

4.0 APPLICATIONS

4.1 INTRODUCTION

The CAPRAD system is a dual-purpose system that allows for both the coordination and resource planning involved in the allotment phase for regional plans and the coordinated submission of 700 MHz applications to the FCC by users nationwide. Since all applications for the 700 MHz spectrum, regardless of region, are being funneled through the CAPRAD system, contention for scarce channel resources will be minimized and reuse of channels in non-overlapping areas will be maximized.

This process is augmented by the coordinated allocation of resources nationwide and the on-line cooperation of adjacent regions in the preparation and finalization of regional plans. Once frequencies have been allotted to an area, all users can review what those allocations are, and, when choosing a channel for an application, this information is automatically provided for review. How this works within the framework of application generation and submission is discussed in the sections that follow.

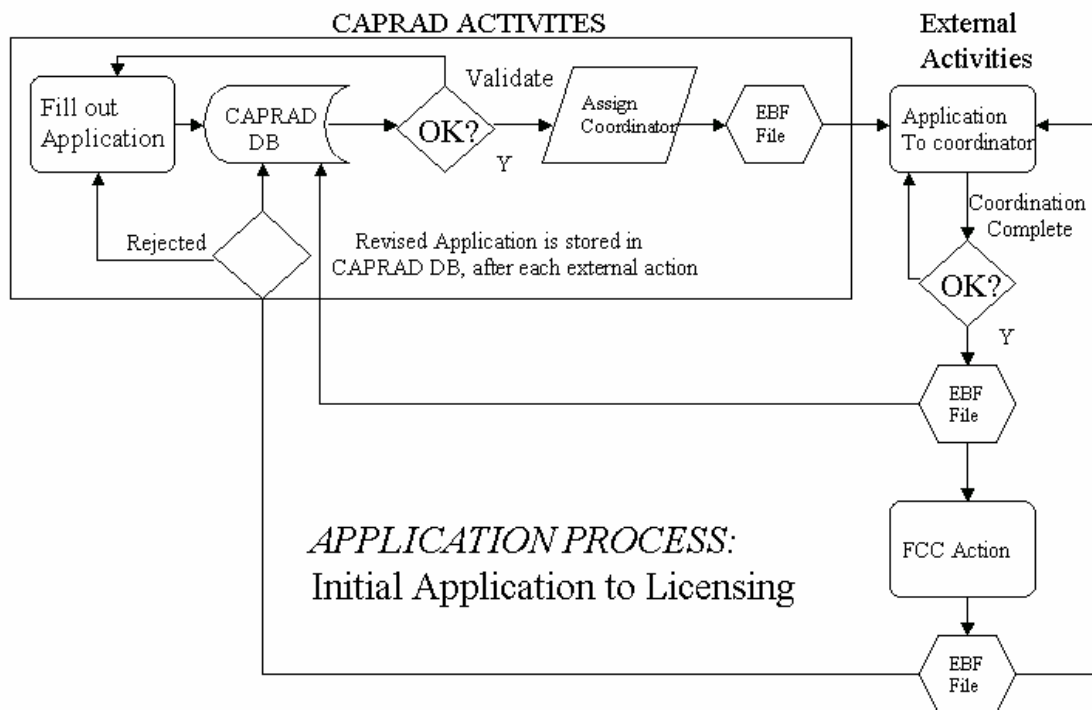


Figure 4-1: Application Processing in CAPRAD

Several issues must be kept in view when using this system. CAPRAD is meant to work closely with and as a supporting tool for, the frequency coordination organizations that service the public sector. All CAPRAD-originated applications are submitted to the FCC via an assigned frequency coordinator. The FCC requires that electronic submissions be from approved organizations. Existing frequency coordination agencies have that charter, so CAPRAD sends validated applications to the assigned coordinator who in turn

submits the coordinated application to the FCC. Figure 4-1 shows the application flow as assisted by the CAPRAD database.

EBF (an acronym for Electronic Batch File interface) is the standard file format established by the FCC for electronic transmission of frequency applications. All information transfers between CAPRAD, the frequency coordinators and the FCC will take place using the established FCC procedures and formats.

4.2 MAIN MENU OPTIONS

The main menu for applications provides the same basic information as that for regional plans. Table 4-I summarizes these menu options.

Menu Text	Description	More Info at:
Applications	Display a PDF file of Section 4 of the User's Guide in the information frame. Requires Acrobat Reader.	
User Name	Select your user name and user related information can be edited.	Section 2.5
Logout	Logout of the CAPRAD system. This will close the current browser window.	Section 2.1
New Region	Display a USA map with regions identified.	Section 2.5
Regional Plans	Switch display to Regional Plans menu and allow edit / review of plan information within current region.	Section 3.1
FAQ	Display information on the Frequently Asked Questions associated with Regional Planning.	See example in this section.
???	Receive contextual help for whatever information is being displayed in the information frame.	See example in this section.

Table 4-1
Main Menu Options

This section of the user's guide is available on-line when you select the banner title "Applications". It displays as a PDF file and is completely text-searchable. The FAQ and ??? (help) functions are also directly accessible from this menu.

The FAQ function is intended to provide context sensitive help to answer questions that pertain to specific functions in CAPRAD. The generic FAQ screen is shown in Figure 4-2. As questions are asked through training and other points of user contact, the FAQ sections will grow to reflect answers to users' questions.

Help is also context-sensitive. Figure 4-3 displays the generic help available to the user. As additional help is needed to navigate or understand CAPRAD functions, these help screens will be added to the system. For the application forms, help has been derived from the actual text taken from the instructions for the 601 forms. If the applicant is filling out a specific item on a particular form and selects ???, the help file will be opened

positioned to the correct item. Selecting any hyperlink in help displays returns you to the calling screen.



Figure 4-2: Generic FAQ Display for Applications.

