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# Outpost Packet Message Manager and ICS 213 Messaging

## Users Guide

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Version 3.0



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### Revision History

Date	Revision	Release	Notes
2-April-2012	Original	v2.6	Updated for this release
19-Sep-2013		v2.8	Updated for this release
23-Mar-2015		V3.0	Updated for this release

# 1 About ICS213mm

## 1.1 Introduction

This guide will introduce you to Outpost's ICS 213 program and describe how to create ICS messages that interact with the **Outpost Packet Message Manager** program.

## 1.2 What is ICS 213?

The following are excerpts from <http://ics.com/>

“The ICS 213 General Message Form was originally designed as a multipart self-copying form for use as an interoffice memo. Since its inception, both the usage and physical embodiment have changed significantly.

“The ICS 213 General Message Form is now increasingly used for messages between parties who are not in the same location. Because the nature of incident communications is generally urgent, the form is often originated in one location and transmitted electronically to another location. The reply from that location is returned electronically and the two "parts" of the form are matched together.

GENERAL MESSAGE		
TO:	POSITION:	
FROM:	POSITION:	
SUBJECT:	DATE:	TIME:
MESSAGE:		
SIGNATURE:	POSITION:	
REPLY:		
DATE:	TIME:	SIGNATURE/POSITION:

ICS 213

NFES 1326

**Figure 1: Typical ICS-213 Form**

“Because of the General Message Form's increased usage between often physically distant locations, the information for an ICS 213 General Message Form is often transcribed onto a blank form or entered electronically via a computer word processing program.”

### 1.3 ICS 213 and Outpost

This implementation of ICS 213 Messaging is designed to improve the message handling efficiency of communications teams who work closely with served agencies that use the ICS 213 message form.

There are three components of ICS 213 Messaging:

- **Ics213mm.exe.** This is a standalone program that presents the user with a computer-based fill-in-the-blank form with fields that align with the ICS 213 message form. It guides the user in creating a message using some pre-defined message fields values or by direct entry, saving a local copy, and exchanging messages with Outpost.

The screenshot shows the 'ICS 213 Messaging (LOCAL)' application window. The menu bar includes 'File', 'Setup', 'Edit', and 'Help'. The toolbar contains buttons for 'New', 'Send', 'Save', 'Delete', 'Close', 'Browse', '<<', '>>', 'Edit', and 'Reply'. The main area is titled 'Msg# 1, Locally created message; Draft' and is divided into three sections: 'Header', 'Message', and 'Reply'.

**Header:**

Incident Name:	City Flooding		
To:	Dan Dreager	Position:	Ops Chief, County OES
From:	Dave Knapp	Position:	DES, Cupertino OES
Subject:	Stevens Creek Dam Status	Date:	03/29/2012 20:36

**Message:**

Be advised that the Santa Clara County Valley Water District confirmed that the dam withstood the last aftershock, but recommends periodic observations of its downstream face. Cupertino will post volunteer watches at the parking lot.

Signature: Dave Knapp      Position: DES, Cupertino OES

**Reply:**

Signature: \_\_\_\_\_      Position: \_\_\_\_\_  
Date: \_\_\_\_\_

At the bottom right, the status bar shows 'Disconnected' and the time '20:38:39'.

**Figure 2: The Ics213mm Message form**

- **Opdirect.exe.** Opdirect MCS (Message Capture System) is a program that listens on the local area network for and receives messages from remote message sources. Once the message is received, Opdirect processes and writes the message to the Outpost message database. The Outpost operator then completes the message and presses **Send**.

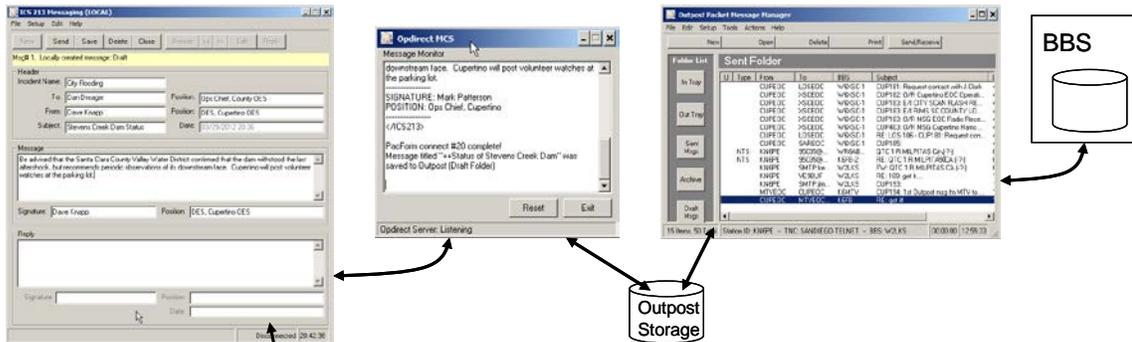
Opdirect MCS listens for, captures, and stores messages from Ics213mm in Outpost, as well as sending back ICS 213 messages received by Outpost from a remote station.

1. **Outpost.** Outpost continues to be program that interacts with the BBS for sending and retrieving packet messages.

**1.4 An Ics213mm session**

Ics213mm helps the user compose a message and get it sent by packet. Here’s what a user needs to do:

1. At the Outpost computer, verify Opdirect.exe is running. See Section 3.3 *Outpost / Opdirect Setup* for details.
2. Run Ics213mm.exe.
3. Enter a user identifier (you define it, such as BOB, DAVEF, CTYOPS, etc.).
4. Check the default field settings (optional).
5. Press **New**. The program pre-populates the message form with any default field settings and opens all message fields for editing.
6. Fill in the subject and the body of the message. When done, press **Send**. Ics213mm stores the message locally for retrieving and updating later.
7. At this point, Ics312mm automatically does the following:
  - a. Connects and logs on to Opdirect.
  - b. Formats any outgoing messages into a user-readable text message.
  - c. Sends the formatted message to Opdirect (which subsequently stores the message in the Outpost Draft folder).
  - d. Requests any messages intended for this user ID. Ics213mm stores any retrieved messages, and then pops up a notification window letting the user know that an incoming message has arrived.
  - e. Logs off Opdirect when done.



**Ics213mm...**

- Lets the user create and store messages locally.
- Periodically connects to Opdirect to exchange ICS 213 messages with Outpost.



**Opdirect...**

- Processes logon requests, receives messages, writes to Outpost DB, Draft Folder.
- Sends Outpost messages flagged as “ICS213” back to Ics213mm.

**Outpost...**

- The user complete the message by filling in the **To:** address field.
- Then, presses Send/Receive.

**Figure 3: Ics213mm Messaging Components**

### 1.5 Why use Ics213mm?

- Keeps the focus on the message – Ics213mm is exclusively aimed at ICS 213 message management: creating, sending, receiving, printing, storing.
- Reduce transcription errors – Instead of writing a message down on paper and handing it to a packet operator, the Ics213mm program can be given to the individuals who need to create the message thereby eliminating the possibility of interpretation problems and transcription errors.
- Receives new messages and create replies – Ics213mm can also retrieve messages that Outpost received thereby closing the loop from message creation to reply.
- Deployable anywhere on the same LAN as Outpost – Ics213mm interacts with Outpost through Opdirect MCS (delivered with Outpost) using standard networking to interact with Opdirect. As a result, Ics213mm can be deployed either on the local PC where Outpost is installed, or anywhere on the local area network.
- Multiple copies of Ics213mm can be deployed and interact with a single copy of Outpost. Essentially, Ics213mm can be placed throughout the EOC on the same LAN as Outpost thereby empowering the users to manage their own message traffic. Packet radio room operators retain control operator responsibilities since they complete the message and press Outpost's Send/Receive button.

