Training Manual

EL-CID Online

Equipment Location Certification Information Database (EL-CID)

Version 0.10

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Introduction

The intent of this manual is to introduce users to some of the capabilities of the EL-CID Online application. An introduction to all of the capabilities would occupy more time and space than allotted here. Furthermore, many of EL-CID Online's capabilities address specific, specialized use cases and will not be of interest to most users.

Users should familiarize themselves with the help resources that augment this manual, including the Online Help, and the instructions and explanations embedded in the application itself.

The examples provided here are simple in nature and may not completely mimic each specific operation but are employed to demonstrate the capabilities of the system.

Please send comments or concerns to the EL-CID Online help desk at ecohelpdesk@alionscience.com or at 833.695.0543.

WHAT IS CERTIFICATION?

The National Telecommunications and Information Administration (NTIA) is the US Regulator of the Federal Spectrum. NTIA carries out spectrum certification as part of its role in regulating federal use of the radio-frequency spectrum. In order for a federal agency to operate radio equipment in the continental US, that equipment must be certified by NTIA.

The goal of the Spectrum Certification process is to collect and analyze essential data for equipment that uses spectrum before significant resource expenditure. That data is used to determine:

- adequate spectrum availability
- electromagnetic compatibility
- compliance with spectrum policy, rules, regulations, directives, allocation tables, etc.

IRAC

The Interdepartment Radio Advisory Committee (IRAC) is an important part of the certification process. IRAC is an advisory committee that provides the views of the federal agency spectrum managers to NTIA. IRAC's work is considered executive branch pre-decisional and not releasable. It is a collegial body: almost all of its work is done by consensus and is composed of experienced spectrum management professionals. Several IRAC subcommittees, including the frequency assignment subcommittee and the spectrum planning subcommittee help investigate and analyze specific aspects of domestic spectrum use.

IRAC is an advisory committee that provides NTIA the view of the federal agency spectrum managers. IRAC work is considered executive branch pre-decisional ind is therefore not releasable. IRAC subcommittees address general areas, and IRAC ad hoc groups address individual topics.

Members

IRAC is chaired by NTIA and includes members from the U.S. Postal Service, Air Force, Veteran Affairs, Broadcasting Board of Governors, Department of Homeland Security, Department of Transportation, State Department, Department of Energy, Navy, NASA, Department of Agriculture, Department of the Interior, Justice Department, Army, Treasury Department, the Coast Guard, Federal Aviation Administration, Department of Commerce, National Science Foundation, and a liaison with the Federal Communications Commission.

SPS

Spectrum Planning Subcommittee (SPS) is an IRAC subcommittee that develops recommendations for NTIA regarding spectrum certification requests and plans for federal use of the spectrum. The SPS:

1. Receives certification requests from SPS members
2. Coordinates certification requests with SPS members to minimize potential interference with other systems in the same frequency bands

3. Forwards certification requests to the System Review Branch (SRB) for evaluation
4. Provides recommendations to NTIA
5. Forwards policy issues to the IRAC.

System Review Branch

1. Determines compliance with the US allocation table, emissions standards, and other guidelines identified in the NTIA manual
2. Provides spectrum certification assessments to the SPS
3. EL-CID Online is the tool used to assess spectrum certification applications and manage the certification application database

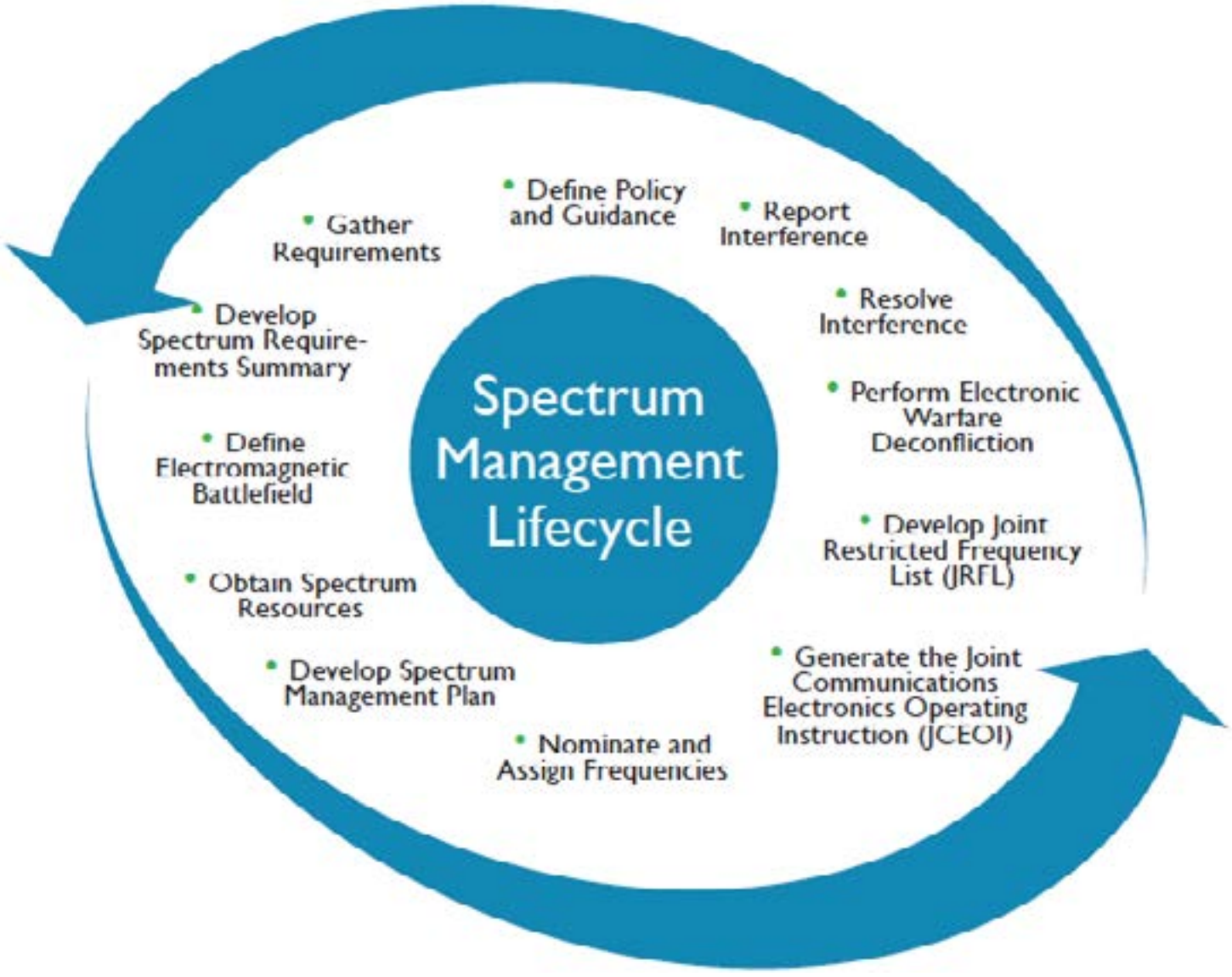
NTIA Administrator

1. Receives and normally approves SPS recommendations

Spectrum Management Lifecycle

The Spectrum Management Lifecycle goes through several interconnected and dependent steps in order to understand, maintain, manage, and regulate the spectrum use of a system.

Those steps are depicted in the graphic below.



EL-CID ONLINE

The primary purpose of EL-CID Online is the creation and maintenance of Certification Applications, along with their supporting equipment and location data.

EL-CID Online is an equipment spectrum certification capability deployed as a web application. It is supported by sophisticated logic that captures inter- and intra-system relationships and prompts entry of applicable system parameters. EL-CID Online is designed to permit the automated processing of this information among EL-CID users and the NTIA, through automated compliance checks and electronic exchange of data.

EL-CID Online also automates the internal distribution and processing of certification requests among NTIA employees and other federal employees who support the spectrum certification process.

EL-CID Online features a modernized interface in which both the workflow and visual layout are intended to guide the user toward the "next step" or information the user needs to locate in given contexts. EL-CID Online features Alerts and contextualized help to reduce system complexity and improve the user experience.

The Workflow

The Workflow request dashboard features 8 basic components and is the main user interface for EL-CID Online.

① The dashboard selection bar is located in the top-left corner of the interface. It allows users to select which dashboard to view. The dashboard currently being viewed will be highlighted in green.

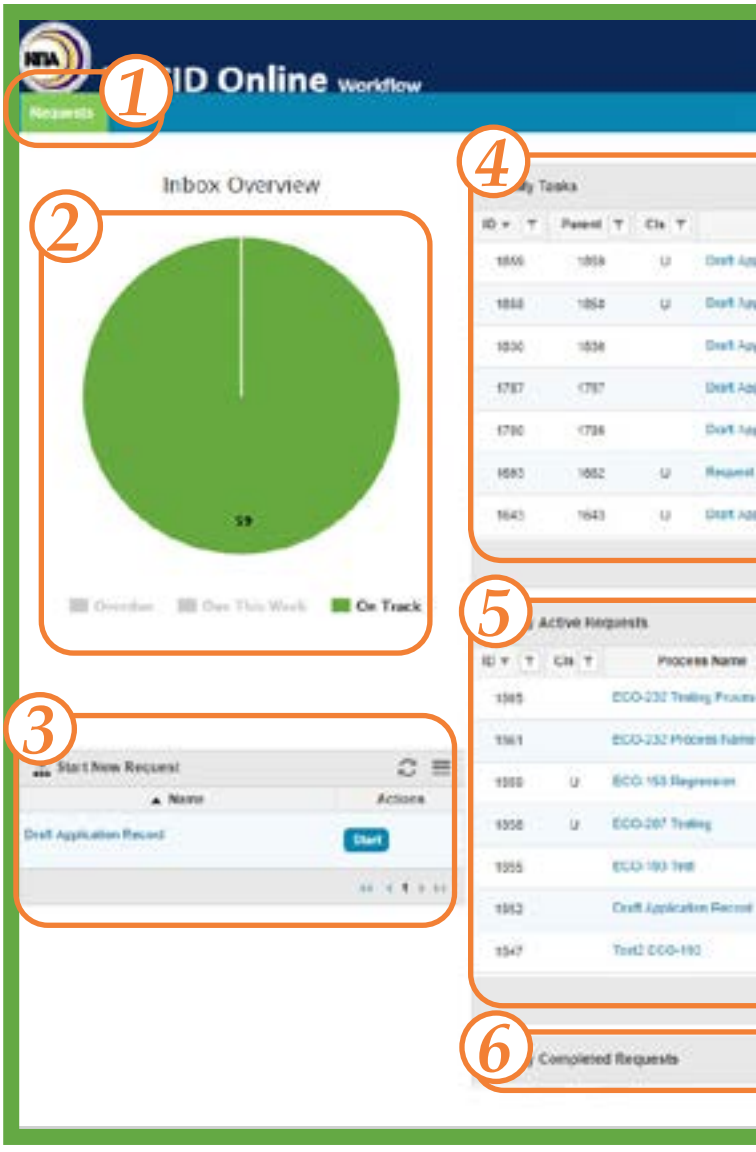
② The graphical display is a visual tracking and reporting component located in the middle-left section of the interface. The current capability provides an in-box tracking overview chart which tracks the speed with which the user completes the tasks in the "in-box"— i.e.., items in the "My Tasks" table (see Component 4). The boxes below the circle graph indicate whether the user is "On Track" by completing their tasks in a timely manner, "Overdue" by failing to read messages in a timely manner, or "Due This Week," by approaching the threshold of application determined deadlines for reading messages.)

③ The Start New Request bar, located in the bottom-left of the interface, is where users initiate a new SRB processing request.

④ Component 4 in the top-middle of the screen contains the My Tasks table which stores requests requiring actions on the part of the user. EL-CID Online automatically sorts certification request processing information into three searchable and sortable tables: tasks, active requests, and completed requests (Components 4, 5, and 6). Each user can use the My Tasks Table only to view tasks associated with his or her account. The My Tasks table is the primary work area users will visit within the Requests dashboard.

⑤ The My Active Requests table contains all open requests initiated by the user or that the user participated in at some point. Instead of a My Active Requests table, the SRB Chief and engineers view an All Active Requests table which contains all open requests in the workflow. To view basic information about an active or completed request, the user should click on that specific request.

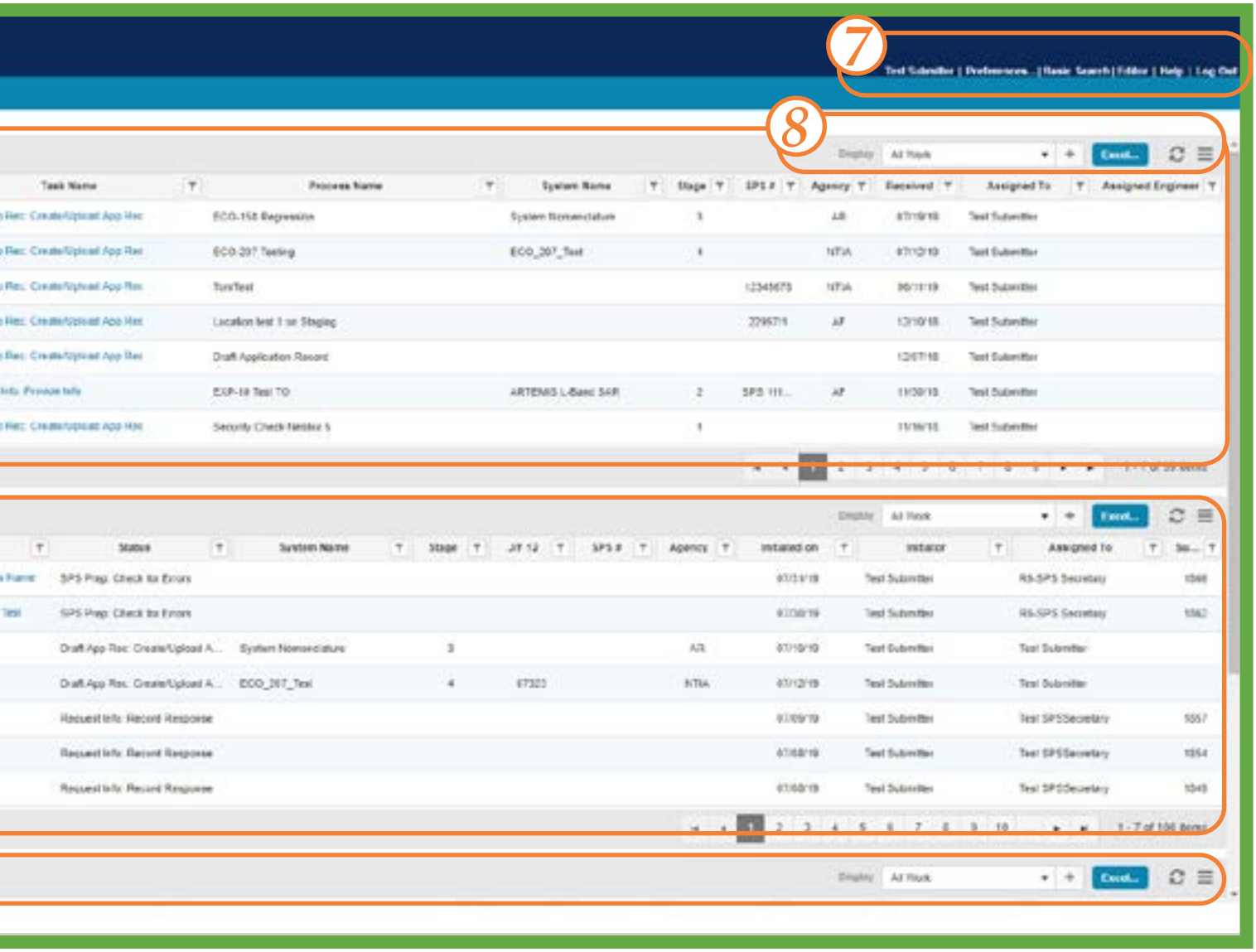
⑥ The My Completed Requests table is located in the bottom-middle of the interface. It stores requests that are completed, initiated,



or processed by the user. Because these requests require no further actions on the part of the user, the My Completed Requests table is view-only, and will primarily be used for record keeping and performance assessment purposes. Instead of a My Completed Requests table, the SRB Chief and engineers view an All Completed Requests table which contains all completed EL-CID Online requests.

⑦ The user profile space is located in the top-right of the interface. This space identifies the user, contains preference options, houses the help menu, and allows the user to log out of the workflow. The help menu can only be accessed from the main Requests screen using the Help link. For this reason, when new users log onto EL-CID Online, they should select the Help button to open up the online help as a separate browser tab.

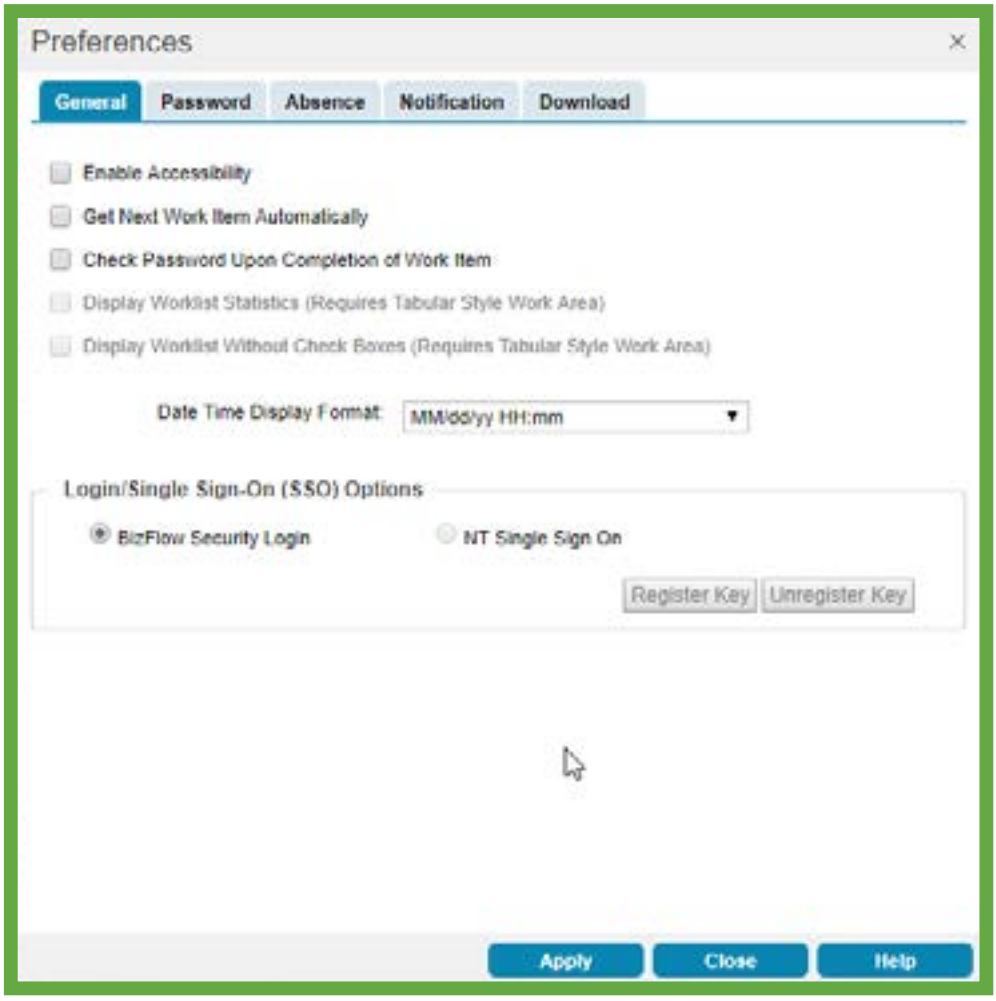
⑧ Filter, Search, and Export Bars allow users to identify and access specific certification requests quickly and easily.



The User Profile Space

The User Profile Space allows users to customize EL-CID Online in a few, specific ways.

- To access the menu, click on the Preferences... link.
- A popup will open with several tabs



Of the five options, only Password, Absence, and Notification will be helpful to the EL-CID Online user.

Password

The Password tab allows users to change their passwords.

➤ **To change the password, click on the** Password **tab.**

➤ **Enter your old password and new password.**

➤ **Click the button.** Apply

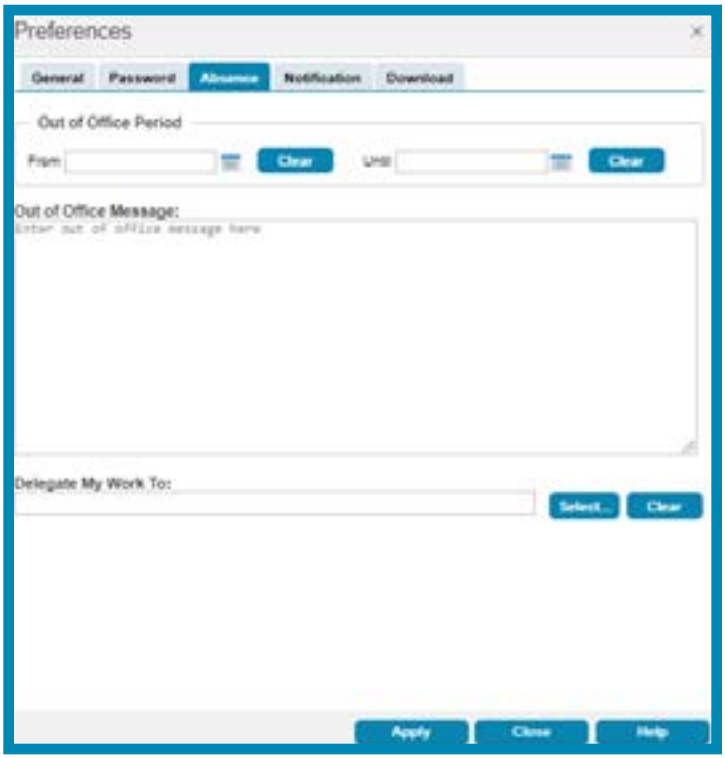
The system will change your password but will *not* display an alert that this has occured.

Absence

The Absence Tab allows users to create an automatic message in response to communications to notify others that of an absence. Users can also choose to forward their assigned tasks to other users during the absence.

➤ **Click on the** Absence **tab.**

The following screen will appear:



➤ **Select dates for your absence.**

➤ **Enter and out-of-office message in the appropriate field.**

EL-CID Online will reply to tasks sent to the user during the period of absence with this message.

➤ **To forward assigned tasks to another user, click the** Select... **button.**

The system will open another window entitled "Select Designee".

➤ **Click on the** Organizational Unit **link to open a drill-down menu of available user roles.**

➤ **Select a role.**

The system will offer a list of users with that role.

➤ **Select a user from the list.**

➤ **Click the** Apply **button to apply the preferences**

Notifications

The notifications tabs allows users to select when they receive notifications regarding workflow activities, and whether notifications are received through email, or via both email and calendar invitation.

Click on the Notification tab.

Select the notification options you prefer.

Then, click the Apply button.

