

IG-97-026

**AUDIT  
REPORT**

---

**COMMERCIAL USE OF NASA'S TRACKING  
AND DATA RELAY SATELLITE SYSTEM  
(TDRSS)**

**JUNE 24, 1997**

---



National Aeronautics and  
Space Administration

**OFFICE OF INSPECTOR GENERAL**

## **ADDITIONAL COPIES**

To obtain additional copies of this audit report, contact the Assistant Inspector General for Auditing at 202-358-1232.

## **SUGGESTIONS FOR FUTURE AUDITS**

To suggest ideas for or to request future audits, contact the Assistant Inspector General for Auditing. Ideas and requests can also be mailed to:

Assistant Inspector General for Auditing  
NASA Headquarters  
Code W  
300 E St., SW  
Washington, DC 20546

## **NASA HOTLINE**

To report fraud, waste, abuse, or mismanagement, contact the NASA OIG Hotline by calling 1-800-424-9183; 1-800-535-8134 (TDD); or by writing the NASA Inspector General, P.O. Box 23089, L'Enfant Plaza Station, Washington, DC 20026. The identity of each writer and caller can be kept confidential upon request to the extent permitted by law.

## **ACRONYMS**

|                |  |
|----------------|--|
| <b>CAC</b>     | Columbia Astronautics Corporation        |
| <b>CCC</b>     | Columbia Communications Corporation      |
| <b>CEO</b>     | Chief Executive Officer                  |
| <b>EOS</b>     | Earth Observing System                   |
| <b>FAR</b>     | Federal Acquisition Regulation           |
| <b>FY</b>      | Fiscal Year                              |
| <b>M&amp;O</b> | Marketing and Operations                 |
| <b>OSC</b>     | Office of Space Communications           |
| <b>OSF</b>     | Office of Space Flight                   |
| <b>SBA</b>     | Small Business Administration            |
| <b>TDRSS</b>   | Tracking and Data Relay Satellite System |

National Aeronautics and  
Space Administration  
**Headquarters**  
Washington, DC 20546-0001



JUN 24 1997

Reply to Attn of: **W**

**TO:** M-3/Deputy Associate Administrator for Space Flight (Space Communications)

**FROM:** W/Acting Assistant Inspector General for Auditing

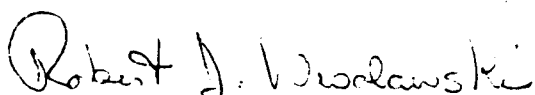
**SUBJECT:** Commercial Use of NASA's Tracking and Data Relay Satellite System (TDRSS)  
Assignment No. A-KE-96-003  
Report No. IG-97-026

Enclosed is the subject final audit report. We found three C-Band agreement provisions not in NASA's best interest: (1) marketing and operations costs were unreasonable, resulting in more than \$700,000 of lost revenue to NASA, (2) C-Band revenues were improperly used to pay profits, and (3) C-Band revenues were not deposited into the lock box, as required.

A discussion draft report was issued on April 9, 1997. We discussed the observations and recommendations contained in the discussion draft report with your representatives at an exit conference on May 15, 1997. The Agency's written response was received on June 9, 1997. We include the response after each recommendation and present it entirely as Appendix 4 to the report. The response indicates that management has planned actions that are considered responsive to the intent of the recommendations.

The audit also showed that NASA may not be in compliance with applicable laws and regulations regarding the use of TDRSS C-Band revenues. We issued a final Rapid Action Report addressing NASA's use of the C-Band revenues on December 17, 1996. We include a summary of this report as Appendix 3 to the final report.

In accordance with NASA Management Instruction 9910.1B, we request to be included in the concurrence cycle for closure of each of the report's four recommendations. If you have any questions or require any additional information, please contact Kevin J. Carson, Acting Program Director for MTPE and Communications at 301-286-0498, Daniel J. Samoviski, Acting Director, Audit Division-A, or me at 202-358-1232.

  
Robert J. Wesolowski

Enclosure

cc:

B/A. Holz

G/B. Stephens

JM/D. Green

K/R. Thomas

W/K. Carson, GSFC

W/S. Massey, KSC

201/J. Clark, GSFC

## **TABLE OF CONTENTS**

---

|  |    |
|--|----|
| EXECUTIVE SUMMARY .....  | 1  |
| OBSERVATIONS AND RECOMMENDATIONS .....   | 3  |
| 1. MARKETING AND OPERATIONS COSTS ARE<br>UNREASONABLE .....                      | 3  |
| 2. C-BAND REVENUES IMPROPERLY USED TO PAY PROFITS ..                             | 7  |
| 3. C-BAND REVENUES ARE NOT DEPOSITED DIRECTLY INTO<br>LOCK BOX AS REQUIRED ..... | 11 |
| EXHIBIT 1 .....  | 13 |
| EXHIBIT 2 .....  | 15 |
| EXHIBIT 3 .....  | 17 |
| EXHIBIT 4 .....  | 19 |
| APPENDIX 1 - BACKGROUND .....  | 21 |
| APPENDIX 2 - OBJECTIVES, SCOPE, AND METHODOLOGY .....                            | 23 |
| APPENDIX 3 - SUMMARY OF RAPID ACTION AUDIT REPORT .....                          | 25 |
| APPENDIX 4 - MANAGEMENT'S RESPONSE .....   | 27 |
| APPENDIX 5 - MAJOR CONTRIBUTORS TO THIS AUDIT .....                              | 29 |



# COMMERCIAL USE OF NASA'S TRACKING AND DATA RELAY SATELLITE SYSTEM (TDRSS)

## EXECUTIVE SUMMARY

---

### **INTRODUCTION**

The Office of Inspector General has completed an audit of the Commercial Use of NASA's Tracking and Data Relay Satellite System (TDRSS). See Appendix 1 for detailed background regarding the audit and Appendix 2 for more detailed information on the audit objectives, scope, and methodology.

