Introduction to
Pre-release Packet Installer

Santa Clara County ARES/RACES

Revised: 01-May-2019

Purpose

- In the past, packet software updates were mostly incremental
  - And we didn't do this type of presentation until general release

- This release contains substantial changes, significant new capabilities
  - Discovering all of the new features by accident would take time
  - We'd like testers to jump right into the new features for faster feedback

Agenda

- Terminology
- Integrated Installer Contents
- Outpost
  - Behind the scenes enhancements
  - Live Demo: Other key features
- PackItForms
  - Live Demo: Key features
- Current Test Status
- Rollout Schedule
- Testing Details
- Action Items

Terminology

- Outpost Packet Message Manager
  - GUI-based interface for managing packet communications
  - Makes using packet as simple as using e-mail

- PacFORMS
  - HTML-based forms for use with Outpost
  - Since 2007, simplified forms-based data entry, reduced network bandwidth

- PackItForms
  - Next generation HTML-based forms for use with Outpost
  - Started in Los Altos; expanded to all county forms
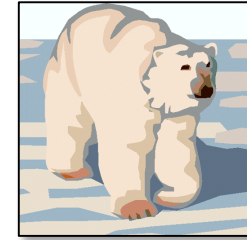
Terminology (2)

- API – Application Programming Interface
  - A method for two programs to communicate with each other without either having to know the internal implementation details of the other
  - Makes it easier to connect to, integrate with additional applications

- Outpost "Add-On"
  - Program that extends Outpost to handle enhanced/specialized message types
  - Communicates with Outpost via the Outpost API
  - Examples: Outpost Alt-911, PackItForms

Terminology (3)

- SCCo Integrated Packet Installer
  - In the past: Outpost with SCCo settings, PacFORMS
  - New: Outpost with SCCo settings, PacFORMS, PackItForms
  - Future: May incorporate additional "add-on" applications
- Pre-release
  - Tested by development and support team; needs broader testing
  - May contain cosmetic issues, but no known operational issues
- General Release
  - Fully tested and ready for use by everyone
  - Everyone should update as soon as possible

Integrated Packet Installer Contents

- Latest Outpost →

  - ~50 changes!

  - 31% API, 17% message handling, 11% send/receive, 10% scripting

- PacFORMS

  - Fix for double-quotes problem

- PackItForms

  - All new forms processing engine

  - 9 next generation forms

  - New offline operating mode

Outpost:
Behind the Scenes Enhancements

Outpost Behind the Scenes Functionality

- JNOS MD5 Authentication for Telnet

- Base64 encode/decode

- Support for SCS Tracker DSP TNC

- Major improvements/expansion of API

- New subject line format

# Outpost: JNOS MD5 Authentication for Telnet

- TNC uses AX.25 (packet) protocol
  - Only call sign is used to connect to BBS
  - All transmissions are in clear text; easily intercepted by someone listening
- If TCP/IP network is available, Outpost can use Telnet protocol
  - Same BBS commands as TNC/Radio, but network speed is usually faster
  - Telnet logins require passwords
    - **login:** w6xrl4
    - **Password:**
  - Telnet uses clear text, including the password
    - Exposing passwords might give bad actor a clue about other passwords you use
    - Can be snooped locally, but county WiFi backbone uses encryption

Outpost: JNOS MD5 Authentication for Telnet (2)

- MD5 Authentication is now automatic in Outpost
  - No security for message data; but helps avoid snooping on passwords
  - Not encryption; does not "obscure meaning" [47 CFR § 97.113(a)(4)]
  - Server (JNOS) and client (Outpost) have a shared secret: user's password
  - Server (JNOS) sends a "challenge" along with password prompt
    - **login:** w6xrl4
    - **Password [5cbe627b] :**
  - Client (Outpost) calculates and sends response (not password) in clear text
  - Server (JNOS) determines if response is correct; if so, user is connected
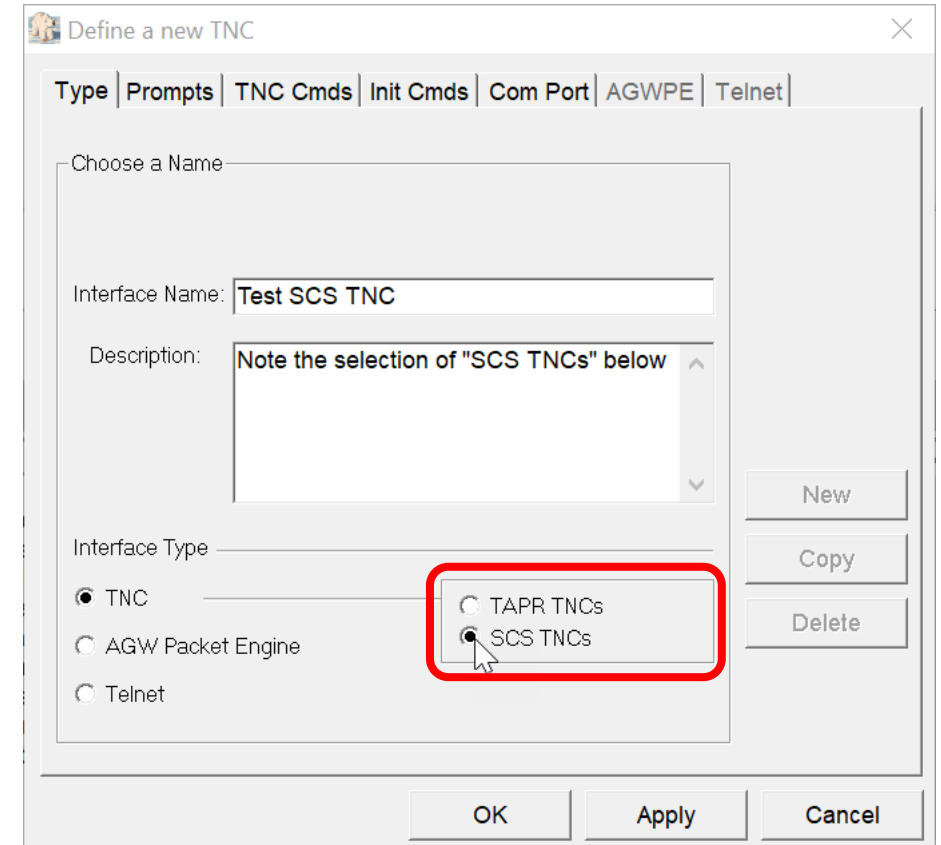 - A new challenge is calculated at each login

Outpost: Base64 Encode/Decode

- Initial encode/decode implementation
  - Action > Encode Base64

- Outpost will
  - Encode before sending to, decode after receiving from BBS
  - Displays sent or received message to user as plain text
  - Note: Approximately 33% increase in message size!