### 1.6 Ics213mm Features

Some of the key features of Outpost's Ics213mm Messaging are:

#### Message Management

- Message Types. Ics213mm supports 2 message types: (i) a Message is what the originator creates, (ii) a Reply is what the recipient sends back. Both the Message and Reply are linked and managed within a single message structure. Ics213mm tracks what it is looking at and ensures the right message control actions are allowed.
- Message Creation. Ics213mm allows messages to be created from scratch, importing text from an ASCII file, cut and pasted in from other applications, or by Replying to a previously received message.
- Text Message Formatting. Messages can be entered in a free-form text area. Simple formatting can be performed, errors corrected, and text can be added and deleted prior to sending the message.
- Storage. All messages and replies are stored locally. This allows the user to create messages with Ics213mm even if the network or Opdirect is down. Once up, Ics213mm forwards all pending messages to Outpost.
- Printing. Ics213mm can print a message in the standard ICS 213 format.
- ICS 213 message outside of Outpost. Ics213mm messages sent by Outpost are formatted in a human-readable and ICS 213-like format for retrieval and use by non-Outpost users.

#### Configurations and Setups

- Default fields. Some message fields can be defaulted to predefined values, particularly if they are the same from message to message. For instance, the FROM: and FROM POSITION may be set to your name and preloaded at message creation time.

- Network parameters. Because Ics213mm talks to Opdirect through a network connection, the user defines the IP address and Port where Opdirect is listening. Once set, it is always used when Ics213mm runs.

### **1.7 Notes, assumptions, and disclaimers**

- The program attempts to guide the user through the process of creating, sending, reviewing, retrieving, and printing messages. If you observe obvious problems, please let me know
- Error handling will continue to evolve over time. Most of the errors are properly trapped and reported, however, it is not 100% foolproof.

### **1.8 Find an Error?**

If you find an error or unsure how Outpost's ICS 213 Messaging is supposed to work, post a message to the Outpost Users Group or send me email to [kn6pe@arrl.net](mailto:kn6pe@arrl.net).



## 2 Getting Started

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All ICS 213 Messaging activities are managed and controlled by the Ics213mm.exe program. This section provides an overview of the program.

### 2.1 Introduction

The following are basic concepts to help get you started.

**User Identification.** Because more than one instance of Ics213mm could be installed on the LAN, a User ID is stamped on each outgoing message so that the reply message knows the route back to this user (and copy of Ics213mm).

**Message Storage.** Ics213mm will locally store messages (independently of Outpost) that you create, or that are received from Outpost. This allows the user to start a message or reply, but not send it because of some missing information, as well as editing a previously sent message thereby creating an update.

Any viewed message can also be printed as desired.

While there may be a tendency to keep messages forever, this is not the intent of Ics213mm.

**Message States.** Ics213mm can create a message or reply as well as view a received message or a received reply. Because of this, it is important to understand some of the message references that you will see as you work with messages:

- |                   |  |
|-------------------|--|
| Created Message:  | This is a message that is originated by you and is to be sent to someone else. You can get to message text area by pressing <b>New</b> . Only the message area of the form is enabled for editing. |
| Received Message: | This is a message received by you that was originated by someone else. The received message text area is read-only and cannot be edited.   |
| Created Reply:    | After you receive a message, you can create a reply to be sent back to the messages' originator. After pressing Reply, the <b>Reply</b> text area of the form is enabled for editing.              |
| Received Reply:   | This is a copy of your original message and the reply as created by the person to whom you sent the original message. The message and reply text areas are read-only and cannot be edited.         |

## 2.2 The main Ics213mm form

When you start the program, you will see the main window letting you know that Ics213mm.exe is ready.

## 2.3 Menus and Toolbars

The *Program Controls* portion of the User Interface controls the operation and execution of all program tasks.

**Figure 4: Main Screen Menu and Tool Bar**

The Ics233mm menus provide different options for setting up and controlling the application.

**NOTE:** Some of the more common menu items are also implemented as Tool Bar buttons. See the associated menu item below for their description.

Menus	Description
<b>File</b>	<p><b>Open:</b> Lets the user pick a text message and load the message into the Message Area or Reply Area, depending on the message type.</p> <p><b>Save:</b> Saves the message back to the local Ics213mm message store.</p>

Menus	Description
	<p><b>Print Setup.</b> Allows the user to select a default printer.</p> <p><b>Print.</b> Allows the user to select a printer, and then print the message in an ICS 213 format.</p> <p><b>Exit:</b> Exits the program. If a connection with Opdirect is in progress, the connection will end first, then the program will exit.</p>
<b>Setup</b>	<p><b>Properties:</b> Sets various parameters to control the behavior of the program:</p> <ul style="list-style-type: none"> <li>• <b>Formatting.</b> Allows the user to set up some message fields as defaults. Additionally, the date and time format can be specified.</li> <li>• <b>Remote Access.</b> Sets up the IP address and Port number for Opdirect. Also, defines the polling interval that Ics213mm uses to poll for incoming messages from Outpost.</li> </ul> <p>See <i>Section 3.1 ICS 213 properties</i> for more information.</p> <p><b>Identifier:</b> opens a box for entering the User ID.</p> <p>See <i>Section</i> for more information.</p>
<b>Edit</b>	<p><b>Cut:</b> Copies and deletes any highlighted text from any text area of the form. The text is placed in the MS-Windows clipboard.</p> <p><b>Copy:</b> Copies any highlighted text in any from any text area of the form. The text is placed in the MS-Windows clipboard.</p> <p><b>Paste:</b> Inserts text from the clipboard at the position where the cursor is located.</p>
<b>Help</b>	<p><b>About:</b> Lists information about Ics213mm.</p>

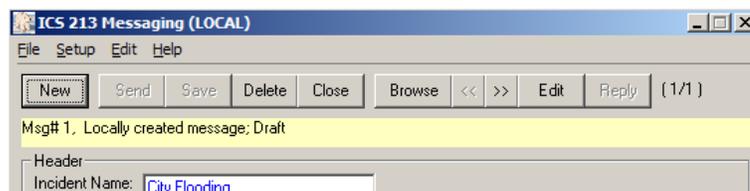
The following are other controls found on the main form.

Controls	Description
<b>New</b>	This option is enabled at startup. Sets up Ics213mm for entering a new message.
<b>Send</b>	This option is enabled whenever you are editing a message or reply. On pressing <b>Send</b> , the message is saved and locked, and Ics213mm attempts to deliver the message to Opdirect.
<b>Save</b>	This option is enabled whenever you are editing a message or reply. On pressing <b>Save</b> , the message is saved and locked.

Controls	Description
<b>Delete</b>	This option is enabled whenever you are viewing any message. On pressing <b>Delete</b> , the message is deleted from the Ics213mm local message store.
<b>Close</b>	This option is enabled whenever you are viewing or editing any message. On pressing <b>Close</b> , the message is cleared and the <b>New</b> and <b>Browse</b> buttons are enabled.
<b>Browse</b>	This option allows the user to Browse the messages found in the Ics213mm local message store. The number of messages and the position of the message in the store is shown to the Right of the buttons.
<<	Browse “left”. This option brings up an earlier created messages for display.
>>	Browse “right”. This option brings up a later created messages for display.
<b>Edit</b>	This option is enabled whenever you are browsing messages. On pressing Edit, you can edit the message text area of Created Messages or edit the reply text area of Created Replies.  Pressing this button for sent messages allows you to update the message thereby letting it be sent again.
<b>Reply</b>	This option is enabled only when viewing a Received Message.  On pressing this option, the status bar will be listed as... Locally created reply, status is Draft.

## 2.4 Message Status Bar

The **message status bar** is just below the control buttons. This field describes the type and state of the message that is currently being displayed.



You may see one of these Status line messages:

Status Line Messages	Meaning
Locally created message, status is Draft	A message that you are creating is not complete or ready to send. This is primarily due to a missing field.