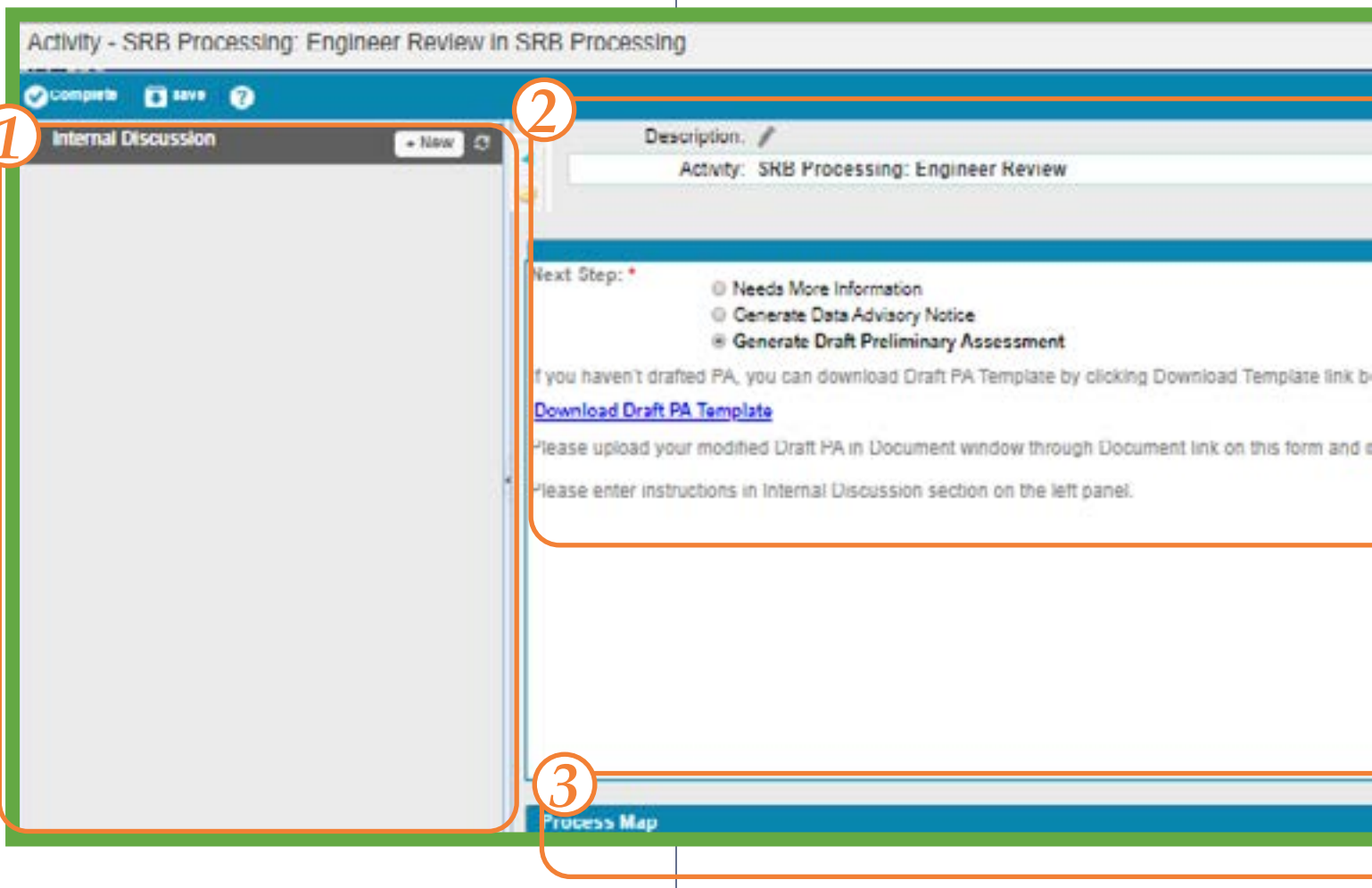
The system will change your notification settings will *not* display an alert that this has occured.

The Task Form

To process requests using EL-CID Online, click on a Task in Request title in the My Tasks Table. The Task Form will open, showing the required steps for processing this task. The Task Form page has the following components.

① The internal discussion panel records comments from each EL-CID Online user who has helped process this request. Internal comments may contain extra instructions or other information pertinent to other EL-CID Online users who are processing a request. Each user must enter a comment in the internal discussion before completing a task.

② The activity name and instructions are available in the central panel. For each task, read the instructions, and complete the activity required. Different tasks will require different selections, decisions, or information, depending on the task and user role. After leaving a comment in the internal discussion panel, click the Complete button in the upper right hand corner. Clicking on the complete button will



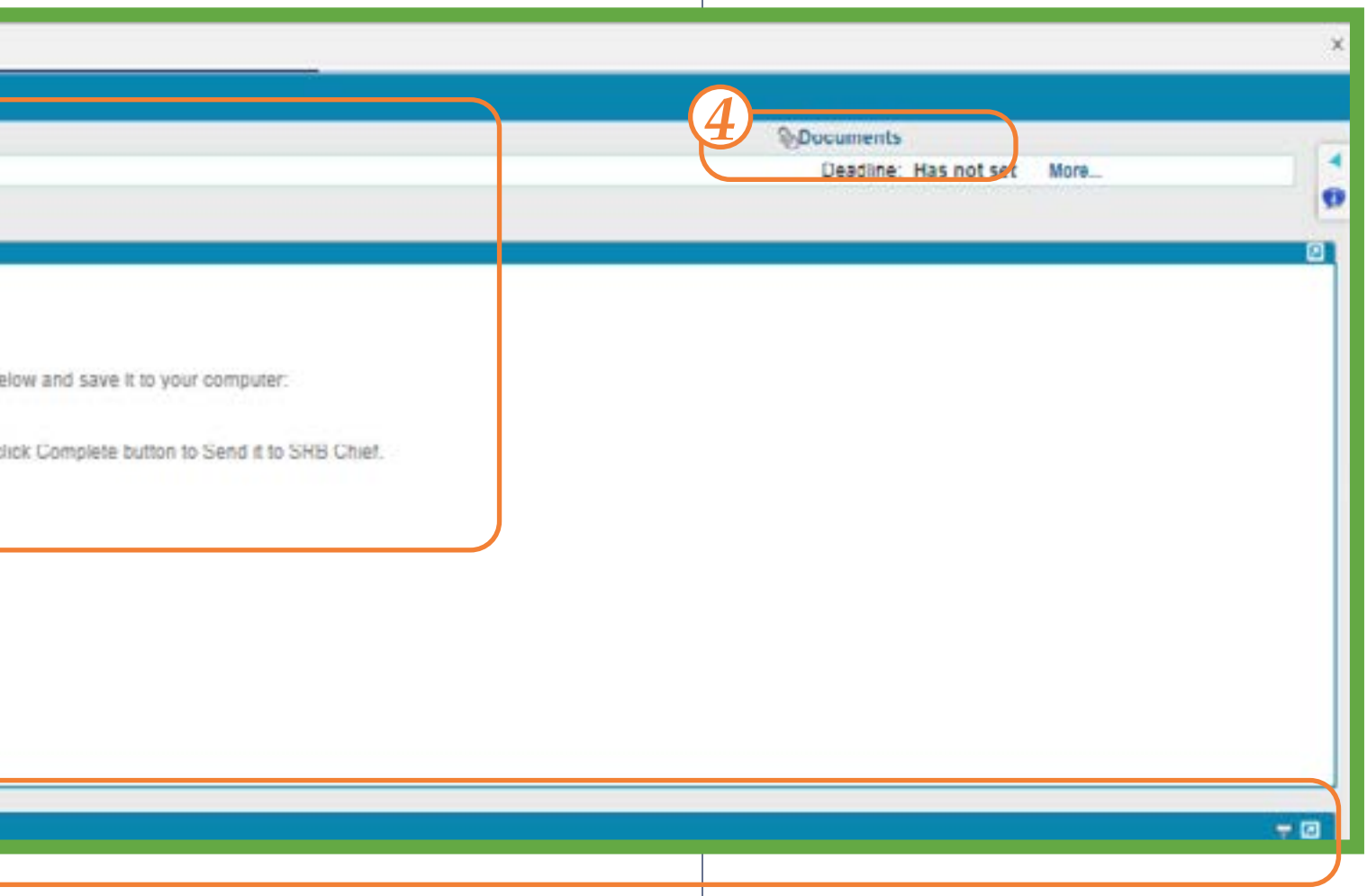
close the Task Form window and return the user to the EL-CID Online dashboard.

③ The process map is minimized at the bottom of the Task Form page. It can be accessed by clicking on the button at the bottom right of the screen. The process map shows which users have interacted with the request, and what path the request has taken.

④ The documents link in the upper right corner opens the documents page, which provides access to the documents associated with a certification request. The documents link also provides a link to open the Editor.

Note:

If you attempt to complete a task without entering a comment, in the discussion panel, the system will prompt you to enter a comment before allowing you to continue.

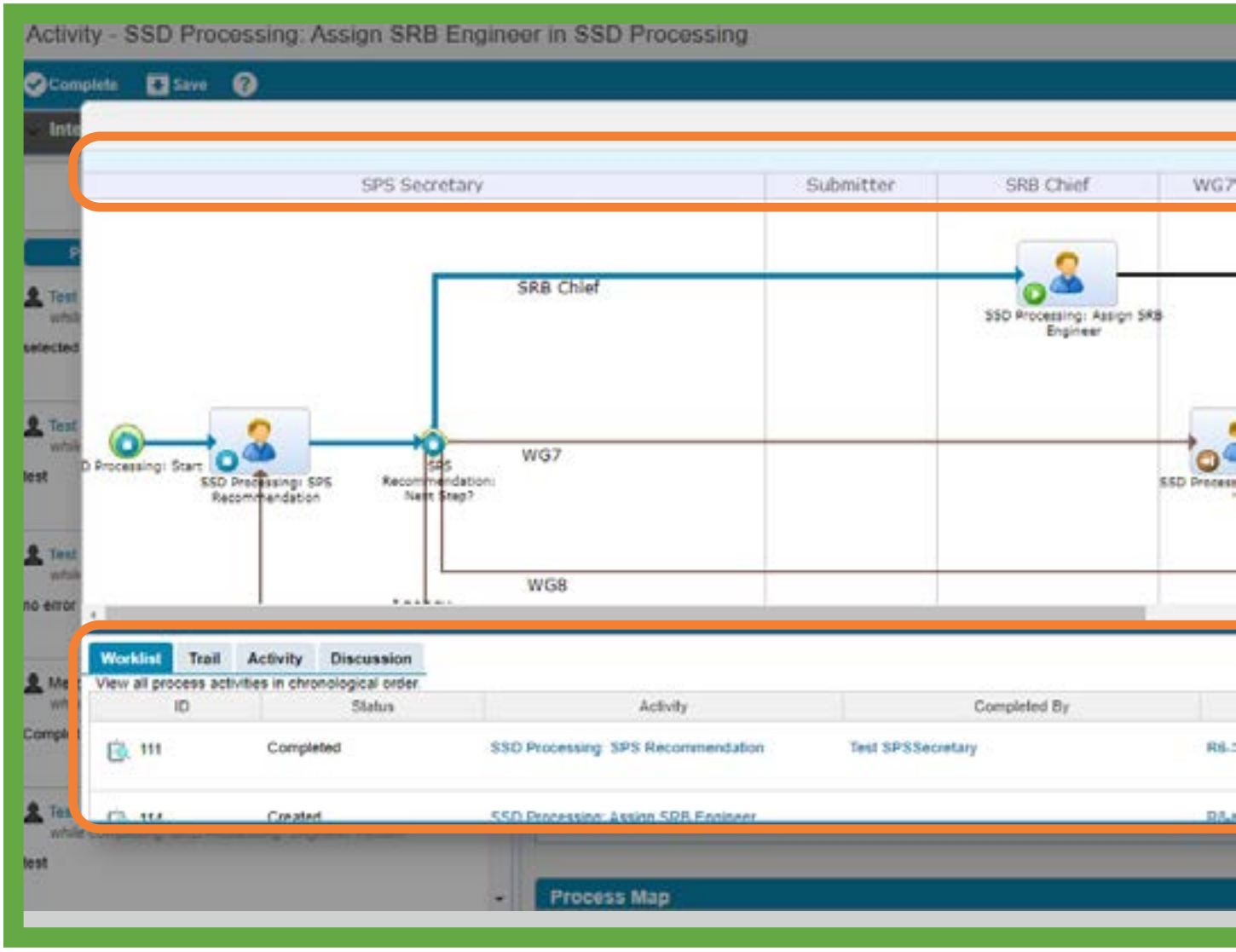


Process Map

The Task Form contains links to a process map, which is a highly detailed flow chart that displays an overview of task flows, the history of a particular request within the task flow, and where the request is currently situated within that flow. All though the map is necessarily complex, some users may find it helpful in gaining a more complete understanding of the larger processing picture.

When the process map is selected for a particular request, the following visuals cues provide key information:

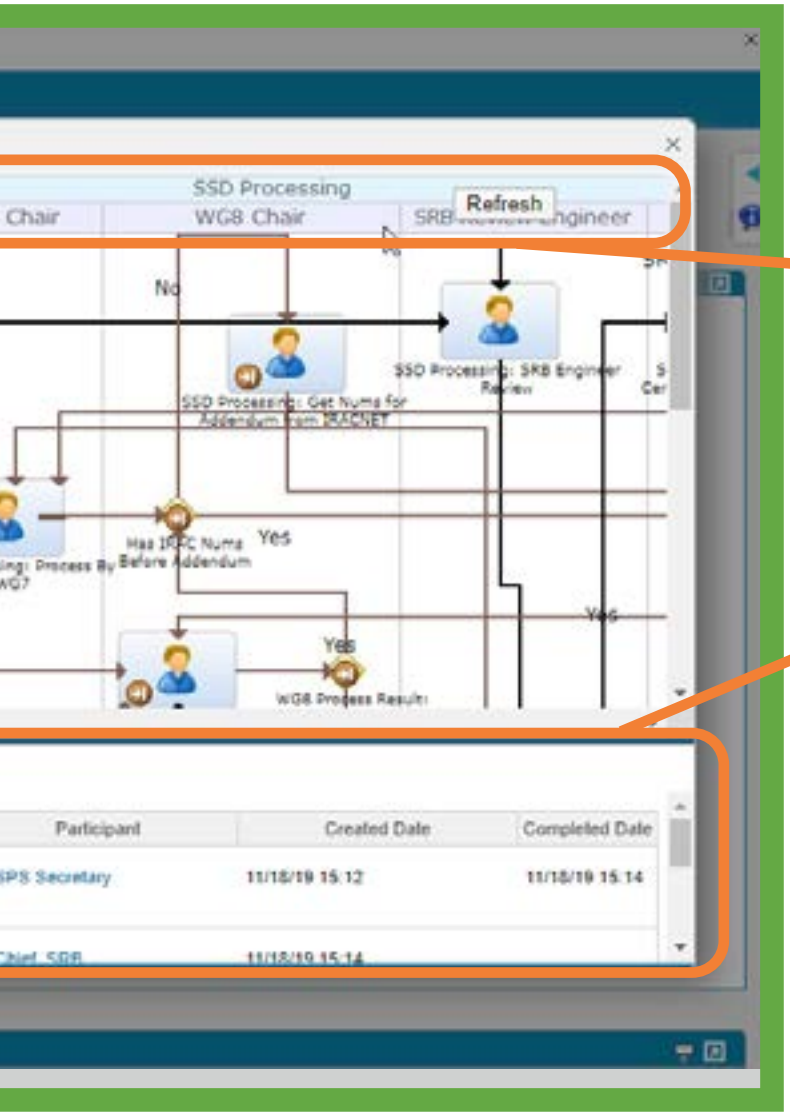
- The button identifies the request's task flow position – i.e., the current task that needs to be completed.
- The line identifies the request's general history within the task flow.



- The button identifies the request's specific history within the task flow – i.e., previous task and process steps that have been completed.
- A represents a decision gate within the task flow.

To view additional details regarding the processing history of a specific request, users may click on items in the Activity, Completed By, and Participant columns within the process history table to view additional details, such as participant contact information.

To exit the map, select the X in the top-right corner.



Roles Identified:

Headers and vertical lines indicate the roles responsible for tasks in each vertical lane.

Process History:

The process history table located below the map, details the history of all previous tasks completed within the workflow associated with the request, in chronological order.

Documents Page

After a user clicks on the documetns link, the documents page opens in a separate tab. To exit the documents page, close the tab.

Layout

The documents page contains six primary features.

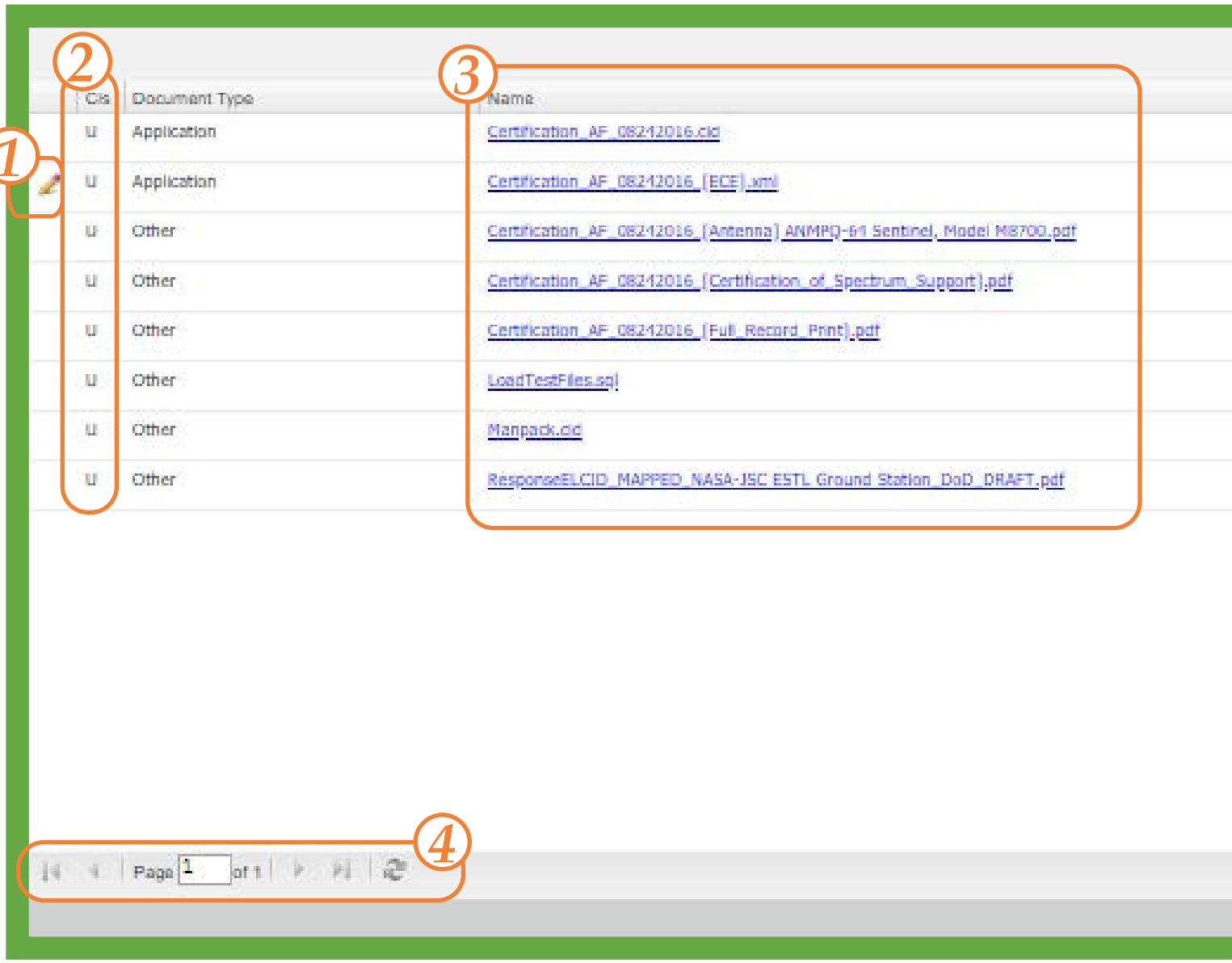
① Pencil icons provide links to access the Editor and edit SSRF documents. Pencil icons will only appear in SSRF document rows.

② Classification identification indicates the classification level of each document .

③ Document links provide access to documents associated with the certification request.

④ Navigation bar provides navigation in the unlikely event that the number of documents associated with a request is too large to fit on a single screen.

⑤ The upload file button is used to upload documents. Once upload file is selected a dialog

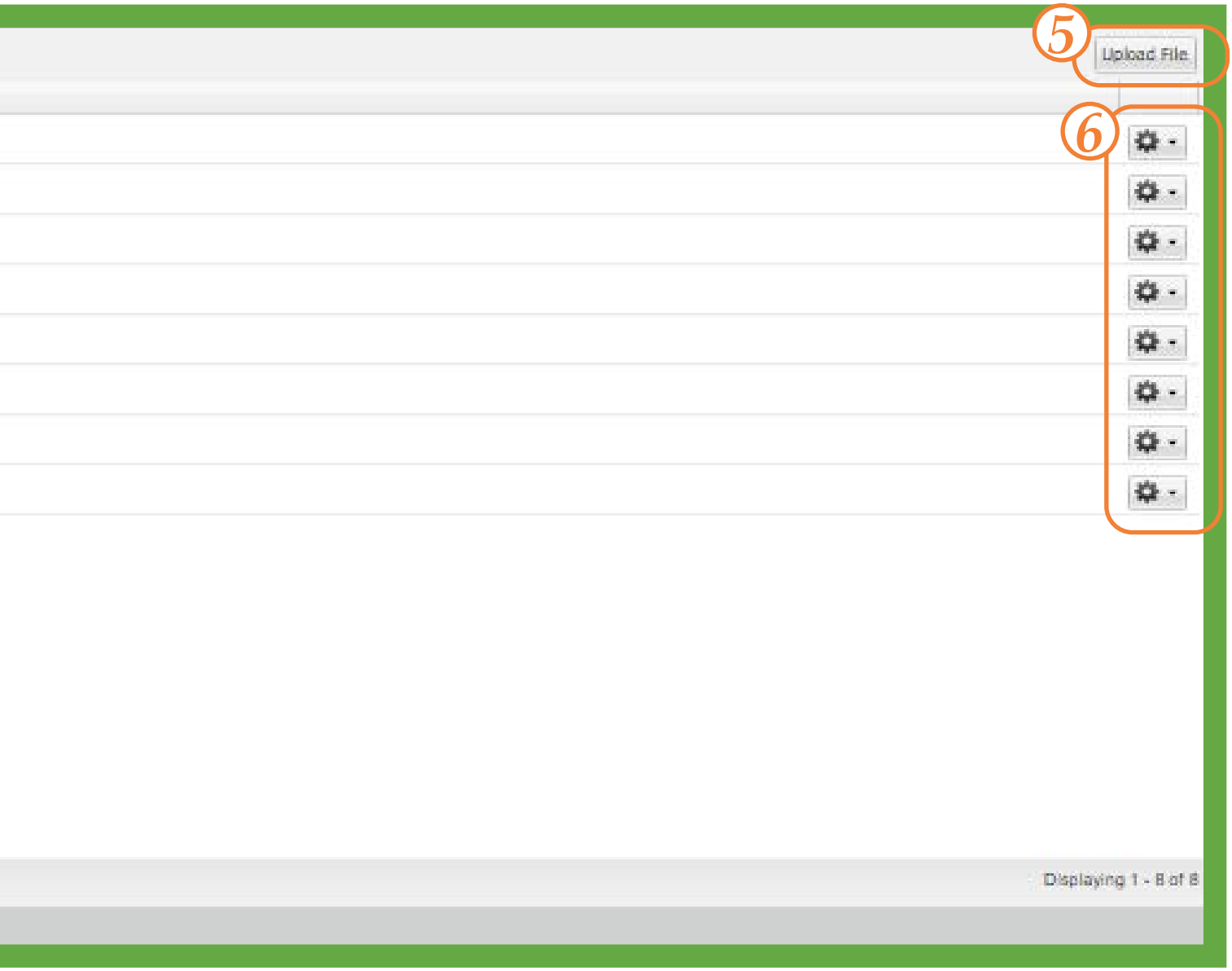


box will appear to guide you through the upload process.

⑥ Document tools provides a variety of tools used to manipulate documents. Tool icons are located in each document row and offer four options for each document.

Document tools

- Download: Used to download documents to the user computer.
- Update: Used to upload a new document. The new document will replace the current document.
- Rename: Used to rename a document, such as after the document has been edited.
- Delete: Used to remove documents from certification requests. Only certain user roles have permission to delete documents associated with a request.



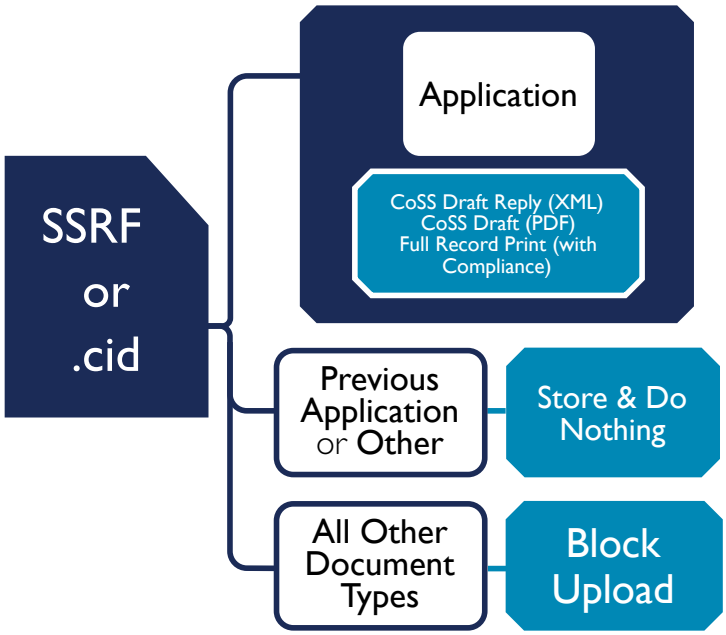
Document Handling

EL-CID Online automates several aspects of document handling, including document upload, conversion, and user roles.