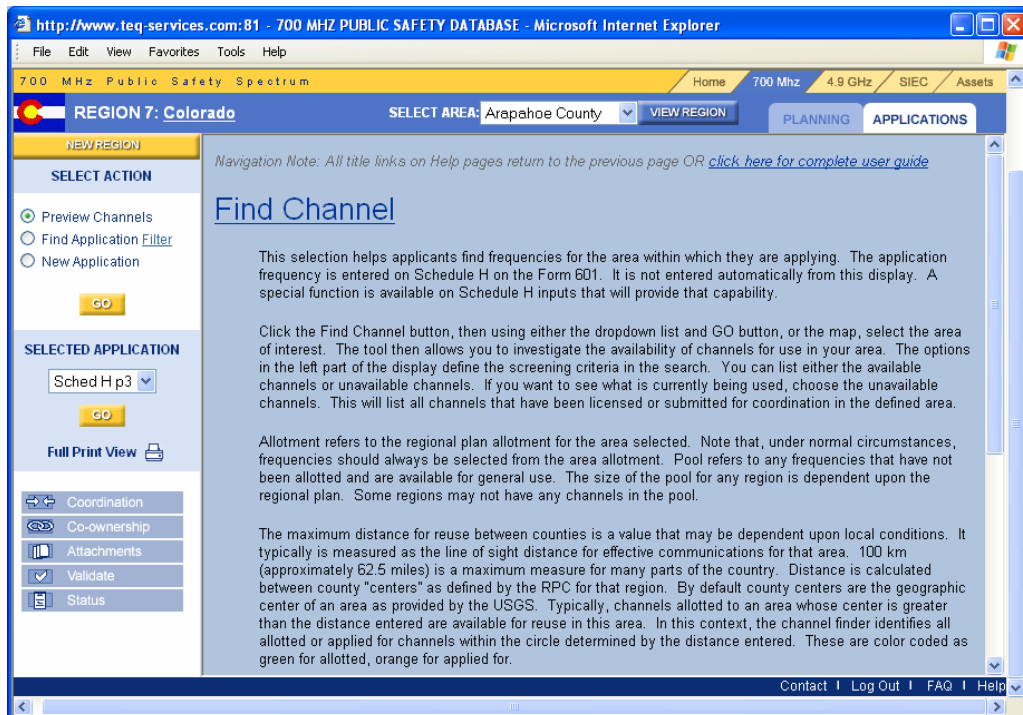


Figure 4-3: Typical Help Display

4.3 AREAS AND MAPS

Applications are associated in CAPRAD with a specific area. Typically, this is the area, which constitutes the jurisdiction of the applicant. For example, the Arapahoe County Sheriff's Department would have an area of Arapahoe County. Fire districts, rescue services, forestry agents and others that might have jurisdictions that cross county boundaries would use the area where the primary antenna is located or where the base unit was located. Area identifications are important since frequencies have been allotted to an area during the regional planning process.

The regional map is hyperlinked so that, if you click the mouse cursor on the name of any labeled area on the map, the information display will change to reflect a review of the selected action as it applies to the area selected. See Section 4.3.2 for an example of what this looks like. The dropdown selection list for area will also be updated to reflect the area just selected. For example, if the selected action is set at 'Find Application' and you select Arapahoe County on the map, a review list of applications that have originated with Arapahoe County will be displayed in the information area.

Menu Text	Description	More Info at:
Select Area	Specifies the valid political entities within the region currently viewed. The list is alphabetical and generally restricted to counties. Some regions also include cities (VA, MD, MO) or census areas (AK) that have their own "county-like" government.	Section 4.2
View Map	Re-display the region map. This may be necessary, as other functions will display their information in the map area.	Section 4.2
Select Action	Identify the various actions that are available to the applicant. They include: Preview Channels, Find Application and New Application.	Section 4.3
Selected Application	These various hyperlinks will allow you to review the information in or associated with a selected application. These functions include looking at any of the specific application forms, assigned coordinators or co-owners, application comments, related attachments, validation report, and application status,.	Section 4.4

Table 4-2
Sidebar Menu Options

The Select Area dropdown list works in a similar fashion. Position the dropdown to select the area, then select the action option for the application information to be displayed, and then select the GO button. The action will produce a change in the displayed information area.

Note that the Select Area dropdown has an initial entry of “Entire Region.” Selecting this option will provide the following displays depending upon the action selected. For Find Channels and for New Application, it will return an alert indicating a specific area must be selected. Frequencies are always associated with an area in the allotment and consequently for applications. Applications are always associated with a specific area. For Find Application, applications in the entire region are displayed. See Section 4.3 for more details on these actions.

The name of the region is hyperlinked when the region map is displayed. Selecting the region name displays a regional planning summary for that region. This information is identical to that produced when using the Regional Plans option. This provides applicants with a quick glimpse of the allotment breakout for a region and the existing TV stations and their locales.

Figure 4-4 displays the regional map when the applications option is selected.



Figure 4-4: Viewing the Regional Map when using the Applications Option

4.4 SELECT ACTIONS

When handling applications some key information is required, including the area to which the application applies and the channels to be applied for. The area is determined at the time the application is initiated (Section 4.3.3); the channel applied for can be determined any time prior to submission for coordination. If an application has been

initiated, then to continue processing the application requires finding it. The actions on this section of the side bar menu allow the applicant to perform these necessary functions.

4.4.1 New Application

Figure 4-5 shows a typical display when initiating a new application. Select the area from either the dropdown area list or from the map while the radio button is highlighted for New Application. Select GO if the dropdown area list is selected. If you select the area from the map, the dropdown list will automatically be positioned to the area selected.

The screenshot shows a web browser window titled "http://www.teq-services.com:81 - FCC 601 MAIN FORM PAGE 1 - EDIT - Microsoft Internet Explorer". The page header includes the CAPRAD logo and the text "COMPUTER ASSISTED PRE-COORDINATION RESOURCE AND DATABASE SYSTEM". The user is logged in as "RPC7 Chair 2" and can access "Log Out", "FAQ", and "Help". The page is for "REGION 7: Colorado" and "Arapahoe County". The "SELECT ACTION" menu on the left has "New Application" selected. The "SELECTED APPLICATION" section shows "Sched H p3" selected. The "Application Purpose" dropdown is set to "NE-New". The "FCC 601 Main Form" section contains fields for "Radio Service Code" (set to "PW-Public Safety Pool, Conventional") and "Existing Radio Service Code". The "Application Purpose" section lists various options: NE - New, RO - Renewal Only, CO - Consolidate Call Signs, NT - Required Notifications, MD - Modification, RM - Renewal/Modification, WD - Withdrawal of Application, EX - Requests for Extension of Time, AM - Amendment, CA - Cancellation of License, DU - Duplicate License, and AU - Administrative Update. The "3a) If this request is for a Developmental License, Demonstration License, or an STA (Special Temporary Authorization), enter the code and attach the required exhibit as described in the instructions. Otherwise enter N (Not Applicable)" field is set to "N-Not Applicable". The "3b) If this request is for Special Temporary Authority due to an emergency situation enter 'Y', otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency." field is set to "No". The "4) If this request is an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC" field is set to "File Number".

Figure 4-5: Initiating a NEW application.

Once the Save button is selected, the application is initiated and is in the database associated with the area identified. No fields need to be filled out prior to saving and initiating an application. The applicant name, the area selected and the time and date of the save action are important items identifying a specific application.

The Cancel button will return you to a view, which lists the applications associated with the current area. The radio box for the current application will be highlighted. See Section 4.3.2 for more discussion on finding an application.

The PRINT button, when selected, redisplay the current page in a font and style that are suitable for printing. All of the buttons are gone, and the data elements of each form item

are displayed without the input boxes. Pages printed in this manner can provide a hard copy archive for the application. Figure 4-6 shows a representative page in print mode.

