. Host Related: 58%
2. CableCARD related including rebooting CableCARDS: 36%
3. Network Related: 6%

9. Of the problems encountered, please list how they were resolved: (Ex. TV Firmware upgrade)

Host DCR TV Issues (Sample)

Problem Description:

CableCARD does not bind with the host - Swap the CableCARD.

Occurs During:

Installation

Resolution:

The technician will unbind first CableCARD install/bind another CableCARD. In some instances, the customer needs to contact the host TV manufacturer for a patch to be sent out for the specific host TV or professional visit by the manufacture's technician.

Problem Description:

Pixilation on most digital channels

Occurs During:

Post-Installation

Resolution:

Replace service drop or components to verify signal levels are within specification or customers may need to contact manufacturer directly to have a Certified Technician perform a service call to install new hardware in the DCR TV chassis.

Problem Description

DCR TV missing premium channels

Occurs During:

Post-Installation

Resolution:

Perform "reboot" by removing CableCARD and turning DCR TV off. Channels are usually restored

CableCARD Issues (sample)

Problem Description

Customer getting CableCARD "no service" message every few minutes

Occurs During:

Post-Installation

Resolution:

Sent "hit" to CableCARD or customer removes CableCARD from DCR TV.

Problem Description

CableCARD error 161-4

Occurs During:

Post-Installation

Resolution:

Cabledata "hit" to CableCARD and reset TV

Problem Description

Customer has black screens on premium channels only.

Occurs During:

Post-Installation

Resolution:

Hit card. Have the customer turn off DCR TV and remove card and replace card.

10. Problems encountered in deploying CableCARDS and how problems are resolved

Cablevision has established technical support protocols to enable the technician to receive immediate troubleshooting support from Dispatch, Network Support or Engineering if the technician encounters a problem during the professional installation of CableCARD equipment. It should be noted that Cablevision responds to each CableCARD performance issue in the same manner we respond to other CE interoperability issues (e.g., DVI, HDMI or 1394 interoperability issues).

If the technician is unable to complete the installation due to technical issues, the technician is required to record the reason(s) why the install was not completed and the work order remains open. At the customer's request, a follow-up visit is conducted to further troubleshoot the problem and/or install a second (new) CableCARD. At this visit, additional personnel may accompany the technician to provide enhanced technical support. If a customer is unable to activate their equipment due to interoperability issues, Cablevision will contact the CE manufacture to define the issue, resolve the problem and once again offer the customer the CableCARD installation.

The data (fix codes) collected from the problem are analyzed by the operations and engineering departments to determine if there are systematic issues contributing to the CableCARD technology not functioning properly on the network.

Cablevision has also undertaken significant steps to pro-actively work with all the major CE manufactures to identify the numerous CableCARD enabled devices and conduct interoperability testing in our (single) test laboratory *before* any problems have been experienced in the field."

**Charter Communications
FCC CableCARD Reporting
March 1, 2007 – May 31, 2007**

1. Current Number of CableCARD Subscribers:

The total number of CableCARDs in service through May 31, 2007 is 20,831.

2. Provide the number of CableCARDs in inventory:

SA CableCARD devices: 2700
Moto CableCARD devices: 11842
Total CableCARD devices: 14542

3. How are CableCARDs placed in service?

Installations of a CableCARD require a professional installation, including a truck roll, in all serviced areas.

4. Whether service calls are required for all CableCARD installations?

Yes , service calls are required for CableCARD installation.

5. Average Number of Truck Rolls to Install a CableCARD?

The average number of truck rolls to install a CableCARD (i.e., the initial truck roll and any truck rolls within 30 days from the date of installation) through May 31 was 1.2.

6. Monthly Lease rate for a CableCARD?

The average monthly lease for a CableCARD device is \$1.50.

7. Average installation cost of a CableCARD (if applicable):

The average cost for a professional installation is \$32.00.

8. Process for Resolving CableCARD trouble calls:

Customers with a CableCARD problem are directed to call the Charter customer service number. Customer Service Representatives (CSRs) are trained about the features and benefits of CableCARDs, just as they are trained on any other Charter product offering. Some CableCARD calls are forwarded to the Advanced Services Team, whose members have more training and expertise on troubleshooting such calls. If the problem cannot be resolved over the phone, the CSR places a service order, which is then fulfilled by the cable installers and technicians. Charter maintains a record of any service calls for which a technician is dispatched.