Status Line Messages	Meaning
Locally created message, status is Ready/Not Sent	A message that you created. It is ready to send, but for some reason, has not been transferred to Opdirect.
Locally created message, status is Sent	A message that you created. It has been transferred to Opdirect.
Received message, status is Unread	This is a message received by you, and you are seeing it for the first time.
Received message, status is Read	This is a message received by you, and you have already read it.
Locally created reply, status is Draft	A reply to someone else's message that you are creating. It is not complete or ready to send
Locally created reply, status is Ready/Not Sent	A reply that you created. It is ready to send, but for some reason, has not been transferred to Opdirect.
Locally created reply, status is Sent	A reply that you created. It has been transferred to Opdirect.
Received reply, status is Unread	This is a reply sent to you for a message that you originated, and you are seeing it for the first time.
Received reply, status is Read	This is a reply sent to you for a message that you originated, and you have already read it.

## 2.5 Message Fields

Field	Description
<b>Incident Name</b>	Name of the incident as assigned by the agency that activates the event. <b>Default:</b> Blank, or loaded with the value defined from <b>Setup &gt; Properties</b> , first tab.
<b>To</b>	Name of the individual to whom this message is intended. This person would be the likely individual to create the reply. <b>Default:</b> Blank, or loaded with the value defined from <b>Setup &gt; Properties</b> , first tab.
<b>(To) Position</b>	The organizational position of the message recipient. <b>Default:</b> Blank, or loaded with the value defined from <b>Setup &gt; Properties</b> , first tab.
<b>From</b>	Name of the individual that is originating this message. <b>Default:</b> Blank, or loaded with the value defined from <b>Setup &gt; Properties</b> , first tab.
<b>(From) Position</b>	The organizational position of the message author. <b>Default:</b> Blank, or loaded with the value defined from <b>Setup &gt; Properties</b> , first tab.

<b>Field</b>	<b>Description</b>
<b>Subject</b>	For new messages, enter a subject for this message. When viewing an existing message, this field contains the subject of the message. The subject will be used by Outpost when it sends this as a packet message.
<b>Date</b>	The date that this message is created and sent. <b>Default:</b> Set with the current date and time based on the date/time format as defined from <b>Setup &gt; Properties</b> , first tab.
<b>Message</b>	This is a free-form text field for creating the message to be sent to the recipient. The message size is limited to 4000 characters. <b>Default:</b> Blank
<b>Signature</b>	On the standard ICS 213 form, this is the signature of the individual creating this message. <b>Default:</b> The content of the From: field is copied here. However, it can be overridden if necessary.
<b>Position</b>	On the standard ICS 213 form, this is the position of the individual creating this message. <b>Default:</b> The content of the From Position: field is copied here. However, it can be overridden if necessary.
<b>Reply</b>	This is a free-form text field for creating the reply to the above message to be sent back to the originator. The reply size is limited to 4000 characters. <b>Default:</b> Blank
<b>Signature (Reply)</b>	On the standard ICS 213 form, this is the signature of the individual replying to this message. <b>Default:</b> The content of the To: field is copied here. However, it can be overridden if necessary.
<b>Position (reply)</b>	On the standard ICS 213 form, this is the position of the individual replying to this message. <b>Default:</b> The content of the To Position: field is copied here. However, it can be overridden if necessary.
<b>Date</b>	The date that this reply is created and sent. <b>Default:</b> Set with the current date and time based on the date/time format as defined from <b>Setup &gt; Properties</b> , first tab.

When a message is being edited, Ics213mm unlocks the necessary fields so that they can be changed. The field text is colored **BLACK**. When viewing a message that is not editable, the message text is colored **BLUE**. This helps the user identify which fields are changeable depending on whether they are creating or editing a Message or a Reply.

## 3 Setups

There is a mix of optional and required setups that must be made. This section describes these setups.

### 3.1 ICS 213 properties

Program properties cover 3 areas: Message Formatting, and Remote Access. Access this form from the **Setup > Properties** menu. There are 2 tabs on this form:

Tabs	Description
<b>Message Formatting</b>	This tab allows you to define some default message field values that are automatically loaded whenever you create a new message. All fields are required.
<b>Remote Access</b>	This tab captures the network parameters that Ics213mm uses to find Opdirect.
<b>Receiving</b>	This tab sets up what to do when a message is received.

#### Tab 1 – Message Formatting

Ics213mm allows you to define some default message field values that are automatically loaded whenever you create a new message.

The screenshot shows the 'ICS 213 Properties' dialog box with the 'Formatting' tab selected. The 'Defaults - New Messages' section contains the following fields:

- Incident Name: City Flooding
- To: Dan Dreager (Name), Ops Chief, County OES (Position)
- From: Dave Knapp (Name), DES, Cupertino OES (Position)
- Report Format: (empty)
- Date format: mm/dd/yyyy
- Time Format: hh:mm

Buttons for 'OK' and 'Cancel' are located at the bottom right of the dialog.

Figure 5: Program Properties

These fields are:

<b>Fields</b>	<b>Description</b>
<b>Incident Name</b>	Name of the incident. <b>Default:</b> blank      Character size: 64
<b>To: Name</b>	Name of the individual to which this message is intended. This person would be the likely individual to perform any reply to you. <b>Default:</b> blank      Character size: 64
<b>To: Position</b>	The organizational position of the message recipient. <b>Default:</b> blank <b>Character Size:</b> 64
<b>From: Name</b>	Name of the individual that is originating this message. <b>Default:</b> blank      Character size: 64
<b>From: Position</b>	The organizational position of the message originator. <b>Default:</b> blank <b>Character Size:</b> 64
<b>Date Format</b>	The format of the date. This can take many forms, including: mm/dd/yy      11/24/09 mm/dd/yyyy      11/24/2009 dd-mmm-yyyy      24-Nov-2009 d-mmm      24-Nov <b>Default:</b> mm/dd/yy
<b>Time Format</b>	The format of the time. This can take many forms including: hh:mm      13:05 h:mm AM/PM      1:05 PM h:mm:ss      13:05:47 <b>Default:</b> hh:mm

The 2 controls at the bottom of the form apply to both tabs.

<b>Controls</b>	<b>Description</b>
<b>OK</b>	Saves the settings and closes the form.
<b>Cancel</b>	Ignores any changes and closes the form

To make message format setup changes, do the following:

1. Determine the names and positions of the **To:** and **From:** individuals that will be getting these messages. Any field left blank must be filled in at message creation time.
2. Change the date and time format if necessary. It is recommended that this format remain the same, or be set to whatever standard format is used.

- Press **OK** when done.

### Tab 2 – Remote Access

This tab allows you to configure Ics213mm networking. The goal is to identify where Ics213mm can find Opdirect on the network.



**Figure 6: Remote Access – Finding Opdirect**

Ics213mm allows you to define some default message field values that are automatically loaded whenever you create a new message.

Fields	Description
<b>Remote Host</b>	<p>The IP Address or host name of the PC where Opdirect is running.</p> <p>The default setting tells Ics213mm to look for the Opdirect on the PC where Ics213mm is running.</p> <p><b>Default:</b> 127.0.0.1</p>
<b>Remote Port</b>	<p>Ports are used with TCP to name the logical connection on a specific network node. This setting must match what is set up in the Opdirect Winsock Interface form.</p> <p><b>Default:</b> 9334 (DO NOT CHANGE: must match the Opdirect default port number)</p>
<b>Network Timeout</b>	<p>The network timeout tells Ics213mm how long to wait for a network interaction with Opdirect before giving up and reporting an error. A setting of 5000 milliseconds (5 seconds) is plenty, particularly if Opdirect is operating on the same PC as Ics213mm.</p> <p>For remote instances of Opdirect, the timeout may need to be longer depending on the network traffic.</p> <p><b>Default:</b> 5000</p>

