

EOC Operations: Extending Outpost's Reach

EMCOMM University

San Joaquin County Ag Center

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Topics

- Building on the ICS-213 General Message Form
- Leveraging Local Area Networks
- Demo's



Aligning features to needs

(continued...)

Environment: *Definition:* the circumstances or conditions that surround us.

Each situation is different... how do we adapt the tools we use to our environments?

Policy: *Definition:* a definite course or method of action.

In a community of packet users, what policies do we adopt to ensure order, consistency, and efficiency in what we do?

Mission: *Definition:* the task with which we are charged.

How do we support our served agencies in their efforts to minimize loss of life and property, and speed the recovery?



EOC Operations

Emergency Operations Center

- Central command and control facility responsible for emergency or disaster management functions
- Responsible for the strategic overview, or "big picture", of the disaster
- The first most critical component of an EOC is the individuals who staff it
- The second most critical component of an EOC is its communications systems



EOC Operations

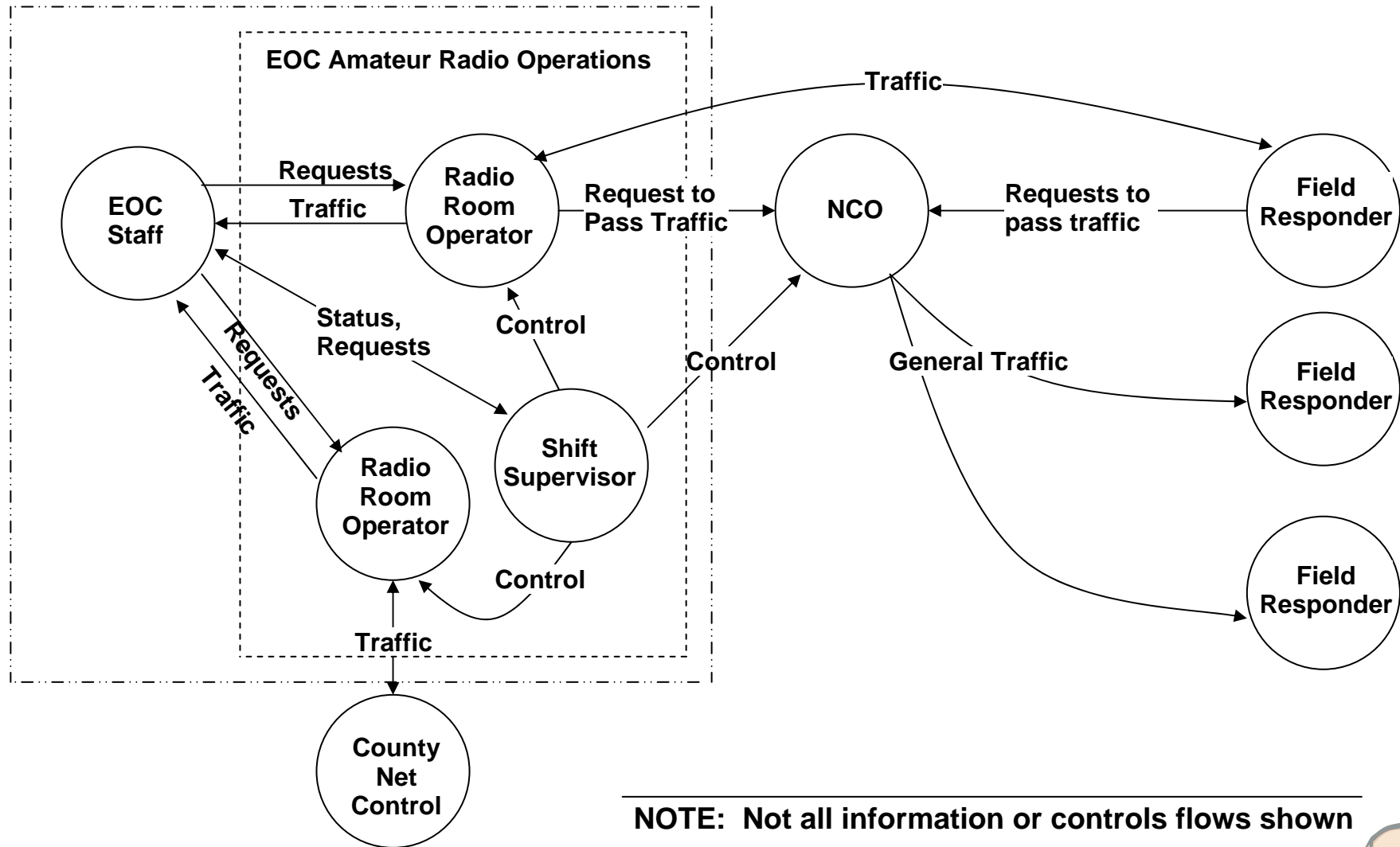
Communications systems

- Ranges from simple word of mouth to sophisticated communications networks
- Must provide for a redundant path to ensure that both situational awareness information and strategic orders can pass into and out of the facility without interruption.
- For continuity of operations considerations, communications system backbone components are not normally located at the EOC.
- Most municipalities have ARES and/or RACES volunteer teams on staff and rely on them for primary or secondary communications channels



Interacting with the EOC Operations

Sample Information flow – Cupertino, CA



ICS-213

General Message Form

- Originally designed as a multipart self-copying form for use as an interoffice memo.
- Increasingly used for messages between parties who are not in the same location.
- The form is often originated in one location and transmitted electronically to another location.
- Replies are returned electronically and the two "parts" of the form are matched together.
- Incident messaging, message documentation, and transmission are being adapted to include emerging needs and best practices.

Source: <http://ics213.com/>

- Everyone's got an opinion on how ICS-213 should look



ICS-213

General Message Form

- Most ICS-213 Message Forms look like this...

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

Source: <http://ics213.com/>

ICS-213

General Message Form


Message Number _____	General Message ICS-213	Check _____
To: _____	Position: _____	
From: _____	Position: _____	
Subject: _____	Date: _____	Time: _____
Message: _____		

Multiple flavors

- Header variation...

- Voice-net ready...

VIRGINIA RACES - ICS FORM 213 GENERAL MESSAGE



TO: _____ POSITION: _____

FROM: _____ POSITION: _____

SUBJECT: _____ DATE: _____ TIME: _____

MESSAGE NUMBER:

					5
					10
					15
					20
					25
					30
					35
					40
					50

SIGNATURE: _____ POSITION: _____
(Reply on back)

ICS-213

General Message Form

Multiple flavors

- One way, detailed

MESSAGE FORM		When Receiving ² Msg.: Sender's msg. #	Msg. #	When Sending Msg. ³ Receiver's msg. #
▶ Use Ballpoint Pen—Press Hard; Print Clearly (See back for instructions)				
Date: (MM/DD/YY) ¹ ____/____/____	Situation Severity (✓one) ⁴ <input type="checkbox"/> EMERGENCY (e.g., Life Threat) <input type="checkbox"/> URGENT (e.g., Property Threat) <input type="checkbox"/> OTHER (All others)	Msg. Handling Order (✓one) ⁵ <input type="checkbox"/> IMMEDIATE (As Soon as Possible) <input type="checkbox"/> PRIORITY (Less Than One Hour) <input type="checkbox"/> ROUTINE (More Than One Hour)		Message Requests You To: ⁶ TAKE ACTION (✓one) <input type="checkbox"/> Yes <input type="checkbox"/> No REPLY (✓one) <input type="checkbox"/> Yes, by _____ <input type="checkbox"/> No <input type="checkbox"/> FOR YOUR INFO. (no action required)
Time: (24hour clock) ____:____:____ <small>0001 to 2400 2:00 PM = (12+2) = 1400 Hrs</small>	ICS Position: (required) ⁷	From:	ICS Position: (required) ⁸	
	Location: (required) ⁹		Location: (required) ⁹	
	Name: (optional)		Name: (optional)	
	Telephone #: (optional)		Telephone #: (optional)	
SUBJECT: ¹⁰ _____				
REFERENCE (e.g., Number of earlier msg.): ¹¹ _____				
Message: ¹² (what, when, where needed; how long; contact name and phone number) KEEP MSG BRIEF				

ACTION TAKEN: ¹³ (For use by Originator / Recipient) ▶ USE SEPARATE MESSAGE FORM IF SENDING REPLY!				