- Current Usage
  - Preserve non-printable and other characters that would not normally be useable in a packet system
  - Prevent unintended "newlines" inserted by BBS
  - Add-ons can request encoding/decoding via API

- Future:
 - Part of workflow to handle more complex message types
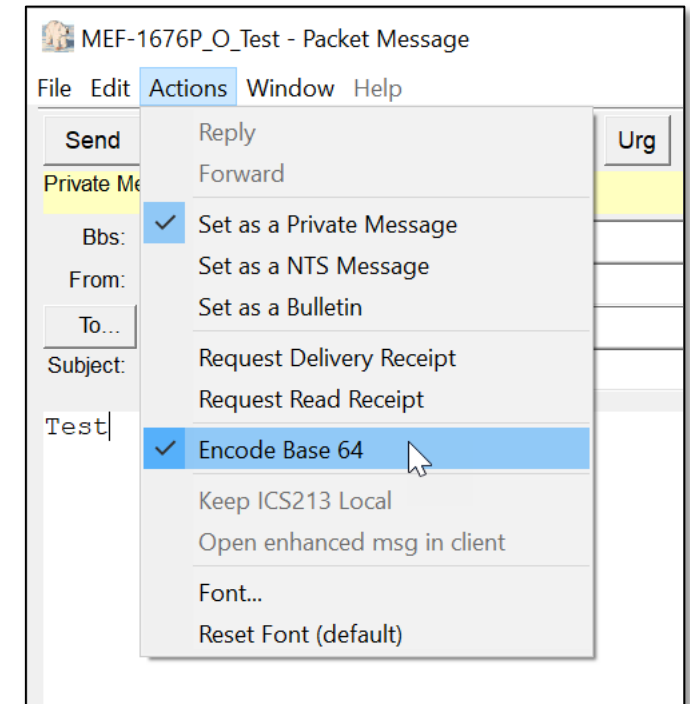
Outpost: Support for SCS Tracker DSP TNC

- SCS TNCs behave differently than TNCs that use the TAPR standard (Kantronics, Timewave, MFJ, …)
  - They are also about 1.5x as expensive!
- Outpost can now support the SCS Tracker / DSP TNC
- Helps ensure Outpost is usable no matter what TNC is in use

Outpost: Improvements/Expansion of API

Existing

PacFORMS
Outpost

New Release

PacFORMS	PackItForms
	Outpost Add-On API
Outpost	

• • •
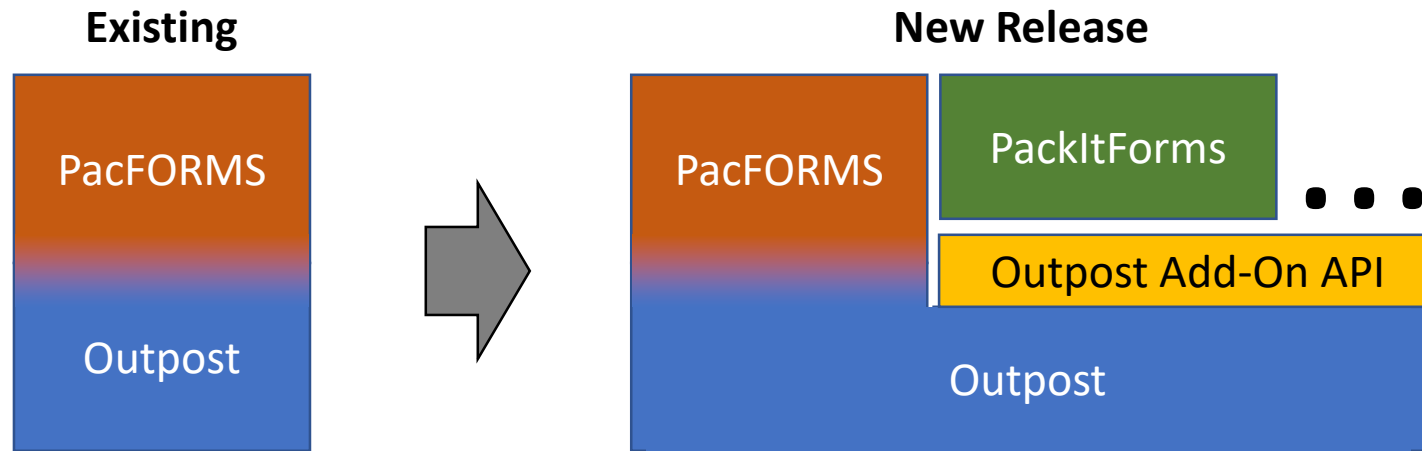
- Speed improvements (submit) and greatly expanded functionality
- New Edit before sending workflow:
  - Submit to Outpost > Re-open form > Edit > Re-Submit to Outpost > Send

Outpost: New Subject Line Format

- Implements new Subject Line format:
  - <MsgNbr>_<H>_<Subject>
  - where <H> is the handling order: I, P, R (**I**mmediate, **P**riority, **R**outine)
- Red font and "!!" Urgent marker if Handling Order = Immediate
  - Previously, red emphasis was based on Severity field

U	Type	From	To	BBS	Local ID	Subject		Date/Time	Size
In Tray									
!!		n6mef@...	N6MEF	N6MEF-3	MEF-1492P	MEF-1490P_I_MuniStat_Santa Clara		4/10/2019 16:51	4,331
		n6mef@...	n6mef@n6m...	N6MEF-3		DELIVERED: MEF-1490P_I_MuniStat_Santa Clara		4/10/2019 16:51	125

LIVE DEMO

Key Outpost Enhancements

LIVE DEMO: Key Outpost Enhancements

- Force One-time Bulletin Retrieve for Send Only stations

- Profile Saving

- Opening Enhanced Message Types

Outpost: Force Bulletin Retrieve for Send Only

- Force one-time bulletin retrieve now works in Send Only mode
    - Fantastic if you have a two-PC setup (one is Send Only, one is Receive Only)
    - Now it's easy to download notices/bulletins to the Send Only PC
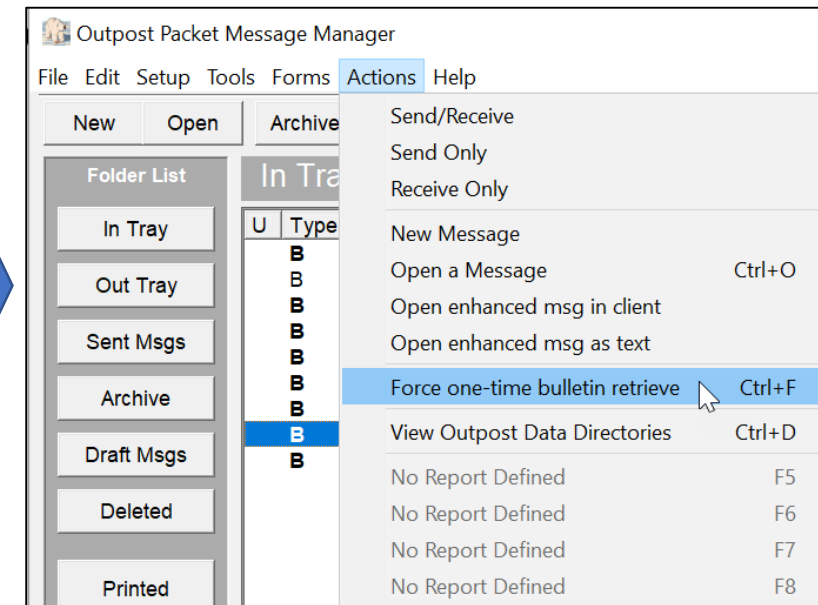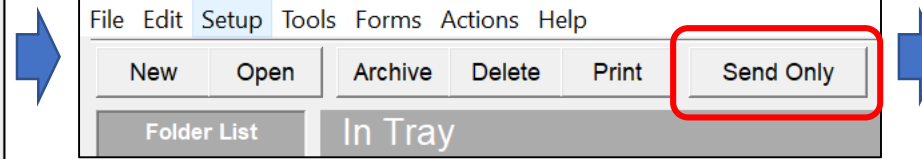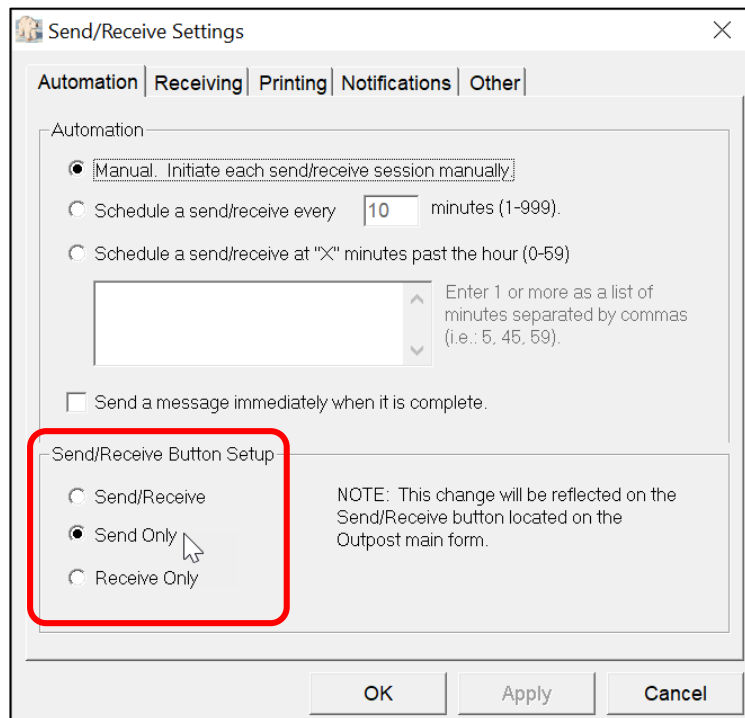
Outpost: Profile Saving

