

AUTOMATED FREQUENCY
COORDINATION SYSTEM CONTRACT

Agreement entered into this ____ day of _____, 1987 between Associated Public-Safety Communications Officers, Inc. (APCO) and C.E.T., Inc. (CET) to continue to provide APCO and its local coordinators with automated database program services for radio frequency coordination purposes.

WHEREAS, APCO is designated by the FCC as the frequency coordinator for local government, police and 800 MHz public safety radio services and CET has agreed to continue to provide automated database services to APCO and its local coordinators in order to enable APCO to accomplish its coordinations in an accurate and timely fashion, it is agreed as follows:

I. SYSTEM OPERATION

A. HOURS

CET host computer will be operational and available for access seven (7) days per week between the hours of 8:00 a.m. Eastern and 8:00 p.m. Pacific time, excluding major Holidays as recognized by the National APCO Office.

B. ACCESS SECURITY

CET will provide a minimum of six simultaneous access ports for exclusive APCO Frequency Coordination uses. System access is protected by the use of three different passwords. Should a Coordinator fail to enter the correct password three (3) times in a row, then he will be locked out of the system and forced to redial. All attempts and accesses are written to a log showing coordinator number, password, date, time, etc. All Coordinators will also be issued a security level code which will allow certain

functions. Since the system will be on-line 24 hours a day, seven (7) days a week, CET will not be liable or responsible for intrusion by any unauthorized party into the database. CET will reconstruct any damaged programs and/or data which may be lost or damaged by an unlawful intrusion into the system from backup files at no cost to APCO.

C. PASSWORDS

All passwords necessary to enter the system will be supplied to each Coordinator by CET. CET's computer will pick up the passwords and maintain all logs in conjunction with the passwords. These passwords will be reissued on occasion to maintain system integrity. All passwords are to be treated as confidential information.

D. TRAINING

CET will provide training on the Frequency Coordination System to Coordinators and National Office Personnel at the National and Regional Conferences and as otherwise requested by APCO at no charge. APCO will reimburse CET for travel and per diem expenses for all training.

CET will produce and deliver to APCO updates to the Frequency Coordination System Operations Manual annually or when sufficient changes dictate.

E. MAINTENANCE

All system maintenance will be scheduled if possible. Non-scheduled maintenance such as equipment failure will be repaired within twenty-four (24) hours. If the equipment fails on a weekend or holiday, CET will repair the system on the first work day of the following week. This only applies to CET equipment and does not apply to telephone line problems or coordinator equipment problems.

F. FILE MAINTENANCE

Since the system will be required to be on line fifteen (15) hours a day, file maintenance will normally be performed between the hours of 8:00 p.m. Pacific to 8:00 a.m. Eastern, to the greatest extent possible. This will include updating the granted licenses to the active file, any file sorting necessary, record deletions and record changes.

G. FILE BACKUPS

File backups will be done as follows:

- a. Backup of daily changes every night.
- b. Total file backup weekly.
- c. The backup tapes will be stored off premises.

H. 800 MHz COORDINATION

CET will research and negotiate a purchase on behalf of APCO for a current database of the 800 MHz Public Safety spectrum in tape form.

CET will then convert the data to APCO format and load to on-line disk for a one time fee of Twenty-Five Hundred Dollars (\$2,500.00). CET will provide the necessary hardware (additional disk storage capacity) and software modifications necessary to incorporate the 800 MHz Coordination process as part of the Automated Frequency Coordination System within sixty (60) days of the effective date of this Agreement.

II. GENERAL

A. GUARANTEES

CET guarantees the accuracy of its software programs, however, CET cannot guarantee the accuracy of the

information in the database. It is understood by the parties that as the database becomes more accurate, the frequency coordinations will also become more accurate. CET will correct any errors found in its software upon verification by CET of the problem.

B. COPYRIGHT/RIGHTS OF DATA

All computer software programs belonging to CET and used in conjunction with the Frequency Coordination System have been created, written and copyrighted by CET and therefore all rights to that software remain the property of CET.

All data used in conjunction with the CET Frequency Coordination System, will remain the exclusive property of APCO. CET will not use or allow to be used any APCO property by any entity not authorized in writing to CET by APCO. The APCO Database and any software programs developed for APCO will be returned to APCO upon termination of this Contract unless other agreements are entered into.