CC: <input type="checkbox"/> Management <input type="checkbox"/> Operations <input type="checkbox"/> Planning <input type="checkbox"/> Logistics <input type="checkbox"/> Finance				
Operator Use Only: ¹⁴				
How Received <input type="checkbox"/> or Sent <input type="checkbox"/> (✓one)		Operator Call Sign:		
<input type="checkbox"/> Telephone <input type="checkbox"/> Dispatch Center		Operator Name:		
<input type="checkbox"/> EOC Radio <input type="checkbox"/> FAX <input type="checkbox"/> Courier				
<input type="checkbox"/> Amateur Radio <input type="checkbox"/> Other _____		Date:		Time:

Outgoing (Sent): ¹⁵

Message Originator: Send the top copy (white) to radio, yellow to PLANNING, retain the pink copy for your reference.

Radio: After sending, complete Disposition info., retain white copy for file in radio.

Incoming (Received): ¹⁵

Radio: After receiving complete Disposition info., send the top copy (white) to the Addressed recipient, PLANNING, retain pink



ICS-213

If ICS-213 is what the OES uses, how do we tighten the alignment between what ARES/ RACES Teams have to offer with their needs?

How do we support the passing of situational awareness information and strategic orders?

What are the opportunities?

Adding an ICS-213 form to Outpost is one of the more frequent asked-for requests



ICS-213 Example

Santa Clara County RACES

ICS-213 in Santa Clara County

- Santa Clara County OES required a backup means to pass RIMS messages; Packet Radio was the logical choice
- County RACES also needed more standard means for soliciting and collecting information from the cities
- PacForms are web-based forms that can be deployed to the EOC staff for quick data entry
- Message can be saved to a file or passed directly to **Outpost** by **Opdirect MCS**

ES/RACES MESSAGE FORM - Windows Internet Explorer

E:\PacFORMS\exec\Message.html

Edit View Favorites Tools Help

http://www.nasa.gov/cente... ARES/RACES MESSAGE F... x

EOC MESSAGE FORM

PacFORMS adaption of SCCo ICS Form 213 (Ver. 2.0)
By Phil Henderson, KF6ZSQ
(This form works with Outpost/OpDirect for Automatic ASCII text save)
For Instructions using this form [Click Here.](#)

2.) When Receiving Msg.: Senders's msg. #		Msg. #	3.) When Sending Msg.: Receiving msg. #
<input type="text"/>		<input type="text"/>	<input type="text"/>

1a.) Date: (MM/DD/YY) <input type="text" value="03/10/2009"/>	4.) Situation Severity (Select One) <input type="radio"/> EMERGENCY (e.g., Life Threat) <input type="radio"/> URGENT (e.g., Property Threat) <input type="radio"/> OTHER (All Others)	5.) Msg. Handling Order (Select One) <input type="radio"/> IMMEDIATE (As Soon as Possible) <input type="radio"/> PRIORITY (Less Than One Hour) <input type="radio"/> ROUTINE (More Than One Hour)	6.) Message Request You to: TAKE ACTION (Check one) <input type="radio"/> Yes <input type="radio"/> No REPLY (Check one) <input type="radio"/> Yes <input type="radio"/> No <input type="checkbox"/> FOR YOUR INFO. (No action required)
1b.) Time: (24 hour clock) <input type="text" value="2202"/> 0001 to 2400 2:00 PM = (2+12)=1400 Hrs.			

7.) ICS Position: (required)	<input type="text"/>	8.) ICS Position: (required)	<input type="text"/>
9a.) Location: (required)	<input type="text"/>	9b.) Location: (required)	<input type="text"/>
Name: (optional)	<input type="text"/>	Name: (optional)	<input type="text"/>
Telephone #: (optional)	<input type="text"/>	Telephone #: (optional)	<input type="text"/>

10.) SUBJECT:

11.) REFERENCE (e.g., Number of earlier msg.):

12.) Message (what, when, where needed; how long; contact name and phone number) KEEP MSG BRIEF

13.) Action Taken: (For use by Originator / Recipient) -> USE SEPARATE MESSAGE FORM IF SENDING REPLY!

CC: Management Operations Planning Logistics Finance

14.) Operator use Only

How Received or Sent (Check One this line and one below)

Telephone Dispatch Center
 EOC Radio FAX Courier
 Amateur Radio Other

Operator Call Sign:

Operator Name:

Date: Time:

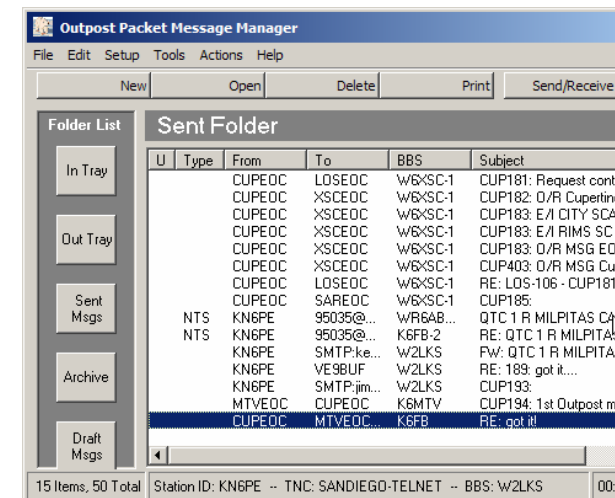
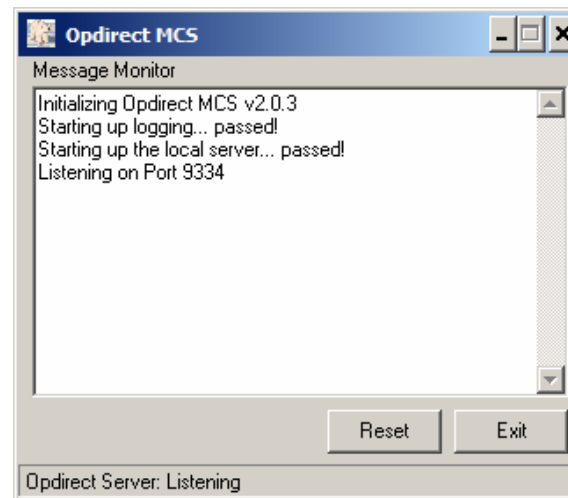
Outgoing (Sent):
Message Originator: Send the top copy (white) to Radio, yellow to PLANNING, retain the pink copy for originators file.
Radio: After sending, complete Action Taken info. in gray area, keep white for file in Radio.
Incoming (Received):
Radio: After receiving, complete Action Taken info. in gray area, route top copy (white) to the addressee, pink copy to PLANNING; retain yellow for file in Radio

Opdirect Message Capture System

Introduction

What is Opdirect.exe?

- Outpost program bolt-on
- Listens for and receives messages from remote sources, such as SCC's ICS-213, by a WinSock connection
- Processes and writes a message to the Outpost message DB
- Requires the Outpost Operator to complete the message and then press "send."