### **RESULTS OF AUDIT**

Our audit showed that NASA may not be in compliance with applicable laws and regulations regarding the use of the C-Band revenues. We issued a Rapid Action Report addressing NASA's use of the C-Band revenues. We summarize this report in Appendix 3.

We identified that the Earth Observing System (EOS) Program may be able to use TDRSS excess capacity, other than C-Band. However, a separate audit showed that the program will make use of ground stations instead of the TDRSS for future spacecraft.

The C-Band agreement amendments regarding marketing and operations expenses are not in NASA's best interest. We identified three issues concerning the amendment provisions to the C-Band agreement.

- 1. Marketing And Operations Costs Are Unreasonable.** Columbia Communications Corporation (CCC) claimed over \$1 million for marketing and operations expenses considered unallowable or unreasonable under the Federal Acquisition Regulations (FAR). This occurred because the NASA C-Band agreement lacked sufficient guidance regarding marketing and operations expenses. As a result, NASA's share of the 1995 C-Band revenues was reduced by more than \$700,000. (Page 3)
- 2. C-Band Revenues Improperly Used To Pay Profits.** From January 1, 1994, through June 30, 1996, CCC incurred \$375,000 for Hawaii operations expenses which included \$154,664 in profit for Columbia Astronautics Corporation

(CAC). Since the C-Band agreement prohibits the use of revenues to pay profits, the Office of Space Flight (Space Communications) should pursue recovery of \$108,265, which is NASA's 70 percent share of C-Band revenues. (Page 7)

3. ***C-Band Revenues Are Not Deposited Directly Into Lock Box As Required.*** CCC was not in compliance with the lock box provision of the agreement. As a result, NASA does not have assurance that all of the C-Band revenues are being reported accurately. (Page 11)

### ***RECOMMENDATIONS***

We recommend that the Office of Space Flight (Space Communications):

- (1) Establish clear guidelines, such as those in FAR, Part 31, to determine what constitutes allowable and reasonable marketing and operations expenses under the C-Band agreement.
- (2) Require that Hawaii Operations expenses be fully documented in the future.
- (3) Pursue recovery of \$108,265 from CCC.
- (4) Ensure that CCC's customers send their payments directly to the bank lock box as required by the C-Band agreement unless otherwise authorized by NASA.



## **OBSERVATIONS AND RECOMMENDATIONS**

---

### ***1. MARKETING AND OPERATIONS COSTS ARE UNREASONABLE***

In 1995, CCC claimed over \$1 million of marketing and operations expenses considered unallowable or unreasonable under FAR. This occurred because the C-Band agreement does not provide specific guidelines defining what marketing and operations expenses will be considered allowable or reasonable. As a result, NASA's share of C-Band revenues was reduced by more than \$700,000 in 1995.

### ***FAR CRITERIA***

FAR, Part 31, contains cost principles and procedures for (1) the pricing of contracts and (2) the determination, negotiation, and allowance of costs. The objective of FAR, Part 31, is to ensure that all organizations performing similar types of work follow the same principles and procedures.

### ***NASA ADOPTED FAR FOR SOLICITATION AND SELECTION PROCESS***

NASA's solicitation for bids for the use of TDRSS C-Band capacity stated that the agreement would be awarded to a responsible, prospective customer meeting substantially the same standards and procedures applied to a responsible, prospective contractor in accordance with FAR, Subpart 9.1. Compliance with this provision required prospective bidders to provide business, financial and technical information to designated NASA officials to enable the Agency to make a determination that the bidder was, in fact, a responsible, prospective customer. NASA's review of CCC's proposal, in combination with a Defense Contract Audit Agency report on CCC's financial position, resulted in findings that CCC was not a responsible bidder.

CCC protested NASA's decision, citing that under United States Code, Title 15, Section 637(b)(7)(A), only the Small Business Administration (SBA) can determine whether a small business is responsible. This statutory provision provides that "A Government procurement officer or an officer engaged in the sale and disposal of Federal property may not, for any reason specified in the preceding sentence preclude a small business concern . . . from being awarded such contract, without referring the matter for final disposition to the SBA." The United States District Court for the District of Columbia ruled in favor of CCC. Consequently, the question of whether CCC was a responsible, prospective customer was posed to the SBA. The SBA found in favor of CCC and NASA awarded the company the C-Band lease agreement.

**NASA DID NOT  
ADOPT FAR FOR  
COST NEGOTIATION,  
DETERMINATION,  
AND ALLOWANCE**

Although NASA adopted the FAR Subpart 9.1 in the selection process for the C-Band lease, it did not follow FAR Part 31 provisions for the negotiation, determination and allowance of agreement costs. Instead of clearly defining criteria for allowance and reasonableness of costs, NASA required only that costs be "commercially reasonable marketing and operations expenses." The omission of the FAR reference or some other clearly defined criteria has resulted in reduced C-Band revenues to NASA.