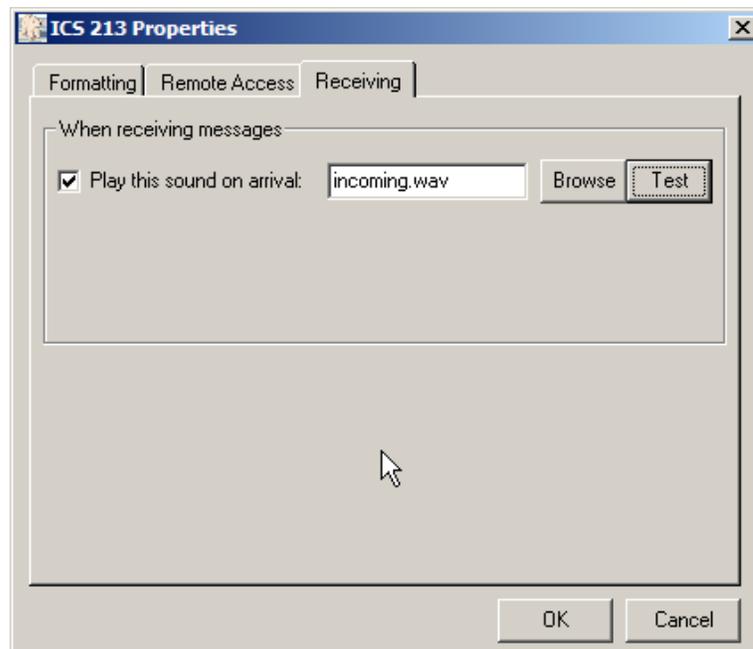
Fields	Description
<b>Send/Receive Interval</b>	Ics213mm will poll Opdirect for any incoming messages at this interval. See <i>Section 3.4 Checking the Ics213mm-Opdirect connection</i> for a description of how to perform <b>Default:</b> 60 seconds

This form has one control that can be used to confirm the network setup is set up correctly.

Controls	Description
<b>Opdirect Link Test</b>	Performs a test network connection with Opdirect. 1. A <b>successful test</b> is indicated by a pop-up box stating <b>Link test to Opdirect passes</b>  2. An <b>unsuccessful test</b> is indicated by a pop-up box stating <b>Link test to Opdirect failed. Check the following:</b> 1. <b>Confirm that Host Name and Port number match Opdirect.</b> 2. <b>Confirm that Opdirect is running</b>

### Tab 3 – Receiving

This tab lets you configure how Ics213mm will notify you when a message arrives.



**Figure 7: Remove Access – Finding Opdirect**

Operation	Description
<b>Play this sound on arrival</b>	<p>This option allows you to select a .wav file to be played when a message is saved in Outpost.</p> <p>The user can browse for a .wav file, select it, and test it to confirm that it is suitable for their environment.</p> <p>See the Play on Arrival Considerations below.</p>

### Play on Arrival Considerations

This feature requires that an operational Sound Card is installed in the Outpost PC. Once you choose a .wav file, pressing the “**Test**” button will cause the .wav file to play. If there is a problem with the file or the sound card, a sound card is not installed or enabled, then Ics213mm will issue a “beep” instead.

While any .wav file can be used or created, two three .wav files are included with the Outpost distribution as examples for how this feature could be used.

- Sound38.wav – a very obnoxious alarm. If you use this file with the sound turned up, you will definitely know when a message arrives.
- Sound136.wav – used for Notifications.
- incoming.wav – a spoken notification. The phrase “Attention, incoming packet message” is spoken.

### 3.2 User Identification

Multiple copies of Ics213mm could be deployed on the same LAN with all feeding Outpost via Opdirect. To ensure reply messages get back to the right owner, Ics213mm “tags” all messages with a routing identifier.

This routing identifier is the same as the User ID. The User ID form is presented each time Ics213mm runs, as well as from the **Setup > Identification** menu.

**Figure 8: Set up User Identification**

The Identifier must be unique for all Ics213mm’s that connect to a specific instance of Outpost. No unique Id checking is performed.

This form has only one field. If there are no changes, just press OK or Enter to continue.

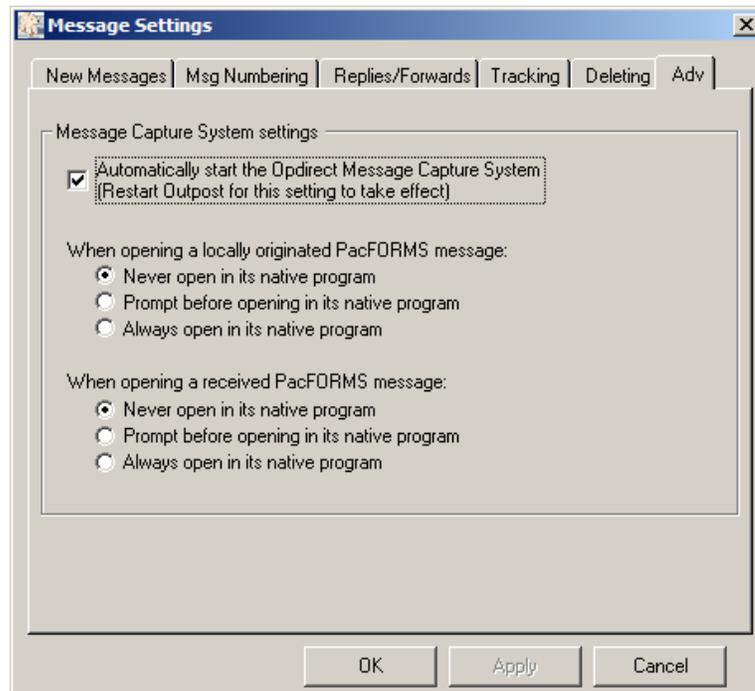
Fields	Description
<b>Identifier</b>	When Ics123mm runs on the same PC as Outpost, leave the Identifier set to <b>LOCAL</b> . For all other PCs running Ics213mm, pick a different name. <b>Default:</b> LOCAL

### 3.3 Outpost / Opdirect Setup

For Ics213mm to complete the message transfer to Outpost, it needs the help of the Opdirect.exe program.

Opdirect listens on a specific network port for message requests from Ics213mm or Santa Clara County's PacFORMS. When a message comes in, Opdirect creates a valid Outpost message and writes it to the Outpost message database.

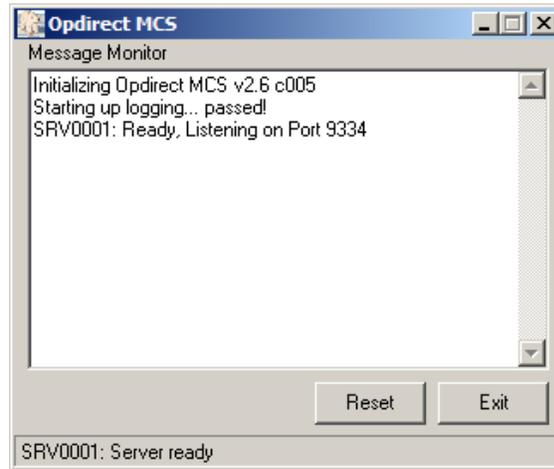
Opdirect must be running for Ics213mm to post a message to Outpost. The best way to do this is to set up Opdirect to run automatically from Outpost.



**Figure 9: Running Opdirect from Outpost**

1. In Outpost, go to **Tools > Message Settings** menu, select the **Adv Tab**.
2. Check the bottom Box to "... **Automatically start Opdirect Message Capture System**". Press **OK**.

- Exit and restart Outpost. Opdirect will start up, and you will see the following window open.



**Figure 10: Opdirect Startup Message**

The benefit of using this approach is that, on exiting Outpost, Outpost will also shut down Opdirect as well. To manually start the Opdirect.exe, navigate to the Outpost directory and double-click on Opdirect.exe.

- As Opdirect starts up, it will report that it is listening on Port 9334. This is the default port number that Opdirect, Ics213mm, and PacFORMS uses for passing message traffic.

**NOTE:** Some PCs may have aggressive port blocking turned on and you may be prompted to **Continue Blocking** or **Unblock**. For Opdirect to work, click on **Unblock**.

**NOTE:** There should never be a reason to change the port number that these 3 programs use. PacFORMS is hard-coded to use this port number. However, if you must change the port number, then it must be changed for Opdirect and for Ics213mm. The Opdirect.ini file has an entry that defines the Port Number.