Listens to...
Host: LocalHost (127.0.0.1)
Port: 9334

Outpost-formatted
message

Outpost
Message DB

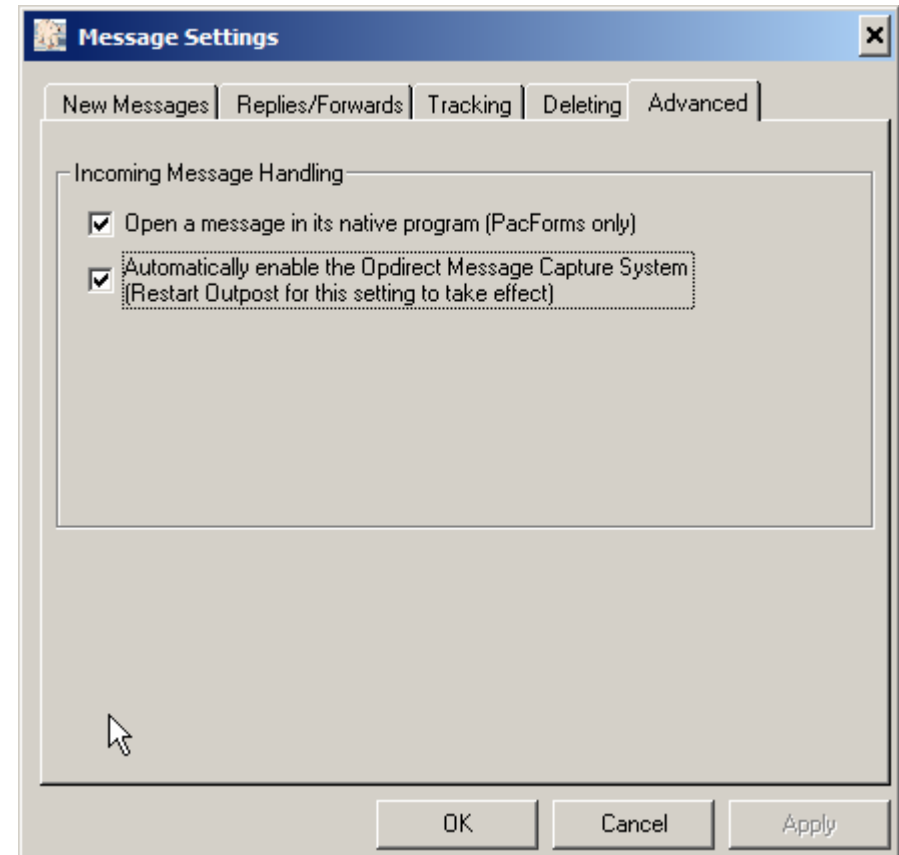


Opdirect Message Capture System

Introduction

Starting Opdirect.exe

- From Outpost,
Tools > Message Settings,
Advanced Tab
- Currently, controls to schedule
Opdirect.exe on Outpost startup



Opdirect Message Capture System

Processing SCC's online EOC Message Form

ES/RACES MESSAGE FORM - Windows Internet Explorer

http://www.nasa.gov/cente... ARES/RACES MESSAGE F... x

EOC MESSAGE FORM

PacFORMS adaption of SCCo ICS Form 213 (Ver. 2.0)
By Phil Henderson, KF6ZSQ
(This form works with Outpost/OpDirect for Automatic ASCII text save)
For Instructions using this form [Click Here.](#)

1a.) Date: (MM/DD/YY) 03/10/2009	4.) Situation Severity (Select One) <input type="radio"/> EMERGENCY (e.g., Life Threat) <input type="radio"/> URGENT (e.g., Property Threat) <input type="radio"/> OTHER (All Others)	5.) Msg. Handling Order (Select One) <input type="radio"/> IMMEDIATE (As Soon as Possible) <input type="radio"/> PRIORITY (Less Than One Hour) <input type="radio"/> ROUTINE (More Than One Hour)	6.) Message Request You to: TAKE ACTION (Check one) <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> REPLY (Check one) <input type="radio"/> Yes <input type="radio"/> No <input type="checkbox"/> FOR YOUR INFO. (No action required)
7.) ICS Position: (required) 8.) ICS Position: (required)	9a.) Location: (required) 9b.) Location: (required)	10.) SUBJECT: _____	

11.) REFERENCE (e.g., Number of earlier msg.): _____

12.) Message (what, when, where needed; how long; contact name and phone number) KEEP MSG BRIEF

13.) Action Taken: (For use by Originator / Recipient) -> USE SEPARATE MESSAGE FORM IF SENDING REPLY!

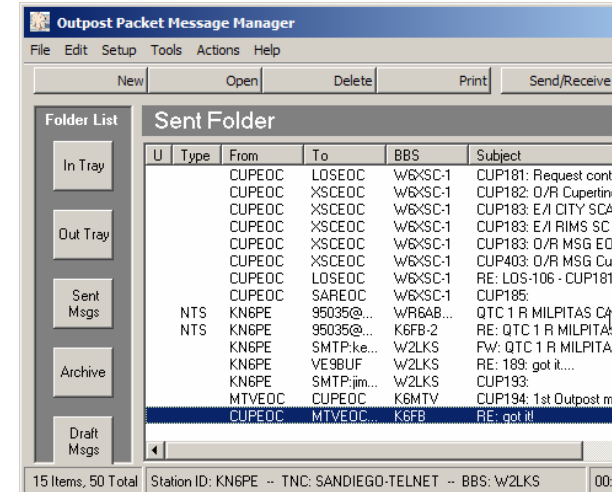
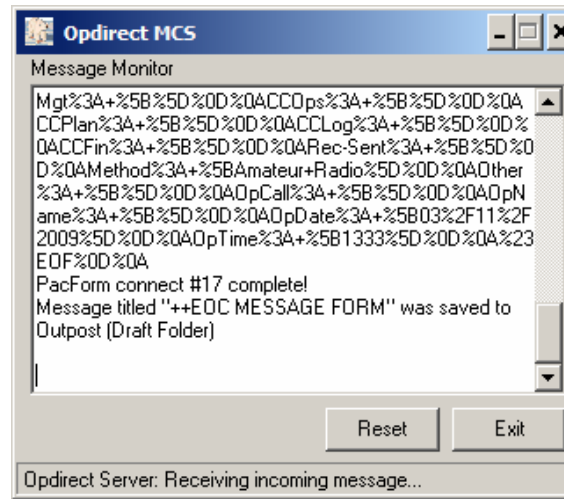
14.) Operator use Only
How Received or Sent (Check One this line and one below)
 Telephone Dispatch Center
 EOC Radio FAX Courier
 Amateur Radio Other _____

Operator Call Sign: _____
Operator Name: _____
Date: 03/10/2009 Time: 2202

Outgoing (Sent):
Message Originator: Send the top copy (white) to Radio, yellow to PLANNING, retain the pink copy for originators file.
Radio: After sending, complete Action Taken info. in gray area, keep white for file in Radio.

Incoming (Received):
Radio: After receiving, complete Action Taken info. in gray area, route top copy (white) to the addressee, pink copy to PLANNING; retain yellow for file in Radio.
Addressee: Take appropriate action.

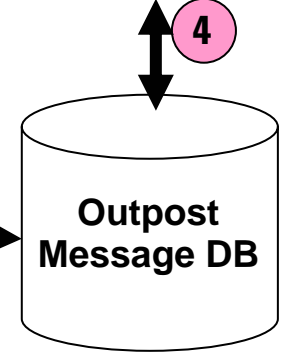
SCCo ICS FORM 213 (Ver. 2.0), 07/17/2007



1 SUBMIT Message Form to Outpost

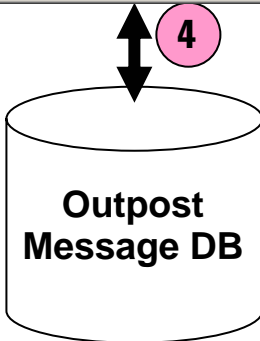
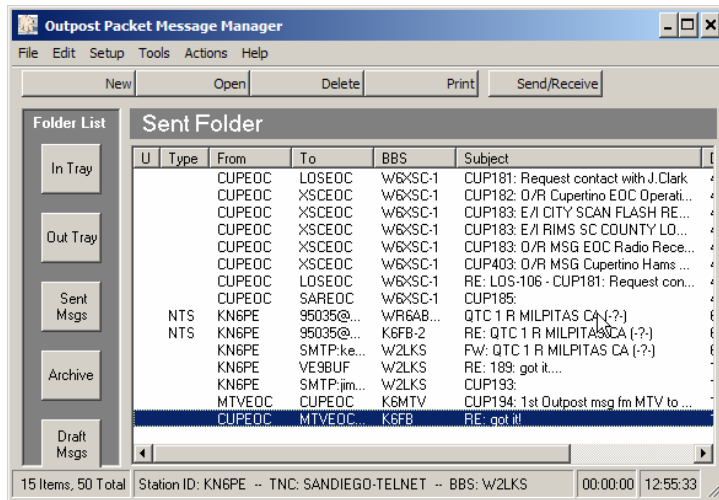
Host: LocalHost (127.0.0.1)
Port: 9334