FCC 601 Main Form

FCC Application for Wireless Telecommunications Bureau Radio Service Authorization

Approved by OMB
3060-0798
See instructions for Public burden estimate

1) Radio Service Code: **PW** 1a) Existing Radio Service Code:

Application Purpose (Select only one): **NE - New**

2) NE - New MD - Modification AM - Amendment	RO - Renewal Only RM - Renewal/Modification CA - Cancellation of License	CO - Consolidate Call Signs WD - Withdrawal of Application DU - Duplicate License	NT - Required Notifications EX - Requests for Extension of Time AU - Administrative Update
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3a) If this request is for a Developmental License, Demonstration License, or an STA (Special Temporary Authorization), 3a) If this request is for a Developmental License or an STA (Special Temporary Authorization), enter the code and attach the required exhibit as described in the instructions. Otherwise enter **N** (Not Applicable) **Not Applicable**

3b) If this request is for Special Temporary Authority due to an emergency situation enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency. **No**

4) If this request is an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC. File Number

5) If this request is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, Consolidate Call Signs, Duplicate License, or Administrative Update, enter the call sign of the existing FCC license. Call Sign

6) If this request is for a New, Amendment, Renewal Only or Renewal/Modification, enter the requested authorization expiration date (this item is optional).

7) Is this request "major" as defined in para 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of para 1.929). **Yes**

8a) Does this filing request a Waiver of the Commission's rules? If 'Yes', attach an exhibit providing rule numbers and explaining circumstances. **No**

8b) If a waiver request is attached, multiply the number of stations time the number of rule sections and enter the result.

8c) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station? **No**

9) Are attachments being filed with this application? **Yes**

Figure 4-6: Applicant Form displayed in Print Mode

To print the page, click the mouse button with the cursor in the information display, select file, and then print frame option from the browser menu if using Netscape Navigator. If using Internet Explorer, place the mouse cursor in the display information area, press the right mouse button and then from the pop-up menu select print. From the pop-up window displayed, choose the Print Frame option 'Only the Selected Frame' and then select print. Either method will print to your default printer. To choose a different printer, or to modify the header / footer defaults, consult your specific browser instructions.

Pages of an application must be printed individually. This saves time and reduces print complexity since each application contains a variety of forms and varying page counts.

4.4.2 Find Application

During normal operation, the key action for applicants is to find the application that they are working on. Although CAPRAD contains internal keys that uniquely identify each application, there is no need to remember keys or date / time stamps. A simple search screen is provided to find applications. Applications can be found for the entire region or for a specific area. In general, it is recommended that you conduct most 'searches' using a specific area. Since all applications can potentially be listed for an entire region when

no filters are set, the application list can become very long over time. Figure 4-7 shows what is displayed when the Find Application option is selected, the area is limited to a known county, and the GO button is selected.

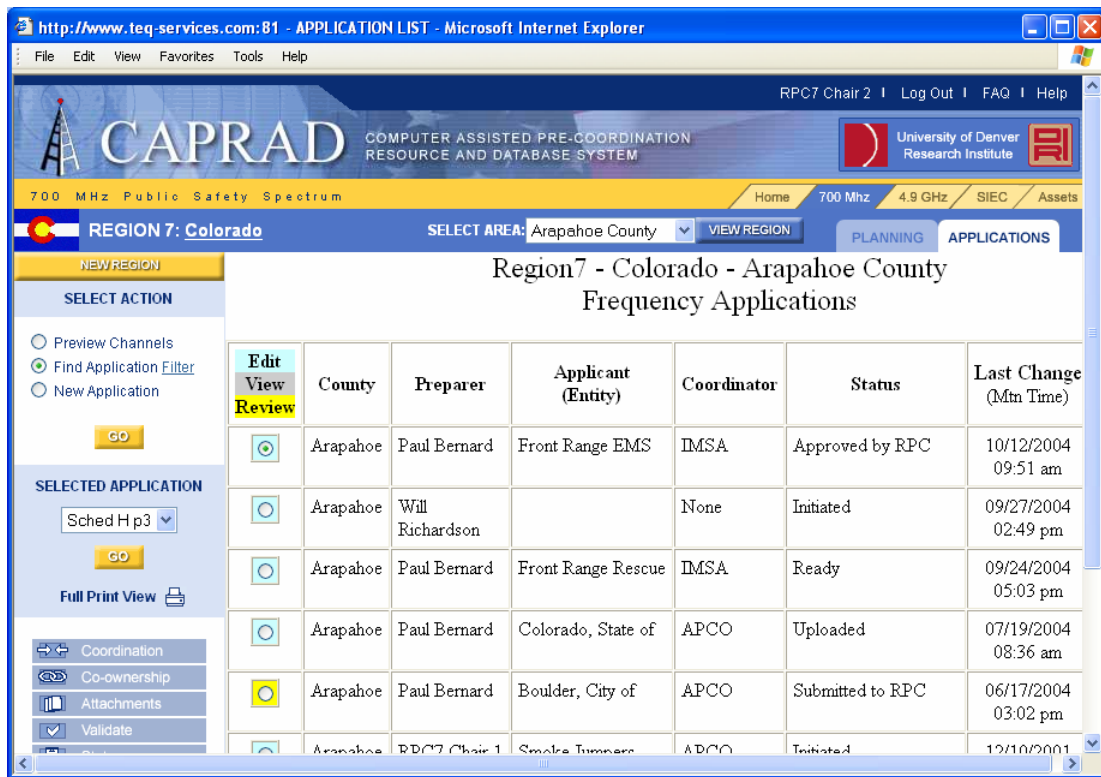


Figure 4-7: Typical Find Application Display

The various columns provide basic information that separates and identifies an application. Key fields in this regard are the County, Entity (for whom the application is intended), and the Last Change date. The other key action field is the Edit / Review radio button. Note that Edit (Edit) capability is granted only to owners or co-owners (see section 4.5.3) of an application. In this example, RPC7 Manager is logged in, so that all applications where the Applicant is RPC7 Manager are labeled Edit. All others are identified as Rev (Review) only. Review means that you can review an application without the ability to change a field or to print the form. Choosing an editable form provides the capability to change fields. The application displayed would have the same look and feel as shown for new applications in Figure 4-5.

Since it is often useful to modify the list of applications on the found list, CAPRAD provides the capability to filter your applications using some simple screens. Figure 4-8 displays the filter screen options. You get this display by selecting the 'filter' icon next to the 'Find Application' action description.

Figure 4-8: Application Filter Parameters

Three categories of filtering can take place in this version of the software: Ownership, Status, and Coordinator assignment.

Ownership refers to the originator or co-owner of an application. If you select All, there is no filter applied. Otherwise, selecting mine only will restrict the application review list to those where you are the applicant or co-owner. Selecting Others only reduces the list to those for which you have review rights only.

The Coordinator screen is also a simple screen that allows for selection by all, none or a single coordination agency. The default is for applications assigned to any coordinator to be listed. This in effect removes the coordinator filter. The other options are to choose a single, specific coordination agency or applications for which a coordinator has not yet been identified. A coordinator **MUST** be assigned prior to an application being ready for submission.

The third filter category screens according to application status. The status list provided identifies all of the possible statuses that an application can have. Since these are checkboxes and not radio buttons, more than one status can be included in the filter. See Section 4.4.6 for a more detailed discussion of how statuses are applied to an application.

It is important to note that a change in filter parameters does not occur until the **SAVE** button is selected. It is also important to know that the saved parameters stay in effect until they are changed again regardless of when you sign on. So if you cannot find an

application, be sure to check your application filter to make sure the settings are appropriate for your search.