ONLY CHANGE the PortNumIn value. DO NOT CHANGE ANYTHING ELSE.

```
[Opdirect MCS]
ConnectNum=302
PortNumIn=9334
Pausev=100
```

**Figure 11: Opdirect.ini file**

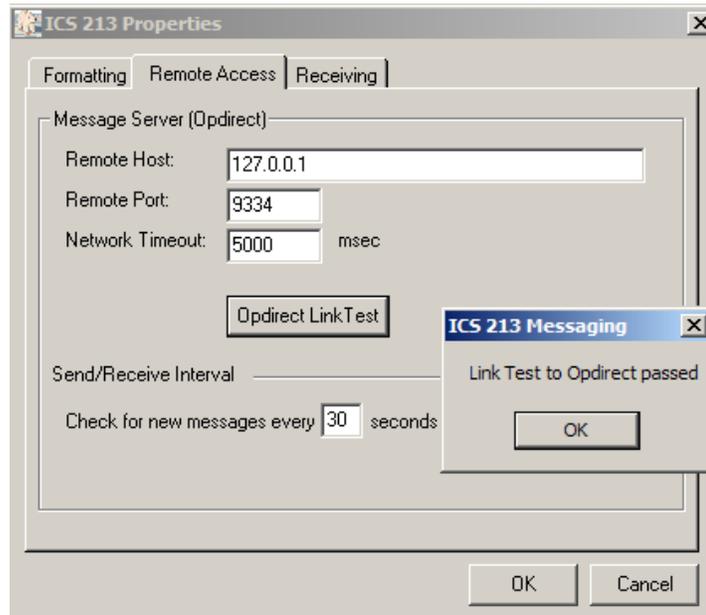
When you start Outpost, Opdirect will also start up. As you exit Outpost, Opdirect will be terminated. Outpost is now ready to interact with Ics213mm.

### 3.4 Checking the Ics213mm-Opdirect connection

To verify that Opdirect and Ics213mm are set up correctly, run the Link Test from Ics213mm.

- Start Opdirect as described above.
- Start Ics213mm if it is not already running. **Select Tools > Properties**, then Tab 2 named **Remote Access**.

3. Press the **Opdirect Link Test** button. A short connection test is made with Opdirect and a pop-up message box indicates the state of the test.



4. If the test fails, check that the Host Name/IP address and Port Number match what is set up on Opdirect, and that Opdirect is running.

## 4 Ics213mm Messages

Ics213mm relies on Outpost for getting an ICS 213 formatted message sent by packet to its destination.

- Ics213mm creates and formats the ICS 213 message.
- The Opdirect program listens for and receives message requests from Ics213mm, and then writes the message to the Outpost message database.
- The Outpost operator performs the final steps to get the message on its way.

This section describes how to use ICS 213 messaging and what you will see as it interacts within the rest of the Outpost environment.

### 4.1 Creating an ICS 213 message

The steps for creating a new ICS 213-based message includes:

1. Configure and start up Outpost and Opdirect (see *Section 3.3 Outpost / Opdirect Setup*).
2. Set up any common message field defaults (**Setups > Properties**).
3. Set or change the Ics213mm User ID (**Setups > Identification**).
4. Press **New** to load the message field defaults, set the Signature and Position to the From/Position fields, and enable the messages fields for editing.
5. Fill in the blank message fields. Since you are creating a *Message* and not a *Reply*, the reply fields are locked and will not take any text input.

The screenshot shows the 'ICS 213 Messaging (LOCAL)' application window. The menu bar includes 'File', 'Setup', 'Edit', and 'Help'. The toolbar contains buttons for 'New', 'Send', 'Save', 'Delete', 'Close', 'Browse', '<<', '>>', 'Edit', and 'Reply'. The message is identified as 'Msg# 1, Locally created message: Draft'. The 'Header' section contains the following fields:

Incident Name:	City Flooding	Position:	Ops Chief, County OES
To:	Dan Dreager	Position:	DES, Cupertino OES
From:	Dave Knapp	Position:	DES, Cupertino OES
Subject:	Stevens Creek Dam Status	Date:	03/29/2012 20:46

The 'Message' section contains the following text:

Be advised that the Santa Clara County Valley Water District confirmed that the dam withstood the last aftershock, but recommends periodic observations of its downstream face. Cupertino will post volunteer watches at the parking lot.

The 'Signature' section contains the following fields:

Signature:	Dave Knapp	Position:	DES, Cupertino OES
------------	------------	-----------	--------------------

The 'Reply' section is partially visible at the bottom of the window.

Figure 12: Sample Message

#### Pressing New, then Save

6. Pressing **Save** causes Ics213mm to validate that all fields are filled in. If they are not, the user is prompted whether they want to continue to Save and edit it, or send it later.

7. If the user pressing OK, the message is saved, and the fields are locked (colored **BLUE**).

#### **Pressing New, then Send**

8. Pressing **Send** causes Ics213mm to perform a Save (see the validation description above), and then attempts to connect to Opdirect.
9. If Opdirect is running, it loads the message into Outpost and Ics213mm flags the local message as being sent.
10. If Opdirect is not running, Ics213mm flags the local message as ready, but not sent.
11. Regardless of whether Opdirect is running, the message is saved, and the fields are locked (colored **BLUE**).

## **4.2 Browsing for messages**

Because Ics213mm can save messages locally, the **Browse** function allows you to review what messages have been created and in what state the messages are in.

Messages are stored in the order in which they were created or loaded. Browsing lets you step through the list of messages from first to last and select an additional action to perform on them. **Browse** can be used as long as there is at least one message present.

After pressing **Browse**, the first message is loaded into the message form, is shown as locked (colored **BLUE**), and the following actions can be applied to it:

1. **Delete**. The user can delete the message from Ics213mm. Once deleted, it is gone.
2. **Close**. After pressing Close, browsing is ended and the base set of controls is enabled: **New** and **Browse**.
3. **<<** (Browse Left). The previous message in the list is reloaded.
4. **>>** (Browse Right). The next message in the list is reloaded.
5. **Edit**. Editing causes all eligible fields to be available for editing. For instance,
  - a. For a previously saved message that was not completed, the message can be opened, edited, and completed. The user can press **Send** to save and send it.
  - b. For a previously sent message, the message can be opened and updated with new information. The user can press **Send** to save and send this updated message. NOTE: this overwrites the original local message copy that was previously sent.
  - c. For a previously saved reply message that was not completed, the reply message area can be opened, edited, and completed. Note that the main message area is still locked (colored **BLUE**). The user can then press **Send** to save and send it.
6. **Reply**. This option is only enabled when you find a message that was received from Opdirect. When pressing **Reply**, The original message area remains locked (colored **BLUE**). However, the message reply area is eligible for editing and updating.

## **4.3 Retrieving sent messages**

There is no automated way to retrieve a message you may have accidentally sent once it is transferred to Outpost. The best you can do is to contact the packet operator as soon as you discover that the wrong message was sent, and ask him/her

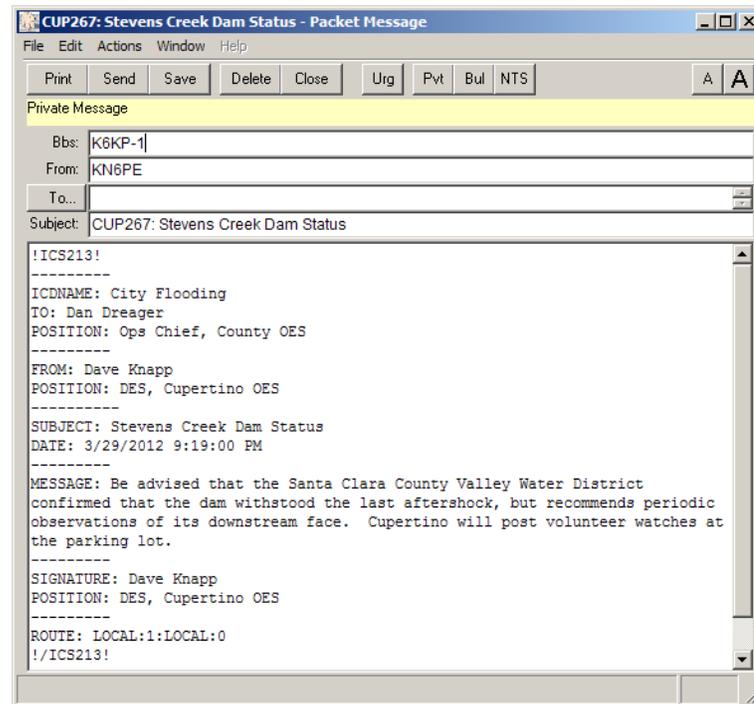
to delete the message before Outpost posts it to the BBS. If Outpost already posted the message to the BBS, then the Ics213mm user or Outpost operator should send a follow-up message requesting that message be ignored or deleted.