At the request of APCO, CET agrees to license use of its other software programs at reasonable prices to be negotiated.

C. INSPECTION AUDIT

Due to APCO's requirements to make available its financial and accounting records to the FCC, CET will also allow inspection of all records pertaining to APCO upon reasonable notification.

D. LIABILITIES

CET's maximum exposure due to error in the CET programs will be limited to the cost of recrystalling or reprogramming of

the affected radio system if it can be shown that the software was the cause of the error.

CET will not accept any liability due to errors in the Coordinator's data entry or judgment, or errors in the APCO owned Database.

III. CONTRACT FEES

A. COMPUTER ACCESS

CET will supply dial access computer services for the Automated Frequency Coordination System as described in Attachment A to APCO for a fixed price of Sixteen Thousand Five Hundred Dollars (\$16,500.00) per month. Future program modifications or additional programs will be provided at a then negotiated price with APCO and will be included in this Contract as addenda.

This does not include other services that CET can offer to APCO.

B. DATA ENTRY

Entry of data from APCO Coordinator Approved Applications into the State Files as Pending and FCC license information including licenses granted, purged, deleted, etc. will be the responsibility of CET as part of the basic service agreement.

APCO agrees to promptly process FCC reference copies of licenses at the National Office and forward to CET within thirty (30) days for data entry.

Data Entry of New Applications will be the responsibility of the National Frequency Coordination Office.

Should APCO's National Frequency Coordination Office require the assistance of CET in the Data Entry of New Applications, time will be billed at twenty percent (20%) off the then current rate for Data Entry Services.

C. MODIFICATION

CET agrees to correct any problems found in any data fields in any of CET's programs at no charge to APCO. Should APCO desire to add additional information or modify the system in some manner or if Federal regulations dictate changes in the software, then CET will negotiate with APCO and arrive at a reasonable charge for the service.

D. TRAVEL/TRAINING

All reasonable travel expenses such as, air or ground travel, lodging, meals, etc. for travel and training requested by APCO will be charged back to APCO for CET personnel. All such expenses must have prior approval of APCO's Board of Officers.

E. METHOD OF PAYMENTS

Payment of monthly time charges will be paid without statement on the fifteenth (15) of each month for the preceding month (16th-15th). Statements for any additional services provided by CET to APCO will be submitted to APCO monthly and are due and payable upon receipt. Any delays in payment(s) will be charged a 1 1/2% interest rate per month after thirty (30) days on any unpaid balances.

F. TELEPHONE

Telephone services and charges will be the responsibility of APCO. CET will not be held responsible for technically inoperable telephone lines.

G. ESCALATOR CLAUSE

Due to inflationary costs, the Fees assessed by this Agreement are subject to increase on an annual basis. Increases may be a minimum of zero percent (0%) and a maximum of five percent (5%), the exact amount to be agreed upon by both parties upon annual review.

IV. CONTRACT TERM/CANCELLATION

A. TERM

The term of this Contract shall run consecutively for three (3) years beginning September 16, 1987 and ending September 15, 1990 and is subject to extension, renewal and/or modifications on an annual basis, thereafter, upon agreement of the parties.

B. FINANCIAL REPORT

During the term of this Contract, CET will provide to APCO a letter of current financial status prepared by CET's CPA firm every six months.

C. TERMINATION

1. This Contract may be terminated without penalty by giving thirty (30) days notice in writing to the other party, by either party only in the event of any of the following:
 - a. CET repeatedly fails to render adequate services as determined by APCO.
 - b. Either entity becomes insolvent.
 - c. Additionally, CET may elect to terminate this contract should APCO repeatedly fail to make its monthly computer service payments to CET on a timely basis.
 - d. The Federal Communications Commission suspends or withdraws APCO's authority to perform frequency coordination.
 - e. Should either party be dissatisfied with the performance of the other party as specified in

a and c above, the offended party shall provide written notice to the offending party specific complaints and documented dates and times of occurrences.

Such notice will provide a minimum of thirty (30) days for the problem(s) to be corrected without further action.

2. Should APCO desire to terminate this Agreement in absence of any of the conditions mentioned in section (1) above, the following penalties shall apply:

- a. Full payment (100%) of Contract Fees for two (2) months if cancelled within the first twelve (12) months of the Contract period or ten percent (10%) of all remaining unpaid months of the Contract period.
- b. Payment of termination penalties are due and payable in full within thirty (30) days of Notice of Termination unless other agreement is reached by both parties.