- Profiles
  - Used to save a complete Outpost configuration
  - Existing: Prompt to save when changing Profiles or Exiting Outpost
  - New: Save right away (Setup > Profiles ... > Save)
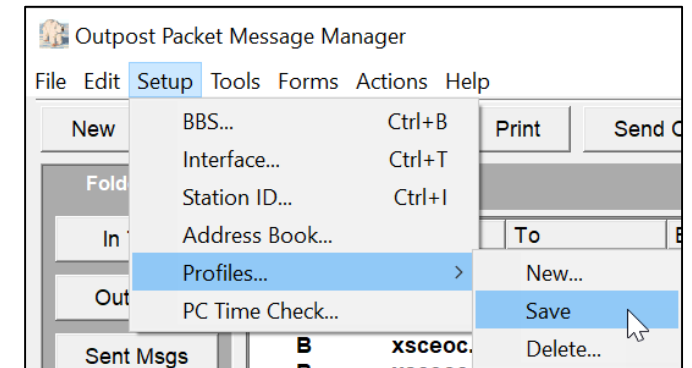
  - New: Warning when exiting or switching
    if Profile save = Never
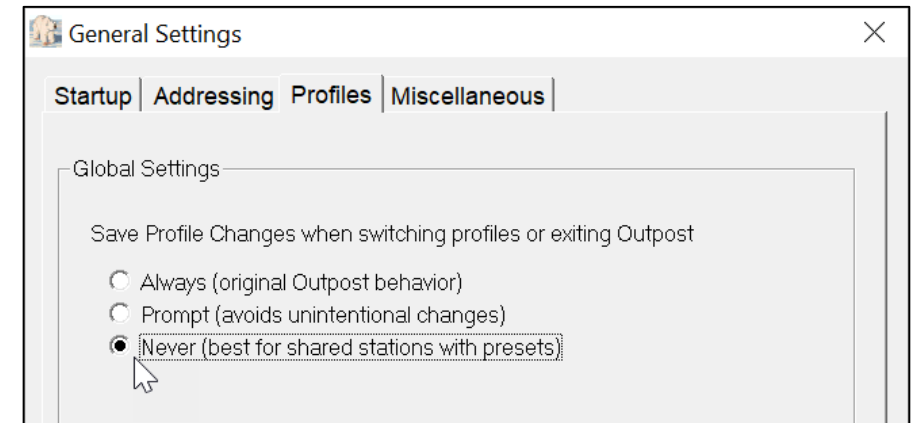
Outpost: Open Enhanced Message Types

- Enhanced message types:
  - PacFORMS
  - New: PackItForms
- Forms open directly in browser window
  - No extra text window to close
- Override with:
  - Action > Open enhanced msg …
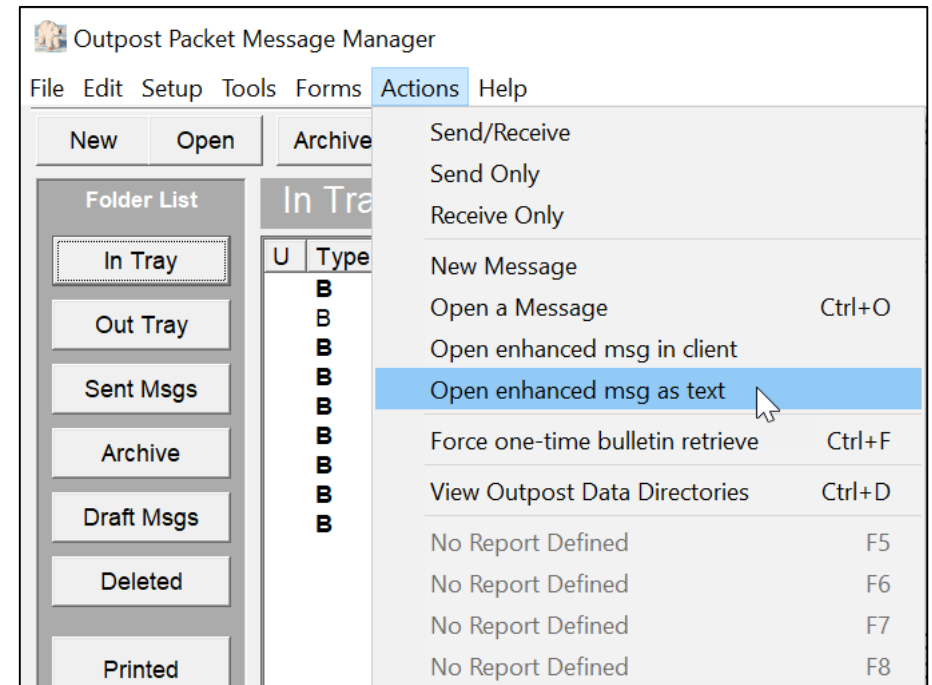
PackItForms

PackItForms

- Next generation of forms for packet radio transmission
  - Keith Amidon, KJ6PUO
  - Peter Amidon, KJ6PUN
  - John Kristian, W6JMK

- Consistent with
  - Agency forms + Radio Routing Slip
  - New PDF forms

- Includes same routing fields
  - Same position
  - Same required fields

LIVE DEMO

PackItForms

LIVE DEMO: PackItForms

- Outpost Forms menu: new (PackItForms) vs. legacy (PacFORMS)
- Required field indication
- Reset form button
- Ready to submit indication
- Show/Hide data message button
- Show PDF button
- Submit {to Outpost|via Email}
- Updating a previously submitted form
- Action > Open Enhanced message as …
- Update vs. Complete Report
- Standalone mode (browse.cmd)