4.4.3 Channel Finder

The last action selection helps applicants find frequencies for the area within which they are applying. The application frequency is entered on Schedule H on the Form 601. It is *not entered automatically* from this display. A special function is available on Schedule H inputs that will provide that capability. Figure 4-9 shows a typical Preview Channel display.

25KHz State License Channels

Channel	Base Freq	Mobile Freq	Status	Area
105-108	764.662500	794.662500	Licensed	Arapahoe, CO
	764.662500	794.662500	Applying For	Denver, CO
109-112	764.687500	794.687500	Licensed	Arapahoe, CO
113-116	764.712500	794.712500	Applying For	Arapahoe, CO

Pool Channel Availability

Channel	Base Freq	Mobile Freq	Status	Area
25-28	764.162500	794.162500	Licensed	Adams, CO
	764.162500	794.162500	Applied For	Arapahoe, CO
	764.162500	794.162500	Allotted (overlap)	Denver, CO
	764.162500	794.162500	Licensed	Arapahoe, EL
29-32	764.187500	794.187500	Allotted (overlap)	Adams, CO
33-36	764.212500	794.212500	Applied For	Adams, CO
	764.212500	794.212500	Applied For	Arapahoe, CO

Figure 4-9: Channel Finder Display

Highlight the Preview Channel radio button, then using either the dropdown list and GO button, or the map, select the area of interest. The tool then allows you to investigate the availability of channels for use in your area. The options in the left part of the display define the screening criteria in the search. You can list either the available channels or unavailable channels. If you want to see what is currently being used, choose the unavailable channels. This will list all channels that have been licensed or submitted for coordination in the defined area.

Allotment refers to the regional plan allotment for the area selected. Note that, under normal circumstances, frequencies should always be selected from the area allotment. Pool refers to any frequencies that have not been allotted and are available for general

use. The size of the pool for any region is dependent upon the regional plan. Some regions may not have any channels in the pool.

The maximum distance for reuse between counties is a value that may be dependent upon local conditions. It typically is measured as the line of sight distance for effective communications for that area. 100 km (approximately 62.5 miles) is a maximum measure for many parts of the country. Distance is calculated between county “centers” as defined by the RPC for that region. By default county centers are the geographic center of an area as provided by the USGS. Typically, channels allotted to an area whose center is greater than the distance entered are available for reuse in this area. In this context, the channel finder identifies all allotted or applied for channels within the circle determined by the distance entered. These are color coded as green for available (in allotment), orange for frequencies that are on an application not yet submitted for coordination, blue for available (not in allotment), and red for unavailable, frequencies have been licensed or submitted for coordination.

By default, CAPRAD considers the adjacent regions and includes the allotments and frequency applications for regions within the distance specified. Note that the display in Figure 4-9 identifies a distance of 180 km. This is typically much farther than needed, but is illustrative for this example. Listed are the various channels in the counties whose centers are within the 180-km-radius circle drawn around the Kit Carson county center. Green and orange color coded entries in the display indicate caution when using since they have been assigned to another area within the distance specified. Blue indicates the channel is available

The status column indicates the reason for caution. The valid status values are allotted, applied for, licensed, and blocked. In general, if the distance identified is realistic for the communication service being implemented and the channel desired is colored other than blue on this display (status is other than allotted), you should strongly consider applying for a different channel. An * following the status label indicates that the frequency bandwidth (e.g. 25 KHz) being found is different than the bandwidth being identified. In Figure 4-9, 13-16 Bent county, CO has status Allotted * and 13-16 Sherman county, KS has status Allotted. The difference is that Bent county has allotted channels 13-14 as a 12.5 KHz voice bandwidth whereas Sherman county has allotted channels 13-16 as a 25 KHz voice bandwidth. Both are within the affected distance, but the allotments by county / region is different.

Channels colored blue indicate the channel can be used. It is strongly recommended that channels in the area allotment (colored green) be applied for prior to any other channel.

To change the area for which you want to find available channels, you need to either use the regional map or when using the dropdown area list, re-select the GO button. This will re-initialize the Channel Finder display to the desired area. If you simply position the dropdown to the desired county and do not select the GO button, the Channel Finder information display will not re-initialize to the desired county.

4.5 SELECTED APPLICATION OPTIONS

When you find the desired application or have created a new application, the options at the bottom of the side bar menu are designed to allow for the various options connected with application manipulation and assignment. This section will discuss the various options as they apply to the application process.

4.5.1 Form Selection

Once an application has been found or has been initiated as a new application, form entry and/or navigation can be exercised with the Form option on the sidebar menu. Figure 4-10 displays access to application forms from the Find Application display. Note that you simply highlight the application desired, use the dropdown list for Forms to determine which section of the application you want to view, and then select the View Form button.

Once the specific section has been accessed, the form can be reviewed or edited as appropriate. Data is entered into the form using the keyboard. Navigation between fields can be done using the Tab key or the mouse. Dropdown lists are provided for fields with limited scope. Simply select the correct value from the drop down list. For these fields no free form data entry is allowed. All fields that have a default value are initialized to that value when a new application is created.

When you want to navigate between pages, simply select the buttons at the top or bottom of the form that indicate the forward or backward progression of form pages. If you want to jump to a different section, use the Form option and dropdown list on the side bar menu to jump to the desired section. Note that forward or backward progression of application pages will sequentially navigate you to all sections.

Figure 4-10: Access to Applications Sections using the Form Option

Information entered onto a form page is not saved in the database until the Save button is pressed or until you go to the next page. When the Save or Go To Page button is selected, a simple check is made on the form page for proper filling of forms data. This check simply determines whether items are properly formatted and are within range. No checks are made to determine if required fields are filled out or the like. That is covered under validation (discussed in Section 4.4.5). Figure 4-11 shows a typical error indication when out-of-range information is detected on a form. In this case a date of 06/31 is identified as out of range. Note that the error alert identifies the item number (6) for which the error applies and the acceptable range of the field. Multiple errors are identified with successive alert boxes.

All pages within the 601 application work on this same principal: text input boxes for standard data fields, dropdown lists for limited selection items, and field level validation at save or navigation requests.

Schedule A is not used for new applications. Schedule D and Schedule H may be required, however. Figure 4-12 displays the Schedule D form as it appears. Several things are different within the Schedule D section. New buttons have appeared at the top of the page. The Cancel, Save, Print and navigation back and forward work the same way as for the FCC 601 form and the Schedule H form. However, with this Schedule D additional operations are now possible. Schedule D can include continuation sheets. The Pg 1 appearing between the < and > labeled buttons allows you to paginate

within the Schedule D section to the beginning (page 1) to the end of as many continuation pages as are needed. The Delete button allows you the capability to delete any given page within this section. If you delete all pages, the next time you access this section, a blank page 1 will be displayed.