Document Conversion

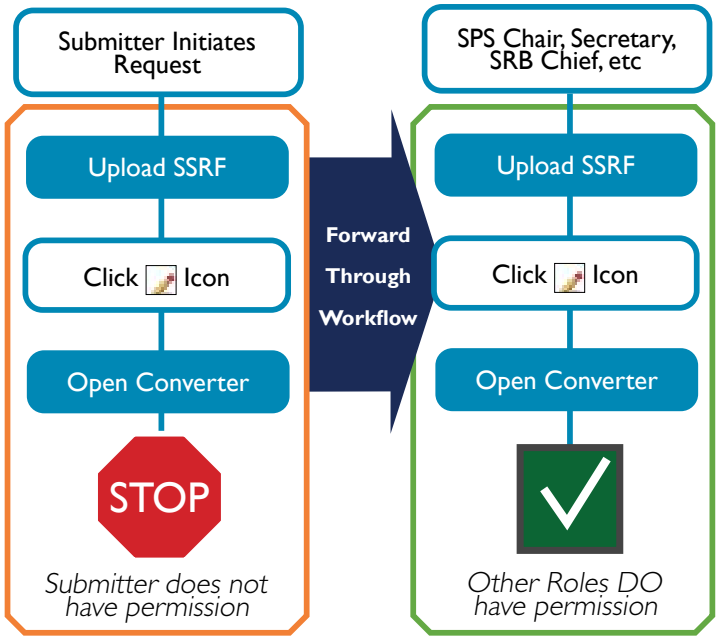
EL-CID Online allows SSRF or .cid files to be uploaded only as Applications or Previous Applications.

The system will create a Full Record Print (with compliance, from an Application and store a .cid or SSRF file uploaded as Previous Application or Other. A .cid or SSRF file uploaded as any other document types will be blocked, as shown in the diagram below.



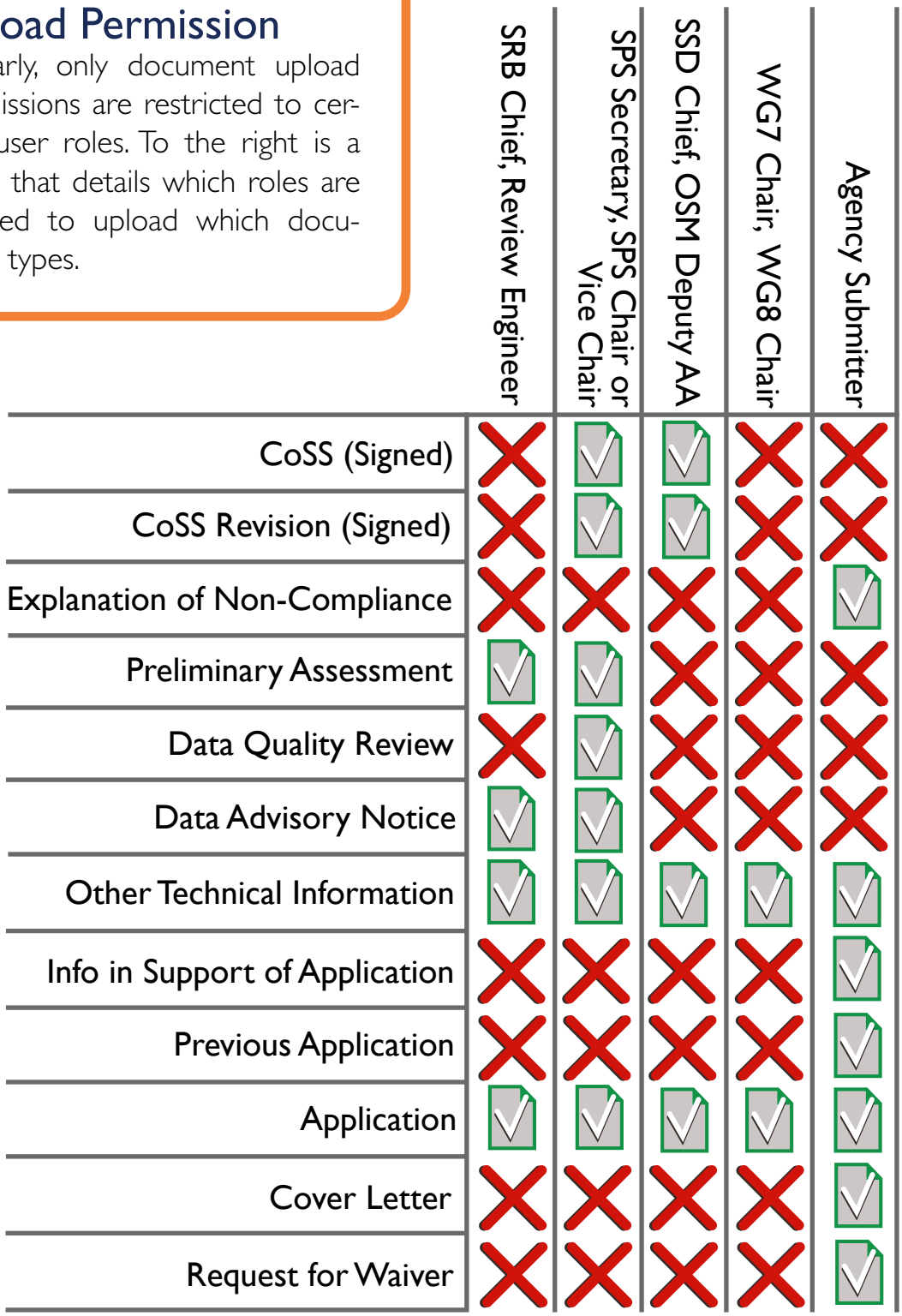
Conversion Permission

In EL-CID Online, most user roles are able to convert an application to a certification of spectrum support. However, the agency submitter role may not convert documents, as shown in the diagram to the right.



Upload Permission

Similarly, only document upload permissions are restricted to certain user roles. To the right is a chart that details which roles are allowed to upload which document types.



The Editor

Overview

The "Editor" refers to the tool used to create and edit certification requests. Users will enter all data pertinent to radio systems requesting certification, following the step-by-step questions, instructions, and explanations provided by the Editor.

Users who are unfamiliar with the Editor should reference the online help available through EL-CID Online.

Opening the Editor

The editor is accessible in three different ways:

1. Users can access the editor from the EL-CID Online user dashboard. The link to editor is in the upper right hand corner of the dashboard.
2. If an SSRF or .cid file has already been attached to a certification request, users can open that file in the Editor by clicking on the pencil icon next to the document in the Task Form.
3. The editor will be accessible from the web. Go to the EL-CID Online landing page at ecotest.ntia.gov/index.html. Click on the External Editor button.

Editor Layout

The main screen of the Editor contains five primary components.

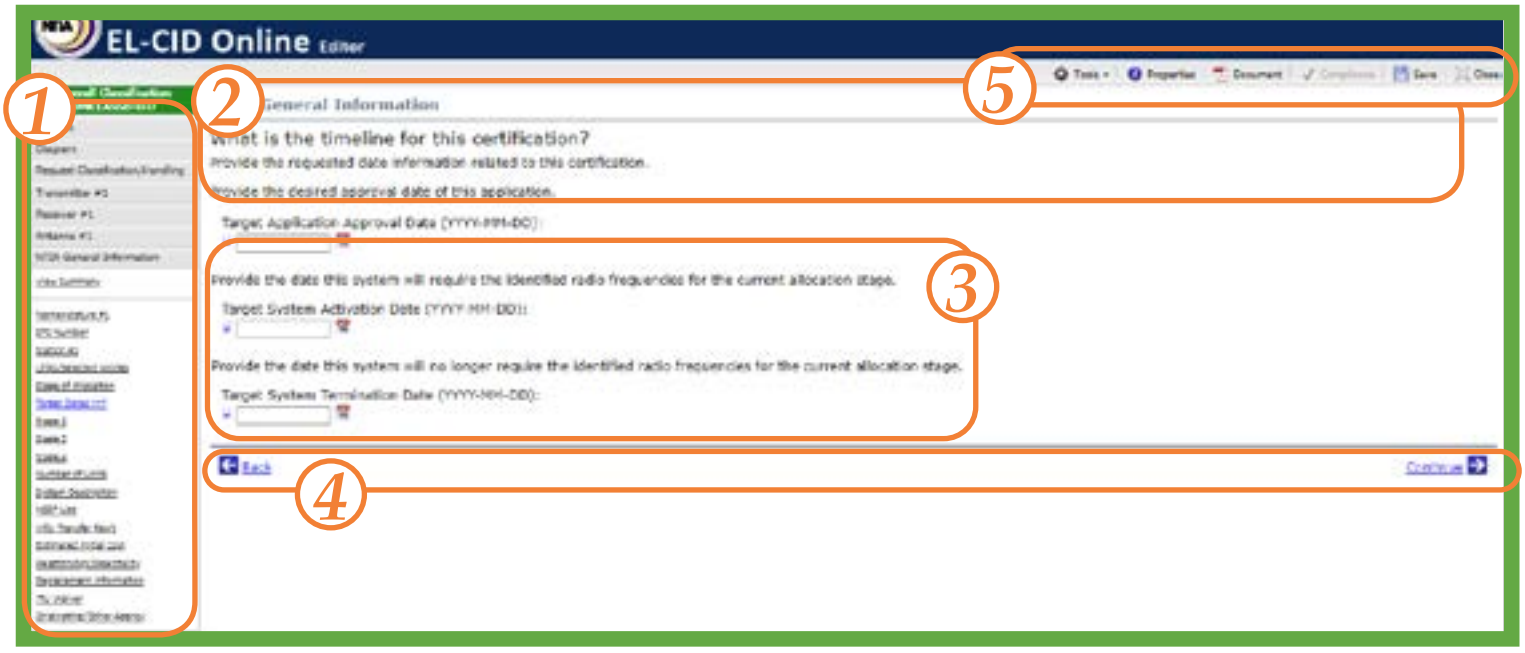
① The navigation panel identifies the user's location within the editorial process, and allows the user to navigate to specific sections that require editing. For more information, see below.

② Instructions: the Editor provides step-by-step guidance for each navigation panel section.

③ Workspace is the space where actual editing is conducted.

④ Navigation buttons allow the user to move to the next or previous section. Users may also navigate by simply clicking on navigation panel sections.

⑤ The Toolbar contains specialized tools for processing certification requests. More information on both is provided below.



Navigation Panel

The navigation panel allows the user to navigate to information field sections within the Editor and identifies the user's location within the panel by highlighting it in blue.

The classification status of the request is identified in the navigation panel header. The header is colored green in this image because the request is marked as unclassified. If the classification status of the request changes, the color of the overall classification header will also change.

The document classification can be changed through the Overall Classification section.

The vertical arrangement of navigation panel sections forms a logical order that corresponds to the arrangement of information in SSRF documents. It is recommended that users follow this logical progression.

Users may also select specific navigation panel sections to visit by clicking on that section.

For information fields within the navigation panel that users may find complex, or which require additional instructions, embedded, in-depth help is available by clicking on the question mark icons.

The Navigation Panel features several useful tools: the Emission Designator Tool, the Satellite Power Flux Density (pfd) model, the Curve Editor, and the Graphical Location Verifier (GLV).

Note: Users can skip between topics in the SSRF by selecting topic in the navigation menu.

Editor Workspace

The Editor workspace is the area of the UI where users will answer questions about the equipment requesting certification. The workspace provides the following features.

Embedded Instructions

The Editor already provides detailed, step-by-step guidance for each information field. Each page in the editor asks a specific question of the user about the equipment and provides instructions and explanation about the information that should be provided.

In addition, for some fields users can access even more in-depth help, by selecting links, or by clicking on the help icons .

The system also generates error and warning messages that provide additional guidance.

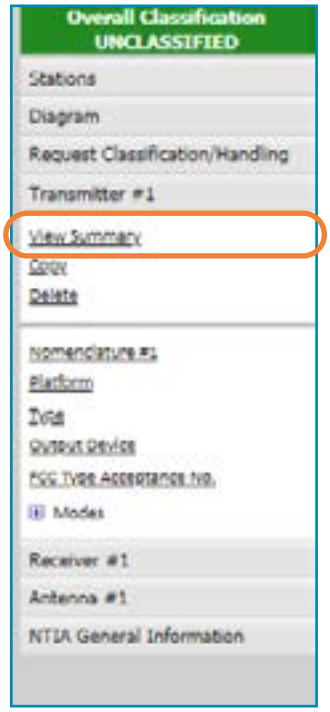
- Errors are identified by red icons .
- Warning messages are identified by yellow icons .
- The icon identifies required data that has not been entered yet.
- The icon indicates incorrect data. Incorrect data will not be saved. It must be edited, or the system will remove it.

Click on the icons to display the corresponding error / warning message.

Error and warning messages are embedded in specific subsections and are also presented through the View Summary screen.

Classification

Every field in the Editor has a classification status indicator like this: . Select these links to view or change the classification of a specific information field.



Add/Delete Rows

The Add Row button is displayed wherever information fields are presented in a table. When information is entered into a row, the button is used to remove the information for that row.

Calendars

To maintain proper format for the system, dates should not be entered manually. Instead, use the icon.

View Summary

Each of the main sections of the navigation panel (Request Classification/Handling, Transmitter, Receiver, Antenna, and NTIA General Information) contain a View Summary page that allows the user to view a summary for the section. Within the summary, navigation links are provided that enable the user to visit specific sections that require further edits or entries.

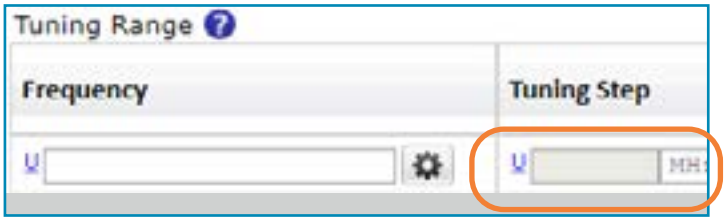
Build Tools

Build icons are used to access build tools such as the Emission Designator Tool which allow the user to construct detailed descriptions of system behavior by indicating system characteristics and allowing the Editor to assess the necessary outcome of those characteristics

Units

For all numerical measurement fields in all sections of the Editor, users may change units by means of the unit selection buttons.

Changing the unit will not change the numbers of the data. Some unit selection buttons may not be accessed until certain information fields have been filled out. In the example below, Tuning Step information cannot be entered until Frequency information has been entered, so Tuning Step and Tuning Step unit selection are grayed out to indicate inaccessibility.



When a user changes the units on the first row of the graphical curve editor, the units of the other rows will also change to match the first row. However, the fields do not convert values already entered. Users should check all curve editor fields after changing units to ensure accurate data entry.

Editor Toolbar

The Editor Toolbar is located in the top-right corner of the Editor.

The toolbar is always available except when the

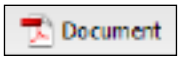
user selects a build tool, such as the Diagram or Emission Designator tool, in which case the build tool screen is displayed and the Editor background is grayed out to indicate inaccessibility.

The following components are available through the Editor toolbar.

Full Record Print

EL-CID Online streamlines processing by auto-generating a Full Record Print with compliance checks in a PDF formatting and associating the PDF with a specific request.

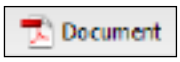
To produce a Full Record Print through the Edi-

tor, click on the  button in the toolbar.

A full record print compliance options menu will pop up. Users may choose to generate Compliance Checks as well at this time.
After you select the okay button, the Full Record Print will generate as a PDF document.

Compliance Checks

Compliance checks allow users to check how well their certification request meets NTIA standards (The Manual of Regulations and Procedures for Federal Radio Frequency Management – aka "The NTIA Manual" or "The Red Book"). Compliance checks may be run at any time to allow the user to check their progress.

1. Click on the 

button in the toolbar
2. A compliance options menu will pop up. Select compliance options. It is recommended that users select all compliance options. Users may generate a Full Record Print at the same time.
3. After you select the

button, the compliance checks will generate as a PDF document.

Tools Menu

The Compare feature allows for comparison of fields between the current loaded record and another record, with any differences displayed in a PDF output. Follow the instructions provided when you select Compare:

The Convert feature allows users to convert a certification request into a Certification of Spectrum Support document.

Models

Most models are used to approximate transmitter emission bandwidths. Other models include receiver sensitivity and image rejection calculations, satellite power flux density, radiation hazard, and noise figure/temperature conversion.

1. After opening the models window, select a specific model from the drop down menu.
2. After a specific model has been selected, the tool screen for that model will appear. The model tool screen contains the following features.

   - Model identification: Identifies the model being used
   - Calculation Input Fields: Information must be entered into each field to support the calculation.
   - Calculate Button: After each input field has been populated and the units are confirmed, click the calculate button to produce the model output.
   - Numeric Results: After the Calculate button has been selected, displays the output values for relevant items such as specific bandwidth measurements, based on the calculation input fields.
   - Graphical Results: After the calculate button has been selected, graphical results based on the input fields display. Users can switch to a logarithmic scale for the x-axis.

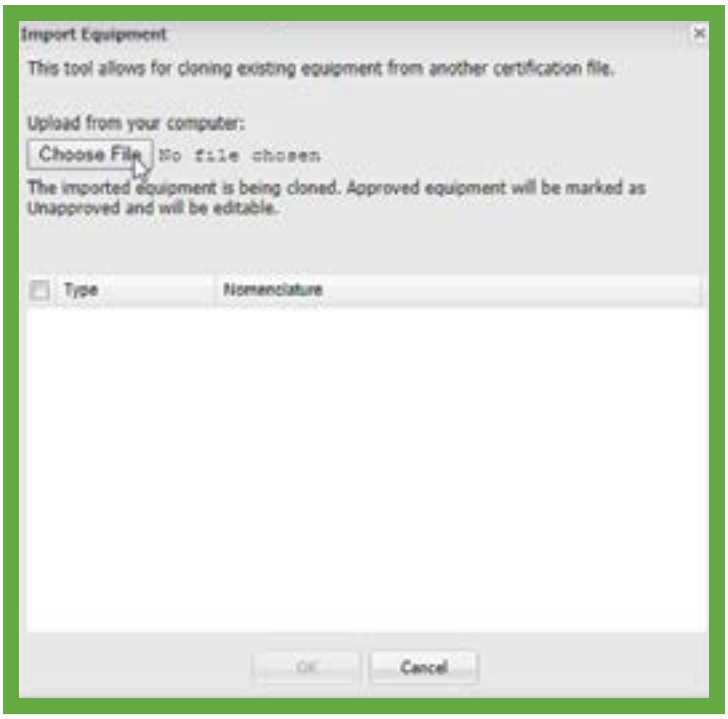
3. Click the close button to return to the main Editor screen.

Import Equipment

This button allows users to ensure continuity between and accuracy of Certification Requests by importing equipment descriptions from previous certification requests to use when creating new applications.

➤ **To import equipment information from a previous application, select the Import Equipment Button from the tools drop-down.**

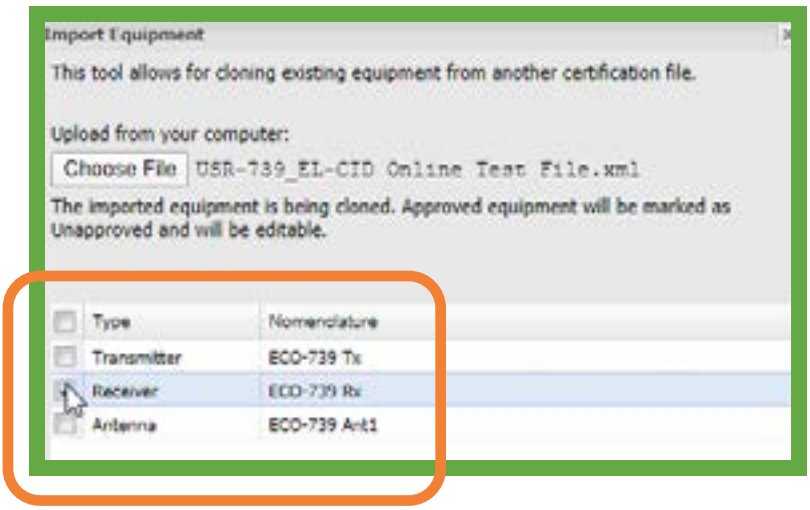
The following Screen will appear:



➤ Select a previous application to upload.

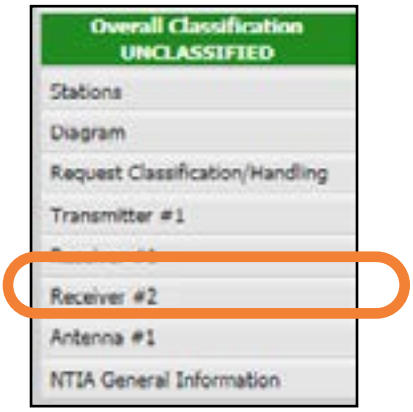
After the upload is complete, the popup window will populate equipment options for import.

➤ **Select the desired equipment**



➤ **Then, select the** Ok **button.**

Links to the imported equipment will appear in the Navigation Panel on the left.



The Diagram

The Diagram is an Editor tool used to create a logical picture of the station types and links for the system requesting certification. The Diagram consists of one or more named stations depicted by icons, which you create by dragging onto the Diagram. Links between stations are drawn as arrows from the transmitting Station to the receiving Station. In some cases, a reverse link also exists and is drawn as a single line with arrows on both ends.

The Diagram can be completed or adjusted at any time. Because the Diagram helps clarify system components (especially for complex systems), it is recommended that users complete the Diagram before entering information into navigation panel sections.

The Diagram is accessed through the Navigation Panel on the left of The Editor.

Components

The Diagram features five components

① Station Type Palette: Contains icons representing station types. Station type icons are dragged over to the diagram to create the visual representation of the stations types and links in the system (note that the term "links" may be thought of as referring to request configurations).

② Palette Legend: After a station type icon has been clicked in the station type palette, color coding defined by the palette legend is used to indicate available choices for additional station type icons that may be selected to complete station-to-station links.

③ Dynamic Help Panel: When a station type icon has been selected and the user then hovers over other station type icons, the dynamic help panel explains whether linkage between the selected and hovered-over station type is permissible. If linkage is permissible, the dynamic help panel will indicate applicable radio services and station type classes; otherwise, it will indicate that the link is not permissible.

④ Frequency Table Button: opens a Table of all the frequencies currently selected for a system. The Frequency Table lists:

- Transmitters
- Receivers
- Frequencies, Emission Designators
- Radio Services
- Station Classes

⑤ Diagram: Allows the user to create visual diagram of the station types and links in the system under consideration for certification, by dragging over station type icons and then selecting link rules using the link control panel.

⑥ Link Control Panel: After station type icons have been dragged over to the Diagram, the link control panel is used to create representations of logical links between station types.

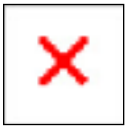
The link control panel includes 5 buttons:

The information button is used to show pertinent information about the selected system, including links to the Selectd Modes/Links page.