**AGREEMENT TERMS  
FOR MARKETING  
AND OPERATIONS  
EXPENSES**

Amendment 11 of the C-Band agreement allows CCC to use \$2.4 million of C-Band revenues for marketing and operations expenses. The agreement specifically states "certain revenue from the leasing of transponder capacity to third parties will be treated separately from the revenue sharing arrangement. This revenue, known as Marketing and Operations (M&O) Revenue, will be retained by CCC, but may be used only to pay *commercially reasonable marketing and operations expenses* {emphasis added} incurred by CCC in connection with the leasing of TDRSS transponder capacity. To the extent that any M&O Revenue is not used for marketing and operations expenses by the end of the calendar year for which it was allocated, the remaining M&O Revenue will be shared by CCC and NASA in the same manner as that used for other revenue described in subsection (a) of the agreement."

If CCC achieves annual revenue milestones specified in the C-Band agreement, then CCC may use up to the following amounts of lease revenues for marketing and operations expenses:

|           |   |
|-----------|---|
| 1993-1995 | \$2.4 million/year of revenues from the MCI telecommunications lease. |
| 1996-1997 | \$2.4 million/year of revenue from any TDRSS leases.                  |
| 1998-2001 | \$1.35 million/year of revenue from any TDRSS leases.                 |

***COLUMBIA  
REPORTED CASH  
EXPENDITURES OF  
\$2.4 MILLION***

CCC reported cash expenditures of \$2.4 million for marketing and operations expenses for TDRSS activities in 1995. The 1995 report to NASA contained over \$1 million of costs which are prohibited or limited under the FAR. This occurred because the expenses were limited only by what CCC deemed to be commercially reasonable. The expenses we questioned, along with applicable FAR citations, are listed in Exhibit 1. (See page 13)

Per Amendment 9 of the agreement, NASA's share of C-Band revenue is 70 percent. We questioned 1995 marketing and operations expenses totaling \$1,012,641. Thus, NASA's share of C-Band revenues was reduced by \$708,848 because the guidelines for marketing and operations expenses were not clearly stated. (See Exhibit 2, page 15)

***CONCLUSION***

Since both NASA and CCC took actions pursuant to the FAR to establish the C-Band agreement, the adoption of FAR provisions for the determination of marketing and operations costs could also be appropriate. The adoption of provisions such as those in FAR, Part 31, would result in fair and consistent treatment of CCC's C-Band costs with other Government agreements.

***RECOMMENDATION 1***

The Office of Space Flight (Space Communications) should establish clear guidelines, such as those in FAR, Part 31, to determine what constitutes allowable and reasonable marketing and operations expenses under the C-Band agreement.

***MANAGEMENT'S  
RESPONSE***

Concur in principle. Since the Agreement with Columbia Communications Corporation (CCC) was not entered into under FAR, this Agreement is not a contract governed by the FAR. The cost principles of FAR, Part 31, do not and should not apply. For example, some of the expenses listed, such as promotional items and participation in trade shows, while not allowable under FAR are normal commercial practices and essential to Columbia's role under the Agreement. We do agree that some of the expenses listed in Exhibit 1 of the report should be questioned, and we are prepared to do so on the grounds of commercial necessity.

***EVALUATION OF  
MANAGEMENT'S  
RESPONSE***

The actions planned are considered responsive to the intent of the recommendation. We will remain in the concurrence cycle for closure of this recommendation to review the actions taken and resulting guidelines established for the allowability and reasonableness of future marketing and operations expenses claimed by CCC.

**THIS PAGE INTENTIONALLY LEFT BLANK**

**2. C-BAND  
REVENUES  
IMPROPERLY  
USED TO PAY  
PROFITS**

From January 1994 to June 1996, CCC claimed \$375,000 for its Hawaii operations expenses that included \$154,664 in profits to CAC. The C-Band agreement prohibits the use of lease revenues to pay profits. The profits were not identified because they were included in a fixed monthly facilities and services fee for support of CCC's Hawaii operations (See footnote (1)). As a result, NASA was not paid \$108,265, which is the agency's 70 percent share of the improperly used revenues.

**C-BAND AGREEMENT  
PROHIBITS THE USE  
OF REVENUES TO  
PAY PROFITS**

There were three amendments to the C-Band agreement during the period of our review which affected NASA's share of the C-Band revenues. Each of these amendments permitted CCC to retain a certain amount of the revenues collected from its C-Band leases to cover commercially reasonable marketing and operations expenses. Two of these amendments (9 and 10) prohibited the use of C-Band revenues to pay profit. We describe each amendment and its provisions in Exhibit 3. (See page 17)

**CCC PAYS CAC FIXED  
FEE FOR HAWAII  
OPERATIONS  
SUPPORT**

CCC paid CAC a fixed monthly fee to support CCC's Pacific-rim operations in Honolulu, Hawaii. However, there was no formal agreement between the two companies to document this arrangement. According to documents from CCC and its Legal Counsel, in 1992, the two companies reached an understanding with certain of CCC's creditors and operating profit distributees whereby CCC agreed to pay CAC a flat \$12,500 monthly facilities and services fee. In return, CAC provides office space, equipment, travel and entertainment expenses that the President of CAC, who is also the President of CCC, incurs for his work on behalf of CCC. This monthly fee is exclusive of any personnel costs (see Footnote (2)).