Should a local cable installer or technician encounter a CableCARD problem, he/she reports such problem to his/her supervisor and the local technical support group. If the problem is not resolved at the local level, it is then escalated to corporate engineering or billing. If there appears to be a host problem, Charter has a designated member of its engineering department contact and place a report with the consumer electronics vendor or with the host manufacturer to resolve the issue as appropriate.

9. Reported problems associated with CableCARDs and how they were resolved:

Charter has experienced a steady decline in problems with its CableCARDs since reporting began,² a trend which continues this quarter with all verified problems resulting from digital television (“DTV”) hosts.

The problems and resolutions listed on the chart below are illustrative of the problems encountered at both the local and regional level as well as those that were escalated to Charter’s corporate offices. The host manufacturer for each problem is identified by a letter only to maintain confidentiality, with such letter corresponding to the same identified manufacturer(s) from previous reports.

All of the undetermined issues on the below chart remain in the troubleshooting phase in order to identify the problem source.

The installation issues associated with the network which were encountered this quarter were resolved *at the time of installation* through Charter’s standard troubleshooting processes. Charter continues to troubleshoot and resolve problems occurring with various makes and models of digital television hosts as they arise.

DIV.	TYPE	ISSUE	RESOLUTION	TV MFGR.
Central	Host	Dropping channels	The customer upgraded the DTV set.	J
Western	Host	The host DTV was unable to reliably receive HD tiers and premium channels.	After full troubleshooting, the customer was advised to contact the DTV manufacturer.	J
East	Unknown	The CableCARD / host DTV interface stops functioning after a certain period of time, though a system reset resolves the problem.	Charter continues to work with the subscriber on resolution.	K

² See Charter Communications FCC CableCARD Reporting, December 1, 2006 – February 28, 2007, p. 2, Attachment to Letter from Neal M. Goldberg to Marlene H. Dortch, Commercial Availability of Navigation Devices, CS Docket 97-80 (filed March 26, 2007).

East	Unknown	The CableCARD / host DTV interface stops functioning after a certain period of time, though a system reset resolves the problem.	Charter continues to work with the subscriber on resolution.	K
East	Host	The host DTV was unable to reliably receive certain channels.	After full troubleshooting, the customer was advised to contact the manufacturer.	L
East	Unknown	The host DTV was unable to receive channels 100 and 123.	Charter continues to work with the subscriber on resolution.	L

**Comcast
FCC CableCARD Report
March 1, 2007 – May 31, 2007**

Current Number of CableCARDS installed in active customer homes	143,195
Number of CableCARDS in Inventory	59,375
How are CableCARDS deployed: Truck Roll / Self Install / Both	Both
Total CableCARD Installs	14,222
Number of Installs - Truck Rolls	12,243
Percentage of Installs - Truck Rolls	86.1%
Number of Installs - Self Installs	1,979
Percentage of Installs - Self Installs	13.9%
Number of Service Calls On CableCARD Installs	2,320
Average Number of Truck Rolls to Install a CableCARD	1.16
Monthly Lease Rate for CableCARD	\$0.00
Monthly Lease Rate for Additional CableCARD in the Same Device	\$1.50
Average CableCARD Installation Cost	\$26.09

Process for Resolving CableCARD Problems

The Comcast CableCARD problem escalation process begins with the local installer/technician and escalates to local supervisory personnel, then to the Division office, and finally to corporate engineering for further escalation to CableLabs or to senior contacts at the CE manufacturer as needed. The local market is expected to review CableCARD issues lists and troubleshooting information posted on an internal website prior to escalation. If an issue with the CE Host device is suspected the local market personnel also make an initial contact to the CE manufacturer's standard support line for help prior to escalation.

Examples of Specific Issues and Resolutions

Several CableCARD capable DVR devices would not receive encrypted services until the devices were replaced under warranty to resolve the issue.

A number of different CableCARD capable devices required replacement by the manufacturer or dealer before the CableCARD would function correctly.