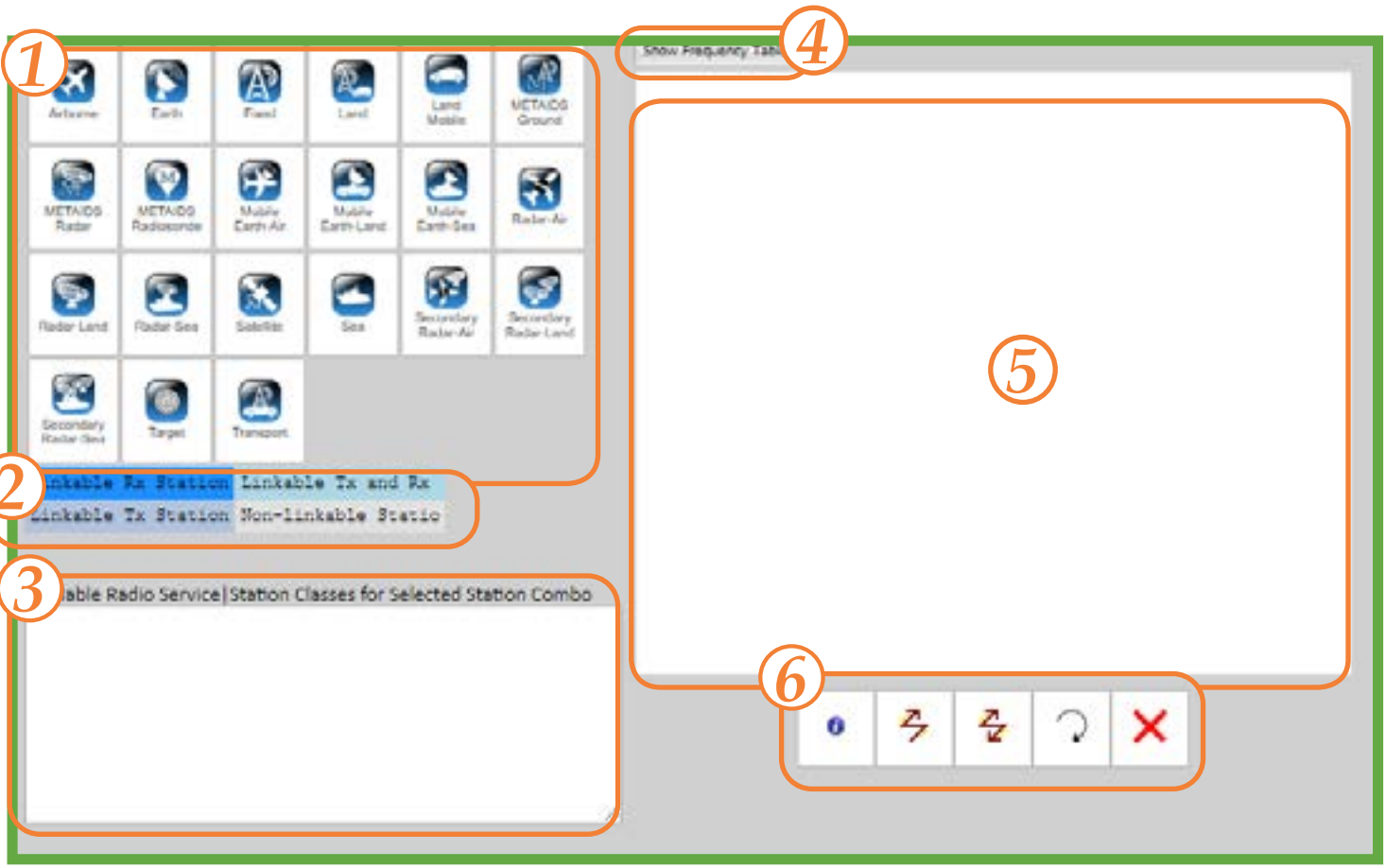
The link button is used to diagram a link between two separate station types. This is the standard link type used in most systems.

The bi-directional link button is used to represent a system in which the receiving station type icon also represents a transmitting station type, and the transmitting station type icon also represents a receiving station type.

The uni-link button is used to diagram a station type that links to its own type: i.e., the transmitting and the receiving station types are the same.



The delete button is used to delete stations or links from the Diagram.



CERTIFICATION REQUESTS

This section of the training manual explains how to create and submit a Spectrum Supportability Request Form (SSRF).

To create your own practice SSRF, read the user-manual and follow the instructions.

➤ **Instructions are formatted like this.**

Creating an SSRF

Creating an SSRF file requires four major steps:

1. Create a line diagram that is a logical picture of the system.
2. Add transmitter, receiver and antenna equipment records to the stations.
3. Specify locations where you want the equipment to be certified for use.
4. For each link in the Diagram, select Station Classes, transmitting and receiving equipment, and modes (frequencies, powers, and emissions) to be certified.

To begin, you must access the Editor. There are three main ways to do this.

1. Users can access the editor from the user dashboard of the EL-CID Online dashboard. The link to editor is in the upper right hand corner of the dashboard.
2. If an SSRF or .cid file has already been attached to a certification request, users can open that file in editor by clicking on the pencil icon next to the document in the Task Form.
3. The editor will be accessible from the web. Go to the EL-CID Online landing page at ecotest.ntia.gov/index.html. Click on the External Editor button.

Icons

The Editor features several icons that aid data entry.

- The icon offers explanations of data fields, providing users with formulas, directions, or clarifications for data entry. Clicking on the icon will open a pop-up window with further instructions.
- The icon alerts users that the data they have entered is unusual or unexpected.
- The icon alerts users to errors in the record,. Errors may be the absence of data required for certification or data that contradicts other data entered in other parts of the document.
- The icon provides a link to the page where incorrect or unusual data can be changed.
- The icon identifies required data that has not been entered yet.
- The icon indicates incorrect data. Incorrect data will not be saved. It must be edited, or the system will remove it.

Editor opens with a landing page asking whether the user wants to create a new certification request or open a previous application.

➤ **Select the "New" radio button.**

➤ **Set the dropdown menu is set to:** `NTIA Certification Request`.

Trunking systems are radio systems that use software to dynamically reassign frequency use instead of maintaining each antenna on a specific frequency. As the electromagnetic environment becomes more crowded and the need for spectrum sharing grows, trunking systems will comprise a significant portion of spectrum certifications in the future. However, for this training overview, we will not be addressing trunking systems directly.

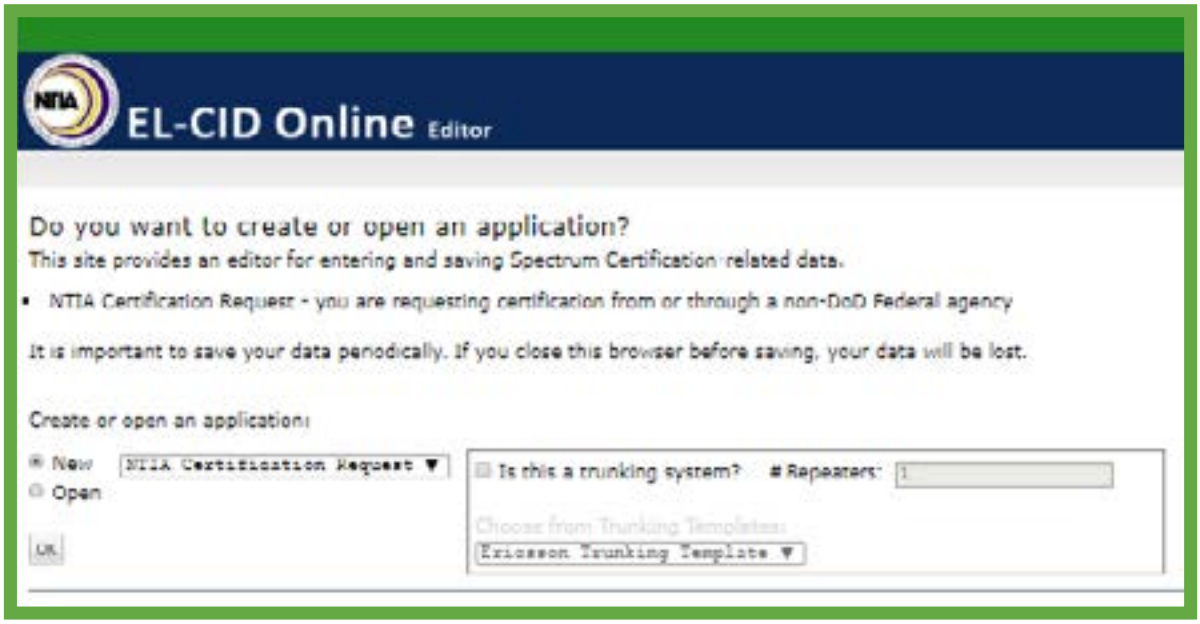
Leave the "Is this a trunking system?" box empty.

➤ **Click "OK" to begin creating the Certification request.**

The system will open a landing page with information about the editor.

➤ **Click**

to begin entering system data.


EL-CID Online Editor
Do you want to create or open an application?
This site provides an editor for entering and saving Spectrum Certification related data.
NTIA Certification Request - you are requesting certification from or through a non-DoD Federal agency
It is important to save your data periodically. If you close this browser before saving, your data will be lost.
Create or open an application:
New
NTIA Certification Request
Open
OK
Is this a trunking system?
Repeaters:
1
Choose from Trunking Templates:
Ericsson Trunking Template

Diagram

The system will open the Diagram. Diagram is also accessible through the Navigation Panel.

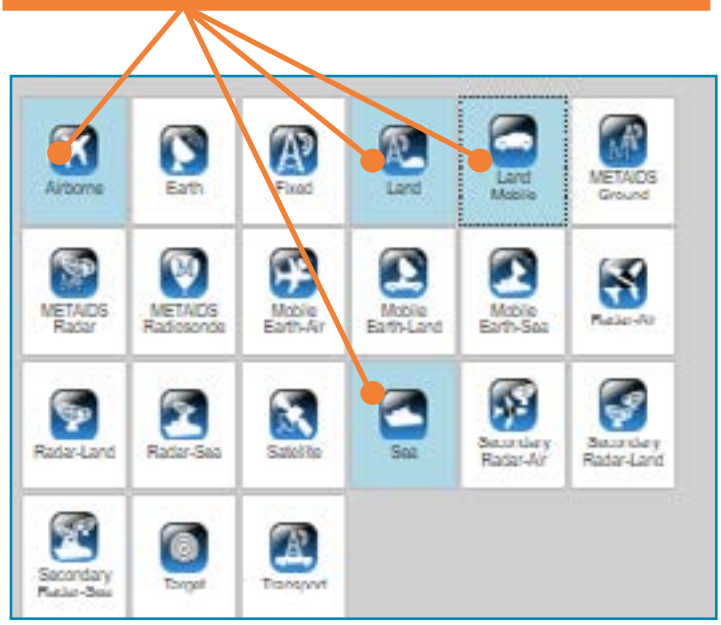
The Diagram allows users to draw a representation of the system requesting certification. EL-CID Online's sophisticated logic will determine which questions to ask users about the system to ensure appropriate data entry.

➤ On the Stations' Palette window, click (but do not drag) the Land Mobile icon.

The colored icons indicate which stations may be linked with a Land Mobile system.

Color Coded Links:

The Icon colors indicate that one may draw link from a Land Mobile icon to an Airborne, Land, Land Mobile, or Sea icon. One may also draw a link from any of these three icons back to a Land Mobile icon.

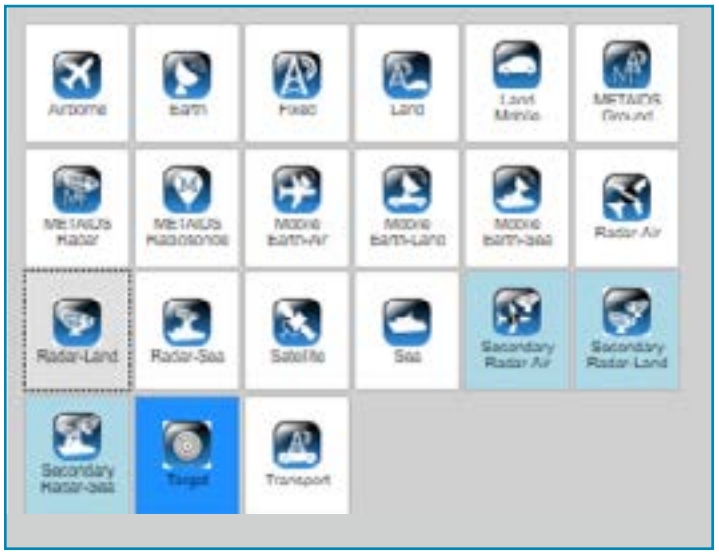


Workaround:

If two stations are very close together in the Diagram, the dotted link indicating incomplete data may appear solid.

In this case, simply refresh the browser page, and the stations will spread out to give the link room to draw properly.

➤ Click (but do not drag) the Radar-Land icon and observe the change in the icons. .

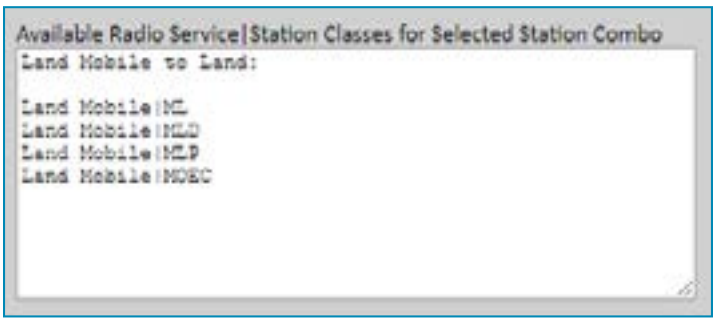


You may draw a link from Radar. You may draw a link from a Radar icon to a Target icon, but not from a Target to a Radar. You may draw a link from a Radar to a Secondary Radar, or the reverse. You may not draw a link between two Radar icons.

The icons that you choose for your diagram determine the Radio Services and Station Classes available for the links between them.

Click the Land Mobile icon, then move the mouse pointer so that it is positioned over the Land icon, but do not click.

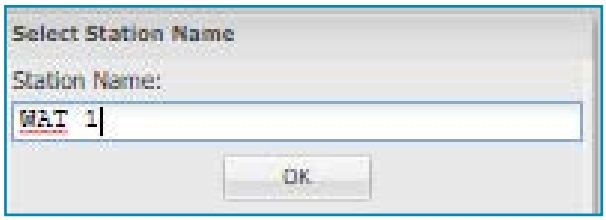
The panel at the bottom of the Stations Palette informs which station classes may be used in a link from Land Mobile to Land antennas.



When a link is drawn from a Land Mobile icon to a Land icon, one may only choose from Radio Service Land Mobile, and Station Classes ML – Land Mobile, MLD – Telecommand Land Mobile, and MLP – Portable Land Mobile.

➤ **Click on the Land Mobile icon and drag it to the drawing area on the right.**

The Change Station Name window is displayed with Land Mobile as the station name.



➤ **Type WAT1.**

➤ **Click OK.**

➤ **Drag two more Land Mobile icons to the drawing area and name them WAT2 and WAT3.**

Editor will not permit duplicate station names.

Drawing Links between Stations

Links between stations are drawn as arrows from the transmitting Station to the receiving Station. There can be only one link from any given transmitting Station to a receiving Station. In some cases, a reverse link also exists and is drawn as a single line with arrows on both ends.

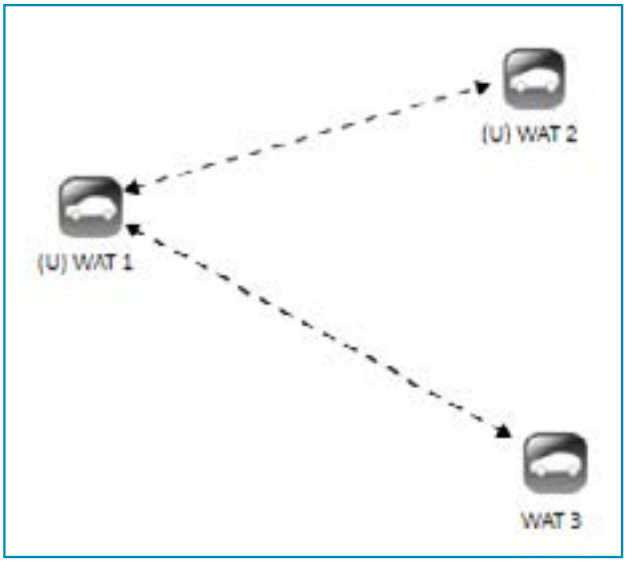
Draw a reverse link so that the receiving Station also becomes a transmitting Station and the transmitting Station also becomes a receiving Station.

➤ **Click the New Link button on the tool bar.**

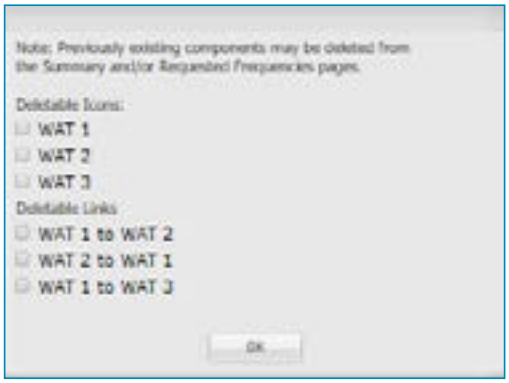
When drawing a link between two stations, always click on the transmitting station first, and then click on the receiving station.

➤ **To create the first link, click on WAT1, and then click on WAT2.**

➤ **Draw additional links from WAT2 to WAT1, and from WAT1 to WAT3, and from WAT3 to WAT1.**



In Step 3 above, we purposefully made an error. We should not have drawn a link from WAT3 to WAT1. Now we want to delete that link.



➤ **Click on the X symbol below the drawing area.**

A dialogue box opens listing existing system

components that can be deleted.

➤ Select WAT 3 to WAT1 and select OK.

Your diagram should now look something like the image below.

➤ Click: Continue

The Editor will save the Diagram and move to the Request Classification/Handling Information section.

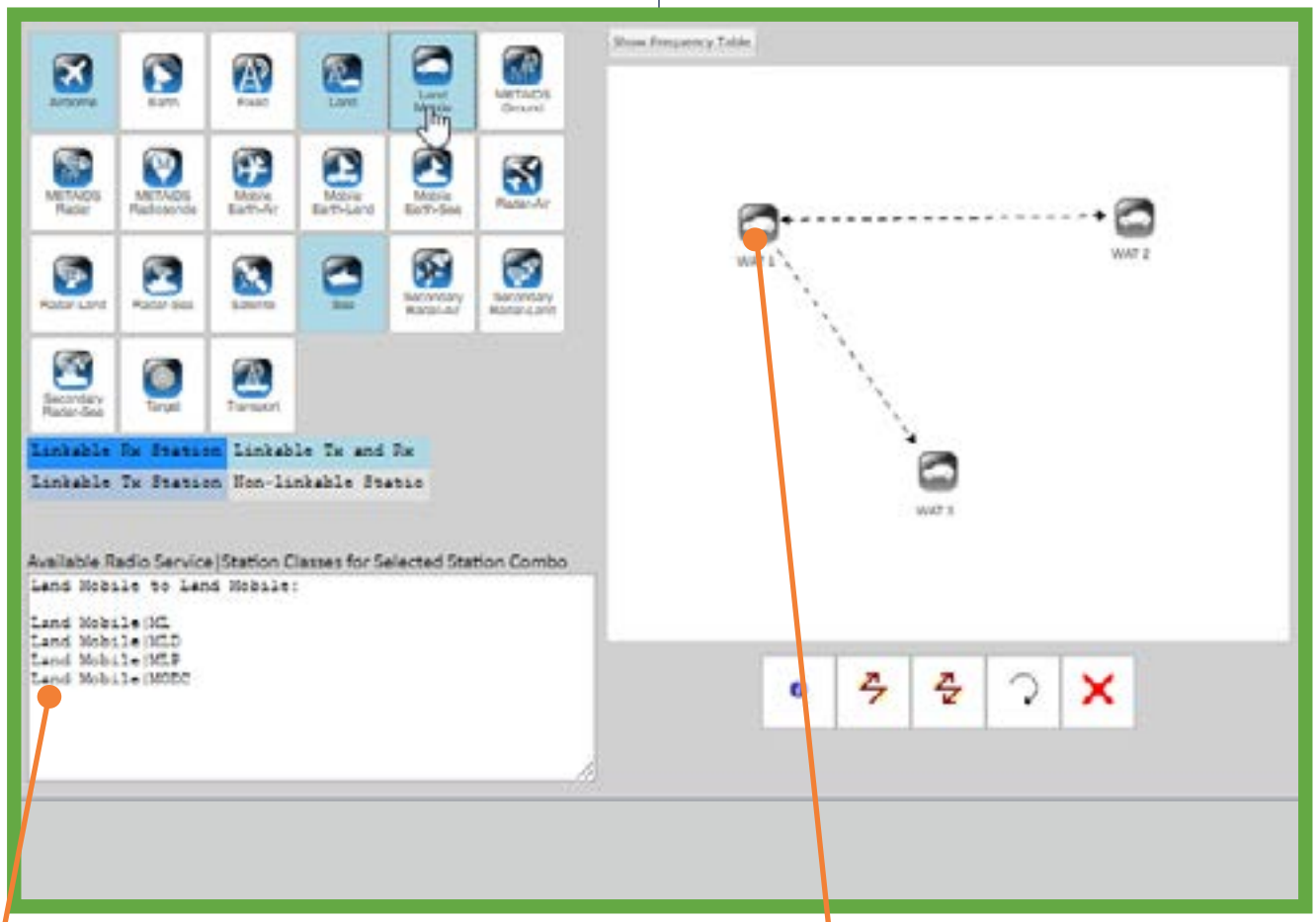
Information

After links have been created, the Links/Selected Modes Page can be accessed through the information button.

➤ Click on the Information Button.

➤ Select a station.

➤ Click on one of the ... buttons to open the Links/Selected Modes page and see



Available Services:

Remember that the panel shows available choices from the selected icon to the icon under the mouse pointer.

Hint:

Users may move the stations by clicking and dragging them.

Editor does not automatically save data.There are three ways to save data manually:

1. Save (to database) –This option permits you to save your data to the same location it was retrieved from in the database.
2. Save As (to database) – This option permits you to save your data to a new location in the database.
3. Download – This option permits you to download data to your computer.

If you do not have permission to save to the database, option three will be selected automatically, and the download will begin when you click the Save Button.

Some browsers are configured to prevent or restrict file downloads. If you are having difficulty downloading this file, please see your system administrator.

information connected to that link.

The page will indicate the selected link with a dotted red line.

Adding Equipment Data

The following section contains training on how to enter data for a typical certification request. As you proceed through this manual, enter the information provided below in your practice certification.

Information is distinguished by font.

Editor page headers look like this.

➤ **Instructions for data entry look like this.**

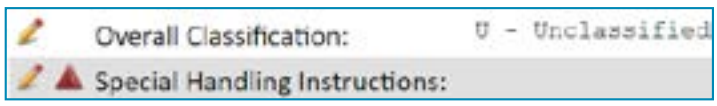
`Data to enter looks like this.`

After entering the data on each page, click the link Continue in the lower right hand corner to move to the next page.

➤ **To begin entering data click the Continue Link at the right hand side of the screen.**

Classification and Special Handling

The Request Classification/Handling section gathers Classification and Special Handling data about this document. Answer each question and click "continue". At the end of this and every section you will find a "summary page" that displays warnings and errors. Use the summary page to navigate to answers that should be changed. The summary page for this section can also be accessed with the appropriate "View Summary" link



in the upper-left corner of the page.

➤ **Click on the "View Summary" link.**

The page should show the following:

➤ **Click on the "Overall Classification" link.**

What is the overall classification of this document?

➤ **Select the Radio Button next to "U - Unclassified" to indicate the overall classification level of the SSRF being prepared.**

```
Overall Classification:
U - Unclassified
```

➤ **Click:** Continue.

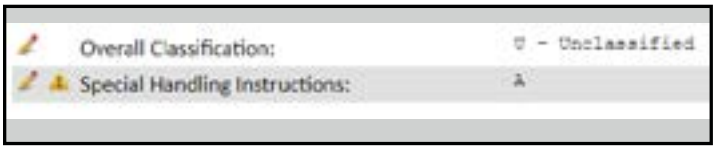
Does this document have special handling restrictions?

Identify the special handling restrictions by dragging and dropping them from left to the right areas below.

➤ **Select "`A - Approved for public release; distribution is unlimited (DoD) Directive 5230.24).`" by clicking on its title in the left column and dragging onto the right hand column.**

➤ **Click:** Continue.

The summary page should appear, showing the following:



At this point, users can review answers and make any changes. Users can view warnings and errors by clicking or mousing-over the warning and error icons. Users can click to change answers. Navigate back to this page by selecting the

"View Summary" link under the desired section on the left side of this screen.

➤ **When you have finished verifying the system, click:** Continue

Transmitter Information

This section gathers technical data about a single transmitter by asking a series of questions. Just as with the classification section, at the end of this and every section you will find a "summary page" that displays warnings and errors. Use the summary page to navigate to answers that should be changed. The summary page for this section can also be accessed with the appropriate "View Summary" link in the upper-left corner of this page. At the end of these questions another transmitter may be added. This process repeats until data for each transmitter has been provided.