D. ARBITRATION

Any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be settled by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator(s) may be entered in any Court having jurisdiction thereof.

William K. Davis, President
Communications Engineering
Technology, Inc. (C.E.T., Inc.)

Robert E. Tall, Executive Director
Associated Public-Safety Communica-
tions Officers, Inc. (APCO)

Associated Public-Safety Communications Officers, Inc.

It's a privilege to belong to APCO



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June 30, 1986

APCO AUTOMATED FREQUENCY COORDINATION SYSTEM (AFCS)

This is a delineation of the components of the APCO Automated Frequency Coordination System, and a step-by-step description of how the System is to work, based on recommendations of the Board of Officers at a meeting in Sparks, Nevada on March 4, 1986; directives from the Executive Committee at a meeting in Sparks, Nevada on March 5, 1986; several cycles of correspondence; and recommendations of the APCO Select Task Force on Frequency Coordination in Downingtown, Pennsylvania on March 22, 1986.

APCO is to receive a written contract proposal from C.E.T., Inc., within seven days of this mailing, and will distribute it immediately to the Board of Officers, the other members of the Executive Committee, and all APCO Frequency Coordinators and Alternates.

Following receipt of the C.E.T. contract proposal, APCO will draft a proposed budget for the AFCS implementation and operation, and distribute it to all of the below parties within another week.

Other than this cover sheet, this paper was prepared by APCO Deputy Director Walter F. Spencer after discussions and negotiations with C.E.T. President William Davis during the week of June 22-28. All questions with respect to its content should be directed to Deputy Director Spencer at APCO's National Office. (800-824-1850 or 904-427-3461.)

Robert E. Tall, Executive Director

CC: National Executive Committee
Board of Directors
Frequency Coordinators and Alternates

ATTACHMENT A

- I. Systems Flow Narrative
- II. Pending File Management
- III. File Maintenance
- IV. Electronic Mail Box System
- V. Other Requirements
- VI. Conversion
- VII. File Layout
- VIII. Password
- IX. Policy Questions Still to be Resolved
- X. Computer Station Hardware Components
- XI. Summary of Software Components
- XII. Telephone Lines

The following is a description of how the frequency coordination system will work under the present systems plan.

Activity starts with the arrival of applications at the National Office. (N.O.)

Applications are checked and the manual processes are completed. The application is then given an ID number.

The Data entry is accomplished by the four regional examiners. C.E.T. is to provide the Data entry screens and edit program. The flow of the screen will be designed to follow the data itmes as presented on the form 574. If there is additional data required (FDR Supplement) this data will also be entered. Each application after entry will be edited to at least the following rules.

1. ZIP CODE must be possible relative to state.
2. State must be possible
3. Longitude & latitude must be possible for the state.
4. Frequency must be possible.
5. Service code must be possible.
6. NUMERIC fields will be checked to insure they have no alphabetic characters.

The edit procedures are designed to eliminate as many initial data errors as possible. Each regional examiner at the N.O. will enter into her own designated file area. The next step is the transmission to Denver. C.E.T. will provide the programs necessary for this transmission. When the day's activity will be transmitted has many options. If there is a low volume in the pending file for the Chapter coordinators to work on, applications can be transmitted before the day's work is completed. If there is an urgency to an application it can be transmitted as soon as the data entry process is completed.

When the data arrives in Denver it will be distributed thru the Electronic Mail Box System (EMBS) to the Chapter coordinators. C.E.T. is responsible for programming required for this phase. A coordinator must take the first steps necessary to empty his EMB. First he will acknowledge the EMBS, at that point he will be asked to turn on his printer. Then he will be asked to request his printout of the applications pending. At this point the status level of the pending file will be upgraded. C.E.T. will design and program this display. The display will be organized to assist the Coordinator. A display similar to the present FDR is to be expected.

The Coordinator will then be allowed to proceed with the requirements of the application. The Auto Find or Auto Check program will be utilized for this function. These programs include the FCC Rules logic for all given frequencies; i.e. can they be used in the service or location requested? These are ongoing C.E.T. programs that are to be included under this contract. The rules tables are to be maintained by C.E.T. as the rules are changed by the FCC.