Schedule H is a required element of the application. There are the standard navigation keys at the top of the form, but there is no delete. Schedule H must be included. However, several unique aspects to this schedule should be noted. Figure 4-13 displays the center section of Page 1 of Schedule H. Items 10-14 do not apply to public safety entities; although they appear, they are grayed out and no information can be associated with them.

http://www.teq-services.com:81 - FCC 601 MAIN FORM PAGE 1 - EDIT - Microsoft Internet Explorer

700 MHz Public Safety Spectrum Home 700 Mhz 4.9 GHz SIEC Assets

REGION 7: Colorado SELECT AREA: Arapahoe County VIEW REGION PLANNING APPLICATIONS

NEW REGION 601-1 601-2 601-3 601-4 A D H-1 H-2 H-3 Cancel Save Print

SELECT ACTION

- Preview Channels
- Find Application Filter
- New Application

GO

SELECTED APPLICATION

Sched D GO Full Print View

Coordination Co-ownership Attachments Validate Status

FCC 601 Main Form FCC Application for Wireless Telecommunications Bureau Radio Service Authorization Approved by OMB 3060-0798 See instructions for Public burden estimate

1) Radio Service Code: PW-Public Safety Pool, Conventional 1a) Existing Radio Service Code:

2) NE - N 6) must be in either the mm/dd, m/dd, m/d, or mm/d format. Signs NT - Required Notifications Application EX - Requests for Extension of Time se AU - Administrative Update

3a) If this Temporary Authorization, enter the code and attach the required exhibit as described in the instructions. Otherwise enter N (Not Applicable) STA (Special N-Not Applicable

3b) If this request is for Special Temporary Authority due to an emergency situation enter 'Y', otherwise enter 'N' No

4) If this request is an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC. File Number

5) If this request is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, Consolidate Call Signs, Duplicate License, or Administrative Update, enter the call sign of the existing FCC license. Call Sign

Figure 4-11: Error Detection when Saving a Form Page

http://www.teq-services.com:81 - FCC 601 SCHEDULE D - EDIT - Microsoft Internet Explorer

File Edit View Favorites Tools Help

RPC7 Chair 2 | Log Out | FAQ | Help

CAPRAD COMPUTER ASSISTED PRE-COORDINATION RESOURCE AND DATABASE SYSTEM

University of Denver Research Institute

700 MHz Public Safety Spectrum Home 700 Mhz 4.9 GHz SIEC Assets

REGION 7: Colorado SELECT AREA: Arapahoe County VIEW REGION

PLANNING APPLICATIONS

NEW REGION

SELECT ACTION

☐ Preview Channels
☒ Find Application [Filter](#)
☐ New Application

GO

SELECTED APPLICATION

Sched D

GO

Full Print View

Coordination
Co-ownership
Attachments
Validate

601-1 601-2 601-3 601-4 A D H-1 H-2 H-3

Cancel Save Print

Page 1 of 1 Add Delete

FCC 601 Schedule D **Wireless Telecommunications Bureau Schedule for Station Locations and Antenna Structures**

Approved by OMB 3060-0798 See 601 Maint Form for public burden estimate

1) Action Requested: Add 2) Location Number: L1

3) Location Description: Fixed 4) Area of Operation Code: N/A 5) Location Name:

6) FCC Antenna Structure Registration # or N/A (FAA Notification not Required): 2223333

7) Latitude (DD-MM-SS.S): NAD83 North 8) Longitude (DDD-MM-SS.S): NAD83 West

9) Street Address, Name of Landing Area, or Other Location Description:

Figure 4-12: Schedule D Form

http://www.teq-services.com:81 - FCC 601 SCHEDULE H PAGE 1 - EDIT - Microsoft Internet Explorer

File Edit View Favorites Tools Help

RPC7 Chair 2 | Log Out | FAQ | Help

CAPRAD COMPUTER ASSISTED PRE-COORDINATION RESOURCE AND DATABASE SYSTEM

University of Denver Research Institute

700 MHz Public Safety Spectrum Home 700 Mhz 4.9 GHz SIEC Assets

REGION 7: Colorado SELECT AREA: Arapahoe County VIEW REGION

PLANNING APPLICATIONS

NEW REGION

SELECT ACTION

☐ Preview Channels
☒ Find Application [Filter](#)
☐ New Application

GO

SELECTED APPLICATION

Sched D

GO

Full Print View

Coordination
Co-ownership
Attachments
Validate

601-1 601-2 601-3 601-4 A D H-1 H-2 H-3

Cancel Save Print

FCC 601 Schedule H instructions **Technical Data Schedule for the Private Land Mobile and Land Mobile Broadcast Auxiliary Radio Services (Parts 90 & 74)**

Approved by OMB 3060-0798 See 601 Maint Form for public burden estimate

Eligibility

1) Rule Section: 90.523 2) Describe Activity: n/a

Frequency Coordination Information (if not self-coordinated)

3) Frequency Coordination Number:	4) Name of Frequency Coordinator:	5) Telephone Number:	6) Coordination Date:

7) Has this application been successfully coordinated? No

Figure 4-13: Schedule H Display

Figure 4-13 also displays some additional buttons associated with Control Points. The < and > labeled buttons will allow you to scroll forward and backward if you have associated more than 5 control points with this application. Only the Control point section of the page changes: the other portion of the page remains as entered. If less than five control points have been associated with the application, then selecting these buttons has no effect.

Note that the drop down box in Figure 4-14 shows a choice of XXX. Choosing this option and then subsequently selecting save will *delete* the information in that row.

Schedule H, page 2 is displayed in Figure 4-14 and page 3 in Figure 4-15. Schedule H is the heart of the application process, as it contains the antenna data and the associated frequencies associated with this application. This information is required for proper coordination of the application. As with all of the application forms, the FCC documentation is available on-line. Simply place the cursor in the input item window for which you need an explanation, select the ??? hyperlink on the top bar menu, and the explanation for this data item as provided by the FCC will be displayed in the information window. Select the item number hyperlink in the help window and the original form will be re-displayed. You will need to place the mouse cursor on the item you were at, since it will not be placed there automatically.

Antenna Information

19) Action (A/M/D)	20) Location Number	21) Antenna Number	22) AAT (meters)	23) Antenna Ht (meters)	24) Azimuth (degrees)	25) Beamwidth (degrees)	26) Polarization	27) Gain (dB)
1. Add	L1	A1	42.0	45.0	75.0	180.0	H	6.1
2. Add	L1	A2	56.0	60.0	90.0	360.0	H	7.1
3. XXX								
4. XXX								
5. XXX								
6. XXX								
7. XXX								

Figure 4-14: Schedule H, Page 2

For pages 2 and 3 of Schedule H, a special symbol has been added to the dropdown list to enable you to delete a row of information from the table. The symbol **XXX** in the first column of a row of information indicates that the row of data will be removed from the

application. This delete occurs in the CAPRAD database so that the information will not be forwarded to the coordinator or to the FCC. This delete action is different from the DEL that is permissible on a modification of an application. The DEL (for delete) in that context will be to delete the row from the existing information in the parallel FCC / coordinator databases where the original application is on file.

On page 3 of Schedule H, frequencies are entered that are associated with the various antennas. A special button labeled Show Freqs appears on this page. Selecting this button will display a frequency selection window similar to that shown in Figure 4-15. The channel finder display is similar to the 'Find Channel' action discussed in section 4.3.3. The options are the same and the display is the same, but the operation of this window is coordinated with the identification of frequencies for this application. All of the blue colored frequencies that appear are frequencies that are hyperlinked. Selecting one of these frequencies will automatically enter that frequency value into the column of the row on which you are currently focused. If a value currently exists in that row, then it will be replaced. Note that if you enter a frequency into a row where the first three columns have not been properly filled out, an error will occur when you Save or navigate to another page.