➤ **Click:** Continue **to begin entering transmitter information.**

What is the Transmitter Nomenclature?

Normally there are specific protocols for nomenclature, requiring the Joint Electronics Type Designation System (JETDS) number (e.g., RT-1816) as the nomenclature. Or, if the transmitter does not have a JETDS number, provide the manufacturer model number (e.g., L-88A). Otherwise, a descriptive phrase (e.g., Command Guidance System (CGS) Projectile Subsystem Transmitter) is acceptable..

➤ **For this training document, we will use a descriptive phrase.**

```
Nomenclature, Manufacturer's
Model No.: Walk & Talk Tx
```

➤ **Select the type of nomenclature.**

```
Type of Nomenclature: Other
```

Who makes this transmitter?

As the user begins typing in the manufacturer field, a list of matching manufacturers will appear.

You should only type a new manufacturer name (as opposed to selecting one that appears) if none of the options are correct.

➤ **Enter the manufacturer name.**

```
Manufacturer: RELM Communi-
cations, Inc.
```

➤ **Click:** Continue

What are the potential platforms?

Optionally, users may provide specific platforms where this transmitter is installed. All military vehicles should be identified by their proper military nomenclature. If the system is portable and not mounted on a vehicle, the user should be identified (e.g., carried by first responders, worn by flight deck crew).

The specified platforms are not the platforms that will be certified, but rather known platforms at the time the application was submitted.

➤ **Enter the following platform information.**

```
Potential Platforms: Hand-
held Device for First Re-
sponders
```

➤ **Click:** Continue

What is the transmitter type?

This section collects the modulation and function of the transmitter (e.g., "FM Communications", "FM and FSK Communications" or "Pulse Doppler Radar").

➤ **Under "Radar/Communications" select "Communications".**

➤ **Then, enter the Transmitter Type.**

```
Transmitter Type: FM Commu-
nications
```

➤ **Click:** Continue

What is the Output Device?

The type of device used for the final RF power output includes the transmitter type as well as the manufacturer model name.

➤ **Enter the output device type.**

```
Output Device Type: Transis-
tor
```

➤ **Click:** Continue

What is the FCC Type Acceptance Number?

The Federal Communications Commission (FCC) Type Acceptance number indicates whether the transmitter has already been approved by the FCC. If there is no FCC Type Acceptance number, enter "NA". Do not provide a number if the transmitter has been modified since acceptance.

➤ **Enter the FCC Type Acceptance No.:**

```
FCC Type Acceptance No.:
K95LT20002
```

➤ **Click:** Continue

What are the Mode Characteristics?

Each transmitter has one or more modes. Each mode defines the characteristics of a radio signal. Often each mode is uniquely identified by its emission designator, although some modes use the same emission designator.

After entering data for the first mode, users may provide data for another mode.

Data entered here will affect the "Frequency Requirements" section. We have not yet filled out the Frequency Requirements section on the main page yet, so no extra action is required.

➤ **Enter the data listed below.**

Start by providing an Emission Designator.

➤ **Click on** Build.

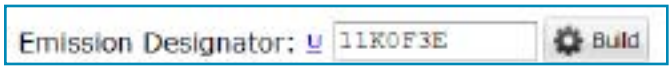
The following window will pop up:

➤ **Enter the following information:**

```
Type of modulation of the
main carrier: F - Frequency
modulation
Nature of the signal: 3 -
A single channel containing
analogue information
Type of information trans-
mitted: E - Telephony (in-
cluding sound broadcasting)
Necessary Bandwidth: 11 kHz
```

➤ **Click** Ok.

The screen should show the following code entered into the Emission Designator field:



A mode name can be used to identify an operating capability that this transmitter mode supports. The combination of emission designator and mode name will usually uniquely identify a transmitter mode. Many times, the emission designator alone will uniquely identify a mode, which is the method we will use for this training process.

➤ **Leave the Mode Name Blank.**

➤ **Click the icon next to the Frequency Field, and enter the frequency range.**

```
Low Frequency: 136 MHz
High Frequency: 160 MHz
```

➤ **Click** Ok.

➤ **Enter the following data for the rest of the Tuning Range table.**

```
Tuning Step: 11 kHz
Minimum Separation: 4 kHz
Num Frequencies: 16
```

➤ **Enter the tuning method.**

```
Method of Tuning: Synthesizer
```

The RF Fundamental table collects the frequency offsets for this transmitter.

➤ **Click the** Curve Editor **button.**

➤ **Enter the following values in the Freq Offset column.**

```
2.0 kHz at -3 dB
4.5 kHz at -20 dB
7.5 kHz at -40 dB
10.0 kHz at -60 dB
```

➤ **Indicate the data source.**

```
Source: Measured
```

The window should display an RF Fundamental curve as shown in the image below.

➤ **Enter the occupied bandwidth and source:**

```
Occupied Bandwidth:11 kHz
Source: Measured
```

Power refers to the power supplied to the transmitter antenna.

➤ **Enter the mean, PEP, or peak power level as appropriates.**

```
Mean: 3 W
```

Modulation Parameters

Because this is a modulated system, we will enter data pertaining to the signal modulation.

➤ **Click the Open Section >> link under "Modulation Parameters."**

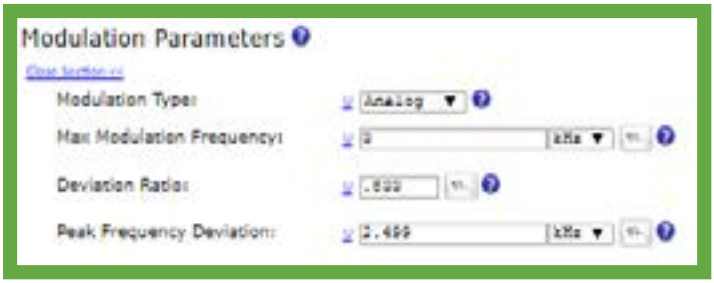
Not all of the information in this section is required for every certification request. For this exercise, we will only be entering Modulation type, Max Modulation Frequency, and Deviation Ratio. This will allow us to calculate the Peak Frequency Deviation.

➤ **Enter the following data.**

```
Modulation Type: Analog
Max Modulation Frequency: 3kHz
Deviation Ratio: 0.833
```

➤ **Click on the button after the Peak Frequency Deviation Field.**

The system should calculate a Peak Frequency Deviation of 2.499, and the modulation section should look like the following image:



After completing this step, users can select the Close Section << link or just scroll down to the next section.

Some systems may use spectrum spreading, or pulsing to communicate. A user who requires these sections should click on the Open Section >> link to enter data pertaining to these systems. However, for our purposes, we will skip these sections and proceed to end of the mode data.

Frequency Tolerance is calculated using the following formula:

Frequency tolerance (ppm) = Maximum transmitter drift (Hz) / Center frequency (MHz)

Important:

If data exists in the Requested Frequencies fields on the NTIA General Information page and you change the frequency, emission designator or power information on this page, the links will be removed from the Requested Frequencies table, and you must revisit the Links/Selected Modes page to update them.

This is also true for changes made to Receiver and Antenna information.

➤ **Enter the Frequency Tolerance**

```
Frequency Tolerance: 2 ppm
```

Because this is a Stage 4 system, the harmonic levels must be entered. These levels should be in dB relative to the peak output power of the carrier signal and should be negative numbers.

➤ **In the series of tables below enter the 2nd, 3rd, and Other Harmonic Levels**

```
2nd Harmonic: -60 dB
3rd Harmonic: -60 dB
Other Harmonic: -60 dB
```

As with Harmonic Levels, Spurious levels are required for Stage 2, 3, or 4 systems. Do not include the harmonic emissions in this section.

➤ **Enter the Spurious level, and check the "Maximum" check box after it.**

```
Spurious Levels: -60 dB
Maximum: ☑
```

➤ Click: Continue .

Do you want to add another transmitter mode?

Transmitter modes can be added here and through the summary page. The summary page also provides tools to sort, copy and delete transmitter modes. Select "Yes" to add another transmitter mode.

➤ **Select "No" and** click: Continue

Review your answers

At this point, users can review answers and make any changes. Users can view warnings and errors by clicking or mousing-over the warning and error icons. Users can click to change answers. Navigate back to this page by selecting the "View Summary" link under the desired section on the left side of this screen.

When you are done, the screen should show the image below:

➤ Click: Continue

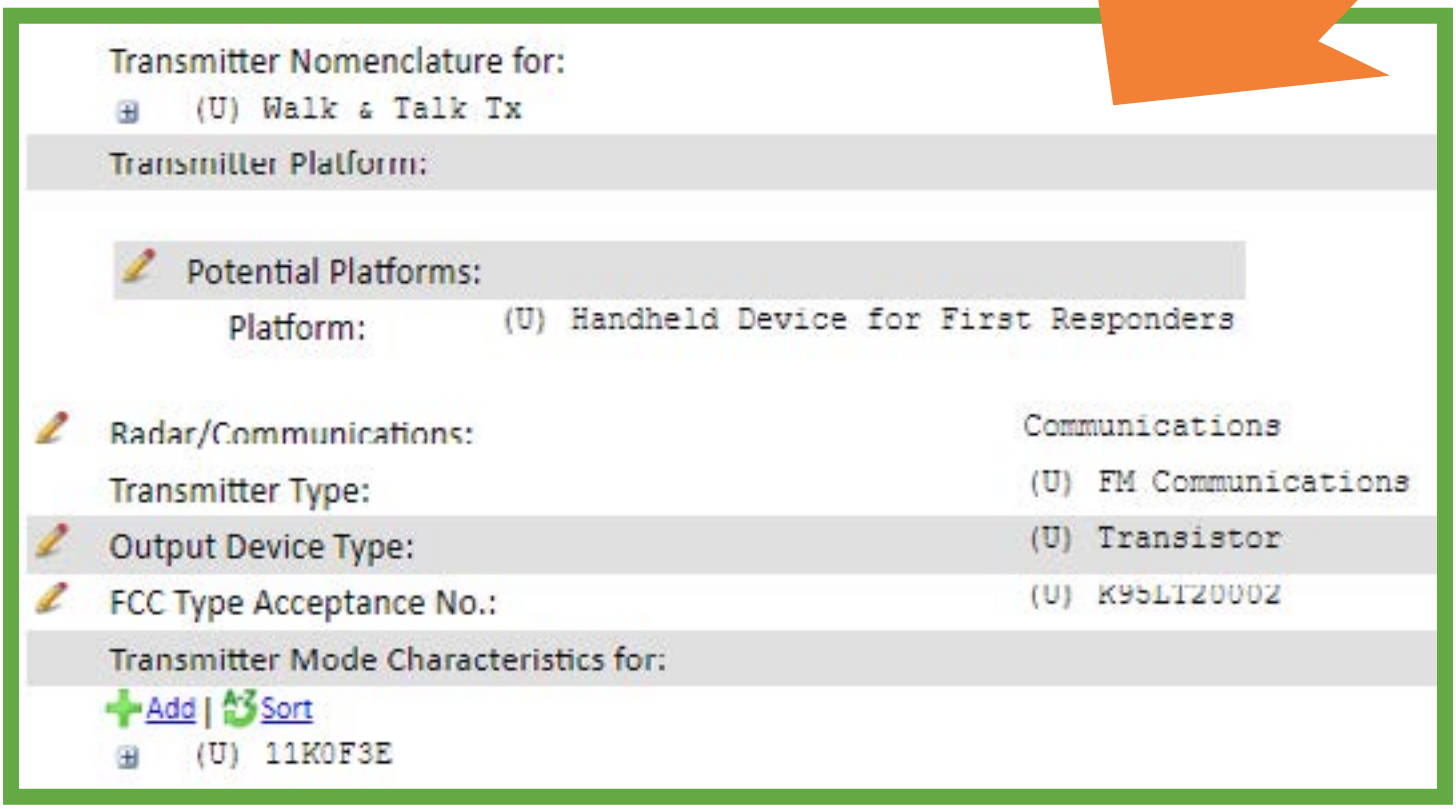
Do you want to add another Transmitter?

Transmitters can be added here and through the navigation section on the left.

➤ Select "No."

➤ Click: Continue

When you are finished entering Transmitter data, the "View Summary" Screen should look like this:



Receiver Information

This section gathers technical data about a single receiver by asking a series of questions. Just as with the classification section, at the end of this and every section you will find a "summary page" that displays warnings and errors. Use the summary page to navigate to answers that should be changed. The summary page for this section can also be accessed with the appropriate "View Summary" link in the upper-left corner of this page. At the end of these questions another receiver may be added. This process repeats until data for each receiver has been provided.

➤ **Click: Continue to begin entering receiver information.**

What is the Receiver Nomenclature?

Normally there are specific protocols for nomenclature, requiring the Joint Electronics Type Designation System (JETDS) number (e.g., RT-1816) as the nomenclature. Or, if the receiver does not have a JETDS number, provide the manufacturer model number (e.g., L-88A). Otherwise, a descriptive phrase (e.g., Command Guidance System (CGS) Projectile Subsystem Receiver) is acceptable.

➤ **For this training document, we will use a descriptive phrase.**

```
Nomenclature, Manufacturer's
Model No.: Walk & Talk Rx
Type of Nomenclature: Other
```

Who makes this receiver?

As the user begins typing in the manufacturer field, a list of matching manufacturers will appear.

You should only type a new manufacturer name (as opposed to selecting one that appears) if none of the options are correct.

➤ **Enter the manufacturer name.**

```
Manufacturer: RELM Communi-
cations, Inc.
```

➤ **Click: Continue .**

What are the potential platforms?

Optionally, users may provide specific platforms where this receiver is installed. All military vehicles should be identified by their proper military nomenclature. If the system is portable and not mounted on a vehicle, the user should be identified (e.g., carried by first responders, worn by flight deck crew).

The specified platforms are not the platforms that will be certified, but rather known platforms at the time the application was submitted.

➤ **For this document, leave this section blank.**

```
Potential Platforms: Hand-
held Device for First Re-
sponders
```

➤ **Click: Continue .**

What is the Receiver Type?

This section collects the generic receiver type.

➤ **Under Receiver Type, enter:**

```
Receiver Type: Tuned Radio
Frequency
```

➤ **Leave the Direct Conversion/Homodyne checkbox blank.**

➤ **Click: Continue .**

What is the local oscillator radiation?

➤ **Leave the field blank.**

```
Local Oscillator Radiation:
```

Click: Continue .

What is the Conducted Emission Level?

Provide the power level of undesired signals generated in the receiver and conducted by way of the connection to the receiver.

```
Conducted Emissions (dBm):
-60
```

Click: Continue .

What is the FCC Type Acceptance Number?

The Federal Communications Commission (FCC) Type Acceptance number indicates whether the receiver has already been approved by the FCC. If there is no FCC Type Acceptance number, enter "NA". Do not provide a number if the receiver has been modified since acceptance.

➤ **Enter the FCC Type Acceptance No.:**

```
FCC Type Acceptance No.:
K95LT20002
```

➤ **Click:** Continue .

What are the Mode Characteristics?

Each receiver has one or more modes. Each mode defines the characteristics of a radio signal. Often each mode is uniquely identified by its emission designator, although some modes use the same emission designator.

After entering data for the first mode, users may provide data for another mode.

Data entered here will affect the "Frequency Requirements" section. We have not yet filled out the Frequency Requirements section on the main page yet, so no extra action is required. Start by providing an Emission Designator.

➤ **Click on** Build.

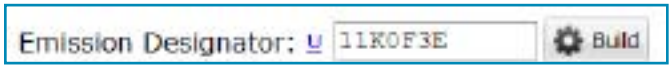
The following window will pop up:

➤ **Enter the following information:**

```
Type of modulation of the
main carrier: F- Frequency
modulation

Nature of the signal: 3 -
A single channel containing
analogue information

Type of information trans-
mitted: E - Telephony (in-
cluding sound broadcasting)

Necessary Bandwidth: 11 kHz
```

➤ **Click** Ok.

The screen should show the following code entered into the Emission Designator field:



A mode name can be used to identify an operating capability that this receiver mode supports. The combination of emission designator and mode name will usually uniquely identify a receiver mode. Many times, the emission designator alone will uniquely identify a mode, which is the method we will use for this training process.

➤ **Leave the Mode Name Blank.**

Tuning Range

➤ **Click the icon next to the Frequency Field, and enter the frequency range.**

```
Low Frequency: 136 MHz
High Frequency: 160 MHz
```

➤ **Click** Ok.

➤ **Enter the following data for the rest of the Tuning Range table.**

```
Tuning Step: 11 kHz
Minimum Separation: 4 kHz
Num Frequencies: 16
```

Method of Tuning

➤ **Enter the tuning method.**

```
Method of Tuning: Synthesizer
```

Max Bit Rate

Because this is an analog system and not a digital system, the Max Bit Rate is not required.

Frequency Tolerance

Frequency Tolerance is calculated using the following formula:

Frequency tolerance (ppm) = Maximum receiver drift (Hz) / Center frequency (MHz)

➤ **Enter the Frequency Tolerance**

```
Frequency Tolerance: 2 ppm
```

Sensitivity

➤ **Enter data for the Sensitivity Level:**

```
Sensitivity Level (dBm): -119 dBm
Criteria Type: SINAD Signal-to-Noise and Distortion Ratio (dB)
Criteria Level: 10
```

➤ **Enter 2 dB for Noise Figure.**

```
Noise Figure: 2
```

The Noise Temperature can be calculated by clicking the button.

IF Selectivity

Because this is a Double Conversion Super-heterodyne receiver, only the IF Selectivity for the 1st and 2nd stages is required.

➤ **Enter values for the 1st and 2nd stage IF Selectivity Frequency Offset.**

```
1st Stage
• 9 kHz at 3 dB
• 15 kHz at 20 dB
• 30 kHz at 60 dB
• Source: Measured
• IF Frequency: 455 MHz
```

2nd Stage

- 16 kHz at 3 dB
- 20 kHz at 20 dB
- 40 kHz at 60 dB
- Source: Measured
- IF Frequency 0 MHz

RF Selectivity and Sensitivity

RF Selectivity includes any significant attenuation contributed by the antenna, the antenna-transmission line, preselection filters, and preamplifiers.

➤ **Enter the following data for the RF Selectivity and sensitivity levels.**

Freq Offset (Fo) Level (dB)
4.5 MHz at 3dB
7.5 MHz at 20dB
15.0 MHz at 60dB
Source: Measured
Image Rejection (dB): NA
Spurious Rejection (dB): NA
Intermod Rejection (dB): 75
Adjacent Channel Selectivity (dB): 60

➤ Click: Continue .

Do you want to add another receiver mode?

Receiver modes can be added here and through the summary page. The summary page also provides tools to sort, copy and delete receiver modes. Select "Yes" to add another receiver mode.

➤ **Select "No" and** click: Continue .

Review your answers

At this point, users can review answers and make any changes. Users can view warnings and errors by clicking or mousing-over the warning and error icons. Users can click to change answers. Navigate back to this page by selecting the "View Summary" link under the desired section on the left side of this screen.

When you are finished, the page should look like the image to the right.

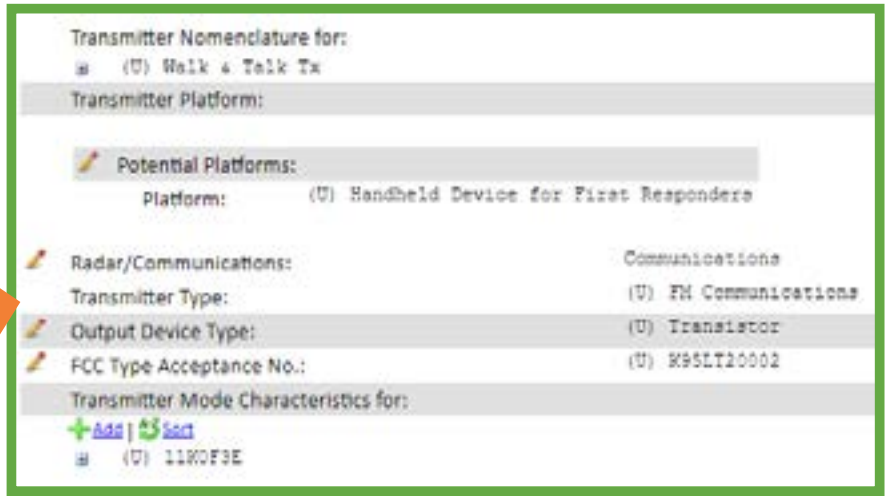
Do you want to add another Receiver?

Receivers can be added here and through the navigation section on the left.

➤ Select "No."

➤ Click: Continue

When you are finished entering Receiver data, the "View Summary" Screen should look like this:



Antenna Information

This section gathers technical data about a single antenna by asking a series of questions. Answer each question and click "continue". At the end of this section, a "summary page" displays warnings and errors. Use the summary page to navigate to answers that should be changed. The summary page for this section can also be accessed with the appropriate "View Summary" link in the upper-left corner of this page. At the end of these questions another antenna may be added. This process repeats until data for each antenna has been provided.

➤ **Click: Continue to begin entering antenna information.**

What is the Antenna Nomenclature?

Normally there are specific protocols for nomenclature, requiring the Joint Electronics Type Designation System (JETDS) number (e.g., RT-1816) as the nomenclature. Or, if the antenna does not have a JETDS number, provide the manufacturer model number (e.g., L-88A). Otherwise, a descriptive phrase (e.g., Command Guidance System (CGS) Projectile Subsystem Antenna) is acceptable.

➤ **For this training document, we will use a descriptive phrase.**

```
Nomenclature, Manufacturer's
Model No.:
Walk & Talk Ant
```

➤ **Select the type of nomenclature.**

```
Type of Nomenclature: Other
```

➤ **Click:** Continue

Who makes this antenna?

Begin typing the name of a manufacturer. When typing, a list of matching manufacturers will appear. Choose one of the names that appear. You should only type a new manufacturer name (as opposed to selecting one that appears) if none of the options are correct.

```
Manufacturer: RELM Communi-
cations, Inc.
```

➤ **Click:** Continue .

What is the Antenna Category?

EL-CID Online organizes antennas into three categories: Linear, Aperture, and Array.

The Linear category includes antennas that take forms created by straight or shaped wires, such as "blade", "whip", "stub", "spiral", or "dipole". This category also includes "microstrip patch" and "slot".

The Aperture category includes antennas that make use of surface reflectors and/or feeds, such as "horn", "parabolic", or "corner reflector" where a surface cross-sectional area is well-defined. This category also includes "dielectric lens".

The Array category includes antennas that are made up of a collection of elements arranged in an array of some kind, where the signals from the multiple elements are adjusted in amplitude and phase and combined, such as a "dipole array", or "phased array".

➤ **Select the antenna category**

```
Antenna Category: Linear
```

What is the Antenna Type?

Provide the type of antenna (e.g., Whip, Horn, Phased Array, Parabolic Reflector). Suggestions will appear as you type. Use a suggested value if possible. Only create a new value if none of the suggestions apply.

```
Antenna Type: Dipole
```

➤ Click: Continue .

What are the Antenna Characteristics?

Answer the following questions about the antenna characteristics.

Data entered here will affect the "Frequency Requirements" section. We have not yet filled out the Frequency Requirements section on the main page yet, so no extra action is required, however the Frequency Requirements fields must be checked after entering data here to ensure they remain accurate.

➤ **Enter the following data:**

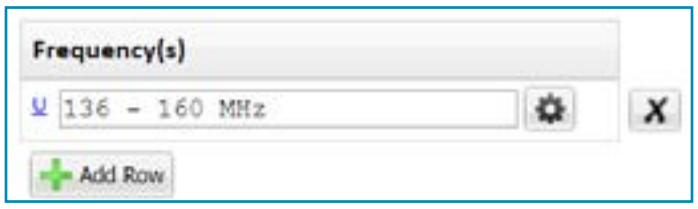
```
Antenna Function: Transmitting and Receiving
```

➤ **Click the icon next to the Frequency Field, and enter the frequency range.**

```
Low Frequency: 136 MHz
High Frequency: 160 MHz
```

➤ Click Ok.

The screen should now show:



➤ **Then add the rest of the data for the antenna.**

```
Main Beam Gain (dBi):0
Polarization: Linear
Horizontal Beamwidth (degrees):
45
Vertical Beamwidth (degrees):
45
```

➤ Click: Continue .

What are the Sidelobe Attenuations and positions?

Because the antenna pattern is uniform in both planes and symmetrical, we will enter generic data for this antenna.