---

*Footnote (1):*

*The Hawaii Operations expenses questioned in this observation are also included in the overall marketing and operations expenses questioned in Observation 1.*

*Footnote (2):*

*The president's annual salary is \$104,000. He also received a bonus of \$201,299 in 1995. This bonus was treated as deferred compensation and CCC pays 12 percent interest on the deferred amount.*

***CAC'S MONTHLY FEE  
RESULTS IN  
EXCESSIVE PROFITS***

According to the Legal Counsel who represents both corporations, CAC does not conduct any business, other than to support CCC. Consequently, CAC incurs no other expenses other than those relating to CCC. Therefore, fees received in excess of actual costs incurred represent profit for CAC. As shown in Exhibit 4 (page 19), CAC earned profits of \$51,659 and \$60,918 in 1994 and 1995, respectively. These amounts equate to profit margins of 53 percent and 68 percent, respectively. In addition, CAC had a profit margin of 128 percent through June 30, 1996. These profits are not only excessive and unreasonable; they are prohibited under the terms of the C-Band agreement.

***CAC'S ACTUAL  
EXPENSES NOT  
SUPPORTED***

We requested that CAC provide supporting documentation for the actual expenses incurred. According to Legal Counsel, CAC did not keep adequate files and, consequently, support for the Hawaii operations expenses were not readily available. CAC did, however, provide a copy of the lease agreement for the Honolulu office space. The office lease was between CCC and the building landlord. It would appear that CAC is not providing office space for CCC as described in the two companies' business arrangement.

CAC did ultimately provide copies of checks and credit card statements as support for its Hawaii operations expenses. However, without detailed supporting documentation for CAC's expenses, it is unknown which company the President was actually representing when the expenses were incurred, or if the costs incurred were valid CCC expenses.

***CCC'S EXPENSES FOR  
HAWAII OPERATIONS  
MUST BE  
REASONABLE AND  
FULLY SUPPORTED***

Our review of the C-Band agreement showed that it was NASA's intent to pay only marketing and operations expenses which are reasonable in the conduct of CCC's business. As such, CCC should fully document and justify all expenses prior to claiming them against the designated marketing and operations revenue. The OSF (Space Communications) should require supporting documentation for CCC's Hawaii office operations in the future.

In addition, payment of a fixed monthly fee for Hawaii operations, which results in payments for profit is prohibited under the agreement. The CAC monthly fees paid in excess of actual costs represented profit of \$154,664. This profit should not be paid out of the \$2.4 million revenues designated for marketing and operations expenses. Accordingly, NASA's share of the annual C-Band gross revenues should not be reduced by \$108,265.

**RECOMMENDATION 2** The Office of Space Flight (Space Communications) should require supporting documentation for future CCC Hawaii Office operations expenses.

**MANAGEMENT'S RESPONSE** Concur. NASA has questioned the nature and scope of the expenses of Columbia's Hawaii office since those expenses were first claimed. NASA will continue to press this matter with Columbia based upon the additional information developed by the OIG.

**EVALUATION OF MANAGEMENT'S RESPONSE** The actions planned are considered responsive to the intent of the recommendation. We will remain in the concurrence cycle for closure of this recommendation to review the resolution of this issue between NASA and CCC.

**RECOMMENDATION 3** The Office of Space Flight (Space Communications) should pursue recovery of the \$108,265 from CCC.

**MANAGEMENT'S RESPONSE** Concur. NASA will pursue recovery of the \$108,265 from CCC.

**EVALUATION OF MANAGEMENT'S RESPONSE** The actions planned are considered responsive to the intent of the recommendation. We will remain in the concurrence cycle for closure of this recommendation to review the recovery actions taken by NASA.

**THIS PAGE INTENTIONALLY LEFT BLANK**



**3. C-BAND  
REVENUES ARE  
NOT DEPOSITED  
DIRECTLY INTO  
LOCK BOX AS  
REQUIRED**

**AGREEMENT TERMS  
FOR LOCK BOX  
DEPOSITS**

**PAYMENTS MADE  
DIRECTLY TO  
COLUMBIA**

CCC violated the terms of the C-Band agreement for revenue deposits. Specifically, C-Band revenues were not directly deposited to, and disbursed by, the bank (independent third party) as required by the C-Band agreement. CCC requested, that its customers send their lease payments directly to CCC's office instead of the bank managing the lock box. As a result, NASA cannot be assured that it received its full share of C-Band gross revenues.

Amendment 10 of the C-Band agreement requires that all lease payments be paid directly into a commercial bank account controlled by a mutually agreeable third party. Thus, CCC's C-Band customers must send their lease payments directly to the bank lock box agreed upon by both NASA and CCC. The bank will then make direct payments to NASA on the first of each month, based on gross revenues received and percentages stated in the agreement. This process ensures that NASA receives its proper share of C-Band revenues.

During our review of CCC's records, we found that customers were sending lease payments directly to CCC rather than the designated lock box. CCC officials instructed customers to send payments directly to CCC for "bookkeeping purposes." Some customers require both space and ground segment services. Consequently, they pay for both space and ground segment costs in one check. Because NASA is not entitled to any ground segment revenue, CCC takes out that portion and forwards it to the ground segment provider. CCC then writes a check to the lock box for the remaining space segment portion.

Our review showed that the submission of checks directly to the bank should not pose a bookkeeping problem because there were only a few cases where checks were received which contained both ground and space segment revenues. Further, according to CCC's Office Manager, as of June 11, 1996, CCC had received no ground segment revenues for Calendar Year 1996. Even though no ground segment revenues were received in 1996, none of the space segment revenues went directly to the bank, as required by the Agreement.