A CableCARD capable device frequently loses "pairing information" requiring Comcast to repeat the pairing process to restore service. The issue has been escalated to the device manufacturer.

Several CableCARD capable devices lost some services due to Comcast changes in copy protection. All were resolved by performing the CableCARD pairing process.

Several different problems with CableCARD devices are still pending after escalation to the device manufacturer.

Cox Communications FCC CableCARD Reporting
March 01, 2007 through May 31, 2007

1. The number of Residential CableCARD devices in service:
Cox TOTAL: 20,979
Moto Total: 10,257
SA Total: 10,722
2. General availability of CableCARD devices:
Total CableCARD devices available: 11,433*
 - a. Please provide an indication of supply availability for SA and Motorola CableCARDS
SA CableCARD devices: 6,995*
Moto CableCARD devices: 4,438*

*The above numbers only include inventory available in our billing system and inventory currently assigned to FSRs. It does not include inventory assigned to subscriber accounts, inventory pending disposition or repair, etc.

3. How cards are placed in service
A professional installation, requiring a truck roll, is currently required for all CableCARD device installs.
4. Whether service calls are required for all CableCARD device installations?
Yes.
5. Average number of truck rolls to install a CableCARD device?
The average number of truck rolls needed to install a CableCARD device includes the initial truck roll for the install itself and any truck rolls required within 30 days of the install.

The average number of truck rolls to install a CableCARD was: 1.131

The breakdown for each month is as follows:
 - Feb 2006: 1.170
 - March 2006: 1.125
 - April 2007: 1.097
6. Monthly price charged for a CableCARD?
The average monthly rental for a CableCARD device is \$ 1.90
7. Average installation cost of a CableCARD if applicable?
 - a. What is the service charge to the subscriber for the installation?
The average cost for a professional installation is \$ 36.13
8. Problems encountered in deploying CableCARD devices and how problems are resolved?
Total number of trouble calls for all CableCARD issues, escalated and un-escalated:
 - March 2007: 894
 - April 2007: 931
 - May 2007: 977

Cox Communications FCC CableCARD Reporting
March 01, 2007 through May 31, 2007

Only the issues that were escalated to the Atlanta corporate offices are described below. Cox also uses a bi-weekly conference call to distribute information to the systems, such as issues lists and CE-supplied troubleshooting documentation, in an effort to provide the systems with the information they'll need to avoid escalation.

Host Problems:

Site 21, Manufacturer 7

- Problems: Unable to tune to new channel map after QAM reorganization.
- Resolution: After completing all Cox troubleshooting with no issue found, customer was referred to contact the host manufacturer for further assistance."

Site 6, Manufacturer 19

- Problems: DCR device displayed black screens on HD channels
- Resolution: After completing all troubleshooting the CBC was replaced with no resolution, issue referred to host manufacturer for further assistance.

Site 21, Manufacturer 7

- Problems: DCR device unable to select current channel map after QAM realignment.
- Resolution: After completing all troubleshooting with no issue found, issue referred to host manufacturer for further assistance.

Site 6, Manufacturer 25

- Problems: DCR device unable to decode TV Works 5.4 Mediacast
- Resolution: After completing all troubleshooting with no issue found, issue referred to host manufacturer for further assistance.

CableCARD Problems

Site19, Manufacturer 21.

- Problem: The DCR device was not receiving any channels.
- Resolution: Re-seated and re paired the CableCARD.

Site 4, Manufacturer 21

- Problems: CableCARD dropping channels out about 3 times a week
- Resolution: Upgraded CableCARD to firmware 1.49p2. No channel drops out after upgrade.

Site 4, Manufacturer 21

- Problems: CableCARD drops out and freezes on 1 channel until the CableCARDs is reset.
- Resolution: Upgraded CableCARD to firmware 1.49p2. No channels drop out or channel 1 freeze after upgrade.

Site 21, Manufacturer 21

- Problems: The CableCARDs drops channels out about once a day.
- Resolution: Upgraded CableCARD to firmware 1.49p2. No channel drops out

Cox Communications FCC CableCARD Reporting
March 01, 2007 through May 31, 2007

Site 10, Manufacturer 9

- Problems: Audio skips on HD channels.
- Resolution: Upgraded CableCARD to firmware 1.49p2. HD channel have no skipping audio after upgrade.