#### 4.4 Finishing up a Sent message with Outpost

Outpost assumes that any message created and stored in its message database is a valid message.

One of the side benefits of setting Outpost's option to run Opdirect on startup (**Tools > Message Settings** menu, Advanced Tab) is that, once the message is sent from Ics213mm, Outpost automatically opens it so that the operator can complete the packet message.

Ics213mm formats an ASCII message that can be imported by another Outpost and Ics213mm program as well as read by a non-Outpost / non-Ics213mm user.



**Figure 13: Ics213mm message in an Outpost Message form**

With the above example, here are some things to note:

- The **!ICS213!** and **!/ICS213!** tags begin and end the message.
- You can add other text either before the **!ICS213!** tag or after the **!/ICS213!** tag. While this text will show up in the Outpost message, it will not show up in the Ics213mm message.
- **DO NOT** add any text in between the tags: This will change the content and possibly the meaning of the message.

To complete the message, the Packet Operator enters the destination address in the To: field, and then presses **Send**.

Note the format of the message. Because Outpost sends text messages in the clear, Ics213mm formats the message so that it is user-readable even if the recipient is not an Outpost/Ics213mm user.



# 5 Message Routing

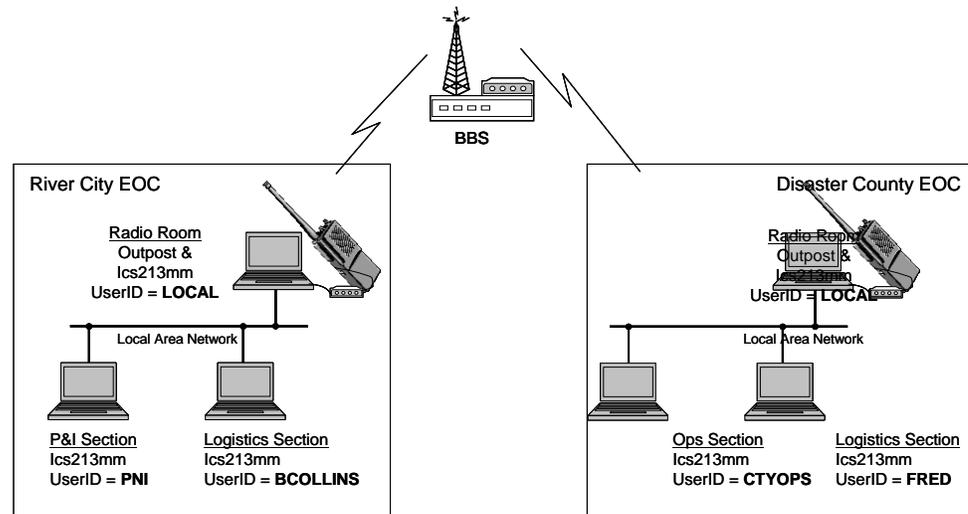
## 5.1 Introduction

Because of the network interconnectivity between Ics213mm and Opdirect, Ics213mm does not necessarily need to be installed in the radio room. Instead, it can be installed anywhere on the local area network PROVIDED Ics213mm is on the same LAN as Outpost.

To get the right message or reply to the right user, Ics213mm needs to perform a certain amount of message routing, particularly if there is more than one instance of Ics213mm deployed.

## 5.2 Example of Routing

To help explain routing, let's assume the following scenario.



Disaster County has its' share of problems and responds whenever a disaster strikes within its jurisdiction. Most of the problems come from River City which is located on the Fullbanks River that flows through the county.

At the River City EOC, they have implemented the following:

1. In the Radio Room, the Communications Team has a laptop loaded with Outpost and an instance of Ics213mm. Because this is the ICS 213 central node for their EOC, they set the User ID to the default "LOCAL". Their Outpost PC is on the City' EOC LAN.
2. There are 2 PCs in the EOC. The Planning and Intelligence (P&I) Section has Ics213mm installed on their PC. This user decided on a User ID of "PNI".
3. The other EOC PC is run by the Logistics Section. Bill Collins is the PC user and decided on an Ics213mm User ID of "BCOLLINS".

At the Disaster County EOC, they have implemented the following:

1. In the County Radio Room, the Communications Team also has a PC loaded with Outpost and an instance of Ics213mm. Because this is the ICS 213 central

node for the county EOC, they also set the User ID to the default “LOCAL”. Their Outpost PC is on the County EOC’s LAN.

2. They also have 2 PCs in the EOC. The Operations Section has Ics213mm installed on their PC, and the PC user decided on a User ID of “CTYOPS” (abbreviation for County OPS).
3. The other EOC PC is run by the Logistics Section. Fred Jones is the PC user and decided to set the Ics213mm User ID to “FRED”.

### 5.3 River City EOC: Sending a Message to County

Today, it’s raining hard in River City and NOAA reports the river will crest late this afternoon. River City EOC just activated, their Logistics Section needs to send a message to County Logistics requesting more sand bags.

1. Bill Collins, the River City Logistics Section Chief and PC user, creates the message in Ics213mm by pressing **New**, then filling in the **Subject** and **Message**. All other fields were automatically filled in. He then presses **Send**.

The screenshot shows the ICS-213 Messaging application window. The title bar reads "ICS-213 Messaging". The menu bar includes "File", "Setup", "Edit", and "Help". Below the menu bar is a toolbar with buttons for "New", "Send", "Save", "Delete", "Close", "Browse", "<<", ">>", "Edit", and "Reply". A status bar at the top indicates "Msg# 15, Locally created message, status is Draft".

The message fields are as follows:

- To: Fred Jones
- From: Bill Collins
- Subject: We've got trouble in River City
- Position: Logistics, County EOC
- Position: Logistics, River City
- Date: 11/28/2009 09:53

The message body contains the text: "Fred, the Fullbanks River is cresting again, and we need about 200 sandbags. Please confirm that you have them, and when you think you can send them to us." Below the message body is a signature field with "Bill Collins" and a position field with "Logistics, River City".

At the bottom of the window, there is a "Reply" section with empty fields for "Signature", "Position", and "Date". The status bar at the bottom right shows "Disconnected 09:54:52".