The collection of ground segment revenues appears to be the exception to most lease agreements. Consequently, as a general rule, lease payments should be deposited directly into the lock box, as required. CCC should seek approval from NASA to waive this requirement only when ground segment revenues are involved.

***CONCLUSION***

The control of the bank lock box receipts by CCC rather than the bank is a violation of the C-Band agreement. Further, CCC's direct receipt of the lease payments weakens accounting controls for gross revenues and disbursements. The OSF (Space Communications) should ensure that CCC fully complies with the lock box provisions of the C-Band agreement. Otherwise, NASA cannot be assured that it is receiving its full share of C-Band gross revenues.

***RECOMMENDATION 4***

The Office of Space Flight (Space Communications) should ensure that CCC's customers send their payments directly to the bank lock box as required by the C-Band agreement unless otherwise authorized by NASA.

***MANAGEMENT'S  
RESPONSE***

Concur. NASA will revisit the current lock box procedures with CCC.

***EVALUATION OF  
MANAGEMENT'S  
RESPONSE***

The actions planned are considered responsive to the intent of the recommendation. We will remain in the concurrence cycle for closure of this recommendation to review the resolution of this issue between NASA and CCC.

**EXHIBIT 1**

**CCC'S MARKETING AND OPERATIONS EXPENSES CONSIDERED  
UNALLOWABLE OR UNREASONABLE  
UNDER FEDERAL ACQUISITION REGULATION, PART 31**

| <b>Account Title</b>                | <b>Amount</b>         | <b>FAR Reference</b>  |
|-------------------------------------|-----------------------|---|
| Giveaways                           | \$2,243.55            | Cost of souvenirs, models, imprinted clothing, buttons, etc. are unallowable - 31.205-1(f)(6)   |
| Print Media Advertising             | \$154,535.21          | Allowable Advertising Costs - 31.205-1(d)(1-2)<br>Unallowable Advertising Costs-31.205-1(f)(1-7)  |
| Public Relations                    | \$107,251.25          | Allowable Public Relations Costs-31.205-1(e)(1-5)<br>Unallowable Costs-31.205-1(f)(1-7)   |
| Trade Shows                         | \$60,619.06           | Unallowable Advertising/Public Relations Costs - 31.205-1(f)(2)   |
| Hospitality Contributions Donations | \$3,585.21            | Contributions/Donations are unallowable-31.205-8 except for 31.205-1(e)(3)  |
| Bonuses                             | \$217,301.33          | Bonuses - 31.205-6(f)<br>Reasonable Compensation - 31.205-6(b)  |
| Consulting - Legal                  | \$229,020.97          | Allowable professional/consultant costs-31.205-33<br>Unallowable costs-31.205-33(c)(1-4).<br>Factors for allowing costs - 31.205-33(d-f). |
| Recruitment                         | \$1,924.83            | Allowable recruitment costs - 31.205-34(a)(1-6)<br>Unallowable costs - 31.205-34(b) and (c)   |
| Travel                              | \$76,493.73           | Allowable/Limited Travel Costs - 31.205-46  |
| Entertainment                       | \$9,665.45            | Unallowable Costs - 31.205-14   |
| Hawaii Operations                   | \$150,000.00          | Allowable, Allocable, Reasonable -31.201-2 thru 4   |
| <b>TOTAL</b>                        | <b>\$1,012,640.59</b> |   |

**THIS PAGE INTENTIONALLY LEFT BLANK**

**EXHIBIT 2**

**IMPACT OF CCC'S MARKETING AND OPERATIONS EXPENSES  
TO NASA'S SHARE OF C-BAND REVENUE**

|  |                     |
|--|---------------------|
| Total FAR costs classified as questionable, unallocable, or unreasonable | \$1,012,640.59      |
| NASA Revenue Sharing   | 70%                 |
| Lost Revenues  | <b>\$708,848.41</b> |

**THIS PAGE INTENTIONALLY LEFT BLANK**

**EXHIBIT 3****TABLE OF AMENDMENTS 9, 10, AND 11  
TO THE C-BAND AGREEMENT**

| <b>Amendment No.</b> | <b>Dates</b>        | <b>Marketing &amp; Operations Allowance by Year</b> | <b>Special Provisions</b> |
|----------------------|---------------------|---|---------------------------|
| 9                    | 7/8/93 to 7/25/94   | \$1.5 million in 1995                               | See note 1                |
| 10                   | 7/26/94 to 11/13/95 | \$1.5 million in 1995                               | See note 2                |
| 11                   | 11/14/95 to present | \$2.4 million in 1995                               | See note 3                |

**Note 1.** In July 1993, NASA approved Amendment 9 of the C-Band agreement. Per Amendment 9, CCC's requirement to make annual progress payments to NASA was replaced with a revenue sharing arrangement. As part of this amendment, CCC was also granted authority to use lease revenues from a MCI lease agreement to fund commercially reasonable marketing and operations expenses. For 1995, CCC was allowed to retain up to \$1.5 million for these expenses. However, the agreement stated that "MCI revenue would not be used to pay obligations of the customer incurred prior to January 1, 1993, or interest on such obligations, or to pay any profit."

**Note 2.** In July 1994, NASA approved Amendment 10 of the C-Band agreement. There were no changes from Amendment 9 affecting NASA's share of C-Band revenues. As with Amendment 9, CCC was prohibited from using the MCI revenue to pay obligations incurred prior to January 1, 1993, or interest on such obligations, or to pay any profit.