➤ **Enter "NA" for each of the fields.**

➤ Click: Continue .

Review your answers

At this point, users can review answers and make any changes. Users can view warnings and errors by clicking or mousing-over the warning and error icons. Users can click to change answers. Navigate back to this page by selecting the "View Summary" link under the desired section

on the left side of this screen.

After the page loads, you will not enter any additional data.

➤ **Click on "View Summary" in the Navigation Panel.**

The icons should now be gone and the summary page should show the image to the right.

➤ **Click:** Continue .

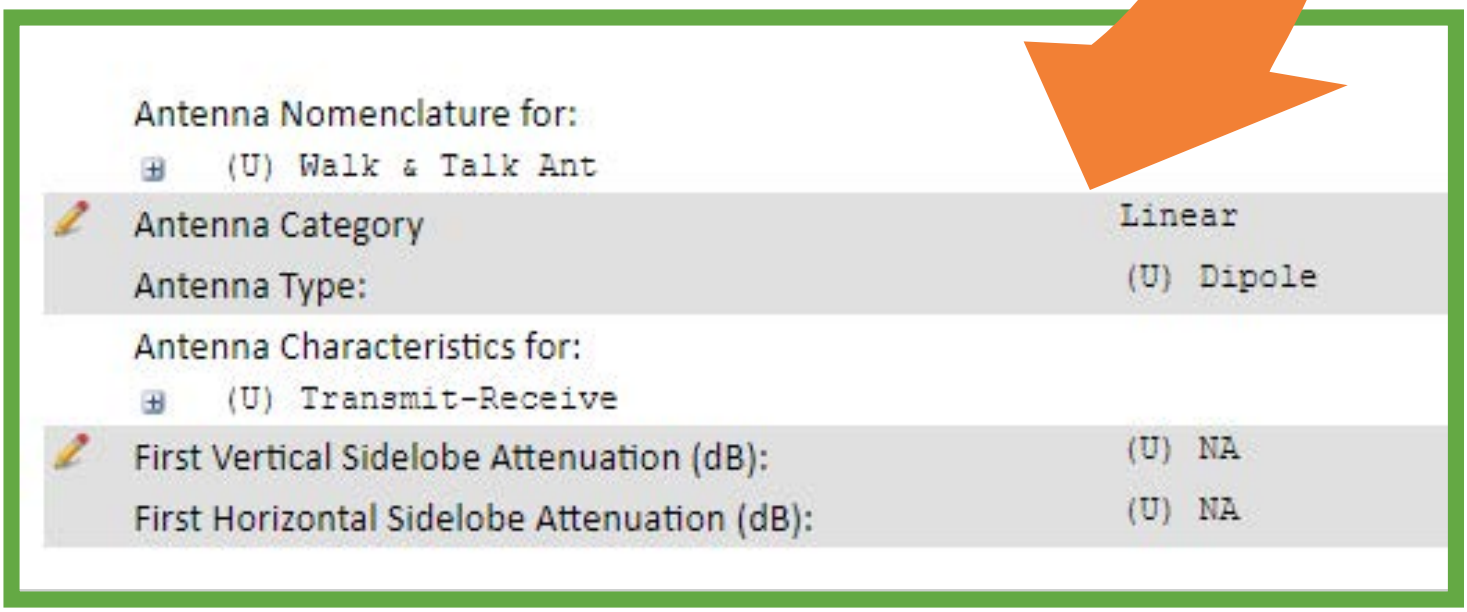
Do you want to add another Antenna?

Antennas can be added here and through the navigation section on the left.

➤ **Select "No."**

Click: Continue

When you are finished entering Antenna data, the "View Summary" Screen should look like this:



NTIA General Information

This section collects technical radio frequency (RF) data and administrative data about this application.

Answer each question and click continue. At the end of this section, a "summary page" displays warnings and errors. Use the summary page to navigate to answers that should be changed. The summary page for this section can also be accessed with the appropriate "View Summary" link in the upper-left corner of this page.

Complete this section last. If you try to complete this section before the transmitter, receiver and antenna sections, you will not be able to reference the transmitters, receivers, and antennas in the Requested Frequencies question (i.e., "What electromagnetic spectrum are you requesting?").

If you complete this section and subsequently revise frequency, emission designator, or power information in a transmitter, receiver, or antenna section, you must revisit the Frequency Requirements data in this section (including corresponding field level classification) to ensure the Frequency Requirements data remains correct.

What is the System Nomenclature?

Often the Application Title and the System Nomenclature are the same. However, they should be different if this application is for a subsystem of the entire system.

➤ **Enter the nomenclature.**

```
Nomenclature, Manufacturer's
Model No.: Walk & Talk
Type of Nomenclature: Com-
mercial
```

What is the Application SPS Number?

If a Spectrum Planning Subcommittee (SPS) document identifier has been assigned by NTIA, provide it below. (This is not the same as the Certification of Spectrum Support SPS number.)

Because this is a new application, we will leave this section blank. NTIA will provide the number during the request evaluation process.

```
Application SPS Number:
```

➤ **Click:** Continue .

Identify Station(s)

On the following page you will be asked for information about stations. A station represents a generic location where equipment is used. After the stations are defined, operating characteristics (e.g., frequencies, emission designators, maximum powers) will be associated with transmitting and receiving stations to form communication links.

What type of station is this?

Several of the data fields are pre-populated with information from the SID. Station Type should already say "Land Mobile." Station Name should already say "WAT1," however this can be changed at this point.

The type of station selected will affect which radio services and station classes can be selected later, as defined by this list.

```
Station Type: Land Mobile
```

What is the name of this station?

```
Station Name: WAT1
```

What is the description of this station?

➤ **Provide a short, unique, description for this station.**

```
Station Description:
Handheld unit used for communication with first responders.
```

What equipment is associated with this station?

At this point, users can specify the transmitters, receivers and/or antennas that are on this station. If any equipment is associated with this station, it will no longer be considered generic.

If you do not choose to enter equipment information here, you can associate equipment with stations on the Links/Selected Modes page.

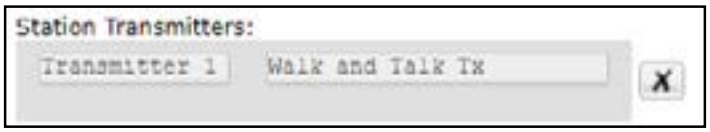
➤ Click the Add Transmitter button.

The following window will open.

➤ Select the "Walk and Talk Tx.

➤ Click the OK button.

The popup will close and transmitter will appear as the Station Transmitter.

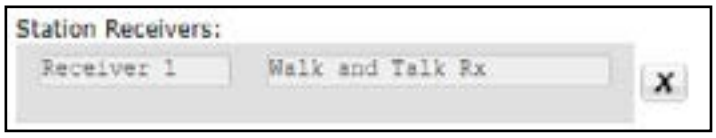


The Station Receiver can be selected in the same fashion.

➤ Click on the Add Receiver button.

➤ Select the Walk and Talk Rx, and click OK.

The popup will close and the receiver will appear

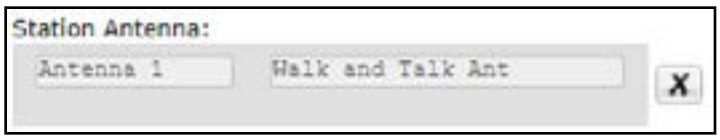


as the Station Receiver.

The Station Antenna can be selected in the same fashion.

➤ Click on the Add Antenna button.

➤ Select the Walk and Talk Ant, and click OK.



The popup will close and the receiver will appear as the Station Antenna.

Where does this station operate?

If this is a satellite or trunking system then open this section and provide the operating locations for this station. For other types of systems the operating locations are specified later for the entire certification.

Because this is not a satellite or trunking system we will move past this page and enter location data later in the process.

➤ Click: Continue .

After entering the information for the first station, a page will load for the next station in the system.

➤ For both the WAT 2 and WAT 3 stations, enter the same description.

➤ After each page is finished, click: Continue .

Adding Stations

During this training we have already entered three stations, so we will move on.

➤ Select "No."

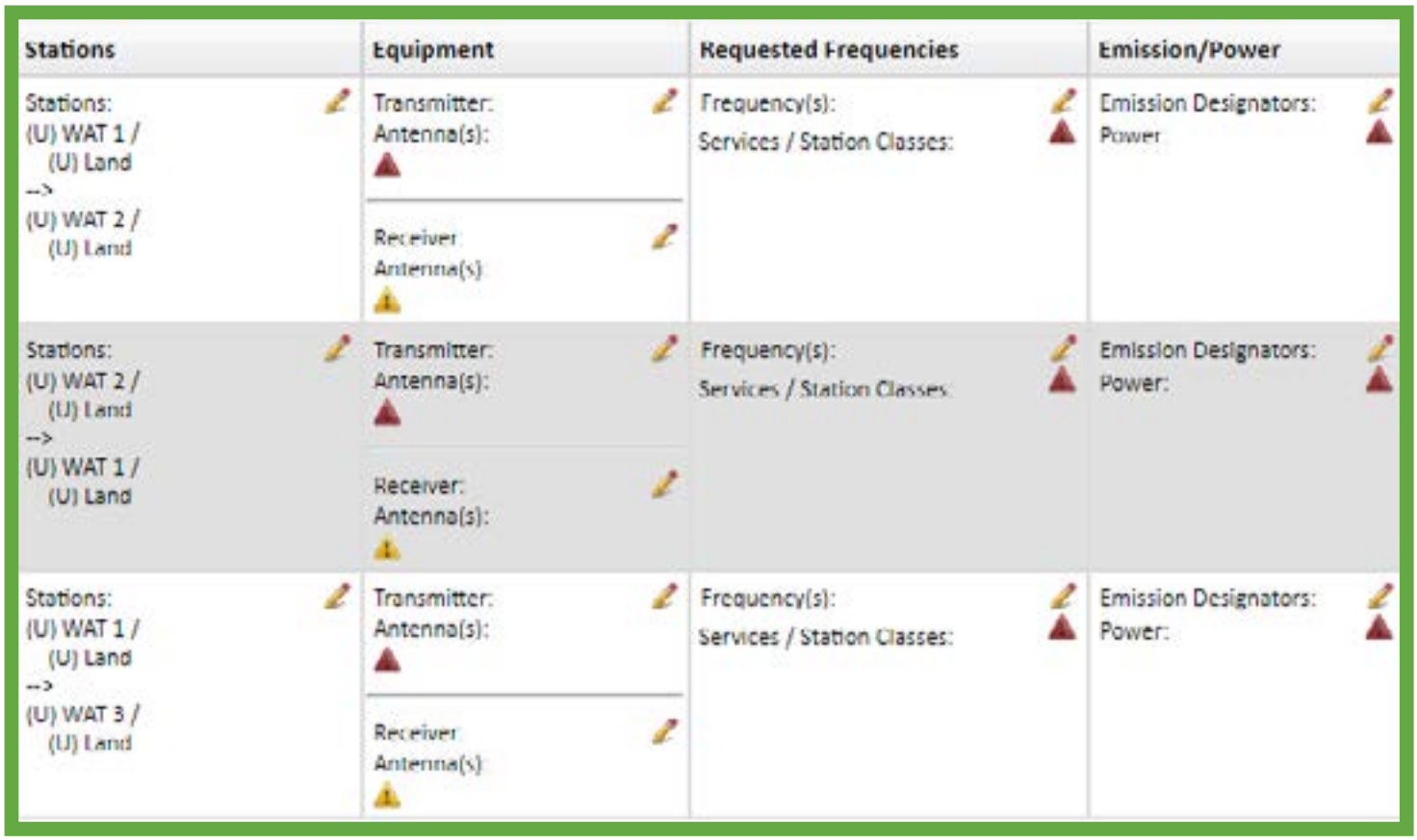
➤ Click: Continue .

What electromagnetic spectrum are you requesting?

In the transmitter, receiver and antenna sections you have specified the full capabilities of the equipment. On this page, you specify the operating characteristics (e.g., frequencies, powers, emissions) you are requesting. This might be a subset of the full equipment capabilities. This page also indicates communication links and how equipment will be installed on stations.

Use the icons to edit data in each row. Add rows or copy rows as needed to accurately reflect the electromagnetic operating characteristics of each station-to-station link.

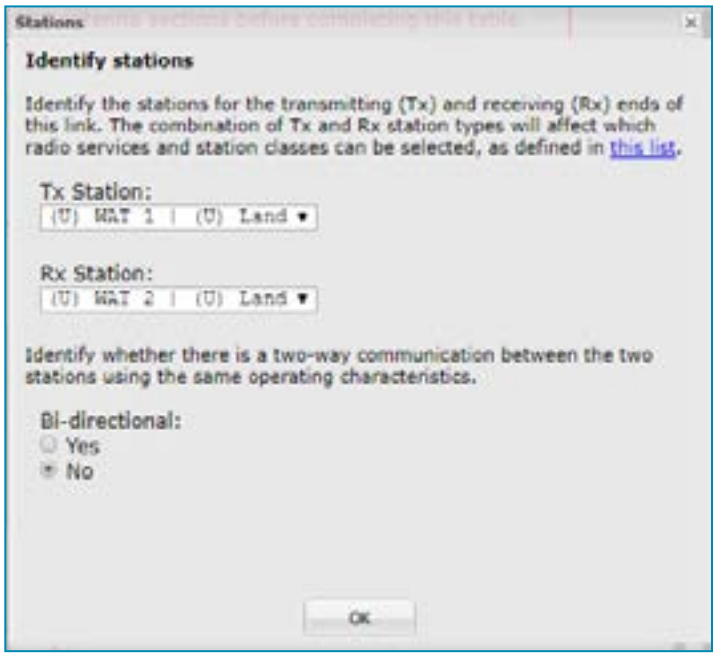
If you change frequency, emission designator, or power information in a Transmitter, Receiver, or Antenna section after filling out this table, you need to revisit this table and ensure the data fields and corresponding classifications remain correct.



If users have navigated to the Links/Selected Modes page by using the [i] button, and clicking on a [...] button, the selected link will be highlighted with a dotted red line, as shown here.

➤ Click on the icon by the WAT1 to WAT2 Station Link.

The following window should open.



In the system we are imagining, there is two way communication between WAT1 and WAT2 using the same operating characteristics.

➤ Select "Yes" radio button under "Bi-directional."

➤ Click the OK button.

Next we will select the transmitters and receivers for this station. We will select these from the transmitters and receivers we have already created in the earlier sections of this process.

➤ Click on the icon in the first row in the "Equipment" column after "Transmitter".

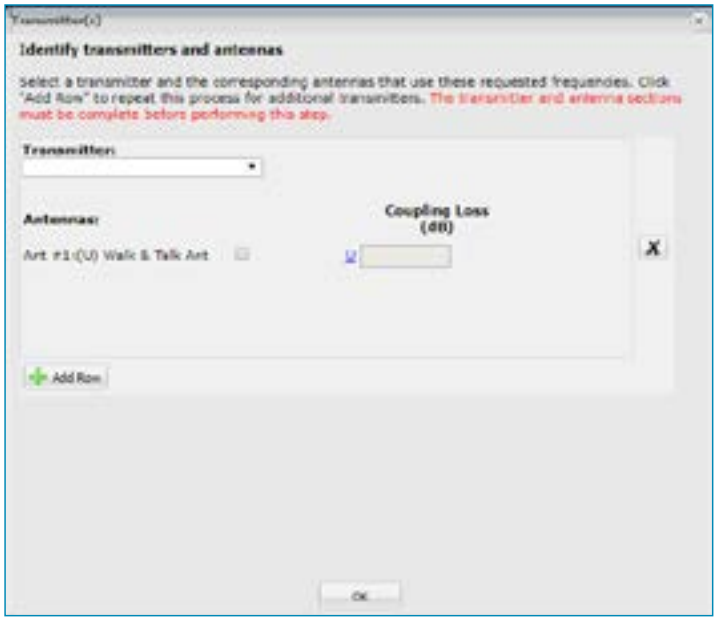
The window below opens.

➤ Select the Transmitter previously entered.

```
Transmitter: Tx #1: (U) Walk
& Talk Tx
```

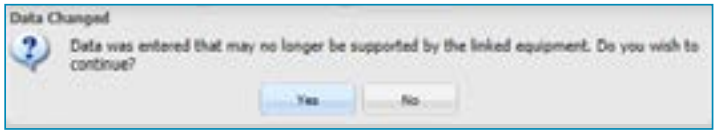
➤ Select the check box next to the Antenna, and leave the Coupling Loss field blank.

```
Ant #1:(U) Walk & Talk Ant ☑
Coupling Loss:
```



➤ Click the OK button.

The following dialog box will appear.



➤ Click the Yes button.

➤ Click on the icon in the first row in the "Equipment" column after "Receiver".

The following window will open.

➤ **Select the Receiver previously entered.**

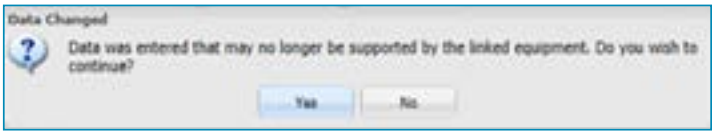
`Receiver: Rx #1: (U) Walk & Talk Rx`

➤ **Select the check box next to the Antenna.**

`Ant #1:(U) Walk & Talk Ant` ☑

➤ **Click the** OK **button.**

Again, The following dialog box will appear:



➤ **Click the** Yes **button.**

Next we will enter the requested Frequencies and Services / Station Classes.

➤ **Click on the icon in the first row in the "Requested Frequencies" column.**

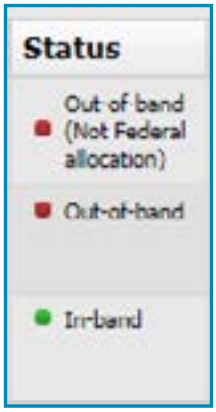
The following window will open.

Appropriate services can be dragged from the left column to the right column.

➤ **Drag Codes ML and MLD into the right hand column.**

The right column in the table should look like this:

Service	Station Class	Code
Land Mobile	Land Mobile	ML
Land Mobile	Telecommand Land Mobile	MLD



Below, under "Identify Frequencies," the system will select frequencies within which the system is capable of operating. Under Status, the system indicates whether the frequencies available are In-band, Out-of-band, or Out-of-band (Not Federal allocation).

➤ **Click the** Select In-Band Only **button to select In-Band Frequencies Only.**

The system should identify 138 -144MHz, 148 -149.9 MHz, and 150.05 - 150.8 MHz as the In band Frequencies.

➤ **Click the** OK **button.**

Next we will enter data in the Emission / Power column.

Click on the icon in the first row in the "Emission / Power" column.

The following window will appear.

The Emission Designator popup will automatically filter for Emission Designators that match the frequencies selected in the previous stel.

➤ Select the Transmitter dropdown.

➤ Select the (U) Walk and Talk Tx.

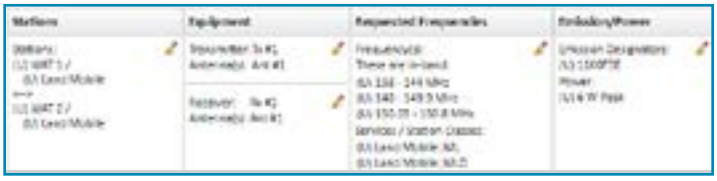
The Power, Power Type, and Emission Designator fields will populate with data automatically, as shown below.

If more than one Emission Designator is compatible with the frequencies selected for this transmitter, the tool will make all of them available.

➤ Check the box next to the appropriate data row.

➤ Click the OK button to close the window.

The row will have the following data associated with it.



We will follow a similar process for the second station, with the exception that the WAT1 to WAT3 link is not bi-directional.

➤ Click on the icon by the WAT1 to WAT3 Station Link.

There is no two way communication between WAT1 and WAT3 using the same operating characteristics.

➤ Check that the "No" radio button under "Bi-directional" is selected.

➤ Click the OK button.

Next we will select the transmitters and receivers for this station. We will select these from the transmitters and receivers we have already created in the earlier sections of this process.

➤ Click on the icon in the second row in the "Equipment" column after "Transmitter".

➤ Select the Transmitter previously entered.

```
Transmitter: Tx #1: (U) Walk
& Talk Tx
```

➤ Select the check box next to the Antenna, and leave the Coupling Loss field blank.

```
Ant #1:(U) Walk & Talk Ant ☑
Coupling Loss:
```

➤ Click the OK button.

➤ Click the Yes button when the dialog box appears.

➤ Click on the icon in the second row in the "Equipment" column after "Receiver".

Select the Receiver previously entered.

```
Receiver: Rx #1: (U) Walk &
Talk Rx
```

➤ Select the check box next to the Antenna, and leave the Coupling Loss field blank.

```
Ant #1:(U) Walk & Talk Ant ☑
Coupling Loss:
```

➤ **Click the** OK **button.**

➤ **Again, click the** Yes **button on the dialog box that appears.**

Next we will enter the requested Frequencies and Services / Station Classes.

➤ **Click on the** **icon in the second in the "Requested Frequencies" column.**

➤ **Drag Codes ML and MLD into the right hand column.**

➤ **Click the** Select In-Band Only **button to select In-Band Frequencies Only.**

The system should identify 138 -144MHz, 148 -149.9 MHz, and 150.05 - 150.8 MHz as the In band Frequencies.

➤ **Click the** OK **button.**

Next we will enter data in the Emission / Power column.

Click on the **icon in the second row in the "Emission / Power" column.**

The Emission Designator popup will automatically filter for Emission Designators that match the frequencies selected in the previous stel.

➤ **Select the Transmitter dropdown.**

➤ **Select the (U) Walk and Talk Tx.**

The Power, Power Type, and Emission Designator fields will populate with data automatically, as shown below.

➤ **Check the box next to the appropriate data row.**

➤ **Click the** OK **button to close the window.**

Because the Link between WAT1 and WAT2 is bi-directional, we can remove the third row in the table.

➤ **Click the** ✗ **button to remove that link from the record.**

The upper two rows look like the following image:

Any extra rows generated by the system can be removed at this time.

Where will this system be operated?

Enter the geographic locations where this equipment will be used during the current stage. If this is a satellite system leave these fields blank and enter geographic locations on the station page. If this is a trunking system enter the geographic location of the system as a whole here, and also enter the geographic location of each base station and repeater on the station page.

Because this is neither, we left black the location information earlier. We will enter that data now.

➤ **Click the Location Type dropdown menu and select "Area/Polygon."**

```
Location Type: Area/Polygon
```

➤ **Click on the Approved Locations dropdown.**

➤ **Begin typing "Maryland" into the field.**

As you type, the system will offer auto-complete options.

➤ **Select "Maryland".**

The system will indicate 947 points are selected.

This system will also be used at a training facility in Virginia.

➤ **Click** **to add a second location.**

➤ **Click the Location Type dropdown menu and select "Area/Polygon."**

```
Location Type: Circle
```

➤ **Enter the data for center point and radius.**

```
Latitude: 370000N
Longitude: 0800000W
Radius: 100km
```

➤ **Click:** .

What is the allocation stage?

The allocation stage refers to the operational level of the system requesting certification. Users should choose the Stage that applies based on the definitions present on the page.

The system for this training session is Stage 4, Operational.

➤ **Select the radio button next to "4 - Operational"**

```
Stage of Allocation: 4 - Operational
```

➤ **Click:** .

What is the timeline for this certification?

The timeline includes the target date for approval of the application and the dates the system will require the identified frequencies.

➤ **Provide the following dates for this request.**

```
Target Application Approval: 2020-11-30
Target System Activation Date: 2021-05-30
Target System Termination Date: 2031-05-30
```

➤ **Click:** .

How many units will be operated?

This section collects the total number of units planned for the current allocation stage. The number entered should be the sum of all units being built, procured and used.

➤ **Enter the number of units.**

```
Number of Units: 45
```

➤ **Click:** .

What is the Description?

Describe the function of the system or subsystem.

➤ **Enter the system purpose description.**

```
System Purpose and Concepts: This unit is a small, light-weight radio capable of providing two-way ground communications.
```

➤ Click: Continue .

Is this system expected to be used during emergencies?

This data indicates whether the system is expected to be used during a National Security Emergency Preparedness event.

➤ **Select the radio button by "Yes."**

```
NSEP Use: Yes
```

What are the information transfer requirements?

In this section we will describe the type of information sent between the transmitter(s) and receiver(s) (e.g.., analog voice, digital voice, pulse compression radar pulses), the modulation types used and any processing prior to modulation such as signal spreading or multiplexing. For digital systems, specify the maximum information bit rate.