There are at least three situations that can result from the processing of an application: (1) approved as requested, (2) approved if modified, (3) cannot approve.

- (1) If the Coordinator can approve the coordination the status is upgraded and the N.O. will be notified and will release the application to the FCC. This will most likely be done in batches. However, an urgent application may be expedited.

Interservice approval, Interstate approval, and Intrastate approval will be monitored by the system. Each of these cases will be given a status code. A change in status causes date and time recording in the computer record by the system and allows for tracking the lapsed time of an application.

- (2) All or a part of the application may be serviced if: a waiver can be obtained; or different frequencies are used; or a different band can be used. This will be signified by a change in status code. Now the applicant must be notified. The policy regarding this kind of action needs to be decided. Two options exist. Does the N.O. notify or does the Coordinator? If the Coordinator is chosen, then a form letter can be designed for this purpose and be done at the Coordinator's computer station. If the N.O. is chosen, a form letter will be designed and sent to the applicant. A policy decision is necessary for this point of action.
- (3) Coordinator cannot approve the application due to: no frequency(s) available, request is in violation of rules, radio systems concept is improper, or other reasons. This will require a status level change. Again a policy decision is necessary to determine if the Coordinator or the N.O. is to notify the applicant.

Throughout this process every action accessing an application is dated and time stamped by the computer system. A time audit trail is part of the specifications for the coordinator's working system. On a daily basis the completed applications will be transmitted to the N.O. The N.O. will have on hand (furnished by C.E.T.) a program that will reprint an FCC form 574 if that becomes necessary. The N.O. will then do the paper work processing to forward the 574's being sent to the FCC. Billing where necessary will be taken care of and each applicant will be sent a postal card notifying him of the date the approved 574 was sent to the FCC. The text of this card needs to be written. If the appropriate FCC Telephone number is included on this card, the N.O. may be spared many calls for status checks by the applicants. With the exception of the 574 print program the N.O. will provide the necessary programs to accomplish the fulfillment requirements.

II. Pending file management.

On a daily basis C.E.T. will transmit to the N.O. the following data relative to status levels.

1. The application has been in the pending file for (N) days and the coordinator has not touched it.
2. The application has been in the pending file, has been accessed by the coordinator but hasn't been approved for (N) days.
3. All completed applications.

For cases 1 and 2 policy decisions need to be made to guide the N.O. It is presumed that the N.O. Coordination Manager will have to take some action to determine the cause of the delay. The EMBS system may be used or a telephone call may be required.

Included in the systems will be the ability to browse. Firm rules for browsing must be adopted. (If the Coordinator is merely informing a future applicant of a potentially usable frequency, we are spending money without offsetting revenue.)

Additional features available to the Coordinators will be the capability to search and select on:

- zipcodes
- city(s)
- longitude
- latitude
- name
- service
- call sign
- expiration date
- class of radio

Output can be either screen, hard copy or transmitted data. If hard copy would be voluminous the high speed printer capability of C.E.T. will be utilized and the printout shipped. The volume of data transmitted will be limited to the storage capability of the receiving computer station. Again firm guidelines are required to limit overly expensive usage of the system. C.E.T. is to provide specifications for all of the above capabilities.

License File Maintenance

This requirement has to deal with two conditions.

At the outset there will be licenses granted by the FCC that have not been through our new computer system. This situation may exist for many months. It will therefore be necessary to have two types of data entry.

The normal situation expects to receive copies of the licenses granted from the FCC. If the license is for an application on our pending file the normal procedure will be to up grade the pending file status to granted, input call sign, and expiration date. The next time the pending file is analyzed the granted license will be removed from the pending file and added to the grant file. At this time all the edits performed at the initial data entry time will be repeated. This again is to prevent any data manipulation errors from being transferred to the license file. If the grant is from a time period prior to the initiation of our pending file, the complete license must be entered. This code will allow the grant to be accepted by the system without having to go through the full coordination system. This type of grant will also be totally edited before inclusion in the license file.

Deletes received from the FCC will be data entered at the N.O. This will require only call sign entry and a status code. Any record on file with the same call sign will be deleted.

As a safety precaution and for future analysis and statistics, all records removed from either the Pending or the License file will be retained. If the FCC or APCO should wish to analyze the time for processing over a period this archive data will be available. If a license has been deleted and the licensee questions the authority, the record will be there. The concept is to maintain through the archive files a complete audit trail both from the view of authority or processing time. The archive files can also be used to evaluate the processing time required by a given Coordinator.