**Note 3.** In November 1995, NASA approved Amendment 11 of the C-Band agreement. Per Amendment 11, CCC was allowed to retain up to \$2.4 million of gross revenues for commercially reasonable marketing and operating expenses in 1995.

**THIS PAGE INTENTIONALLY LEFT BLANK**



**TABLE OF HAWAII OPERATIONS EXPENSES  
INCURRED BY COLUMBIA ASTRONAUTICS  
ON BEHALF OF COLUMBIA COMMUNICATIONS**

| <b>EXPENSE</b>                 | <b>1994</b>               | <b>1995</b>               | <b>6/30/96</b>            | <b>Total</b>               |
|--------------------------------|---------------------------|---------------------------|---------------------------|----------------------------|
| Airline Tickets                | \$23,961.74               | \$23,942.78               | \$2,146.46                | \$50,050.98                |
| Auto Rental/Services           | \$4,729.24                | \$4,233.65                | \$1,961.84                | \$10,924.73                |
| Communications & Cable         | \$10,492.88               | \$8,986.05                | \$3,832.36                | \$23,311.29                |
| Fees and Permits               | \$355.40                  | \$345.00                  | \$325.00                  | \$1,025.40                 |
| Food and Beverage              | \$7,731.38                | \$9,661.19                | \$6,817.63                | \$24,210.20                |
| Health Care/Insurance          | \$2,466.84                | \$2,412.24                | \$252.54                  | \$5,131.62                 |
| Legal and Accounting           | \$3,412.60                | \$2,254.84                | \$673.70                  | \$6,341.14                 |
| License Fees & Taxes           | \$5,275.00                | \$10,935.05               | \$165.00                  | \$16,375.05                |
| Lodging                        | \$17,837.06               | \$11,281.86               | \$7,074.71                | \$36,193.63                |
| Office Equip/Merchandise       | \$6,927.26                | \$514.94                  | \$612.45                  | \$8,054.65                 |
| Office/Computer Supplies       | \$159.56                  | \$492.49                  | \$543.52                  | \$1,195.57                 |
| Office Rent                    | \$12,319.61               | \$11,845.02               | \$7,912.41                | \$32,077.04                |
| Miscellaneous                  | \$1,061.44                | \$859.84                  | \$94.52                   | \$2,015.80                 |
| Postage & Courier              | \$1,231.17                | \$299.85                  | \$143.39                  | \$1,674.41                 |
| Publications & Videos          | <u>\$379.32</u>           | <u>\$1,016.80</u>         | <u>\$358.53</u>           | <u>\$1,754.65</u>          |
| <b>Total</b>                   | <b>\$98,340.50</b>        | <b>\$89,081.60</b>        | <b>\$32,914.06</b>        | <b>\$220,336.16</b>        |
| Fees Paid to CAC               | \$150,000.00              | \$150,000.00              | \$75,000.00               | \$375,000.00               |
| <b>Fees in excess of costs</b> | <b>\$51,659.50</b>        | <b>\$60,918.40</b>        | <b>\$42,085.94</b>        | <b>\$154,663.84</b>        |
| Profit Margin                  | 53%                       | 68%                       | 128%                      | 70%                        |
| NASA's share of revenues       | 70%                       | 70%                       | 70%                       | 70%                        |
| <b>Revenues due NASA</b>       | <b><u>\$36,161.65</u></b> | <b><u>\$42,642.88</u></b> | <b><u>\$29,460.16</u></b> | <b><u>\$108,264.69</u></b> |

**THIS PAGE INTENTIONALLY LEFT BLANK**

## BACKGROUND

---

### ***AGREEMENT PURPOSE AND OBJECTIVES***

In 1990, the Office of Space Communications (OSC) entered into an agreement with Columbia Communications Corporation (CCC) for the use of excess C-Band capacity on two of NASA's Tracking and Data Relay Satellites (TDRS-4 and TDRS-5). CCC would, in turn, lease the C-Band capacity to commercial customers for international telecommunications purposes. The OSC entered into this agreement pursuant to provisions of the National Aeronautics and Space Act of 1958 (Space Act).

NASA's objectives for entering into this agreement were to:

- Use existing excess capacity on the TDRSS.
- Promote competition in the communications satellite industry by fostering an environment which would allow a small business to enter the market.
- Provide monetary return to taxpayers for their TDRSS investment.

### ***AGREEMENT TERMS***

The original agreement provided that CCC would pay NASA approximately \$61.4 million through a series of annual progress payments. Due to insufficient sales during the second year of the six-year lease, CCC was unable to meet its December 31, 1992 progress payment of approximately \$10.5 million. Rather than terminating the agreement, CCC proposed a revenue-sharing arrangement in lieu of annual progress payments.

In 1993, NASA approved Amendment 9 to the agreement. This amendment allowed CCC to pay NASA certain percentages of gross revenue from the TDRSS transponder leases, exclusive of two transponder leases to MCI and four transponder leases to TRW.

NASA allowed CCC to use the MCI revenue to pay for marketing and operations expenses. The TRW revenue was used to pay the first annual progress payment of approximately \$10.5 million under the original agreement. The revenue sharing percentages from the remaining transponder leases were as follows:

- 70 percent until NASA has received \$37.5 million.
- 50 percent thereafter until NASA has received \$53.6 million.
- 30 percent thereafter.