Outpost Forms Menu
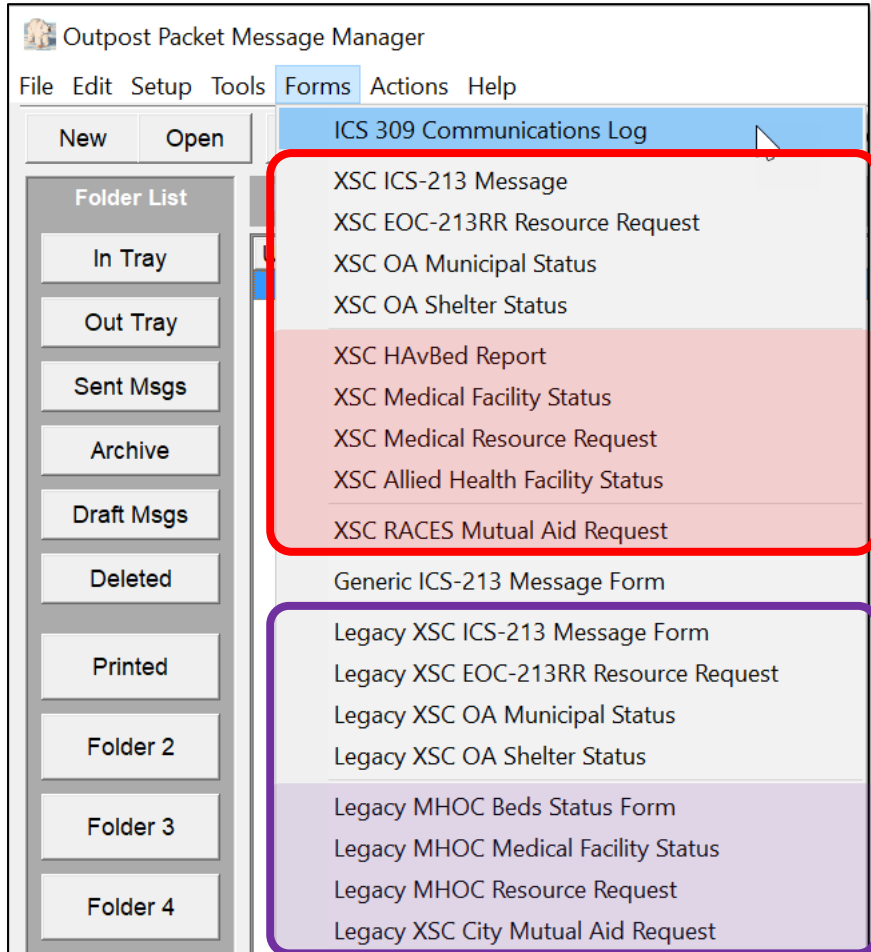
- For backward compatibility both PackItForms and PacFORMS are included

- Shown: Installer w/ Hospital forms

- PackItForms (highlighted here in red)

- PacFORMS (highlighted here in purple)

- Public installer does not contain (shown shaded)
  - Medical/Heathcare forms
  - RACES Mutual Aid forms

Required Field Indication

- Required fields are shown with light red highlighting

  - Disappears when valid data is entered into each field
  - Easy to tell what fields need to be filled in

- As long as at least one required field is not filled, button bar at top remains grey

Reset Form Button

- Resets form to default values

- Use to "start over" without losing message number and other default values, such as date

Ready to Submit Indication

- Button bar at top turns green when all required fields contain valid data

- Submit buttons enabled

  - Submit to Outpost
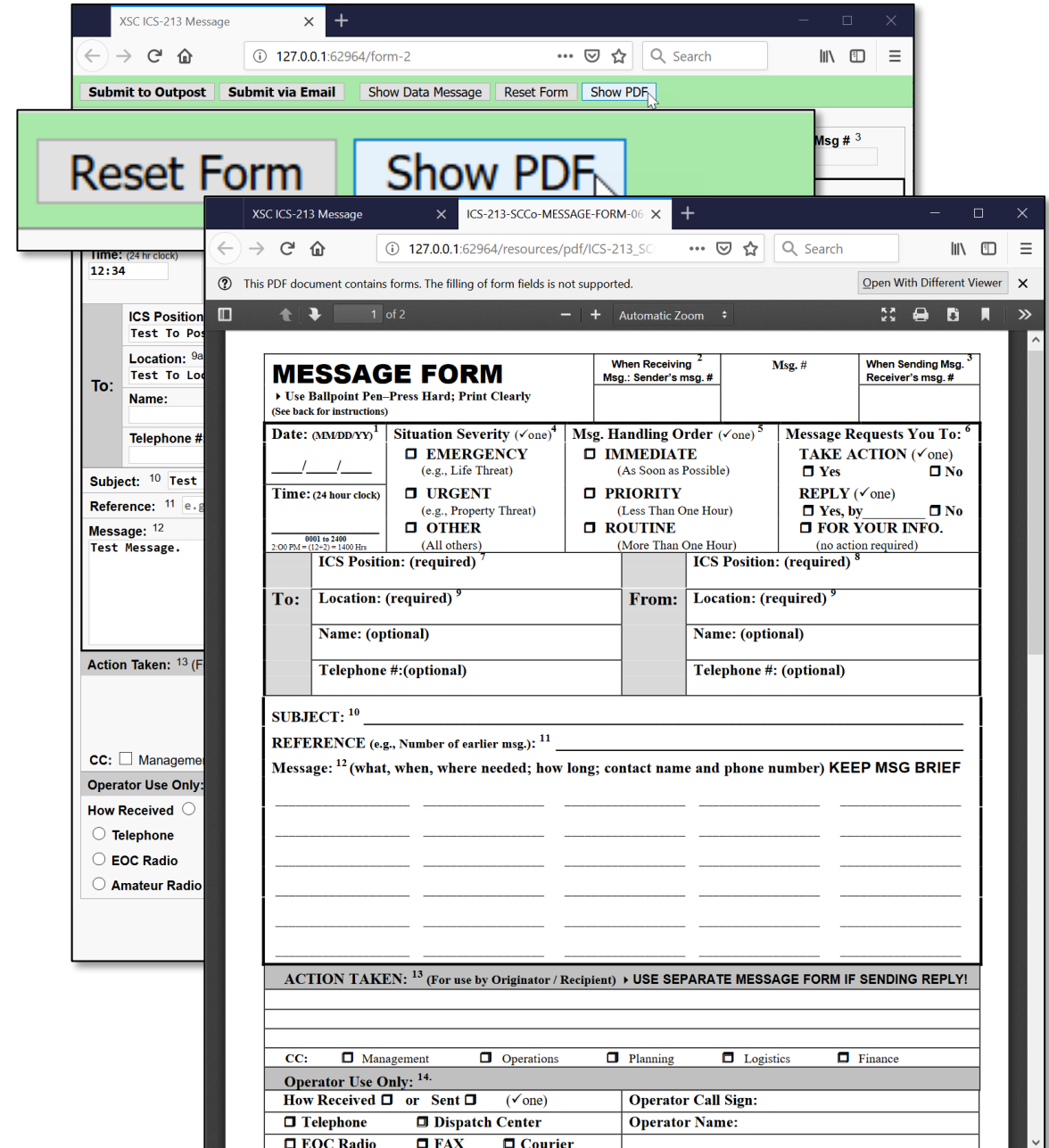
  - Submit via Email