Region 7 - Colorado - Arapahoe County Channel Finder

Availability
☒ Available Channels
☐ Unavailable Channels

Channel Type
 State License
 Voice 25 KHz

Allotment
☐ Allotment Only
☒ Allotment & Pool

Distance
 75 Km. Min distance for reuse between counties

Find Channels

Allotment Channel Availability

Channel	Base Freq	Mobile Freq	Status	Area
105-108	764.662500	794.662500	Licensed	Arapahoe, CO
	764.662500	794.662500	Applying For	Denver, CO
109-112	764.687500	794.687500	Licensed	Arapahoe, CO
113-116	764.712500	794.712500	Applying For	Arapahoe, CO

Pool Channel Availability
 Mobile

32) Station Class	33) No. of Units	34) No. of Paging Receivers	35) Output Power (watts)	36) ERP (watts)	37) Emission Designators
FB	1		60.0	54.0	20K0F3E
FB	1		60.0	54.0	20K0F3E
MO	200		25.0	21.0	20K0F3E
MO	200		25.0	21.0	20K0F3E

Figure 4-15: Channel Finder for Schedule H

If frequencies colored in blue are followed by a + symbol, this indicates that they appear in another application in this or another nearby county. Such frequencies are available,

but because someone else is in the process of applying for this frequency, some care should be taken when using. Frequencies are not blocked (colored orange) until they have been submitted for coordination.

4.5.2 Assign Coordinator

The owner of an application must assign a frequency coordinator before the application can be submitted for licensing. Figure 4-1 shows the overall application processing flow. This assignment can be done at any time while the application is in process. The user can also change the frequency coordinator up until the time the application is submitted for coordination.

Figure 4-16 shows the display that results from selecting the Coordination selection from the side bar menu. There are five choices. None is the default for new applications.

To assign a coordinator, simply highlight the radio button next to their designation and then select the Assign button at the bottom of the display. The frequency coordinator is not notified of this application until it is actually submitted for coordination. Note that only a user with ownership rights to an application can assign the coordinator. Other users can only review who has been assigned.

APPLICATION COORD ASSIGN - Microsoft Internet Explorer

Address: http://www.teq-services.com:81/pls/capdev/f_main.Link2?p_RegId=78p_cAreaId=9998p_cMainOpt=28p_cOpt=6&p_cForm=1&p_cMode=E&p_cApplId=79

RPC7 Chair 1 | Log Out | FAQ | Help

CAPRAD COMPUTER ASSISTED PRE-COORDINATION RESOURCE AND DATABASE SYSTEM

University of Denver Research Institute

700 MHz Public Safety Spectrum

Home 700 Mhz 4.9 GHz SIEC Assets

REGION 7: Colorado SELECT AREA: Entire Region- VIEW REGION

PLANNING APPLICATIONS

Jefferson County - Jeffco Rangers

Assign Coordinator

	Agency	Email Address	Online Information
<input type="radio"/>	None		
<input type="radio"/>	AASHTO	sxcoord@AASHTO.org	http://www.aashto.org
<input type="radio"/>	APCO	pxcoord@APCO911.org	http://www.apco911.org
<input type="radio"/>	FCCA	fxcoord@FCCA.org	http://www.fcca.info
<input checked="" type="radio"/>	IMSA	ixcoord@IMSAsafety.org	http://www.imsasafety.org

Assign Assign Coordinator Edit Coordination Form

Full Print View

Coordination Co-ownership Attachments

Figure 4-16: Assigning a Frequency Coordinator

The hyperlinked selections to the right of each coordinator name provide an on-line link to additional information as provided by the coordinator. These links connect you to billing / costing sites for current pricing information. Typically, these are simply pages

on the coordinator's web site and additional information can be researched by browsing their web site.

4.5.3 Application Co-Owners

The CAPRAD system allows for any application to be co-owned by a number of valid users. Only the application owner or a valid co-owner can assign co-owners for an application. Whether a user is listed as a co-owner or not is determined by the system administrator who identifies an individual user as a proxy agent, i.e., a potential co-owner. The system administrator has exclusive rights to determine which users can be assigned a proxy status and be used as a co-owner. Once a co-owner status has been granted, there is no regional or other qualification, which limits the ability to assign the co-owner. Any applicant user of the system can assign or remove a co-owner at any time. Figure 4-17 shows the co-ownership option display. Note that more than one user can be assigned co-ownership at a time by simply highlighting the radio button next to their names and then selecting Update. Typically, it is unwise to have too many owners of an application since synchronizing inputs and responsibilities for inputs might prove to be tedious and counter-productive.

If an applicant is also on the co-ownership list, it has no effect to either assign or un-assign yourself as a co-owner. As the originating owner of an application, you always have full edit rights to the application. A co-owner, however, could remove himself as a co-owner, thus relinquishing the responsibilities and duties of ownership.

RPC Co-ownership

Any users with RPC authority in a region and who have the "Proxy" option selected on their User Information page (this selection can only be changed by the CAPRAD system administrator) are considered as implicit co-owners for applications under the following conditions:

1. If the regional "Application Review" option has been set to "Always review" then they will be implicit co-owners for all applications in their region.
2. If the regional "Application Review" option has been set to "By allotment" then they will be implicit co-owners for any applications that contain frequencies that are out of the regional allotment.

Implicit co-owners cannot be changed by the preparer of the application.

Any users with RPC authority in a region and who have the "Proxy" option selected on their User Information page (this selection can only be changed by the CAPRAD system administrator) can be chosen as explicit co-owners for applications under the following conditions:

1. If the regional "Application Review" option has been set to "Never review" then they can be explicit co-owners for all applications in their region.
2. If the regional "Application Review" option has been set to "By allotment" then they can be explicit co-owners for any applications that contain frequencies that are within the regional allotment.

Explicit co-owners are then assigned by the preparer of the application.

RPC Application Review

The other effect of selecting "Proxy" for users with RPC authority is to put them on the notification list for all status changes, as well as allowing them to give RPC approval to applications.

The screenshot shows the CAPRAD web application interface. The title bar indicates it's running in Microsoft Internet Explorer. The address bar shows a URL from teq-services.com. The page header includes the CAPRAD logo and navigation links like 'Home', '700 Mhz', '4.9 GHz', 'SIEC', and 'Assets'. The main content area is titled 'Jefferson County - Jeffco Rangers Assign Co-owners'. It features a table with columns for 'Yes', 'No', 'User Name', and 'Organization'. The table lists several users and organizations, including APCO Student 7, Emery Reynolds, RPC7 Chair 1 through 4, RPC7 Planner 3, and Brett Starr. The interface also includes a sidebar with 'SELECT ACTION' options (Preview Channels, Find Application, New Application) and a 'SELECTED APPLICATION' section with a dropdown menu set to 'FCC 601'.