➤ **Enter the Information Transfer Requirements.**

```
Information Transfer Requirements: Analog Voice information using analog modulation.
```

➤ Click: Continue .

What is the estimated initial cost?

The estimated initial cost is used to evaluate the size and complexity of the system. It is not intended to be a determining factor in the system review.

For Stages 1 and 2, provide the cost of research. For Stage 3, provide the development cost. For Stage 4, provide the cost for purchasing all the equipment, that is the price of a single unit multiplied by the total number of units to be procured.

➤ **Because this is a Stage 4 system, enter the purchase cost.**

```
Estimated Initial Cost of the System: $9000
```

➤ Click: Continue .

What is the system relationship and essentiality?

Here we will describe the relationship between the proposed system and the function it is intended to support. We should also indicate why this system is essential to that function. If this system interfaces with other systems or platforms, users should indicate that.

➤ **Enter a description of system essentiality in the field.**

```
System Relationship and Essentiality: These radios will enable communication with first-responders in the field during an emergency. They are the exclusive system intended in emergency circumstances.
```

➤ Click: Continue .

What existing systems might be replaced by this system?

This section collects the names of existing systems that might be replaced by this system.

Note: No action will be taken to cancel frequency assignments or allocations for existing systems based on this response.

➤ **For training purposes, enter "Not Applicable" to indicate there are systems expected to be replaced.**

```
Replacement Information: Not
Applicable
```

➤ Click: Continue .

Is this an ITU-exempt satellite system?

This section indicates whether this is a satellite system that is exempt from submitting notification to the Radiocommunication Bureau.

➤ Select "No."

➤ Click: Continue .

What is the originating agency?

This section collects the agency that originated this application as well as other agencies that may use this system.

➤ **The name of the agency you work for is automatically filled in based upon your login. You may leave the other field bank.**

```
Originating Agency:
Other Using Agencies:
```

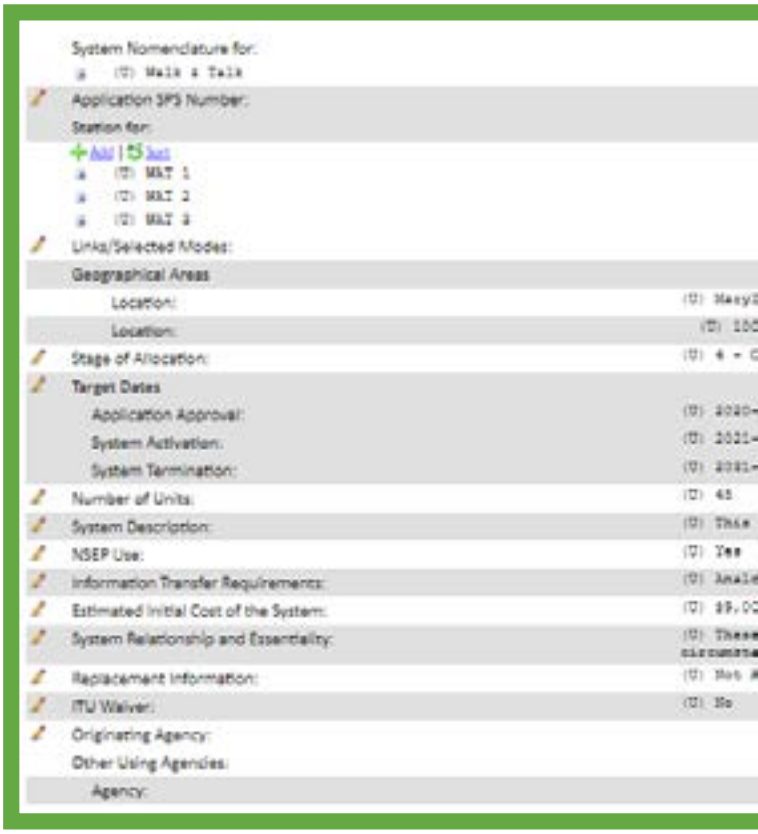
➤ Click: Continue .

Review your answers

At this point, users can review answers and make any changes. Users can view warnings and errors by clicking or mousing-over the warning and error icons. Users can click to change answers. Navigate back to this page by selecting the "View Summary" link under the desired section on the left side of this screen.

The page should show the image below.

➤ Click: Continue .



Saving Completed Documents

After this step, the SSRF has been completed. The next step is to save the document and then send it to NTIA for approval.

The SSRF can be saved as a PDF, or in the native .xml format, which option must be chosen to upload the file as an application in EL-CID Online

PDF

To save the document as a pdf, follow these steps:

➤ Click on the Document link.

➤ Select "Full Record Print" and any desired compliance checks.

➤ Click the OK button.

The system will generate a PDF with the Full Record Print and Compliance Checks.

➤ Save the PDF to your local computer to complete the process.

SSRF

To download the completed SSRF document in its native .xml format, allowing for easy upload to EL-CID Online, follow simply follow this step:

➤ Click the Save button in the Editor Toolbar.

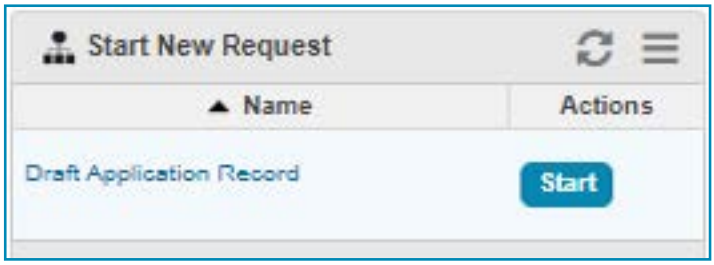
The document will download to the user's computer.

After the application file has been prepared, the Certification Request must be initiated through the EL-CID Online Workflow.

INITIATING REQUESTS

After logging in to EL-CID Online as an agency submitter, the user can initiate the certification request process

➤ Find the Start new Request widget in the lower left hand corner of the main dashboard.



➤ Click the start button.

Important:

By default the "Open work item as soon as initiated" check box is selected so that when the user clicks the initiate button the task form will open.

The Initiate Process dialogue box opens.

➤ Input the process name and a description.

```
Process Name: Walk & Talk Certification Request
Description: Handheld Radio System
```

➤

➤ Click the Initiate Button.

The system will initiate the request and open the Task Form tab. .

➤ Click on the Documents link in the upper right corner.

The system will open the Documents page in a new tab. On the documents page, users may upload any documents pertinent to the request. These documents will stay with the request throughout NTIA's certification process.

Users must attach an Application Record (the Document created using the Editor) and a Cover letter.

➤ Click the Upload File button in the upper right hand corner.

The Upload File document box opens.

➤ Click Choose File .

➤ Select "El-CID Online Test File 01_Agency_Request_Cover_Letter.txt"

➤ Indicate the Document Type:

```
Document Type: Agency Request Cover Letter
```

➤ Set the Overall Classification.

`Overall Classification: U - Unclassified.`

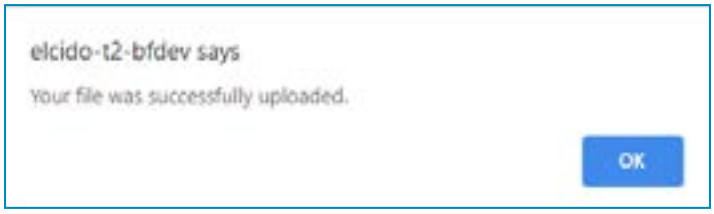
Identify the special handling restrictions by dragging and dropping them from left to the right areas below.

➤ Select "`A - Approved for public release; distribution is unlimited (DoD) Directive 5230.24).`" by clicking on its tile in the left column and dragging onto the right hand column.

➤ Click Ok .

The system will upload the file.

After a successful upload, the following message will appear.



➤ Click OK .

This process should be repeated for each file to be uploaded.

➤ Click the Upload File button in the upper right hand corner.

The Upload File document box opens.

➤ Click Choose File .

➤ Select "El-CID Online Test File 01_Agency_Request_Application.xml"

➤ Indicate the Document Type:

`Document Type: Application`

➤ Set the Overall Classification.

`Overall Classification: U - Unclassified.`

Identify the special handling restrictions by dragging and dropping them from left to the right areas below.

➤ Select "`A - Approved for public release; distribution is unlimited (DoD) Directive 5230.24).`" by clicking on its tile in the left column and dragging onto the right side.

➤ Click Ok .

The system will upload the file.

After a successful upload, the following message will appear.

➤ Click OK .

After all the appropriate documents have been attached to the request. Users can complete the request initiation by returning to the task form.

➤ Close the Documents Page tab.

➤ Post a comment in the discussion panel on

the right.

➤ Click Complete to finish the request initiation.

The system will open a window to provide another opportunity to make a comment.

➤ **After commenting, or if no additional comments are required, click the Send button.**

Checking Request Status

An agency representative can check the status of a certification request at any time simply by logging on to EL-CID Online.

Requests still being processed will be listed on the "My Active Requests" table and will show the status of the request. Clicking on the Process Name of a request in the "My Active Requests" table will open a window showing processing details of the request.

Requests that require additional information from the submitter will display in the "My Tasks Table". They will be listed with the task name "Request Info: Provide Info."

Requests that have completed the certification process will display in the "My Completed Requests" table. Again, clicking on the process name will open a window showing details of the request processing.

Editing an unapproved certification record or Adding information

An NTIA analyst may return a certification request back to an Agency Submitter for updates or correction. If this is the case, the task will appear in the "My Tasks Table".

➤ **To provide the required information, click on the task name.**

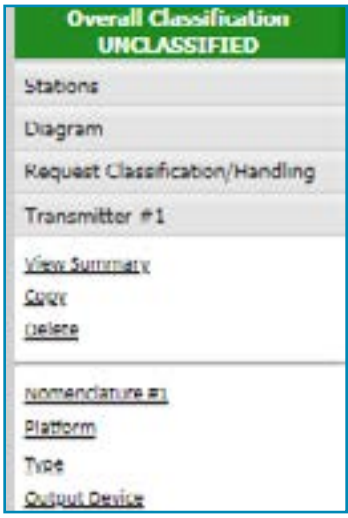
➤ **Read the comments in the internal discussion on the left side of the page.**

This will tell the user what information must be required to continue the certification process

➤ **Click on the Documents link to open the Documents Page.**

➤ **Click on the next to an Application document to open the request in the Editor.**

Use the Navigation panel to find the appropriate field for the required information.



➤ **After adding the required information, save the document, and return to the Task Form.**

➤ **Click on the gear icon to the right of the application file, and select "Update" to upload the edited version of the Certification of Spectrum Support.**

Submitting Revisions

Agencies may discover that the deployment of a certified system changes in such a way that, while the majority of the equipment information remains the same, the equipment requires and adjusted certification. In these situations, agency representatives should submit a certification revision.

NTIA Request for Information

At times during the certification process, the SPS Secretary, the SPS Chair or Vice Chair, or an SRB Review Engineer may return the certification request to the Agency Representative for more information. This may indicate an error in the initial request, or simply seek the clarification of some ambiguity.

In such a circumstance, the request will appear in the agency representative's My Tasks Table with the task name "Request Info: Provide Info".

To answer an NTIA request for information, follow these steps:

- **Open the Task Form by clicking on the blue Task Name link in the My Tasks Table.**
- **After the Task Form opens, read the comments in the internal discussion panel. The comments will have instructions or questions from NTIA.**

The question may be easily answerable by adding a comment in the discussing panel. If so, make the appropriate comment and then click the Comment Button button.

Otherwise, if the request for information requires addressing one or more of the documents associated with this Certification Request, click on the Documents Page Link link in the upper right hand corner, and download, edit and replace any documents that require your attention. After this, make a comment detailing the changes you have made, and click Comment Button.

Editing the Certification

Just as when creating a certification request from scratch, users should open the EL-CID Online Editor either through the workflow, the documents page of a request, or the web address.

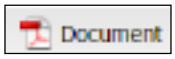
However, instead of creating a new application, agency representatives will use the Editor to open a previous certification.

- **Select the radio button next to "Open" and choose a file from the local drive.**

The System will load the previous application.

After that, users should move through the data entry fields and change the necessary data before saving and downloading the adjusted document.

Users can use the buttons, but will probably know exactly what data must be changed, making the Navigation panel a more efficient means of finding the appropriate data fields.

- **When finished updating the application, click the**  **link.**

The Full Record Print/Compliance dialog box will pop up.

- **Select all the available options to ensure complete data.**
- **Download and save the resulting PDF.**

The new application can now be submitted through the workflow.

Initiating the Request

Just as with any other certification request, to initiate a revision request, users should log in to the Workflow locate the "Start New Request" widget in the bottom right hand corner.

➤ **Click the start button.**

The Initiate Process dialogue box opens.

➤ **Input the process name and a description.**

"Urgent" and "Secure" are not generally used to descrie a request by the SPS. These check boxes should be left unchecked.

➤ **Click the** **Button.**

The system will initiate the request and open the Task Form.

➤ **Click on the** **link in the upper right corner.**

The system will open the Documents page in a new tab. On the documents page, users may upload any documents pertinent to the request. These documents will stay with the request throughout NTIA's certification process.

Required Documents

There are three documents agency representatives must attach to a certification revision.

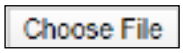
- The Application – The Application should contain the updated data for the system. All the data contained in the application should accurately reflect the updated system.
- A Previous Application - This document is the Certification of Spectrum Support that was modified for this revision. NTIA will use the Previous Application to compare with the current application and verify the changes.
- A Cover Letter – The Cover Letter should explain to NTIA that this application is a revision of a previous certification, and detail the specific data changed between documents.

Other documents can, of course, be uploaded as required for clarity and completeness.

To upload a document, follow these steps.

➤ **Click the** **button in the upper right hand corner.**

The Upload File document box opens.

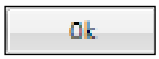
➤ **Click**  .

➤ **Select "El-CID Online Test File 01_Agency_Request_Cover_Letter.txt"**

➤ **Indicate the Document Type:**

➤ **Set the Overall Classification.**

➤ **Identify the special handling restrictions by dragging and dropping them from left to the right areas below.**

➤ **Click**  .

The system will upload the file.

➤ **Click** **when the dialog box confirms the successful upload.**

This process should be repeated for each file to be uploaded.

After all the appropriate documents have been attached to the request. Users can complete the request initiation by returning to the task form.

➤ **Close the Documents Page tab.**

If necessary, post a comment in the discussion panel on the right.

➤ **Click**

to finish the request initiation.

The system will open a window to provide another opportunity to make a comment.

➤ **After commenting, or if no additional comments are required, click the**

button.

NTIA PROCESSING

This section of the training manual explains to NTIA employees how to process certification requests using EL-CID Online. This training is also applicable to employees of other federal agencies who help with certification processing through their work with the Spectrum Review Branch, or the Spectrum Planning Subcommittee.

Logging in to EL-CID Online

Users access the EL-CID Online workflow through role-based user accounts.

Go to the EL-CID Online landing page at ecotest.ntia.gov/index.html. Click on the Internal Workflow button, and log in to the EL-CID Online system.

Accessing a Task

When the user logs into the application, the Requests dashboard will appear. This is the main work screen in the EL-CID Online workflow. All the tasks currently or formerly assigned to the user are displayed on this page in three tables.

➤ **To open a task, click on the process name in the "My Tasks" table.**

After accessing the EL-CID Online page, log in using the above screen.
The EL-CID Online Workflow Dashboard opens, allowing users to access tasks.

My Tasks

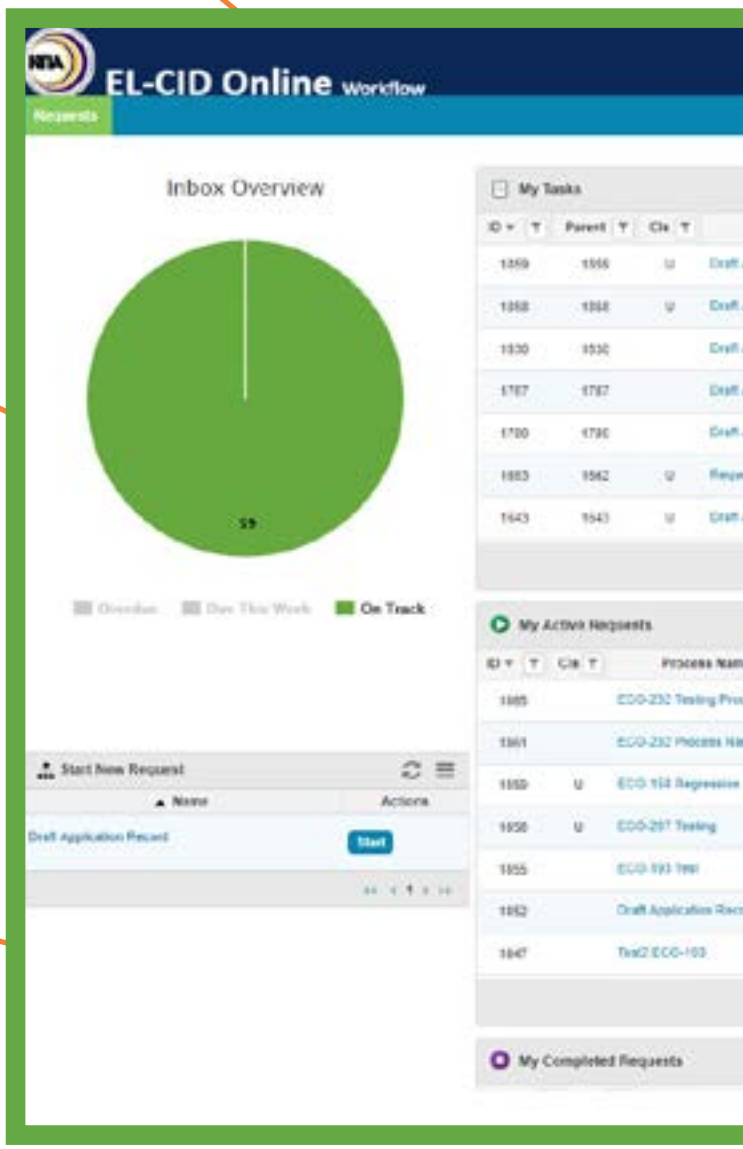
The My Tasks table in the top-middle of the screen stores requests requiring actions on the part of the user. The My Tasks table is the primary work area users will visit within the Requests dashboard. To open any request and complete the task associated with it, click on the task name. This will open the Task Form and provide detailed information for the certification request.

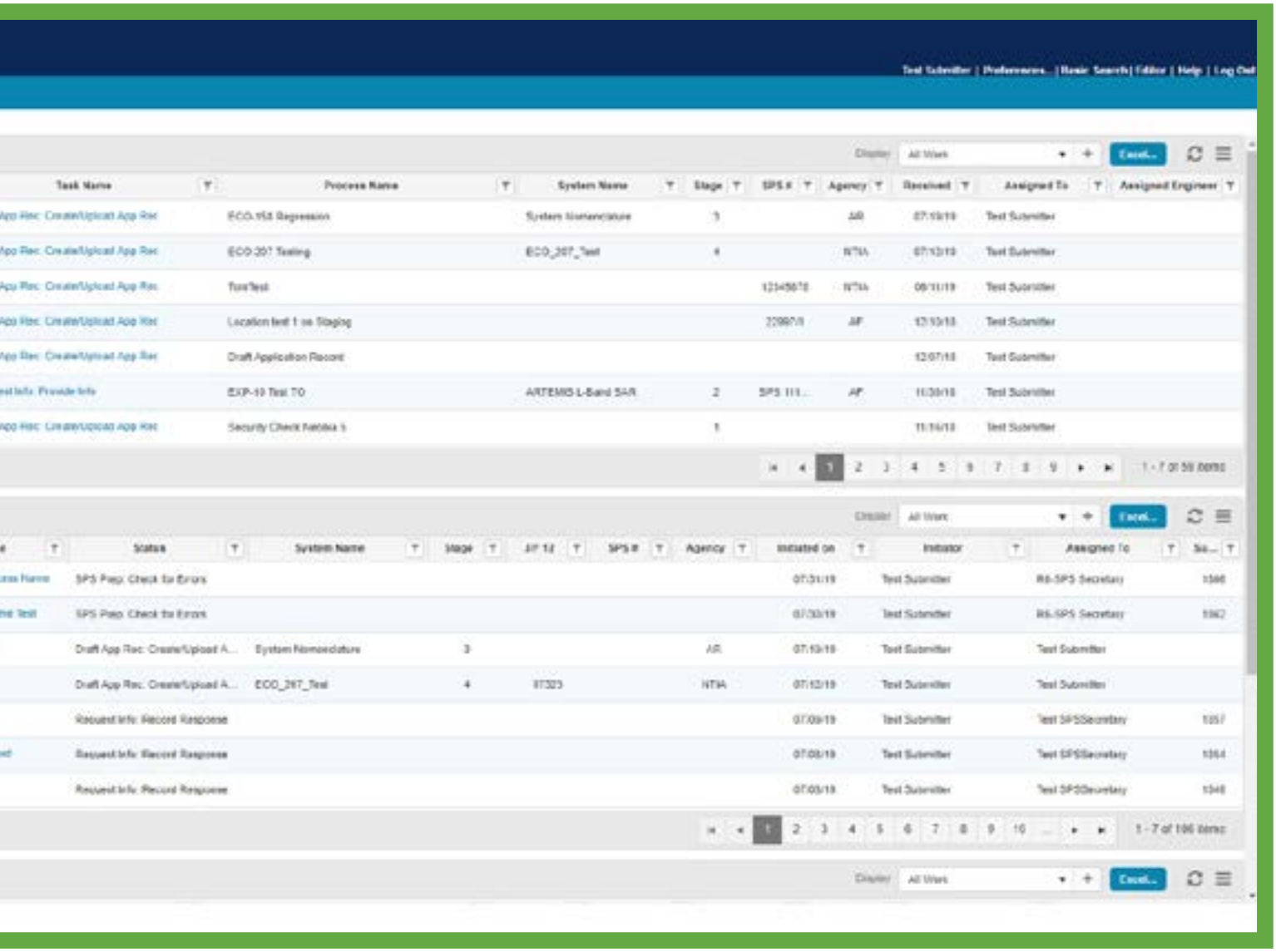
My Active Requests

The My Active Requests table contains all open requests initiated by the user or that the user participated in at some point. Instead of a My Active Requests table, the SRB Chief and engineers view an All Active Requests table containing all open requests in the workflow. To view basic information about an active or completed request, click on that specific request.

My Completed Tasks

The My Completed Requests table is located in the bottom of the interface. It stores requests initiated or processed by the user which have been completed and moved out of request processing. Because these requests require no further actions, the My Completed Requests table is primarily for record keeping and performance assessment purposes. The SRB Chief and engineers are able to see ALL completed requests.




Test Submitter | Preferences... | Basic Search | Editor | Help | Log Out
Task Name
Process Name
System Name
Stage
SPS #
Agency
Received
Assigned To
Assigned Engineer
Status
Initiated On
Initiator
Assigned To

Task Form Information

When a user selects a specific task from the request dashboard, the task form work space screen appears.

To review the Task From components, see the overview of the Task Form on "The Task Form" on page 12.