Show/Hide Data Message

- Show Data Message
  - Changes to "Hide Data Message" when pressed
  - Displays the text message that will be submitted to Outpost or E-mail
  - Could also be used to copy to some other application

- Hide Data Message
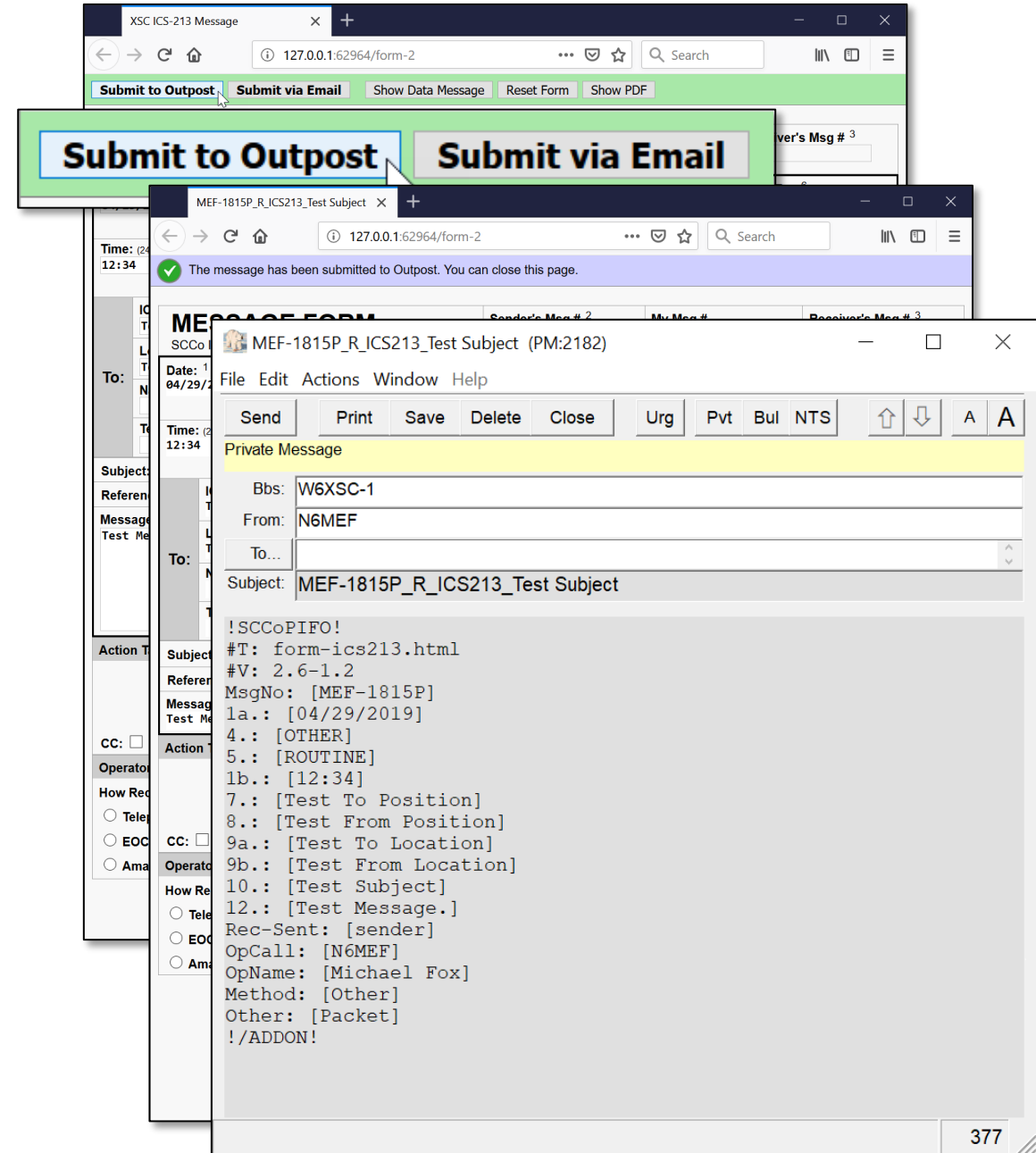 - Removes the overlay text window
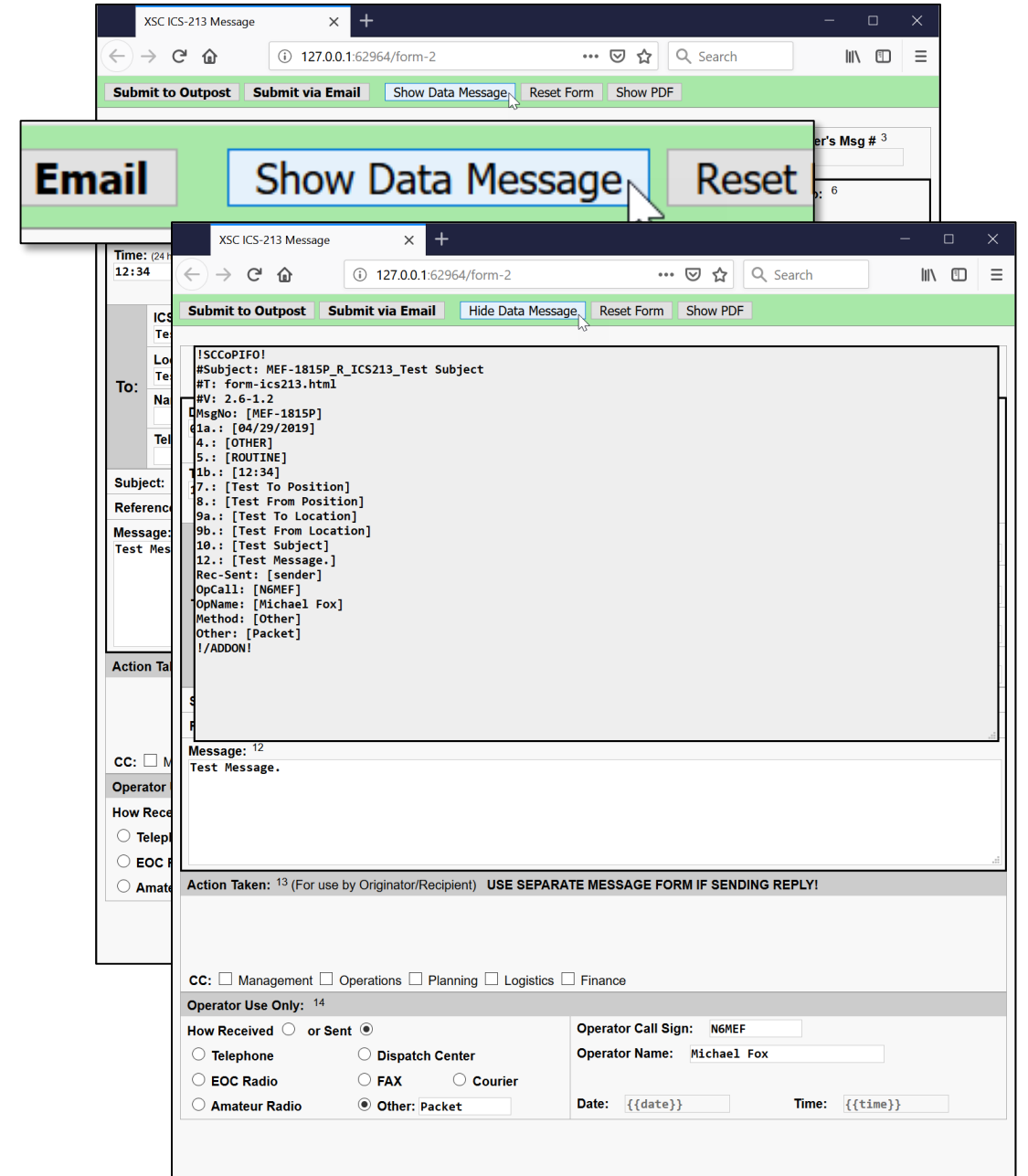
Show PDF