3 Outpost-formatted message

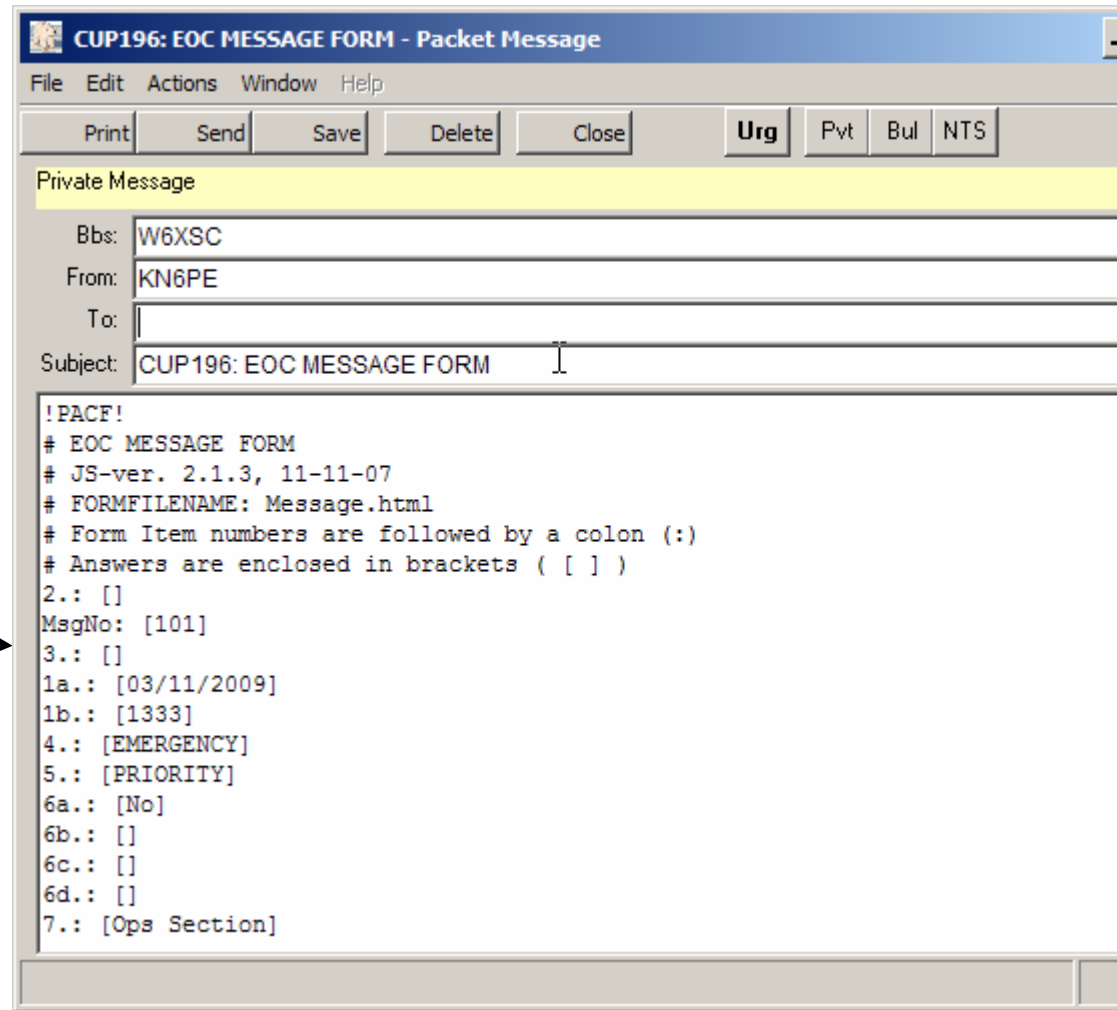


Opdirect Message Capture System

Processing SCC's online EOC Message Form



Auto-Open on Message Receipt



Opdirect Message Capture System

Processing SCC's online EOC Message Form

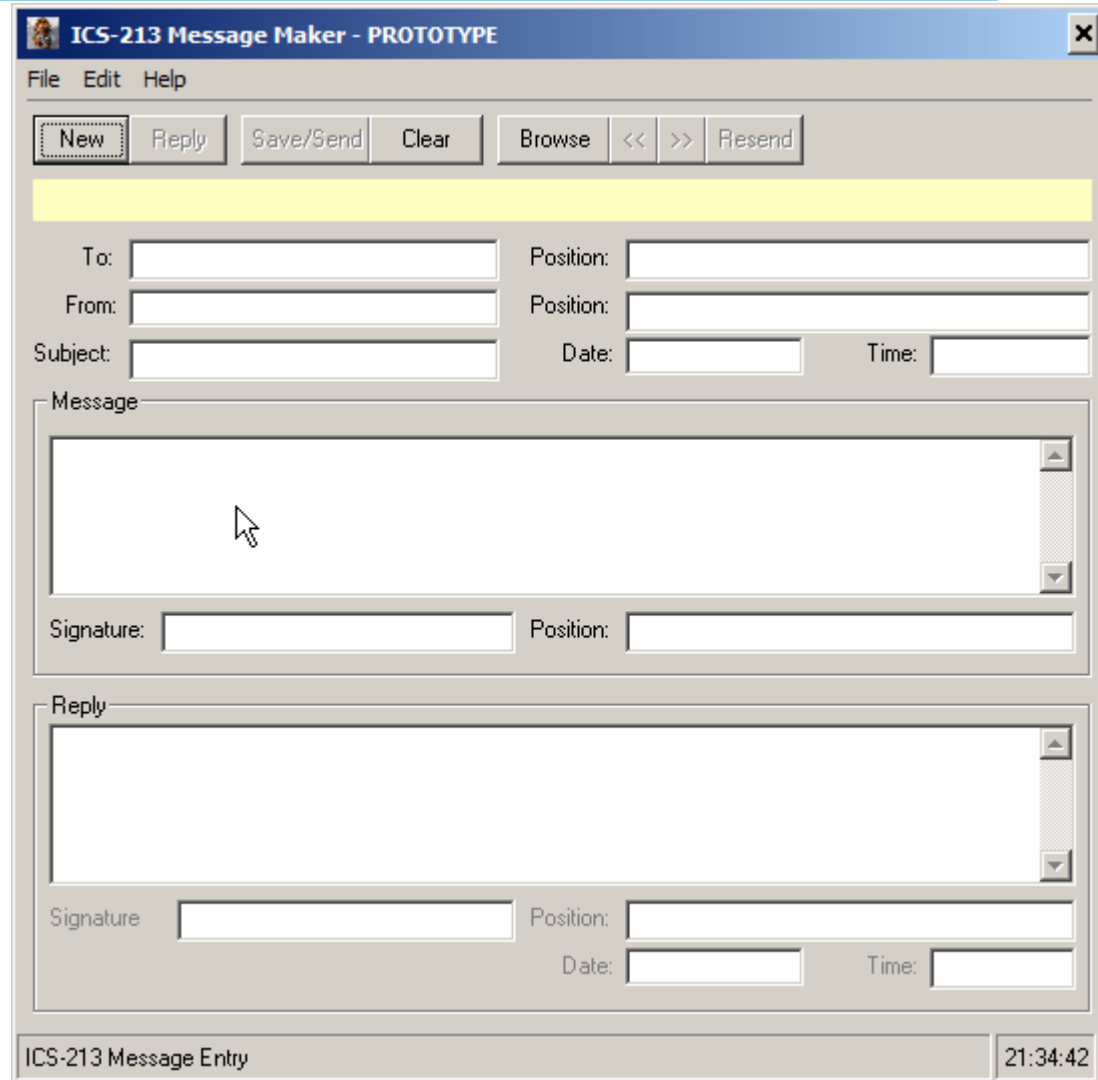
SCC's PacFORMS Implementation Details

- Supports a “reverse read” capability to re-assemble the message back into human-readable form
- Can be deployed on a memory stick to the EOC Staff for message entry and file creation
- Must be deployed on the same PC as Outpost for direct message integration with Outpost



Next Step... ICS-213 Message Maker

- A generic ICS-213 general message form
- Supports limited local message management
- Message delivery to Outpost by Opdirect.exe
- Can exist anywhere on the same LAN as the Outpost PC
- This is a prototype... input requested!!!