Site 6, Manufacturer 25

- Problems: Black screens on several channels.
- Resolution: After completing all troubleshooting the CableCARD was replaced; all channels are now coming in.

Site 21, Manufacturer 21

- Problems: The CableCARD drops channels out about once a day.
- Resolution: Upgrade CableCARD to firmware 1.49p2. No channel drops out

9. Process in place for resolving existing and newly discovered CableCARD implementation problems:

For any CableCARD issues encountered by a subscriber, Cox follows a prescribed troubleshooting process. If the troubleshooting resolves the issue, no further action is taken. If the troubleshooting procedures do not correct the issue, the issue is escalated to one or more of the following personnel within the system: (i) the Digital test desk; (ii) the IT group, and/or; (iii) the system's DAC or DNCS administrator. If none of the foregoing is able to resolve the issue, a problem form is completed and sent to corporate engineering. The problem form collects specific details about the problem and alerts the engineering team to the relevant issues. Corporate engineering then follows up on the issue, contacting all of the necessary parties (including the CE manufacturers) until the issue is resolved.

In addition, a representative from each Cox system attends a platform specific bi-weekly conference call to discuss relevant CableCARD issues that have not yet been escalated, significant trends in the installation and maintenance of CableCARDS, and customer concerns within the system. Cox also uses this conference call to distribute important information to the systems, such as CE-supplied troubleshooting procedures or installation documentation. Atlanta operations and Engineering personnel are usually engaged on the call and work with the systems to resolve any issues or concerns.

In addition, Cox maintains an intranet site containing information about CableCARDS and specific issue updates. Cox Customer Support, Field Service, and Field Service Support also may use this site to review troubleshooting guidelines or details from CE manufacturers.

The DAC and DNCS administrators in each system also have direct connections with ATL operations and engineering to escalate any issues that require immediate assistance.

**Time Warner Cable
FCC CableCARD™ Status Report
March – May 2007**

Current number of CableCARDs customers: 43,727

Number of CableCARDs available in inventory: 19,500

How are CableCARDs deployed? Majority of TWC divisions require a service appointment.

Percentage of installs: Service Appointment: 96%; Self Install: 4%;

Average number of truck rolls required to install a CableCARD: 1.18

Monthly lease rate for CableCARD: ³ Average: \$2.46. Most divisions are at \$1.75.

Do you charge for CableCARD installs? Some divisions charge a standard installation fee for CableCARDs while others waive the installation charge per division business procedure

What is the average installation cost? \$21.64

What is your process in resolving existing and newly discovered CableCARD implementation problems?

The process reported in our previous submission is still in place. The web forum referred to as “eRoom” is still in use for resolving existing and newly discovered CableCARD implementation problems. The eRoom also allows TWC divisions to share information on issues and work together to resolve them.

Problems encountered with CableCARDs and their resolution

Our divisions continue to report a variety of different issues arising with respect to CableCARD host device installations.

Problem: Incorrect software/ firmware on host devices continue to cause most of the reported issues to date and are common across all CE brands.

Resolution: The standard procedure is for the cable technician to inform the customer that a software patch from the CE manufacturer is required to upgrade the Host and

³ The monthly lease rate for CableCARDs reflects an average across all TWC divisions. Some of our divisions are still in the process of standardizing CableCARD lease rates within their divisions, due to differences in pricing stemming from legacy lease rates within cable systems formerly owned by Adelphia Communications Corporation and related systems swapped with Comcast Communications Corporation.

correct the issue. After the CE manufacturer has completed the upgrade, a follow-up service appointment is needed to re-install the CableCARD.

Problem: Missing or no channels on Host device due to faulty or non-compliant in-home wiring devices installed by customer, such as splitters and coaxial jumper cables.
Resolution: A cable technician replaces equipment and brings signal levels into specification.

Problem: CableCARDS not seated properly into Host device at time of installation.
Resolution: Technician reseats the CableCARD activating the MMI screen and initializing authorization.

Problem: Host device dropping encrypted services
Resolution: Contact the CE manufacturers and work together on a resolution. In most cases, a firmware or hardware update is required depending on the model and date of manufacture.