After the Task Form opens, the user should follow these three steps:

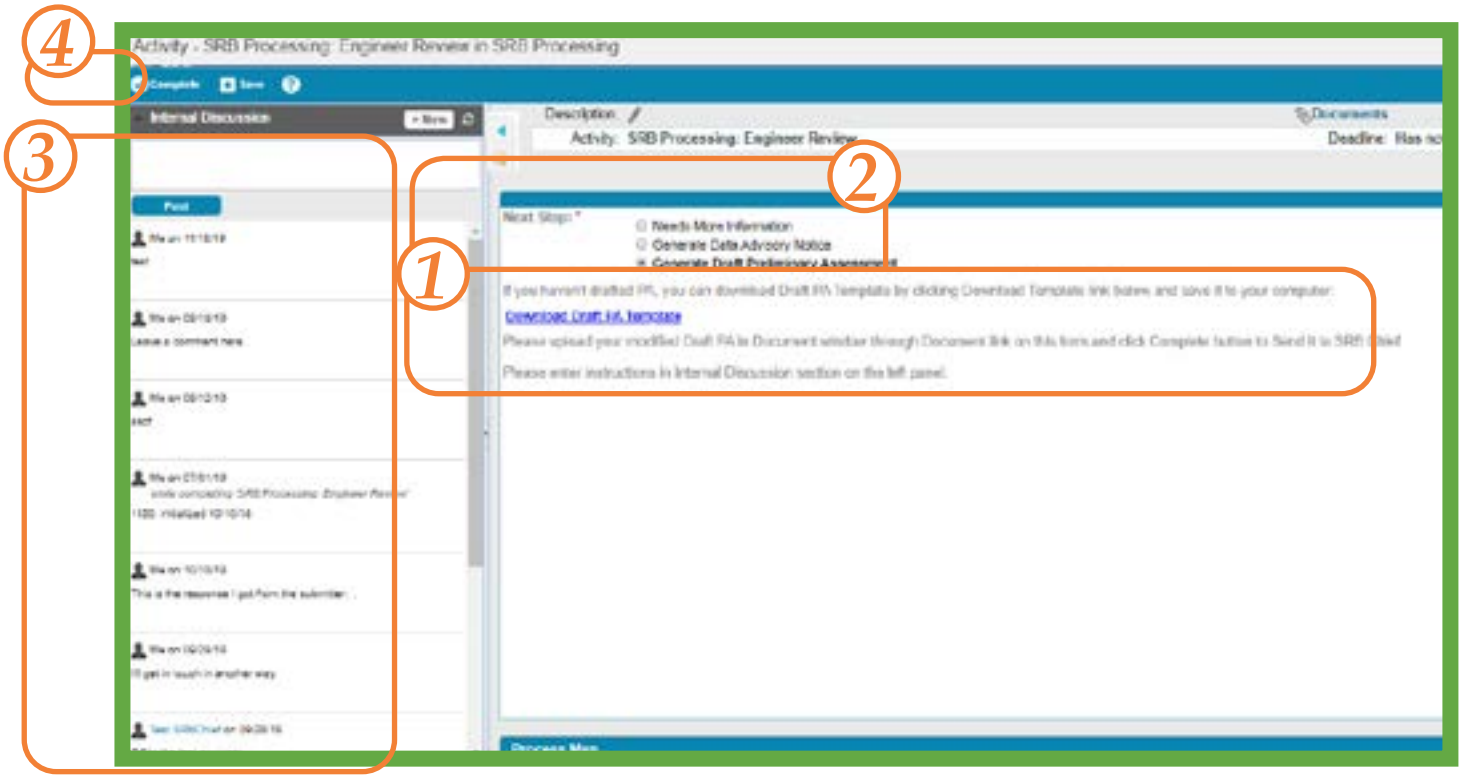
① Review the instructions in the center panel.
② Complete any steps required by the instructions.
③ Leave a comment in the internal discussion panel.
④ Click the

button in the upper right hand corner.

Before initiating the next step, users must always make a comment in the discussion panel indicating their decision and reasoning, along with any other attendant information for the person who will handle the next step.

If a user attempts to complete the task without making a comment, the system will prompt a comment with a pop up window. Before indicating the next step, users must always make a comment in the discussion panel indicating their decision and reasoning, along with any other attendant information for the person who will handle the next step.

After reviewing the information associated with a request, and leaving a comment, the user should complete the task and send the request on to the next step in the certification process.



Note:

Instructions and tasks will be different for each role and user task in EL-CID Online. Be sure to read and understand the instructions before proceeding with each task. Instructions can be found in the center panel.

Documents Associated with a Request

Following the instructions for each task will likely involve reviewing or adding documents to the request. Documents associated with a request are accessed through the

link in the upper right hand corner.

➤ **To access the documents, click on the**

link.

The Documents Page opens in a separate tab. The page indicates classification levels, and document types for each document attached to the request. For a full review of Documents Page features see page "Documents Page" on page 16 of this manual.

Each attached document can be accessed simply by clicking on the document name.

The document page indicates SSRF documents by placing a icon next to the document classification. Clicking on the icon will open the document in Editor.

At the bottom of the page, a navigation bar provides navigation in the unlikely event that the number of documents associated with a request is too large to fit on a single screen.

There are several document tools accessible through the icon to the right of each document. Depending on the user role and task assigned, different tools will be available for each document type.

- Use "Download" to save a copy of the document to the local computer.
- Use "Delete" to remove a file from the request.

- Use "Update" to substitute an old file with a new file of the same type.
- Use "Rename" to change the name of the file.

The Upload File button is used to upload documents. After a user presses Upload File, the system will open a dialog box explaining how to attach a file to the request.

- The box will ask users to do the following:
- Select a file to add to the request.
- Indicate whether the file is SSRF v3.0 (or higher) document.
- Select the document type.
- Indicate the overall classification.
- Choose handling instructions.

Users can click OK to upload the file, or Cancel to return to the Documents Page.

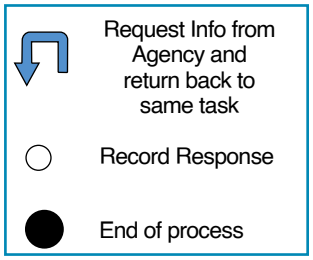
To exit the Documents Page, close the tab.

NTIA Interior Workflow

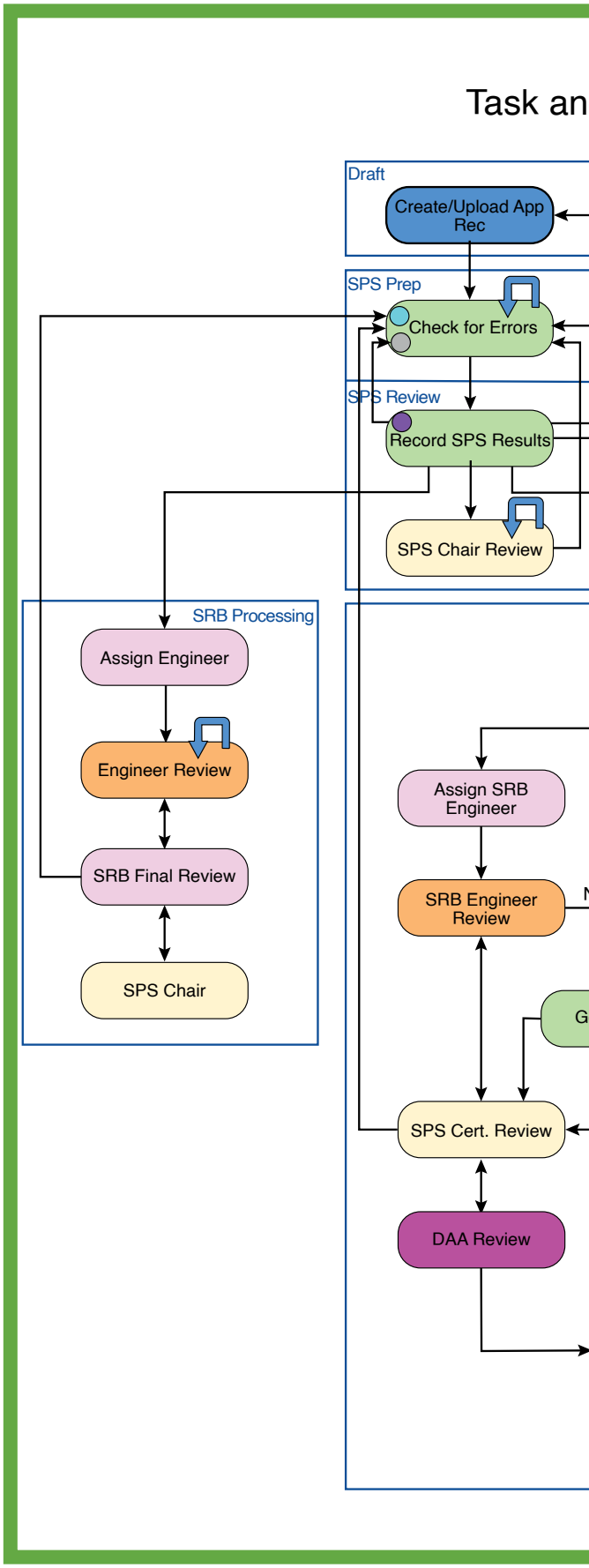
To the right is a task and status workflow diagram showing each processing task that exists in EL-CID Online. The tasks are color coded by user role so that all pink tasks like Assign Engineer are performed by the SRB Chief. All light yellow tasks, like SPS Chair, are performed by the SPS Chair or Vice Chair. Use the key below to identify all user roles.

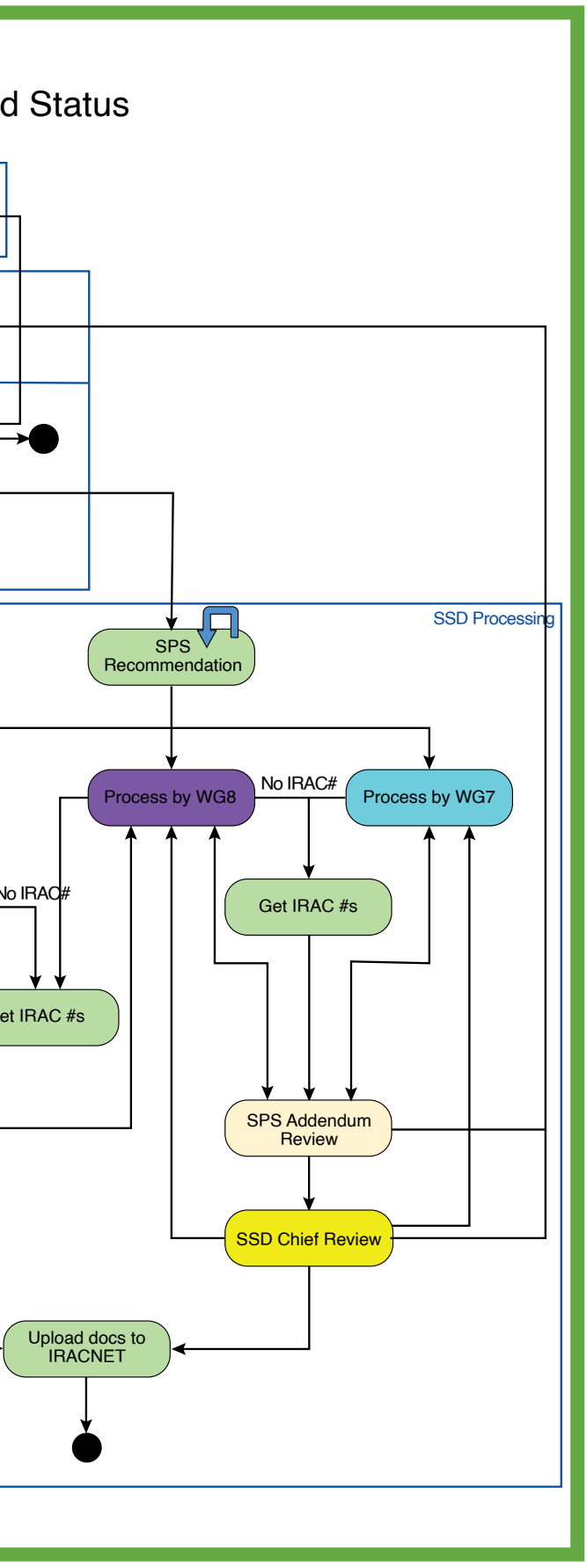
R1 - Agency Submitter/Rep.
R4 - SPS Chair or Vice Chair
R6 - SPS Secretary
R8 - Chief, SRB
R9 - SRB Review Engineer
R10 - Deputy AA, OSM
R11 - SSD Chief
R13 - Chair WG9
R15 - Chair WG7
R17 - Chair WG8

There are several actions indicated by the diagram as well. The key below shows three kinds of processes which employ interaction between NTIA employees and submitting representatives of other federal agencies.



The Online Help manual in the "Workflow Roles" book has specific instructions for how to accomplish each task in the EL-CID Online workflow.





Processing Tasks

Here follows a list of the certification request processing tasks addressed by EL-CID Online.

Draft App

- Agency Submitter – Draft Application: a representative of a federal agency prepares and initiates a certification request.

After this step, the request is moved to SPS Processing.

SPS Processing

- SPS Secretary – Check for Errors: The SPS Secretary reviews the request for errors, and either returns the request to the agency for corrections, sends the request to Working Group 7 or Working Group 9, or places the request on the SPS agenda, assigning an SPS number and an SPS meeting date.
- SPS Secretary – Record SPS Results: After the SPS reviews the request, the SPS Secretary records the results of that review. The subcommittee recommendations will send the request to different users and process for the next steps. Approval sends the request to SSD Processing. Tabling the request to SRB, WG8, or the SPS Chair, asks that group to review the request. Tabling to agency moves the request back to draft and asks for clarification or more information. Noting and withdrawing the request ends the process without certifying the equipment.
- SPS Chair or Vice Chair – SPS Chair Review: The SPS Chair or Vice Chair reviews the request and makes a recommendation. The Chair can request information from the agency or send the request back to the SPS Secretary for review and re-introduction to the SPS Agenda.

These steps may keep the request within SPS Processing, but may also move the request to either SRB Processing, or SSD Processing.

SRB Processing

- SRB Chief – Assign Engineer: The SRB Chief chooses an engineer to review the document.
- SRB Engineer – Engineer Review: The engineer completes a review of the request and either adds a Draft Data Advisory Notice (DAN), or a Draft Preliminary Assessment (PA). SRB Engineers can also request more information from the agency submitter during this step.
- SRB Chief – SRB Final Review: After the engineer has finished all review tasks, the request and related materials are sent to the SRB Chief, who conducts a final review. The SRB Chief attaches a DAN or a Draft PA. If the SRB Chief attaches a DAN, the request returns to SPS Processing. A request with a Draft PA will go to the SPS Chair or Vice Chair for review. The SRB Chief can also send the review back to the engineer for further review.
- SPS Chair or Vice Chair – SPS Chair Review: The SPS Chair or Vice Chair reviews the engineer and SRB Chief recommendations. When finished, the request is returned to the SRB Chief for Final Review.

After SRB Processing, the request is returned to SPS Processing.

SSD Processing

- SPS Secretary – SPS Recommendation: SSD processing begins with the SPS Secretary recording the SPS Approval and assigning the request to the next user. The SPS Secretary can request changes from an agency submitter, send the request to the SRB Chief for engineering review, or assign the request to WG7 or Working Group 8.
- SRB Chief – Assign SRB Engineer: The SRB Chief chooses an engineer to review the document.
- SRB Engineer – SRB Engineer Review: The engineer reviews the request and attaches a draft Certification of Spectrum Support. If the request already has an IRAC #, it will go directly to the SPS Chair or Vice Chair. If not, the SPS Secretary must assign an IRAC #.
- SPS Secretary – Get IRAC #s: The SPS Secretary inputs the IRAC #'s and forwards the request on to the SPS Chair or Vice Chair.
- SPS Chair or Vice Chair – SPS Certification Review: The Chair or Vice Chair can send the request to WG8 for processing, on to the Deputy Associate Administrator, or back to the SPS Secretary for more SPS Processing.
- Deputy Associate Administrator, Office of Spectrum Management – DAA Review: the DAA, OSM accepts or rejects the certification.
- WG8 Chair – Process by WG8: The WG8 chair chooses whether to attach an addendum to the request. If the request already has an IRAC # and does not require an addendum, it will go directly to the SPS Chair or Vice Chair. Otherwise, the SPS Secretary must assign an IRAC #, or add the Addendum # next to the SPS and IRAC #s.
- WG7 Chair – Process by WG7: The WG7 chair chooses whether to attach an addendum to the request. If the request already has an IRAC # and does not require an addendum, it will go directly to the SPS Chair or Vice Chair. Otherwise, the SPS Secretary must assign an IRAC #, or add the Addendum # next to the SPS and IRAC #s.
- SPS Chair or Vice Chair – Addendum Review:

The SPS Chair or Vice Chair can approve the addendum, sending the request on to the SSD Chief. If the Chair or Vice Chair does not approve the addendum, the request returns to the Working Group that attached the addendum or back to SPS Processing to be checked for errors.

- SSD Chief – SSD Chief Review: The SSD Chief approves or does not approve the addendum. If the addendum is approved, the request moves to the SPS Secretary to be uploaded. If it is not approved, it either goes back to the Working Group that attached the addendum, or it goes back to SPS Processing to be checked for errors.
- SPS Secretary – Upload docs to IRACNET: The SPS Secretary uploads docs to the IRACNET.

Checking Request Status

All EL-CID Online users can check the status of a certification request they have processed simply by logging on to EL-CID Online.

Requests still being processed will be listed on the "My Active Requests" table and will show the status of the request. Clicking on the Process Name of a request in the "My Active Requests" table will open a window showing processing details of the request.

Requests that require additional information from the submitter will display in the "My Tasks Table". They will be listed with the task name "Request Info: Provide Info."

Requests that have completed the certification process will display in the "My Completed Requests" table. Again, clicking on the process name will open a window showing details of the request processing.

Documents from Previous Requests

EL-CID Online users may want to find certification requests, signed certifications, or preliminary assesments associated with requests that have already been processed. These documents may be accessed by users by using the Spectrum Supportability Repository Query function.

➤ **From the Workflow Dashboard, click on the Basic Search link.**

The query screen will appear in a separate tab.

To generate search results, users may enter information into a single search field or into multiple fields.

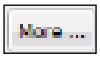
➤ **To search by Frequency Range, select the icon.**

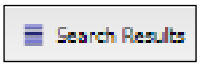
After the user enters information and selects, the Search Results Screen is displayed.

➤ **Click on a certification request title link.**

The Certification Request Details are displayed.

Users can access the documents either by clicking on the document name or by clicking on the icon.

The Initial Certification request details screen contains the same fields found in the Search Results. Users can display additional fields by selecting the  button.

The and  buttons can be used at any time to toggle between the Search and Search Results screens.

Users will only be able to see and access documents they have permission to view through their roles in EL-CID Online.

Note:

Any task may be forwarded to any user, regardless of role normally performed within the workflow.

Forwarding Requests

Automatic Forwarding

If a user is going to be absent from work for an extended time due to illness, travel, or any other reason, the user can set EL-CID Online to automatically forward tasks to a designated user. To do this, follow these steps:

➤ Click on the Preferences... link in the upper right corner of the Workflow Dashboard.

A window below will pop up, similar to the window below.

➤ Click on the Absence tab.

➤ Enter the dates for the forwarding to begin and end, and include a message.

Next, select the user to receive the forwarded tasks.

➤ **Click the Select... button.**

➤ **Click the Organizational Unit button.**

Locate the appropriate user from the accordion menu

➤ **Click the OK button.**

The popup will close.

➤ **Click the Apply button and then the Close button.**

The tasks will be forwarded to the person you selected.

Ad-hoc Forwarding

In certain circumstances, because of illness or other unexpected availability, a user may be unable to complete a task assigned to them.

In this case, the SRB Chief or an SRB Engineer is able to forward a task to another person within the workflow. To do this follow these steps:

Scroll down to the "All Active Requests" table and locate the task to be forwarded.

➤ **Click the ☑ checkbox to the left of the task.**

➤ **Then click the Forward... button in the upper right hand corner.**

The following window will open.

➤ **Click the Organizational Unit button.**

Locate the appropriate user from the accordion menu

➤ **Click the OK button.**

The task will be forwarded to the chosen user.

Certification of Spectrum Support

The certification of spectrum support is a document generated through the Editor and used by NTIA personnel to confirm that a certification request has been certified. Consequently, the certification of spectrum support page is only accessible to authenticated NTIA users.

Only NTIA users have access to the Certification of Spectrum Support. When the Editor is accessed by users with NTIA role log-in credentials, the Certification of Spectrum Support will appear in the navigation panel.

Creating

To create a Certification of Spectrum Support, using a Certification Request, follow these steps:

➤ **Open a task in the workflow.**

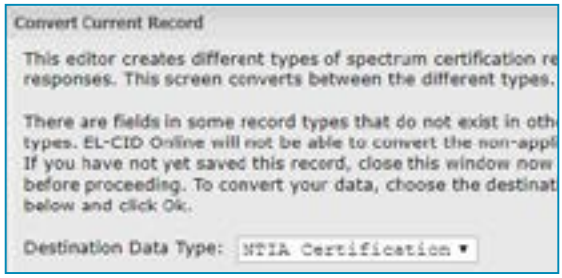
➤ **Click on the** Documents **link.**

➤ **Click on the** **icon next to an application file.**

Editor will open the document.

➤ **Click on the** Tools **dropdown in the upper right of the page and select** Convert **.**

The following window will appear.



This window will allow NTIA users to convert a request into a certification.

➤ **Click the** OK **button.**

The document has now been converted to a Certification of Spectrum Support. There is an "NTIA Certification" link in the Navigation Panel on the left.

➤ **To attach the new certification to a request, click the** Document **button.**

➤ **Select "Certification of Spectrum Support", and click the** OK **button.**

The system will generate a Certification of Spectrum Support PDF. This document can be downloaded to the local computer, and then attached to the certification request.

Access

If a Certification of Spectrum Support has already been created, NTIA users can access and update it as necessary.

To access the Certification of Spectrum Support, first access the Editor through the Documents page, by clicking on an EL-CID Online XML document within a task form.

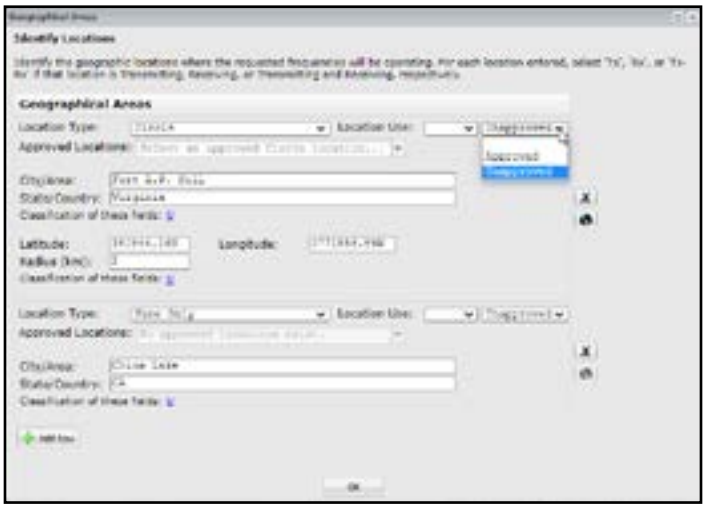
Editor will open the document. On the left, in the Navigation Panel, there is a link for "NTIA Certification".

➤ **Click on the link.**

The NTIA Certification page shows data fields pertaining specifically to NTIA records and certification approval.

Location

NTIA users accessing the Certification of Spectrum Support may recommend that user-created locations be included in the list of Approved Locations. To do this, click on the button. The following popup will open, providing access to the Graphical Location Verifier.



NTIA users may then select "Approved" or "Unapproved" for the location or add a different location for the station, if appropriate.

Note that this only constitutes a recommendation. Only the DAA and SSD Chief can finalize a location approval recommendation. When the DAA or SSD Chief approve a Certification Request, the location will be recorded as "Approved" will be added to the set of Approved locations.

Completing

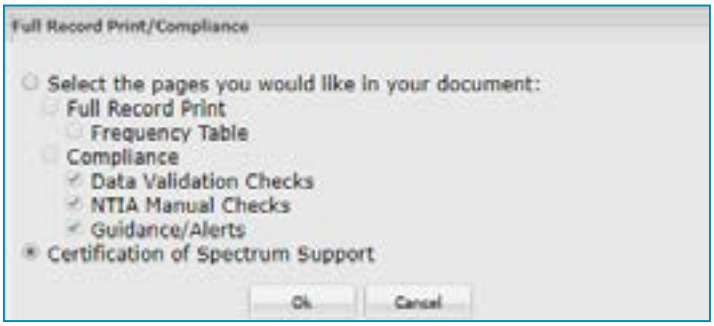
On this page the NTIA user can indicate whether the application is approved, the recipient agency, and document identification numbers including IRAC and FAS numbers.

Additionally, Section 1 shows Operating characteristics for which support is Certified, and Section 2 shows Source Documents. Section 3 and Section 4 show signatures of the NTIA employees who have made Recommendations or Certifications.

All these fields will display information available in the original application or through EL-CID Online processing. However, necessary edits can be made here.

➤ **When finished with edits, click the** Document **button.**

The following window will appear.



➤ **Select "Certification of Spectrum Support", and click the** OK **button.**

The system will generate a Certification of Spectrum Support PDF. This document can be downloaded to the local computer, and then attached to the certification request.

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