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June 23, 2008

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> 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,<sup>1</sup> 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.** As of June 23, 2008, 27 consumer electronics (“CE”) manufacturers have had 583 Unidirectional Digital Cable Ready Product (“UDCP”) models (such as Digital Cable Ready DTV sets) certified or verified for use with CableCARDs. As for CableCARD deployment for those UDCPs, the five MSOs who are required to report today – Cablevision Systems, Charter Communications, Comcast Corporation, Cox Communications, and Time Warner Cable – and who serve nearly 80% of the cable subscribers in the country, have deployed over 344,000 CableCARDs for use in UDCPs. When the CableCARDs deployed by the next five largest incumbent cable operators are included, *there have been over 372,000 CableCARDs deployed for use in UDCPs by the ten largest incumbent cable operators who serve approximately 90% of the cable subscribers in the country.*

By contrast, since the “integration ban” went into effect on July 1, 2007, those 10 companies have already deployed *more than 6,232,800 operator-supplied set-top boxes with CableCARDs. Therefore, in less than one year, cable operators have deployed more than sixteen times as many CableCARD-enabled devices than the total number of CableCARDs requested by customers for use in UDCPs in the last four years.*

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<sup>1</sup> *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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**Multistream CableCARDS.** The Commission also asked for periodic reports on the "effort to develop and deploy a multistream CableCARD." As reported previously, all CableCARD manufacturers (Motorola, CISCO/Scientific-Atlanta, and NDS) have Qualified Multistream CableCARDS. CableLabs has provided testing of UDCPs for conformance to the M-Card interface test suite since January of 2007. Devices from TiVo and other manufacturers have been verified under this test program. Tru2way host devices also make use of the M-Card interface. Major Cable Operators have been deploying M-Cards since 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

Attachments

cc: Brendan Murray  
Brian Markwalter  
Robert Schwartz

## **Cablevision Systems**

### **FCC CableCARD Quarterly Report**

**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: 16,239 (as of June 10, 2008).** This represents a 2% increase in deployment from the 2008 1st quarter report.
- 2. Number of CableCARDS in Inventory:** 21,666 [5,427 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:** 1.1
- 6. Monthly Lease rate for CableCARD:** \$2.00 (as of December 2007)
- 7. Average installation Cost (if applicable):** Professional install fee is \$46.95.
- 8. Number of problems encountered with CableCARDS:** 2823 installation and post-installation Remedy tickets were opened during the period of 4/1/2008 to 6/8/2008.
  - Host Related: 57%
  - CableCARD related including rebooting CableCARDS: 36%
  - Network Related: 7%
- 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 manufacturer'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:**

Send a “hit” to the CableCARD or have customer remove and replace the CableCARD from DCR TV.

**Problem Description:**

CableCARD error 161-4

**Occurs During:**

Post-Installation

**Resolution:**

Cabledata “hit” to CableCARD and reset DCR TV

**Problem Description:**

Customer has black screens on premium channels only.

**Occurs During:**

Post-Installation

**Resolution:**

Send a “hit” to CableCARD. Have the customer turn off DCR TV and remove and replace the CableCARD.

## **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 manufacturer 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 any 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 manufacturers 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, 2008 – May 31, 2008**

1. Current number of CableCARD subscribers:

The total number of CableCARDs in service through May 31, 2008 is 27,795.

2. Provide the number of CableCARDs in inventory:

SA CableCARDs: 3558  
Moto CableCARDs: 12602  
Total CableCARDs: 16160

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, 2008 was 1.2.

6. Monthly lease rate for a CableCARD?

The average monthly lease for a CableCARD 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,<sup>2</sup> 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.