As part of the file maintenance procedure, the pending, license and program files will be backed up. The requirement to maintain adequate backup off-site to the extent that a disaster at the computer site can be totally overcome through the backup files will be part of any contract resulting from these negotiations.

IV. Electronic Mail Box System (EMBS)

The EMBS system will allow for multiple forms of interactive communications. A Coordinator may mail to C.E.T., the N.O. or any other Coordinator with whom he must interface. The Coordinator may also mail to a non-APCO Coordinator for inter-service sharing agreement and concurrence, subject to computer compatibility. The Coordinator may receive mail from C.E.T., the N.O. or other APCO Coordinators with whom he must interface. If an outside Coordinator has a compatible computer station and has a need, he can be given a Password and be allowed to enter the system for the transaction of authorized business. The N.O. will have the capability to mail to one or all APCO Coordinators, C.E.T., and outside Coordinators with compatible computer stations. The system will permit direct interrogation of FCC files, or those of a third party contractor, if that becomes possible.

V. Other Requirements

In order to properly manage and evaluate the system, other programs not related to the Frequency Coordination process will be necessary. Among these are label and print programs to be utilized in connection with the C.E.T. high speed printer. It would be impractical to transmit large quantities of data for print outs or labels. There may be many times we will require this form of service. C.E.T. will provide the software and billing rates. In the event a large printout is required for a Coordinator this capability will cover that requirement.

Each month we will need complete usage data for proper administration and budget control of the system. C.E.T. will transmit the Coordinator usage logs to the N.O. These records will be analyzed to track Coordinators' efficiency, costs and income produced. The analysis programs will be the responsibility of the N.O.

VI. Conversion

APCO will supply C.E.T. with its latest updated master file. C.E.T. will use this file for its initial starting position. While preparing the APCO file for entry into the system all possible edits will be applied. Print outs of erroneous records will be sent to the applicable coordinator for correction. The corrected print outs will be forward to the N.O. for action on the file.

VII. File Layout

C.E.T. is to construct and forward to APCO a data file layout for circulation to the APCO Coordinators. This layout will include all the elements of data required on the 574 and/or the FDR Supplemental forms. In addition, all other fields required for the internal maintenance of the pending file will be noted and code lists where required will be presented. The layout will identify fields carried only in the pending file, and those required for the license file. Since the field layouts have been openly discussed at several meetings the needs, requests and recommendations from the coordinators will be included in the C.E.T. layout. When these layouts have been circulated it will be necessary for the Coordinators to immediately review them and identify any omitted data.

VIII. Passwords

The C.E.T. computer uses a random generator to develop its passwords. The password is Alpha/numeric and is 8 digits in length. Mathematically this gives us $8^{34} - 1$ as a guard against hackers' intrusion. The password will be generated by C.E.T. and administered through them at the director of the N.O. Policy rules regarding re-issue of new passwords or deleting of password will need to be considered at future coordinator meetings.

1. Who notifies applicant in event that a coordination cannot be granted.
2. Who notifies applicant in event that the applicant must be modified.
3. How many days an application can sit in Pending without coordinator initial access.
4. How many days an application can sit in Pending after being accessed by the coordinator and not approved.
5. Rules for use of system browsing.
6. Rules for requesting large transmissions of data or print outs.

GENERAL DESCRIPTION

NUMBER OF UNITS

- | | |
|---------------------------------------|-------------|
| 1. Computer Station 640 RAM
1 Disk | Estimate 70 |
| 2. Modem | Estimate 70 |
| 3. Printer (wide carriage) | Estimate 70 |

XI. SOFTWARE COMPONENTS PROGRAM FUNCTION

1. Data Entry and Edit at New Smyrna Beach.
2. Electronic Mail Box.
3. Application Print for Coordinator.
4. Auto Find (C.E.T. Proprietary Program to find a frequency).
5. Auto Check (C.E.T. Proprietary Program to verify the useability of a frequency).
6. Pending File Management System.
7. File Maintenance for Granted Licenses.
8. Administrative group, i.e. log records etc.
9. Various print and extract programs.

XII. OTHER COMPONENTS

Initially 6 In/Out WATS . Lines. More lines will be added if necessary as we gain experience with the system.