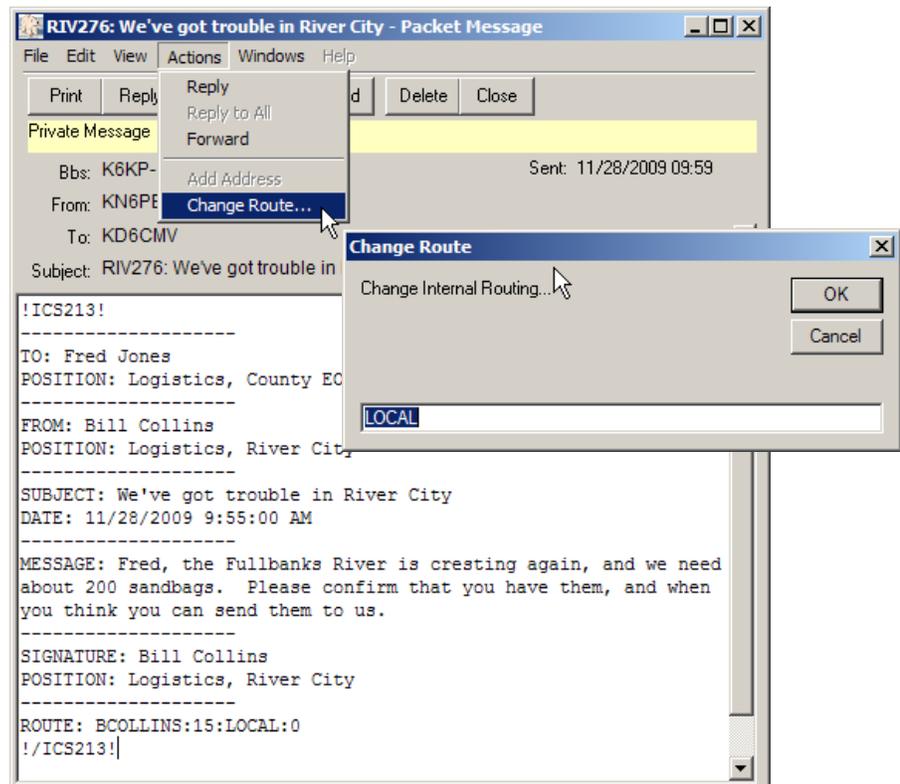
2. Bill’s Ics213mm program connects to Opdirect, passes the message to Outpost, and checks for any incoming messages. Opdirect writes the message to the Outpost message database, and then tells Outpost that a new outgoing message is there. Outpost looks for the message and automatically opens it.



### 5.5 Disaster County Radio Room: receives the message

5. At the County EOC, Outpost polls the BBS as usual, retrieves this message, and indicates that the message arrived (some type of audio message or tone is heard).
6. The County packet operator opens the message in Outpost, sees that it is an ICS 213 message, and it is addressed to Fred Jones, the County Logistics guy. Because the County packet operator was helping the EOC staff with Ics213mm, he knows that Fred's Ics213mm User ID is "FRED".

With the message open, he selects **Actions > Change Route**. The sending station originally set the Destination Route to LOCAL causing the message to load into the Radio Room's copy of Ics213mm (who's User ID is LOCAL).

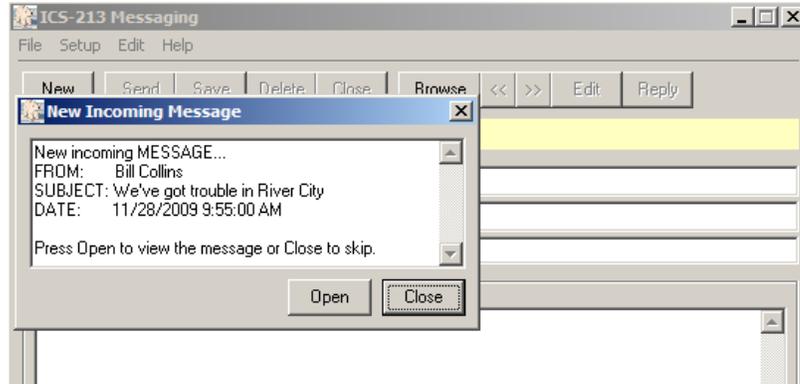


7. The County packet operator changes the Route to match what Fred set up on his Ics213mm, which is, "FRED", presses **OK**, and then presses **Close** to close the message.

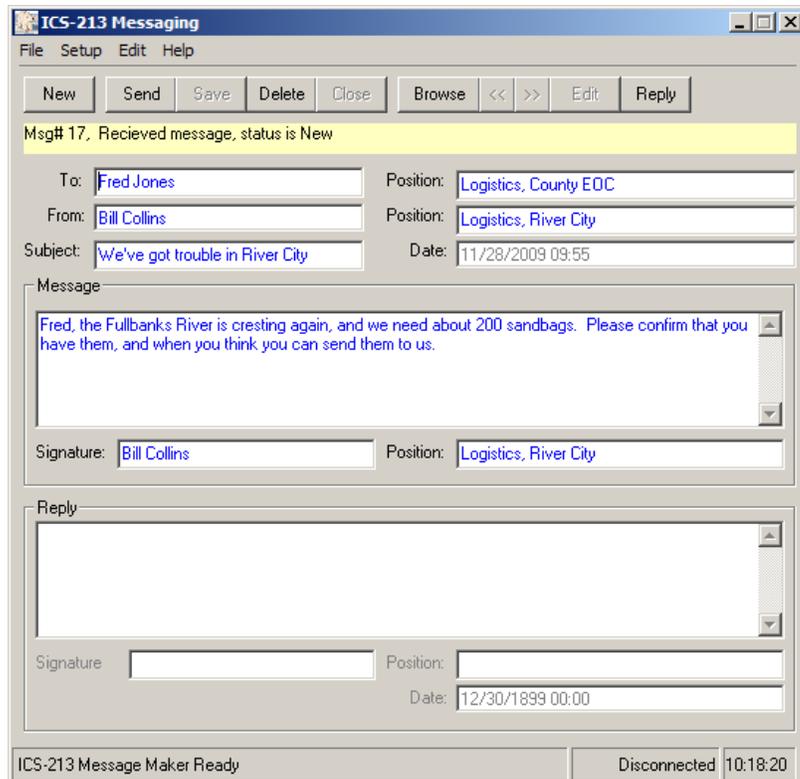


## 5.6 Disaster County EOC: receiving the message

8. Shortly thereafter, Fred's Ics213mm program automatically polls Outpost for any incoming messages with a routing for "FRED", and finds one. At Fred's PC, Ics213mm pops up the notification letting him know that a message arrived.



9. Fred presses **Open**, and the message is loaded for him to review. This what he sees...



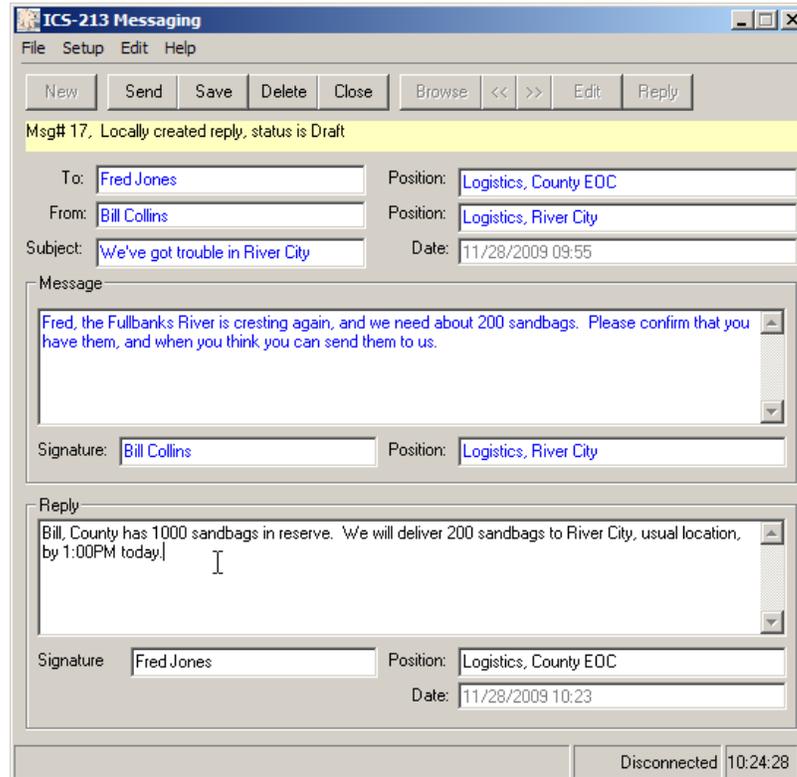
Some things to note:

- The Message status is listed as **Received message, status is New**.
- The message is listed in **BLUE** meaning that it is currently READ ONLY.
- Because this is an incoming message, the only actions allowed are to DELETE or REPLY.

- Fred wants to print this; he uses the menu **File > Print** so his team can see if they can meet he request. Fred prints 2 copies (not shown here).