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.
East	Host	DTV host unit could not receive certain channels.	After full troubleshooting, the customer was advised to contact the DTV host manufacturer.	E
East	Unknown	DTV host unit could not receive certain channels.	Charter continues to work with the subscriber on resolution.	G
East	Unknown	One channel still lacks audio after extensive troubleshooting and a firmware upgrade.	Charter continues to work with the subscriber on resolution.	D

<sup>2</sup> See Charter Communications FCC CableCARD Reporting, December 1, 2007 – February 29, 2008, p. 2, Attachment to Letter from Neal M. Goldberg to Marlene H. Dortch, Commercial Availability of Navigation Devices, CS Docket 97-80 (filed March 25, 2008).

Central	Unknown	Host unit worked with one-way card but failed to integrate two-way CableCARD functions.	Charter is working directly with the host manufacturer on resolution.	L
Central	Host	Host unit failed to integrate CableCARD functions.	Charter continues to work with the subscriber on resolution.	L
West	Host	The DTV host manufacturer indicated that the unit could not be upgraded to utilize the CableCARD feature.	Charter continues to work with the subscriber on a resolution.	D
West	Host	Channels were missing.	The customer replaced the host unit with a new host from the same manufacturer and the problem was resolved.	L
West	Host	The host channel tuner would not work.	The customer plans to obtain a new host unit from the manufacturer.	L

**Comcast Corporation  
FCC CableCARD Report  
March 2008 – May 2008**

<b>Current Number of CableCARDS installed in active customer homes</b>	218,551
<b>Number of CableCARDS in Inventory</b>	89,783
<b>How are CableCARDS deployed: Truck Roll / Self Install / Both</b>	Both
<b>Total CableCARD Installs</b>	38,278
Number of Installs - Truck Rolls	32,309
Percentage of Installs - Truck Rolls	84%
Number of Installs - Self Installs	5,969
Percentage of Installs - Self Installs	16%
<b>Average Number of Truck Rolls to Install a CableCARD</b>	1.10
<b>Monthly Lease Rate for Initial CableCARD</b>	\$0.00
<b>Monthly Lease Rate for Additional CableCARD</b>	\$1.69
<b>Average Installation Cost if part of installation of other services</b>	\$7.32
<b>Average Installation Cost if separate trip</b>	\$21.51

**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**

Some flat panel Plug and Play devices have the CableCARD slot in the back making it impossible to install or access the CableCARD without removing the set from the wall.

Some Plug and Play devices do not initially acquire all of the Comcast channels from the channel map requiring the customer to wait for hours or even days to begin receiving all programming. Some Plug and Play devices and all Comcast settop boxes (including settop boxes using CableCARDS) do not exhibit this problem.

Comcast technicians report that almost every CableCARD installation is unique with different issues arising due to variations in the many different models of Plug and Play devices that use CableCARDS. This often results in long installation times as compared to Comcast settop boxes that also use CableCARDS but can be installed and initialized efficiently.

Cox Communications FCC CableCARD Reporting  
March 01, 2008 through May 31, 2008

1. The number of Residential CableCARDS in service:

Cox TOTAL: 24,274  
Moto Total: 10,872  
Cisco Total: 13,402

2. General availability of CableCARDS:

Total CableCARDS available: 16,458

- a. Please provide an indication of supply availability for CISCO and Motorola

Cisco CableCARDS: 11,357

Moto CableCARDS: 5,101

\*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 installations?

Yes.

5. Average number of truck rolls to install a CableCARD?

The average number of truck rolls needed to install a CableCARD 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: 1.11

The breakdown for each month is as follows:

- Feb 2008: 1.14
- Mar 2008: 1.10
- Apr 2008: 1.09

6. Monthly price charged for a CableCARD?

The average monthly rental for a CableCARD device is \$1.95

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 \$24

8. Problems encountered in deploying CableCARDS and how problems are resolved?

Total number of trouble calls for all CableCARD issues, escalated and un-escalated:

- March 2008: 880
- April 2008: 922
- May 2008: 969

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.

Cox Communications FCC CableCARD Reporting  
March 01, 2008 through May 31, 2008

**Host Problems:**

Site 7, Manufacturer 12

- **Problem:** The DCR device displayed channels that were not authorized for the account.
- **Resolution:** After completing all Cox troubleshooting procedures with no issue found, our technician performed a hard reset on the DCR device and performed channel search. Issue resolved.