- Opens another browser tab

- Displays PDF version of form
 - Can be opened and printed

Submit to Outpost

- Sends form data to Outpost

- Purple confirmation banner
  - Message successfully submitted

- Outpost displays text message window

- Ready for To: address

Submit via E-mail


- Purple confirmation banner
  - Includes warning to delete message from Outpost to avoid sending a duplicate

- Launches default e-mail app as defined in MS Windows

- Subject and body are filled in

- Be sure to set Plain Text mode!
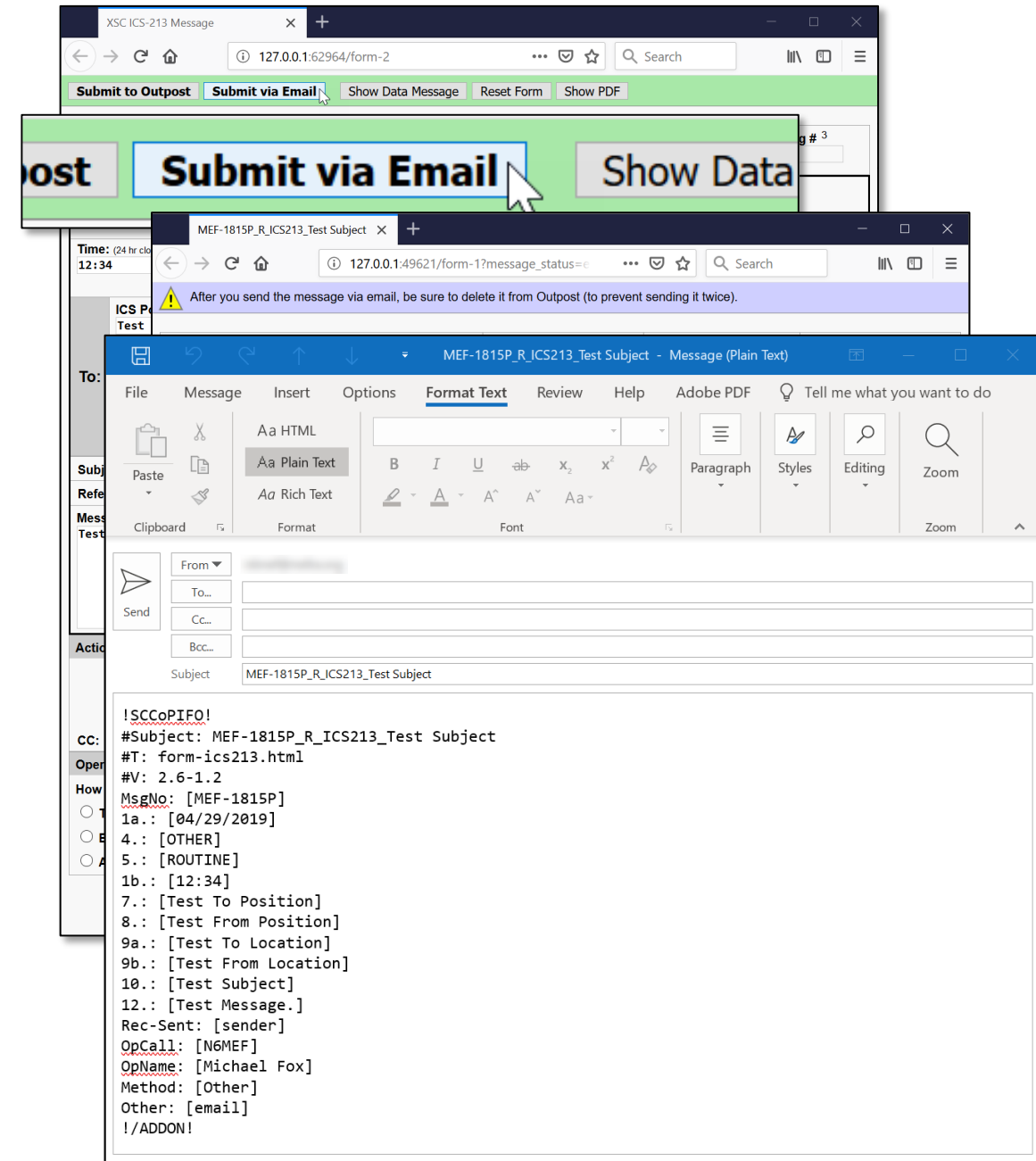
Updating a Previously Submitted Form

- Outpost & PackItForms supports reopening, editing, and resubmitting updating a previously submitted form