The screenshot shows a Windows-style application window titled "ICS-213 Message Maker - PROTOTYPE". The window has a menu bar with "File", "Edit", and "Help". Below the menu bar is a toolbar with buttons for "New", "Reply", "Save/Send", "Clear", "Browse", "<<", ">>", and "Resend". The main area of the window is divided into several sections:

- A yellow highlighted header bar.
- Fields for "To:", "From:", "Subject:", "Position:", "Date:", and "Time:".
- A large text area labeled "Message" with a mouse cursor pointing to it.
- Fields for "Signature:" and "Position:" below the message area.
- A second large text area labeled "Reply" with a mouse cursor pointing to it.
- Fields for "Signature", "Position:", "Date:", and "Time:" below the reply area.

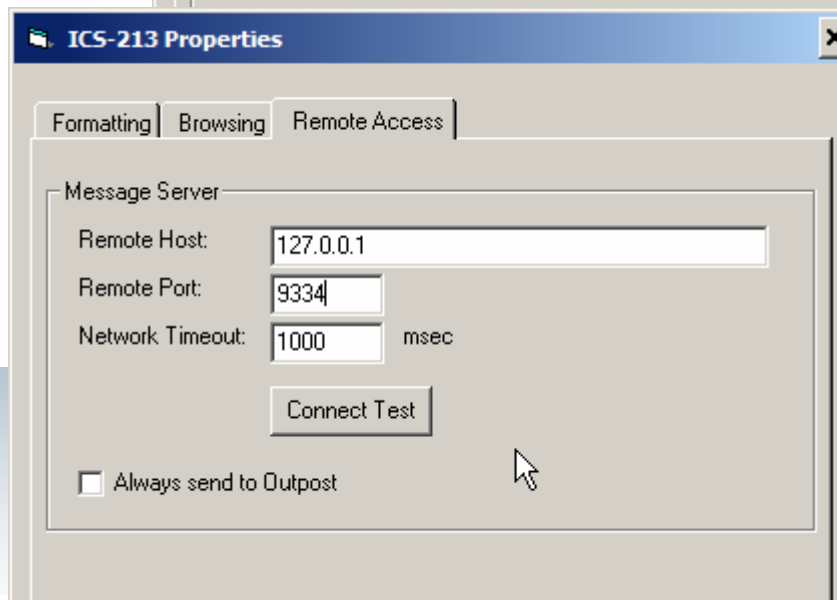
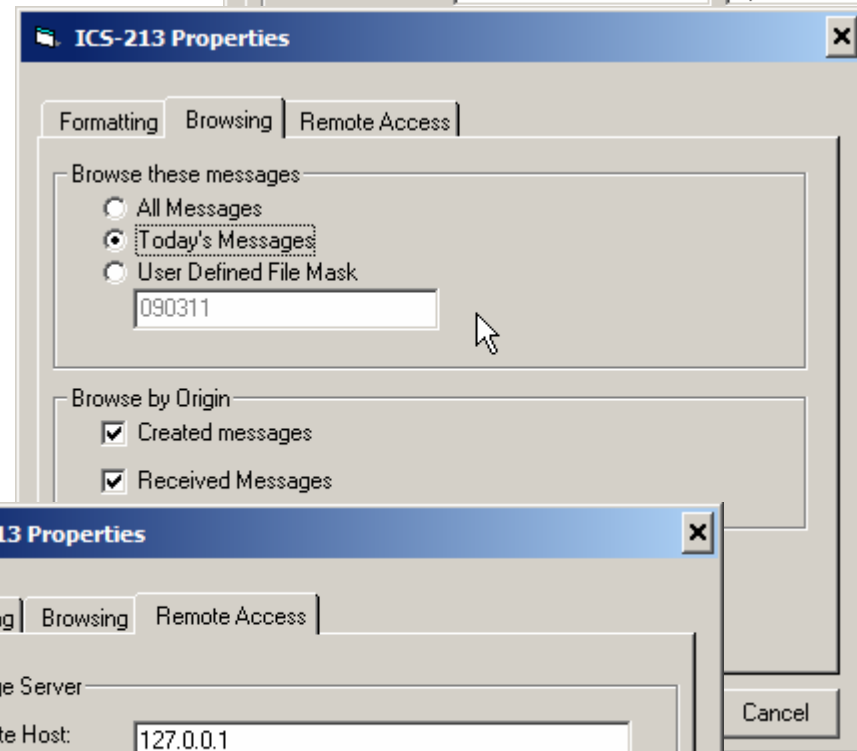
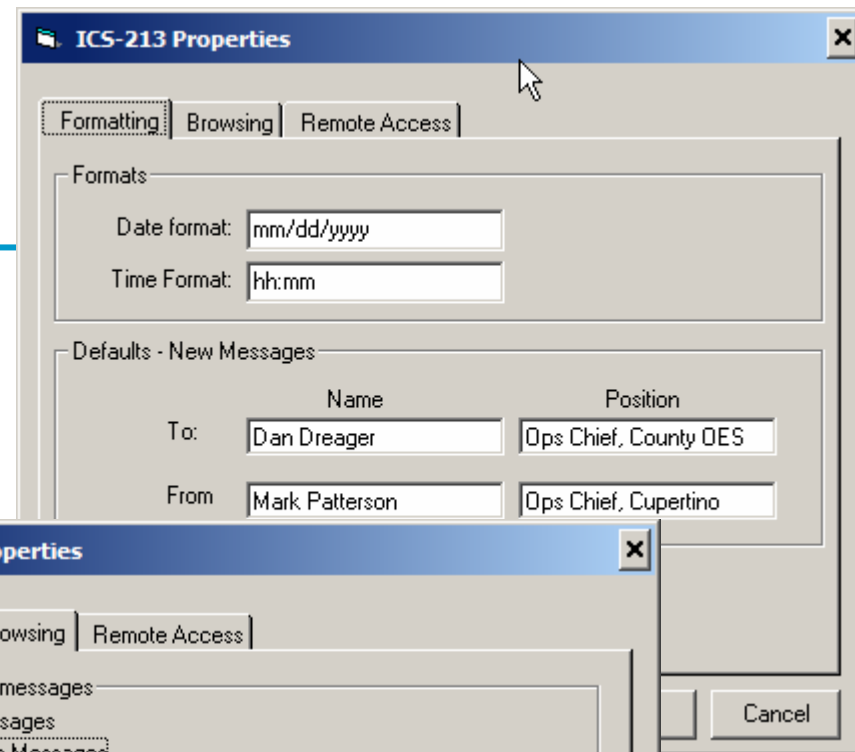
At the bottom of the window, there is a status bar that reads "ICS-213 Message Entry" on the left and "21:34:42" on the right.