Site 23, Manufacturer 25

- **Problem:** The DCR device only displayed channel 12.
- **Resolution:** A CableCARD swap was performed, which did not initially correct the issue. We worked with the host manufacturer to perform a reboot to the host. Issue resolved.

Site 16, Manufacturer 16

- **Problem:** DCR device had a firmware compatibility issue with the M-card. The DCR device dealer indicated this unit could not be updated with firmware.
- **Resolution:** After completing all Cox troubleshooting with no issue found, we asked the customer to contact the manufacturer for an upgrade. Awaiting the upgrade.

Site 16, Manufacturer 16

- **Problem:** For CableCARDS dated after July 2007, the DCR device with a firmware version prior to July 2007 will give the message "Please wait while CableCARD firmware upgrades".
- **Resolution:** After completing all Cox troubleshooting procedures with no issue found, we asked the customer to contact the manufacturer for an upgrade. Awaiting the upgrade.

Site 16, Manufacturer 27

- **Problem:** The DCR device was unable to locate the second CableCARD.
- **Resolution:** After completing all Cox troubleshooting procedures with no issue found, we contacted the DCR device manufacturer for assistance in troubleshooting.

**CableCARD Problems**

Site 19, Manufacturer 19

- **Problem:** The DCR device was unable to receive HBO premiums.
- **Resolution:** After completing all Cox troubleshooting procedures with no issue found, customer opted to use a receiver.

Site 19, Manufacturer 12

- **Problem:** The DCR device experienced problems displaying digital channels. The pairing screen continued to reappear.
- **Resolution:** Cox swapped the CableCARD and paired the new CableCARD with the DCR device. Issue resolved.

Site 23, Manufacturer 19

- **Problem:** The DCR device was not receiving any services.
- **Resolution:** There was a wiring issue at the customer's location. Issue resolved.

Cox Communications FCC CableCARD Reporting  
March 01, 2008 through May 31, 2008

Site 26, Manufacturer 25

- **Problem:** The DCR device could not receive channels above 24.
- **Resolution:** Troubleshooting procedures revealed a CableCARD pairing issue. Issue resolved.

Site 24, Manufacturer 27

- **Problem:** The DCR device would lose channels. The customer would have to reset the device to regain the channels.
- **Resolution:** After troubleshooting with the CableCARD vendor and the DCR Device manufacturer, an issue was discovered with the CableCARD. A software upgrade is scheduled to fix this issue.

Site 2, Manufacturer 27

- **Problem:** DCR device displays black screens from channel 23 and up. When the device is rebooted the channels reappear for a few days, and then disappear again.
- **Resolution:** After troubleshooting with the CableCARD vendor and the DCR device manufacturer, an issue was discovered with the CableCARD device. A software upgrade is scheduled to fix this issue.

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 2008 – May 2008**

*Current number of CableCARDS activated: 57,404*

*Current number of unique CableCARD customers: 41,813*

*Number of CableCARDS available in inventory: 31,185*

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

*Percentage of installs: **Service Appointment: 99.8%; Self Install: 0.2%;***

*Average number of truck rolls required to install a CableCARD: 1.32*

*Monthly lease rate for CableCARD: **Average: \$2.24. 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? **\$22.45***

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

**The process reported in our previous submissions 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.**

**TWC’s central CableCARD support desk continues to diagnose any and all issues pertaining to CableCARDS. This support desk serves as an escalation point for all divisions and will shepherd an issue until resolution.**

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

**Problem:** Compatibility Issues between discontinued CE host devices and newer “MCard” CableCARDS

**Resolution:** Contact the CE manufacturers to update code on the host device. If updated code is unavailable for the CE host device and is also no longer supported by the manufacturer, an older “SCard” CableCARD is installed.

**Problem:** Missing or no channels on Host device due to faulty or non-compliant in-home wiring devices installed by the 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 losing 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. Replace CableCARD and/or resend billing activation codes.