Repeat
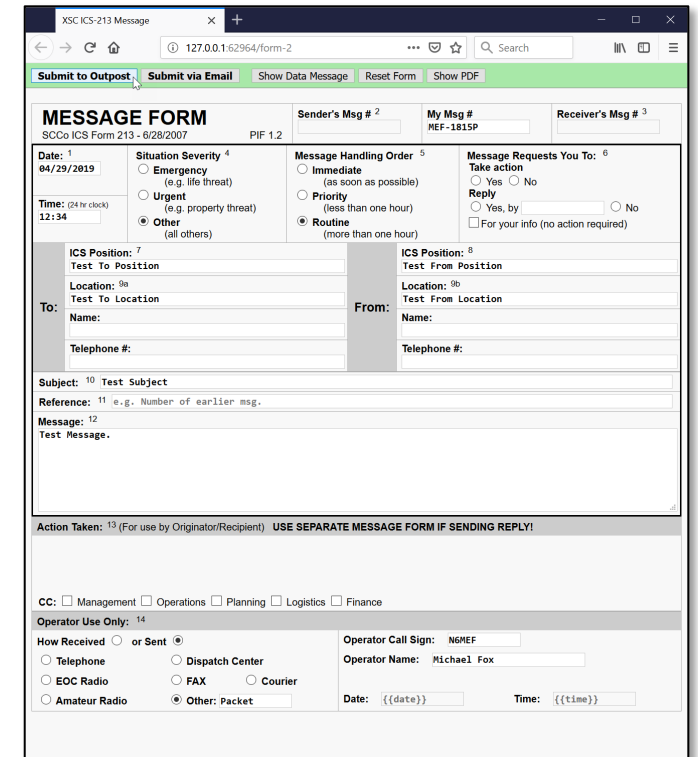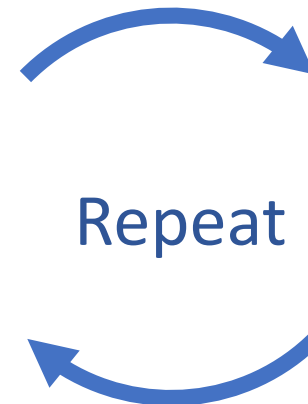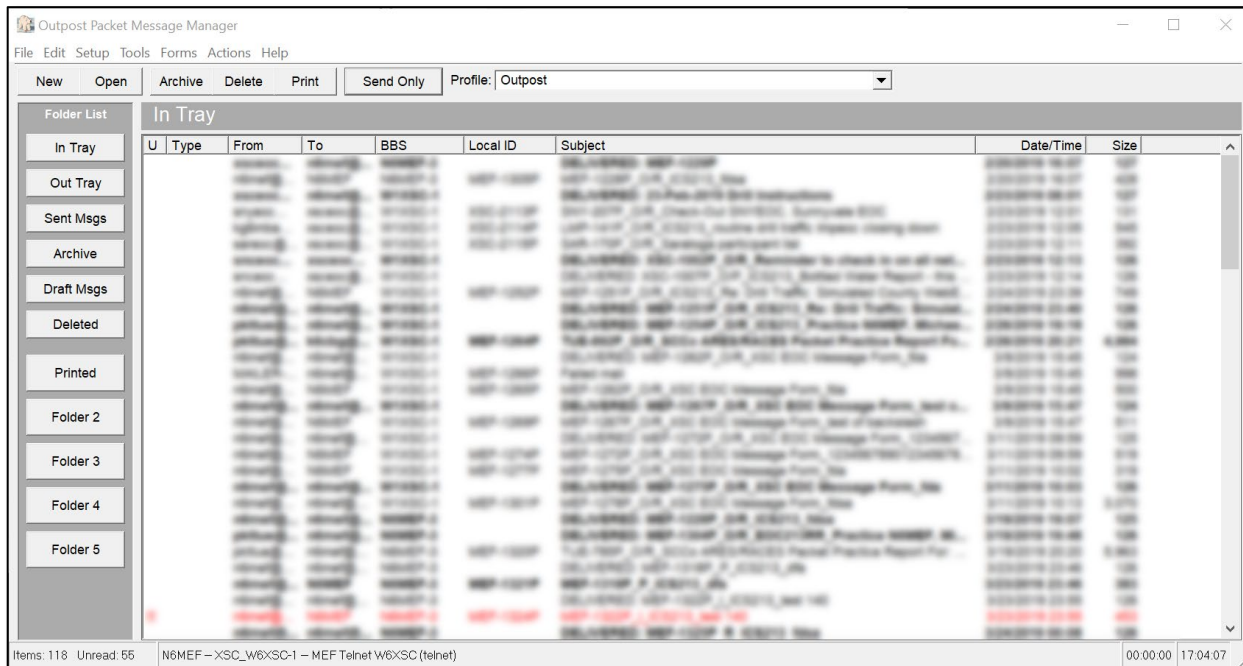
Action > Open Enhanced Msg …

- Outpost automatically detects and opens "Enhanced" (PackItForms, PacFORMS) messages in their appropriate client

- Manually control from Main Outpost Window or Individual Message Window
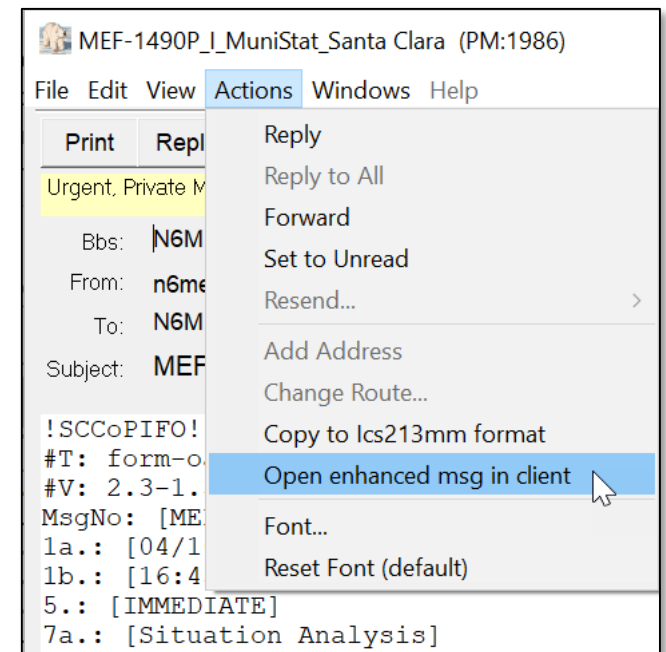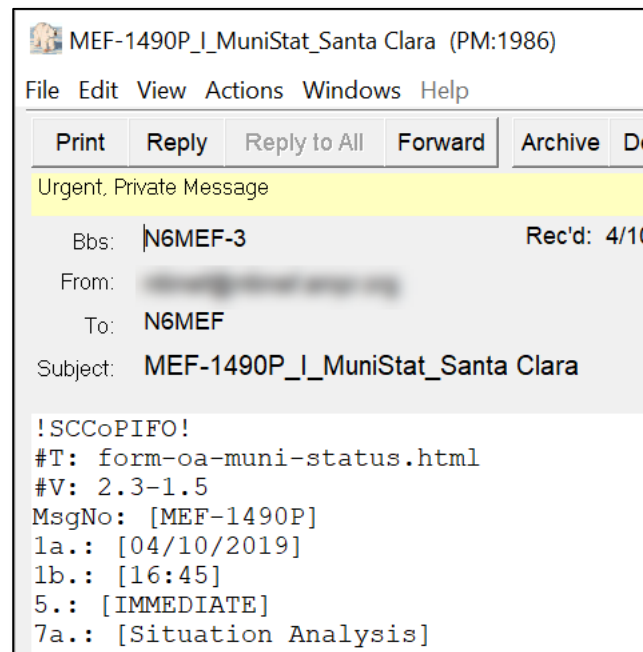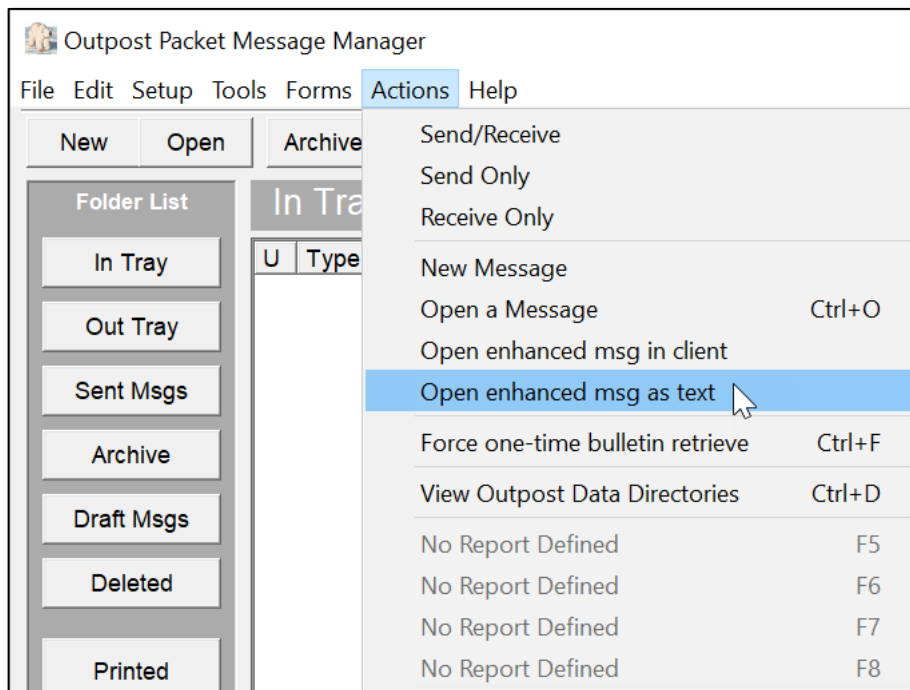
Update vs. Complete Report