ICS-213 Message Maker

Configuration Options

- File > Properties...
- Formatting... set date, time and From: and To: defaults
- Browsing... lets you look for a message saved, sent, or received.
NOTE: a copy of all messages are left locally, and can be reviewed, or used as the basis for the next message.
- Remote Access... the network parameters describing where to find Outpost



ICS-213 Message Maker

Pressing New...

- Fills in the defaults... To:, From:, Date, and Time
- Sets the Signature to the Sender (From:), can be changed
- Fill in...
 - Subject
 - Message

Press Save/Send

- Ics213mm.exe connects to Opdirect, sends the message, and saves this message in a file named:
ICS-213-yymmddhhmmssxy.txt

The screenshot shows the 'ICS-213 Message Maker - PROTOTYPE' application window. It features a menu bar with 'File', 'Edit', and 'Help'. Below the menu bar is a toolbar with buttons for 'New', 'Reply', 'Save/Send', 'Clear', 'Browse', '<<', '>>', and 'Resend'. The main area is divided into sections for 'New message', 'Message', and 'Reply'. The 'New message' section has fields for 'To:' (Dan Dreager), 'From:' (Mark Patterson), 'Subject:', 'Position:' (Ops Chief, County OES), 'Date:' (03/12/2009), and 'Time:' (13:07). The 'Message' section has a large text area and a 'Signature:' field (Mark Patterson) and 'Position:' field (Ops Chief, Cupertino). The 'Reply' section has a large text area and fields for 'Signature:', 'Position:', 'Date:', and 'Time:'. The status bar at the bottom right shows the time 13:08:36.



ICS-213 Message Maker

Pressing Save/Send...

ICS-213 Message Maker - PROTOTYPE

File Edit Help

1

New Reply Save/Send Clear Browse << >> Resend

To: Dan Dreager Position: Ops Chief, County OES

From: Mark Patterson Position: Ops Chief, Cupertino

Subject: Status of Stevens Creek Dam Date: 03/12/2009 Time: 13:10

Message

Be advised that Santa Clara 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: Mark Patterson Position: Ops Chief, Cupertino

Reply

ICS-213 Message Maker

! Message saved as ICS213-09031213102613.txt, and sent to Outpost!

OK

Signature Position: Date: Time:

Message saved and sent 13:10:59

Create this message file...

ICS213-09031213102613.txt - Notepad

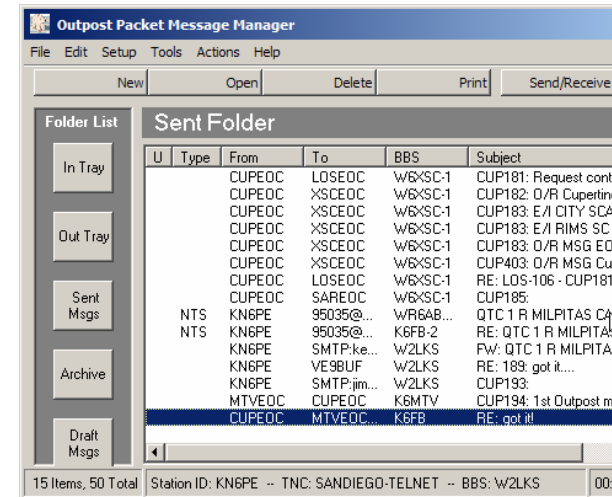
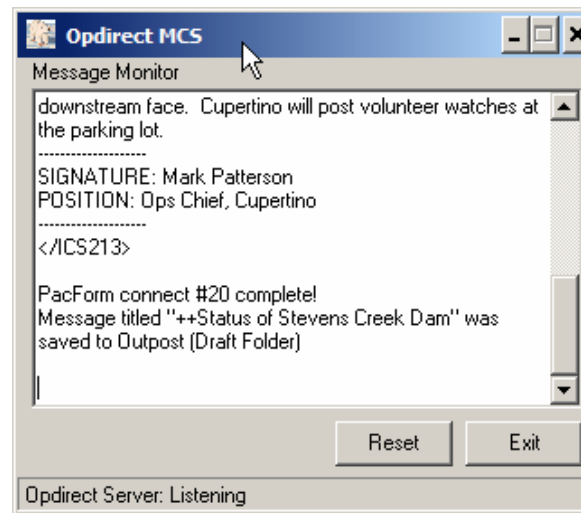
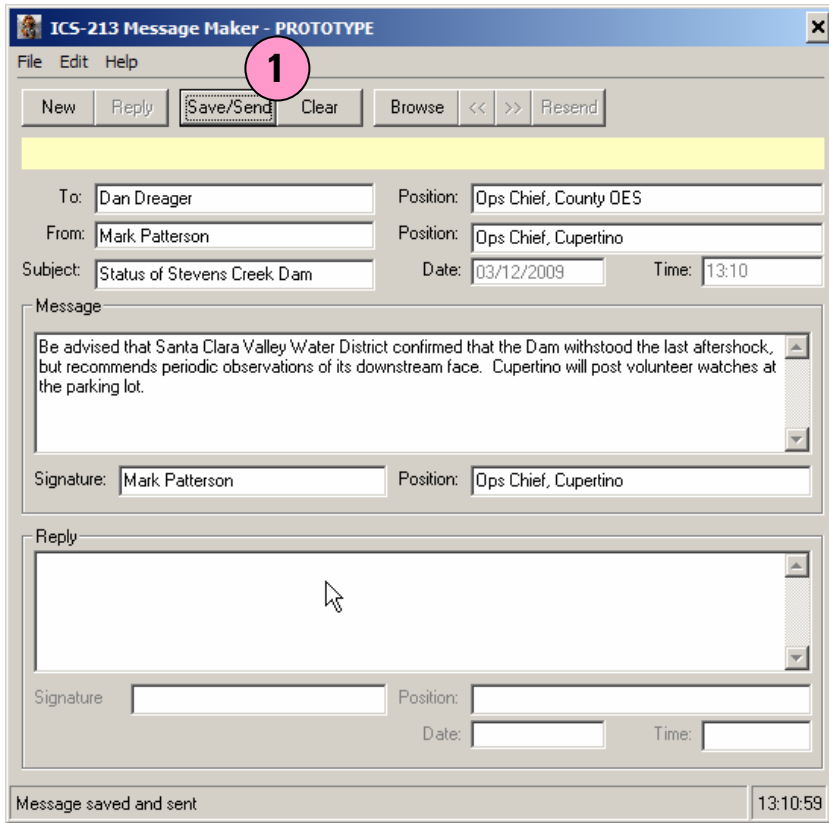
File Edit Format View Help

```
<ICS213>
-----
TO: Dan Dreager
POSITION: Ops Chief, County OES
-----
FROM: Mark Patterson
POSITION: Ops Chief, Cupertino
-----
SUBJECT: Status of Stevens Creek Dam
DATE: 03/12/2009
TIME: 13:10
-----
MESSAGE: Be advised that Santa Clara 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: Mark Patterson
POSITION: Ops Chief, Cupertino
-----
</ICS213>
```

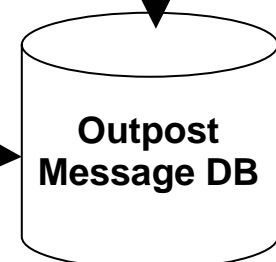


Opdirect Message Capture System

Processing ics213mm message



Outpost-formatted message

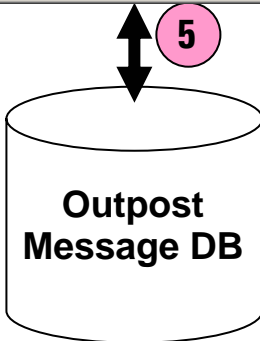
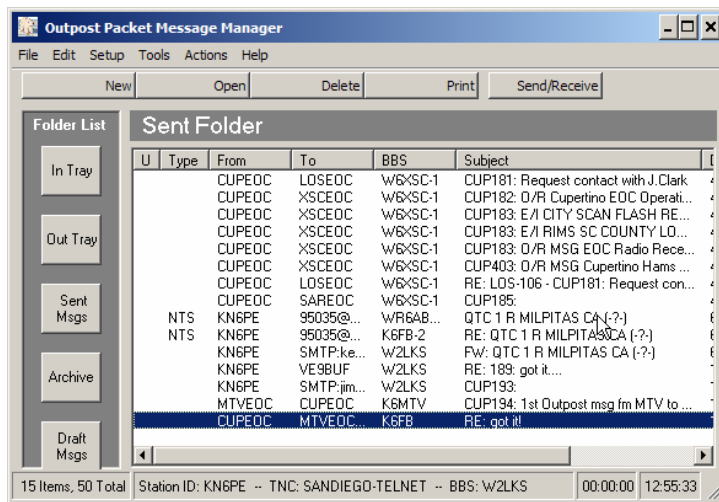