Yes	No	User Name	Organization
<input checked="" type="radio"/>	<input type="radio"/>	APCO Student 7	Some Company
<input checked="" type="radio"/>	<input type="radio"/>	Emery Reynolds	Arapahoe County Sheriff
<input checked="" type="radio"/>	<input type="radio"/>	RPC7 Chair 1	Region 7
<input checked="" type="radio"/>	<input type="radio"/>	RPC7 Chair 2	Region 7
<input checked="" type="radio"/>	<input type="radio"/>	RPC7 Chair 3	Region 7
<input checked="" type="radio"/>	<input type="radio"/>	RPC7 Chair 4	Region 7
<input checked="" type="radio"/>	<input type="radio"/>	RPC7 Planner 3	Region 7
<input type="radio"/>	<input checked="" type="radio"/>	Brett Starr	APCO

Figure 4-17: Assigning Application Co-owners.

The concept of co-ownership is very helpful in situations where assistance is required from several individuals to fill out the various sections of a form. For example, the originating owner might fill out the standard 601 forms but require the corporate engineer to fill out Schedule H. Instead of transferring the information via paper or email and risk an unintentional input error, the engineer could be granted co-ownership of the application and fill in the fields directly. When he was done, he could remove himself as co-owner.

4.5.4 Application Attachments

CAPRAD allows the owners of an application to assign various attachments to an application. These attachments must be in JPG, TXT, or DOC format (per FCC limitations). There is no limit to the size and number of these attachments, but they should be relevant to the application since all users of the system have the rights to review them.

Figure 4-18 displays the screen that results from selecting the Attachments action for an application. Already-loaded attachments for an application are listed at the top of the display. For this application, one attachment had already been assigned. The file name of the file is hyperlinked in the list, and, if selected will open the file in the information window. Select the Back button from the display with the attachment to return to the Upload an Attachment display. To remove an attachment to an application, select the check box in the Del column and press the SAVE button. You can also change the description associated with an attachment from that assigned when uploaded by simply editing the existing description and then selecting the SAVE button. Deletions and changes to the description can be done to one or all of the images in the list prior to selection of the SAVE button.

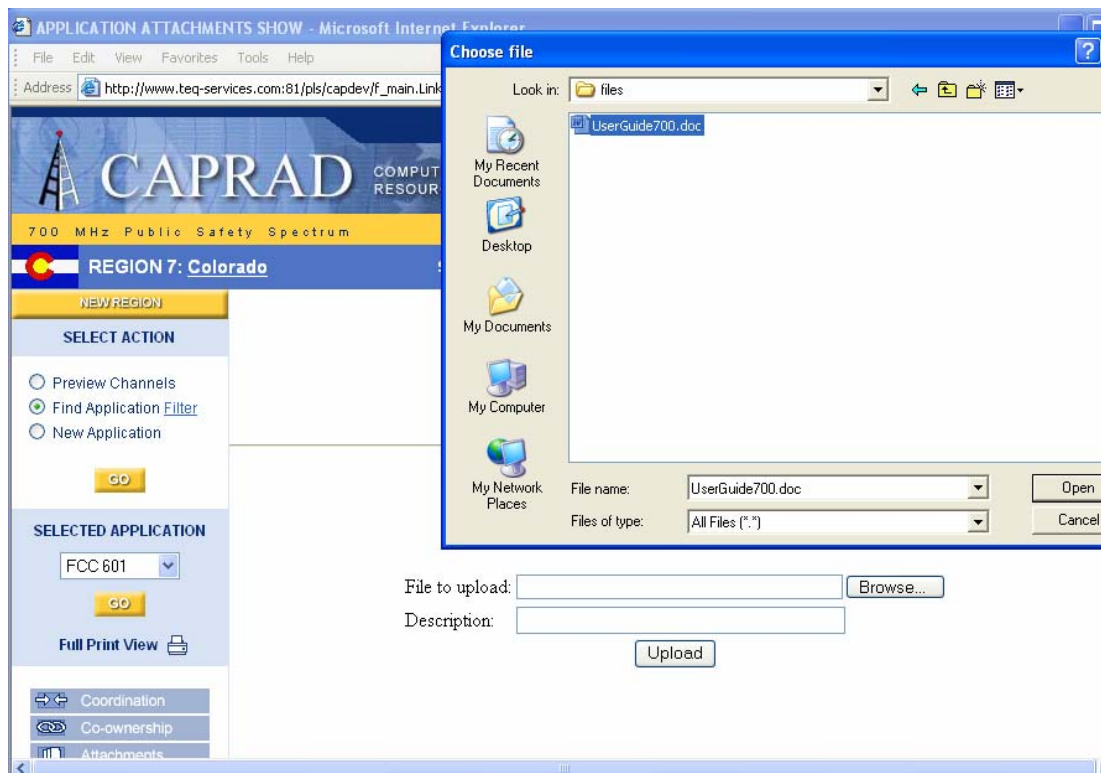


Figure 4-18: Assigning Attachments to an Application

To assign a new attachment file to this application, select the Browse button. A pop-up window (as shown) is displayed. This window is a standard file selection window used in many windows applications. Use the commands within the window to locate the file

to be uploaded. Click the file name to automatically enter the name into the text box, select the open button and the path and name of the file will be automatically entered into the text box beside the 'File to upload' prompt. Enter descriptive text next to the 'Description' prompt and then select the Upload button. The descriptive text should provide ample information to identify the nature of the image. For example, "Picture looking north from Antenna Site C01" is much better than simply "Image 1". The time to upload will depend upon a number of factors, including image size and connection speed. When upload is completed, an "Upload is Complete" message will be displayed and the screen display will be automatically updated to include the new assigned image. You can review it immediately by simply selecting the file name.

Only one attachment can be uploaded at a time. There is no facility at this time to allow for multiple file uploads. Should you choose a file with a suffix other than .jpg, .jpeg, .doc, or .txt you will receive an alert indicating a bad file suffix. Note that the file-type check is not case-sensitive.

4.5.5 Selected Application Validation

The FCC rejects all applications that have errors on them. This can be a very frustrating experience, given the large number of fields and the detailed error checking done by the FCC. The CAPRAD validation function is intended to validate every application to minimize, if not eliminate altogether, rejections based upon improperly filled out applications. To invoke, simply select the Validate function from the side bar menu. Validation will occur on the currently selected application whether or not its pages are being displayed in the information area.