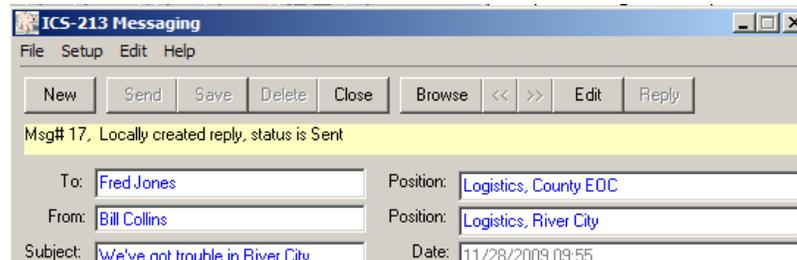
### 5.7 Disaster County EOC: Replies to the message

- County has 1000 sandbags that they can deliver. Fred presses **Reply** and fills in the Reply section of the message letting Bill know that they can be there in 3 hours.



Note that the original message text area remains locked (**BLUE**) while the reply text area is open for editing (**BLACK**). The reply signature, position, and date that the reply was created are automatically filled in.

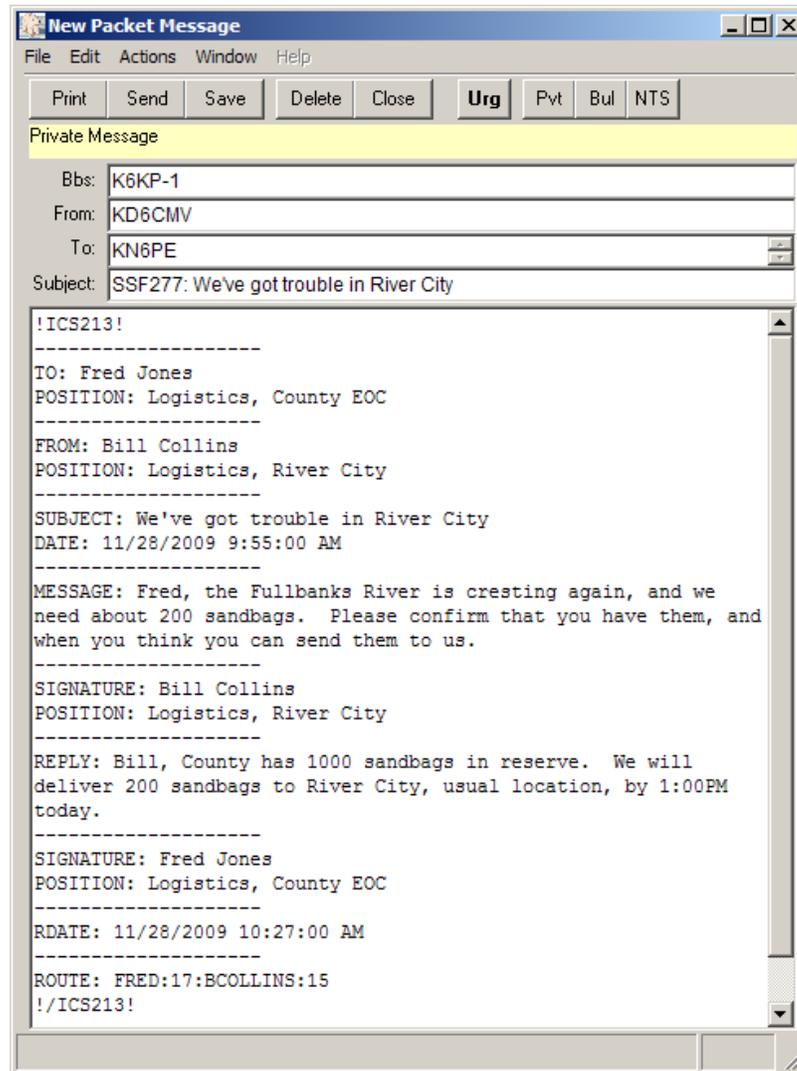
- When done, Fred presses **Send** and the reply is sent back to the County Outpost system.



The message status is now updated to **Locally created reply, status is Sent**.

### 5.8 Disaster County Radio Room: Complete the reply

12. Back in County's Radio Room, the reply message pops up and the County packet operator completes the message by filling in the **To:** field.
13. When done, the County packet operator presses **Send** and Outpost sends it to the BBS.



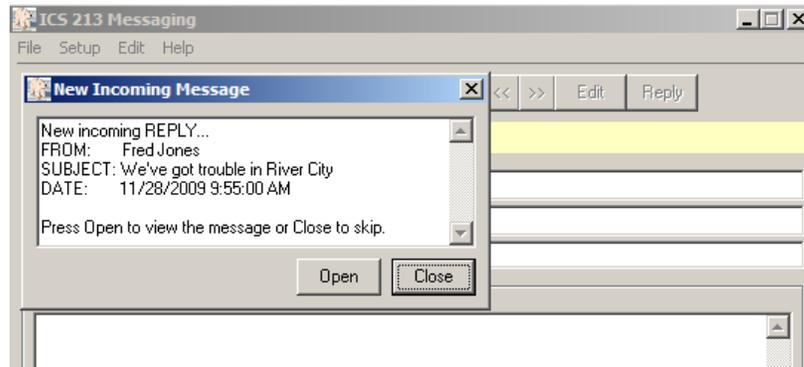
Note the Route. It shows it is from "FRED" and to "BCOLLINS". This ensures that the reply gets back to the originator without any packet operator intervention.

### 5.9 River City Radio Room: Receives the reply message

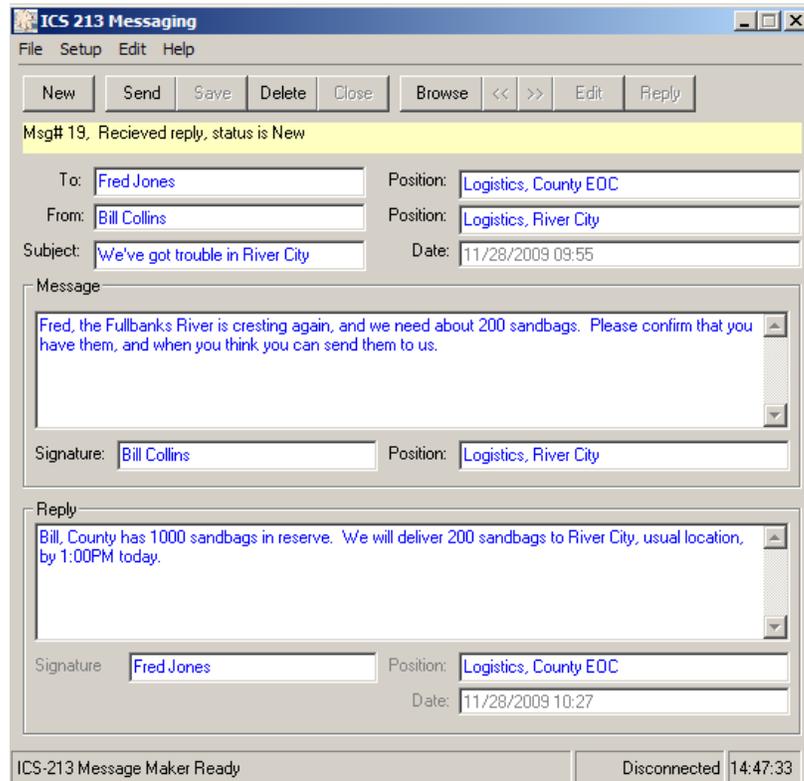
14. River City's Outpost retrieves the message. As described above, because the route is set to BCOLLINS, there is no need for any interaction with the message.

### 5.10 River City EOC: Receives the reply message

15. Finally, Bill Collins' Ics213mm automatically polls Outpost for any messages and retrieves the reply from County. The program opens a notification window letting the PC operator know that a reply message has been received.



16. Bill presses **Open** and sees his original message, plus Fred's reply.



Note that the message status is **Received reply, status is New**. Because this completes the entire exchange, the message cannot be edited. If a new message is needed, the user presses **New** and creates a new message.