Looking for Opdirect.exe at:
Host: LocalHost (127.0.0.1)
Port: 9334

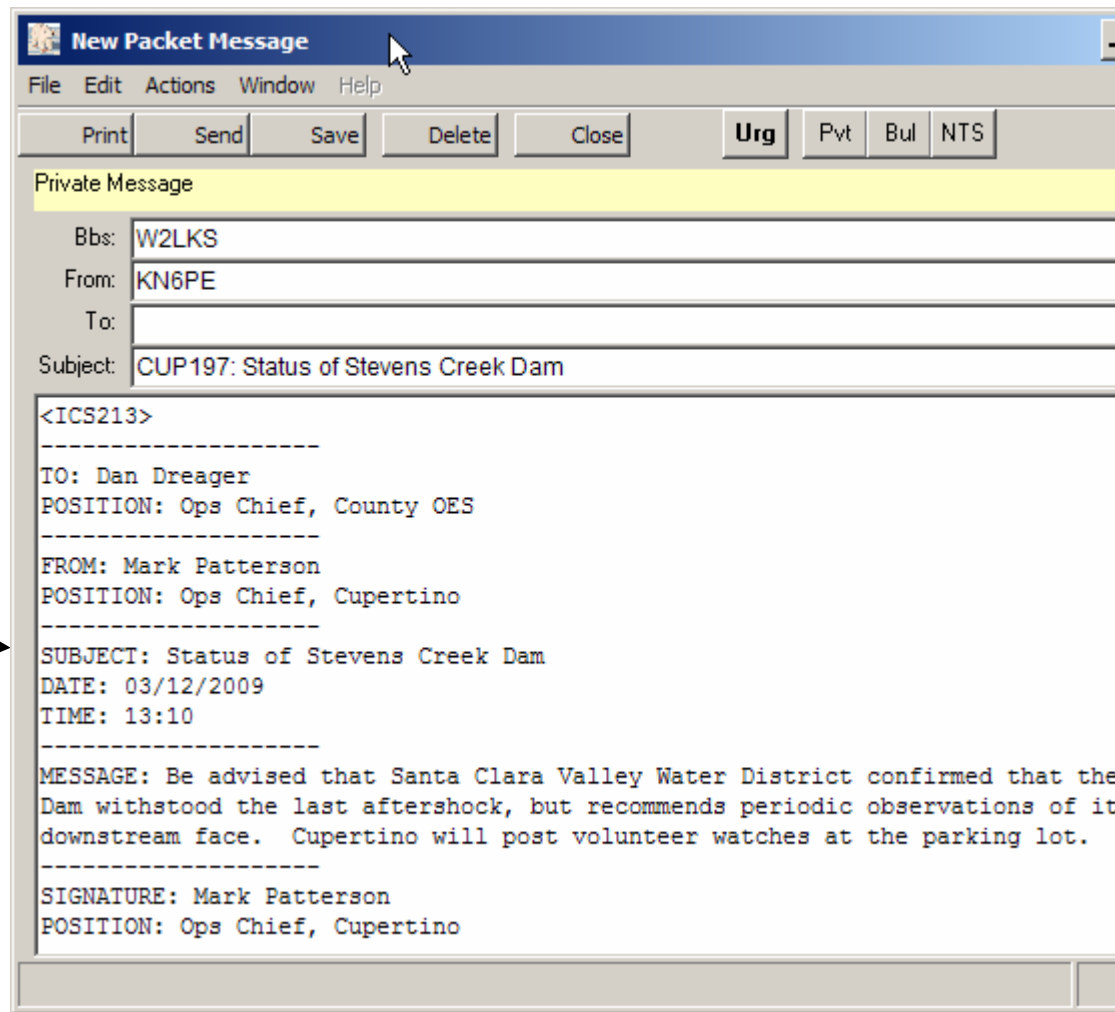


Opdirect Message Capture System

Processing ics213mm message



Auto-Open on Message Receipt



ICS-213 Message Maker

1. This is currently a prototype!
2. Next Steps:
3. Need to resolve several open questions
 1. Who enters ICS-213 messages? RACES? OES Staff?
 2. Form Layout... Message only? Or Message and Reply?



Moving Digital Messaging into the EOC

Leveraging Local Area Networks

Software and Hardware approach

•AGWPE

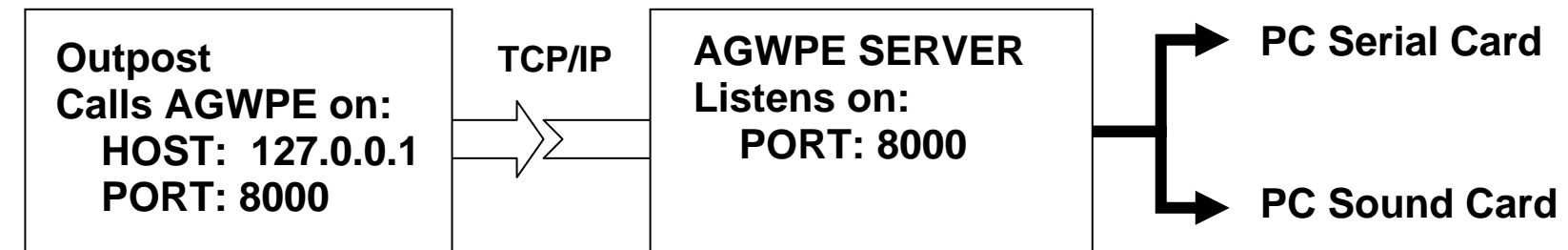
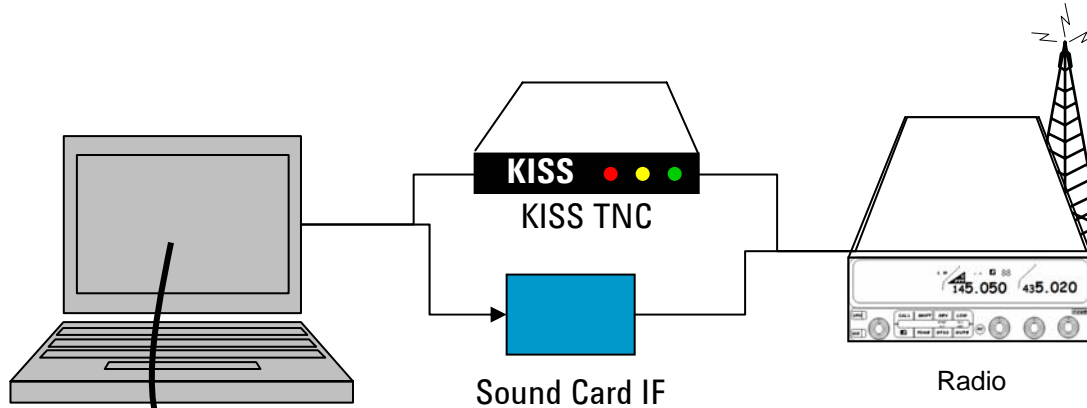
- SV2AGW's Packet Engine
- TNC management Program
- Controls TNCs that run in KISS
- Kits and Pre-assembled Interfaces
 - Tigertronics... Signalink
 - West Mountain Radio ... RigBlaster
 - MFJ... 1275, 1275M
- Or, use a PC's sound Card for packet