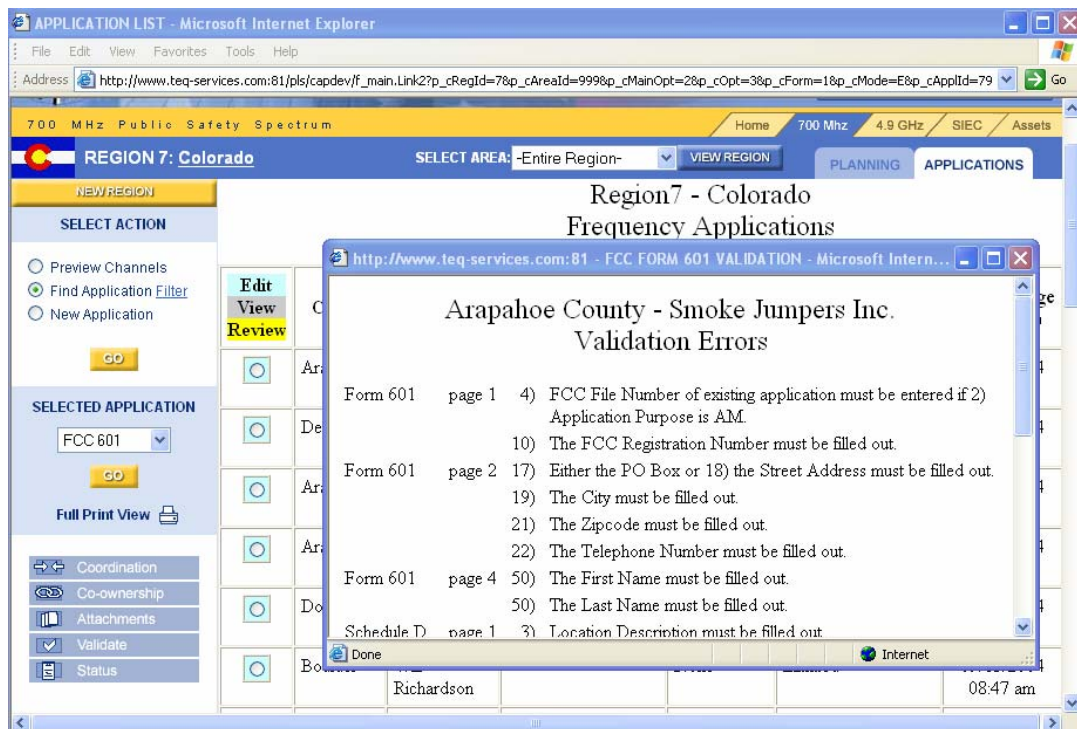


Figure 4-19: Validation of an Application

Figure 4-19 shows the result of a validation selection. All errors on the form that have been detected will be displayed in another window as shown. The form, page number, and item number of the data field are identified, and the nature of the error is described. If the list is very long it may be beneficial to print this list. To do this with Internet Explorer, press the right mouse button with the cursor on this display and the popup menu shown will appear. Choose Print from this menu to send the list to the printer. To print from Netscape requires you to highlight the window contents with the mouse, use CTL-C to copy the contents to the clipboard. Then open an application such as WordPad or Notepad and press CTL-V to copy the contents into that application.

Unless an application is validated successfully, you will not be able to forward it to the frequency coordinator for coordination. The information provided should be sufficient to track and correct the error. Many errors are caused by (1) relational inconsistencies, that is, the value that is correct in one field depends upon the value in a related field, and (2) by required fields not being filled out. All errors must be corrected prior to submitting the application.

When there are no errors on an application, selecting the validation option will produce an alert box indicating that validation is not needed. See section 4.4.6 with regard to application status and validation issues.

4.5.6 Selected Application Status

Tracking the status of an application is an important part of managing the application process. Many of the status changes affecting the application are set separate from the status review display. A few critical steps are set directly from this screen. This section will review the status setting and identify when, how and by whom the status is set in each case.

Figure 4-20 shows the status display generated when the selected application status is selected. The display identifies several information areas that are important to review.

Figure 4-20: Application Status Change

The current status is indicated in the top column at the left. This application is “In Process”. This means that the forms have not yet been validated for errors. Table 4-3 lists the various statuses and the conditions under which they are set and by whom. CAPRAD is the set of computer procedures that control the application process.

Status Label	How Set	When Set
Initiated	CAPRAD	When the applicant presses Save, or initiates a save request via page navigation after selecting a New Application action.
Last Change	CAPRAD	When the user presses Save, or initiates a save request via page navigation when editing an existing application.
Validated	Owner / Co-owner CAPRAD	This status box is checked when validation of an application returns no errors. Should a subsequent change be made which invalidates the application prior to this status being set, the Ready box will not be available.
Coordinator Assigned	Owner / Co-owner	This status box is checked when the applicant / co-owner assigns a frequency coordinator.
Submit to RPC	Owner / Co-owner	This status is only necessary if a frequency appears on the application that is not among those allocated to the county of record for the application.
RPC Review	RPC	This status is set by the RPC of the region for which the application is made. If the RPC denies

		the frequency request, the status reverts back to Last Change. This activity is recorded in the status history.
Submit for Coordination	Owner / Co-owner	This status box becomes active when an application has been marked ready by the owner and, when necessary, approved by the RPC and a coordinator has been assigned.
Coordination Complete	CAPRAD	Set by the system when notified via the EBF file by the coordinator that coordination has been done successfully.
Submitted to FCC	CAPRAD	Set by the system when notified via the EBF file by the coordinator that the application has been submitted to the FCC
FCC Action	CAPRAD	Set by the system when notified via the EBF file sent by the FCC that the application has been rejected or licensed. If rejected, the application status is automatically reset to “not ready”, that is, last change reflects FCC rejection date. Reasons for rejection or notice of licensing will be sent via email to the owners.

Table 4-3: CAPRAD Application Status Descriptions

As a summary of the status events, the user implicitly updates the **initiate** and **last change** status indicators by selecting the SAVE or page navigation form during the form completion process. The **validate** and **coordinator assigned** items are checked by the system when those activities are completed by the applicant. The user explicitly checks the **Submit to RPC** (when needed) and the **Submit for Coordination** when CAPRAD has determined precursor statuses are completed. Assigning the coordinator can occur anytime during the form-filling process up until the submission for coordination. All additional status changes are managed by the CAPRAD system as events external to CAPRAD are accomplished. Coordination of these events is controlled through the external data interchange format defined by the FCC for electronic application submissions, the EBF format. All of the frequency coordination agency programs and the CAPRAD system comply with this interchange format.

When any change of status occurs the date and time of that change are logged in CAPRAD. The column of information under Date/Time in Figure 4-20 indicates the time of status change. This date is based upon the local date and time at the CAPRAD system site. Currently this is Mountain Time, since the CAPRAD computer is located in Denver, Colorado.

Starting with the “Submit to RPC” or “Submit for Coordination” status change, a notification is generated and sent to interested parties noting the change of status of an application. The last column in Figure 4-20 is a list of users who will receive this notification. The user has complete flexibility as to who is notified by highlighting the

check boxes of the groups to be notified. Note that when the UPDATE button is selected, the list for this applicant is remembered. Also, when the UPDATE button is selected, an email notification screen is displayed. The display is similar to that already described for regional plans and displayed in Figure 3-9.

The list of persons receiving the notification can be changed again when this email notification screen is displayed. The list displayed at this point contains only the persons in the groups indicated on the status page. If for some reason one or more of these users do not need to receive the notification, their check boxes can be de-selected. However, the recipient list cannot be added to at this point. It may only be shortened. The message to be sent can be edited to include additional comments to those already suggested. When selecting SEND, the message is transmitted to the users indicated. Selecting CANCEL will prevent the sending of an email, but the status flag will be updated in any event.

Once submitted for coordination, all status changes are made after the external event has been accomplished. As CAPRAD is notified via the EBF file that the change has been made, CAPRAD will notify the owners of the application and the RPC of the region affected of the change in status.