The OSC approved two amendments to the agreement in Fiscal Year (FY) 1996. Amendment 11 extended the agreement through 2001 and established annual revenue milestones totaling \$40.4 million in FY 2000. Amendment 12 provided access to 12 more transponders on a third satellite, TDRS-6.

***COLUMBIA  
CORPORATE  
STRUCTURE***

In 1981, CAC was established to explore space opportunities for U.S. commercial ventures. The corporation was formed because the Chairman, who is also the Chief Executive Officer (CEO), recognized the need for greater competition in the U.S. telecommunications market. The telecommunications market was previously dominated by Intelsat, an international consortium closed to private entities. CAC has no employees other than the Chairman/CEO and is located in Honolulu, Hawaii.

In 1983, the Chairman/CEO of CAC formed CCC. Consequently, both corporations have the same Chairman/CEO. CAC formed CCC for the sole purpose of leasing satellite transponders to private entities for international telecommunications purposes. CCC's efforts to compete with Intelsat were unsuccessful until the award of the NASA C-Band lease agreement in 1990. CCC has seven employees and is located in Bethesda, Maryland.

The Chairman/CEO of both companies supports CCC thru the CAC office in Honolulu, Hawaii. In addition to providing office space and associated support to CCC, the Chairman/CEO does a significant amount of traveling and entertaining on behalf of CCC. CCC pays CAC a fixed monthly fee for these services.

## OBJECTIVES, SCOPE, AND METHODOLOGY

---

### **OBJECTIVES**

The overall audit objective was to determine whether commercial agreements fulfill Agency goals in a manner consistent with NASA's policies and interests. Specific objectives were to determine whether:

- (1) The revenues received under this agreement are used in compliance with applicable laws and regulations.
- (2) There are other internal or external uses for the TDRSS excess capacity which would be advantageous to NASA.
- (3) The CCC C-Band agreement and its amendments are in NASA's best interest.

### **SCOPE AND METHODOLOGY**

We performed the audit in accordance with generally accepted government auditing standards. In addition, we held interviews and discussions with representatives of the NASA Headquarters OSF (Space Communications), the Office of General Counsel, CCC and its Legal Counsel.

### **MANAGEMENT CONTROLS REVIEWED**

We reviewed the following laws and regulations related to our audit objectives:

- The National Aeronautics and Space Act of 1958.
- United States Code, Title 15, Section 637(b)(7)(A).
- NASA Financial Management Manual, Section 9090, Reimbursable Agreements.
- Federal Acquisition Regulation, Part 31.

We reviewed specific management controls to identify the procedures in place for accounting for gross revenues and reviewing and determining the reasonableness of CCC's marketing and operations expenses.

***AUDIT FIELD WORK***

We conducted audit field work from March 1996 to January 1997. Field work was performed at NASA Headquarters, Washington, D.C.; Goddard Space Flight Center, Greenbelt, Maryland; and CCC, Bethesda, Maryland.

## **SUMMARY OF RAPID ACTION AUDIT REPORT**

---

### **“RECORDING OF REVENUES GENERATED BY THE COMMERCIAL USE OF NASA’S TRACKING AND DATA RELAY SATELLITE SYSTEM (TDRSS)” REPORT NO. IG-97-010, DECEMBER 17, 1996**

NASA has deposited more than \$14 million of Commercial-Band (C-Band) revenues into a deposit account rather than forwarding the receipts to the U.S. Treasury general fund. These funds were received from a revenue sharing agreement that NASA has with a commercial contractor, Columbia Communications Corporation (CCC). NASA leases excess C-Band capacity on two satellites to CCC. CCC, in turn, leases out the C-Band capacity to commercial customers for international telecommunications purposes. NASA’s treatment of the revenue sharing agreement proceeds could result in an illegal augmentation of the agency’s appropriation. The Agency had not included the C-Band revenues in its annual program operating plans nor had it used the revenues to offset C-Band support costs as required by law. We recommended that NASA (1) fully disclose the revenue sharing arrangement and seek Congressional authority to use the C-Band revenues, or (2) record the funds as miscellaneous receipts and deposit them into the U.S. Treasury general fund. The Agency nonconcurred with our recommendation stating that they were already in compliance with recommendation one. In our opinion, the Agency's reasoning for nonconcurrence was not valid. Accordingly, we reaffirmed our audit recommendation. As a result of our reaffirmation, the NASA Administrator notified the House Committee on Appropriations in a letter dated February 10, 1997, what the specifics of the revenue sharing agreement with CCC were, and how the funds generated would be used. As a result of these actions, we subsequently closed the recommendation.

**THIS PAGE INTENTIONALLY LEFT BLANK**



## MANAGEMENT'S RESPONSE

National Aeronautics and  
Space Administration  
**Headquarters**  
Washington, DC 20546-0001



Reply to Attn of:

MG

JUN - 9 1997

**TO:** W/Acting Assistant Inspector General for Auditing

**FROM:** M-3/Deputy Associate Administrator for Space Flight  
(Space Communications)

**SUBJECT:** Revised Discussion Draft Report on Audit of Commercial Use of  
NASA's Tracking and Data Relay Satellite System (TDRSS)  
Assignment No. A-KE-96-003

As discussed at the exit conference on May 15, 1997, NASA is responding directly to the subject report, thereby eliminating the need for the Office of Inspector General (OIG) to issue another draft report prior to the final report. The NASA comments for each of the subject report's four recommendations follow:

**RECOMMENDATION 1:** The Office of Space Flight (Space Communications) should establish clear guidelines, such as those in FAR, Part 31, to determine what constitutes allowable and reasonable marketing and operations expenses under the C-Band agreement.