Moving Digital Messaging into the EOC

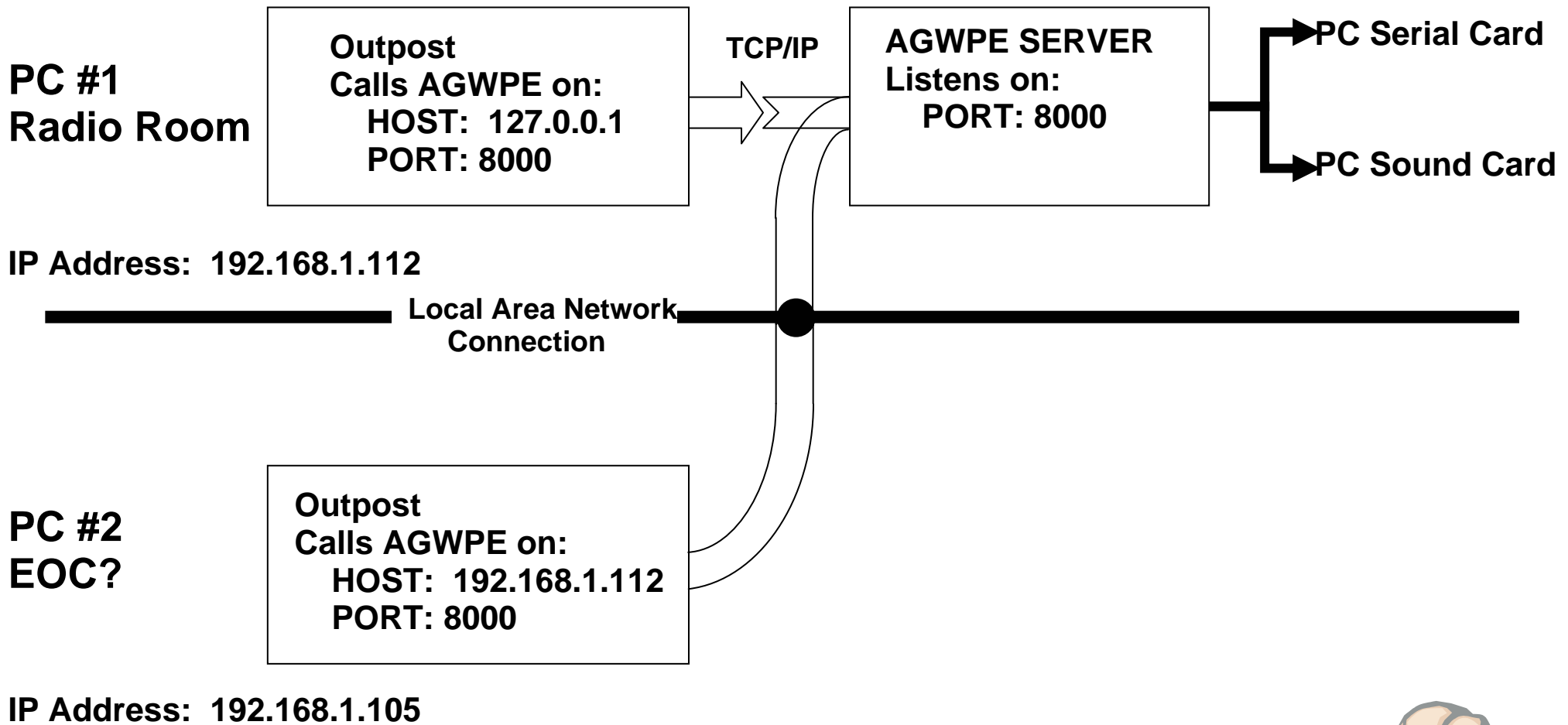
Leveraging Local Area Networks

PC, AGWPE Software
Sound Card IF, Radio



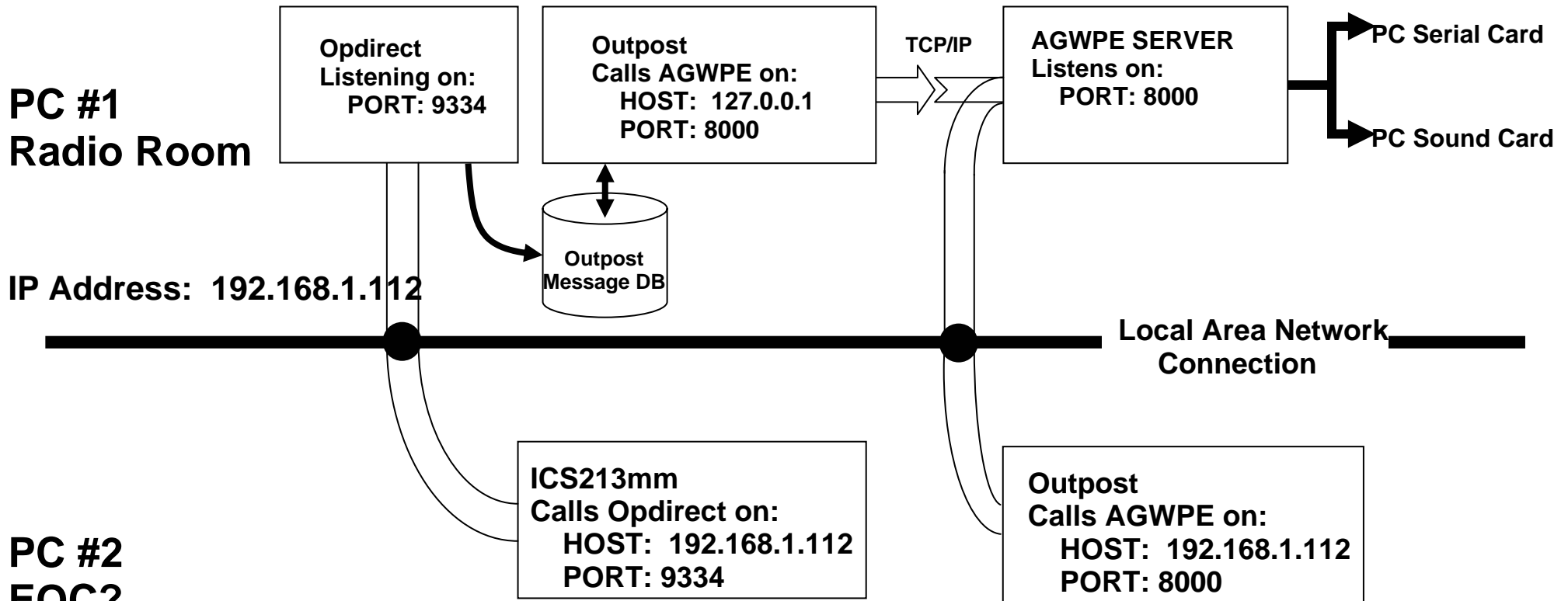
Moving Digital Messaging into the EOC

Leveraging Local Area Networks



Moving Digital Messaging into the EOC

Leveraging Local Area Networks



Moving Digital Messaging into the EOC

Leveraging Local Area Networks

The Problem:

- Some, not all, Municipalities do not allow PCs on their network that are connected to an external network (Packet?!?!)
- If your packet machine is on the EOC LAN, congratulations!
- If not...

The Solution:

- Establish your own EOC/Radio Room LAN



Moving Digital Messaging into the EOC

Leveraging Local Area Networks

Wi-Fi capable residential gateway / router

- The device is capable of sharing Internet connections among several computers via 802.3 Ethernet and 802.11b/g wireless data links.
- Look for one with wired and wireless (need to be wired to configure)
- Can co-exist with other wireless environments
- Configure with a unique SSID (Network name, i.e.: CARESEOC)



ICS213 Message Maker – Demo

- Creating messages
- Browsing
- Sending
- Local operations
- Remote operations



Thank you

Any Questions?