**RESPONSE:** NASA concurs with this recommendation in principle. Since the Agreement with Columbia Communications Corporation (CCC) was not entered into under the FAR, this Agreement is not a contract governed by the FAR. The cost principles of FAR, Part 31, do not and should not apply. For example, some of the expenses listed, such as promotional items and participation in trade shows, while not allowable under the FAR are normal commercial practices and essential to Columbia's role under the Agreement. We do agree that some of the expenses listed in Exhibit 1 of the report should be questioned, and we are prepared to do so on the grounds of commercial necessity.

**RECOMMENDATION 2:** The Office of Space Flight (Space Communications) should require supporting documentation for future CCC Hawaii Office operations expenses.

**RESPONSE:** NASA concurs with this recommendation. NASA has questioned the nature and scope of the expenses of Columbia's Hawaii office since those expenses were first claimed. NASA will continue to press this matter with Columbia based upon the additional information developed by the OIG.

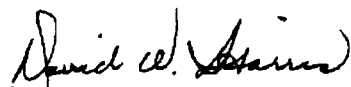
RECOMMENDATION 3: The Office of Space Flight (Space Communications) should pursue recovery of the \$108,265 from CCC.

RESPONSE: NASA concurs with this recommendation, and will pursue recovery of the \$108,265 from CCC.

RECOMMENDATION 4: The Office of Space Flight (Space Communications) should ensure that CCC's customers send their payments directly to the bank lock box as required by the C-Band Agreement unless otherwise authorized by NASA.

RESPONSE: NASA concurs with this recommendation. NASA will revisit the current lock box procedures with CCC.

If you have any questions regarding these comments, please contact Rhoda S. Hornstein at 202-358-4805.



David W. Harris

cc:  
BFH/Mr. D. Gribble  
BR/Mr. R. Lowery  
BR/Ms. P. Nash  
BR/Ms. J. Sprunk  
GG/Mr. R. Stephens  
HC/Mr. J. Horvath  
JM/Ms. M. Myles  
W/Mr. D. Samoviski  
W/GSFC/Mr. K. Carson  
W/GSFC/Ms. M. Anderson  
W/KSC/Ms. S. Massey  
GSFC/201/Ms. J. Clark

**MAJOR CONTRIBUTORS TO THIS AUDIT**

---

|                     |   |
|---------------------|---|
| Daniel J. Samoviski | Acting Director, Audit Division-A                                   |
| Kevin J. Carson     | Acting Program Director, Mission to Planet Earth and Communications |
| Sandra Massey       | Auditor-in-Charge, Kennedy Space Center                             |
| Mary Anderson       | Auditor, Goddard Space Flight Center                                |
| Iris Purcarey       | Program Assistant, Goddard Space Flight Center                      |
| Christina Head      | Program Assistant, Kennedy Space Center                             |

**THIS PAGE INTENTIONALLY LEFT BLANK**

# **REPORT DISTRIBUTION**

---

## **National Aeronautics and Space Administration (NASA) Headquarters**

Code A/Office of the Administrator  
Code AD/Deputy Administrator  
Code B/Chief Financial Officer  
Code B/Comptroller  
Code G/General Counsel  
Code H/Associate Administrator for Procurement  
Code J/Associate Administrator for Management Systems and Facilities  
Code JM/Management Assessment Division (10 copies)  
Code L/Associate Administrator for Legislative Affairs

## **NASA Field Installations**

Director, Ames Research Center  
Director, Dryden Flight Research Center  
Director, Goddard Space Flight Center  
Director, Jet Propulsion Laboratory  
Director, Lyndon B. Johnson Space Center  
Director, John F. Kennedy Space Center  
Director, Langley Research Center  
Director, Lewis Research Center  
Director, George C. Marshall Space Flight Center  
Director, John C. Stennis Space Center

## **NASA Offices of Inspector General**

Ames Research Center  
Dryden Flight Research Center  
Goddard Space Flight Center  
Jet Propulsion Laboratory  
Lyndon B. Johnson Space Center  
John F. Kennedy Space Center  
Langley Research Center  
Lewis Research Center -  
George C. Marshall Space Flight Center  
John C. Stennis Space Center

## **Non-NASA Federal Organizations and Individuals**

Assistant to the President for Science and Technology Policy  
Deputy Associate Director, Energy and Science Division, Office of Management and Budget  
Budget Examiner, Energy Science Division, Office of Management and Budget  
Associate Director, National Security and International Affairs Division,  
General Accounting Office  
Special Counsel, Subcommittee on National Security, International Affairs, and Criminal Justice

**Chairman and Ranking Minority Member - Congressional Committees and Subcommittees**

Senate Committee on Appropriations

Senate Subcommittee on VA-HUD-Independent Agencies

Senate Committee on Commerce, Science and Transportation

Senate Subcommittee on Science, Technology and Space

Senate Committee on Governmental Affairs

House Committee on Appropriations

House Subcommittee on VA-HUD-Independent Agencies

House Committee on Government Reform and Oversight

House Committee on Science

House Subcommittee on Space and Aeronautics

**Congressional Members**

Honorable Pete Sessions, U.S. House of Representatives, Texas