- Some forms have a "Report Type" option
  - Municipal Status, Shelter Status, Medical Facility Status, Allied Health Status

PackItForm

PDF

Update vs. Complete Report (2)

- These forms are very long, with many fields, some of which may contain text that lasts for months

Update vs. Complete Report (3)

- Message Author:
  - Unable to update WebEOC directly (Internet outage at your site)
  - Will send update via packet radio
  - But can't see the WebEOC screen, so doesn't know what's already been entered into the dozens of fields on the form
- Q1: If a blank field is sent, what should the message recipient do?
  - Skip that field? (leave any information that may be in that field alone)
  - Set that field to blank? (delete any information that may currently be in that field)
- Q2: If the message author wants to clear a field, or append to a field, how does he/she convey that to the message recipient?

Update vs. Complete Report (4)

- Use "Show PDF" button

- View the Instructions on the last page

Report Type	Required. • **Update:** Normal mode. Recipient should only replace fields in WebEOC that are entered here. Other fields should retain their current values. To tell the recipient to clear a text field in WebEOC, write "{CLEAR}" in the field. To append to existing data in a WebEOC text field, write "{APPEND}", followed by the text to be appended. • **Complete:** _Use with caution._ An empty field here tells the recipient to clear the field in WebEOC. Use this to replace all fields in WebEOC with the data provided here, or to report on current status of all WebEOC fields.

- "Complete" report can be used to send info about current state of all fields to the person that would usually submit info

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Standalone Mode

- Create or read PackItForms without Outpost

- Scenario
  - Need to send forms via packet
  - You don't have your packet computer (or don't want to leave it)
  - A PC is available. But you don't have Windows admin rights

- Solution
  - Run PackItForms installer (no admin rights)
  - Run C:\PackItForms\Outpost\SCCo\browse.cmd
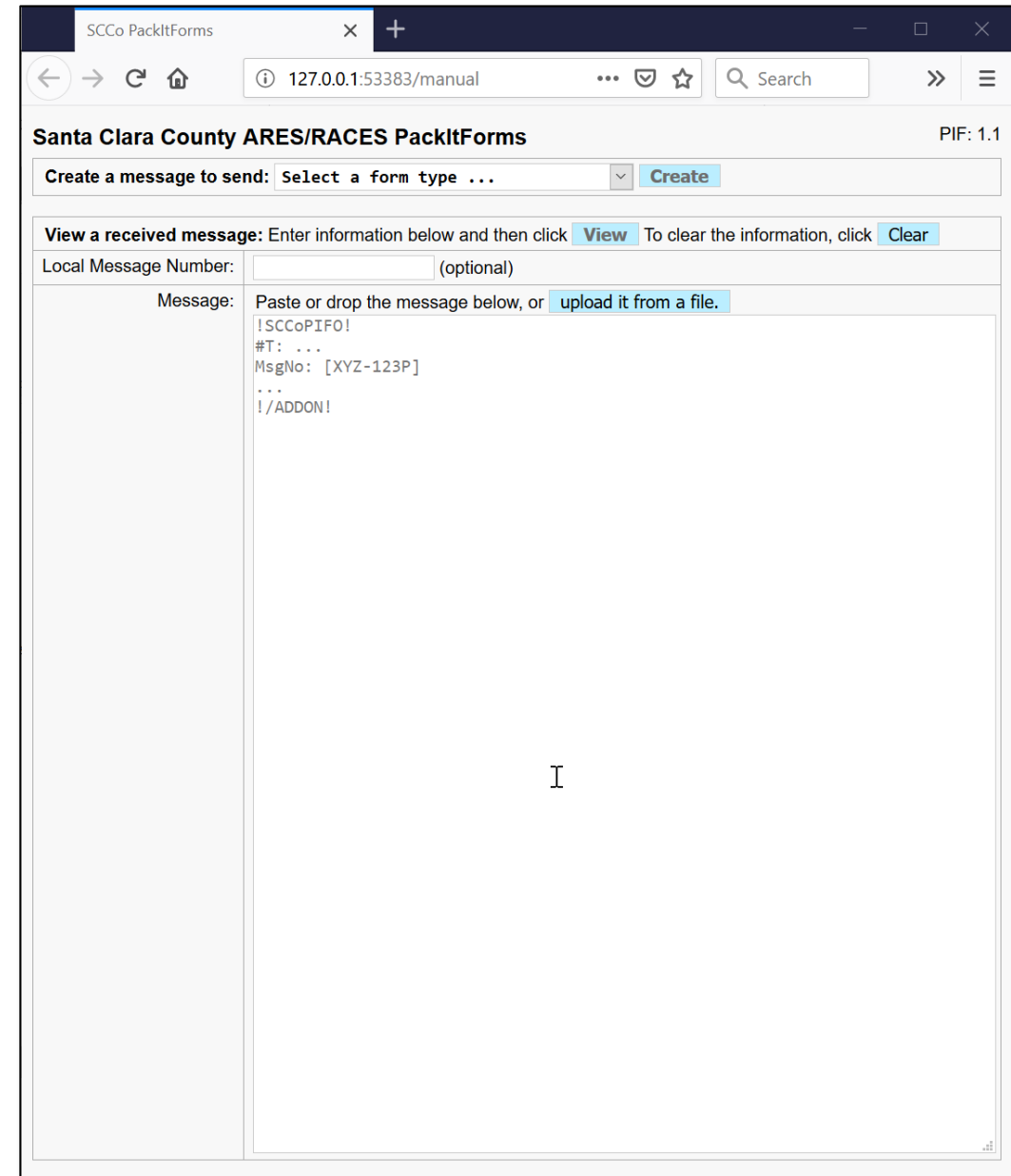
Roll Out Schedule

Current Test Status

- Testing phases
  - Development test > packet committee test > pre-release test
- Testing so far
  - Development team (done) > packet committee (partial)
- Pre-release expectations
  - Anticipate pre-release date: Early next week (May 6-7, 2019)
  - No operations-impacting issues that we know of
  - We intend to run the county EOC on pre-release during May 18th drill
    - Will accept either new or legacy forms

Schedule

Date	Action
Now	**Pre-release PDF forms** • Radio Routing Slip • PDF Forms (as seen in PackItForms)
Target: May 6-7	**Pre-release Packet Installer (everyone that can, please help test and provide feedback)** • Updated Outpost, New PackItForms, Updated PacFORMS
May 27-28	All test feedback due

Early June	**General Release (everyone upgrades)**
	• Integrated Packet Installer
	    • Updated Outpost, New PackItForms, Updated PacFORMS
	• New forms
	    • Radio Routing Slip
	    • New PDF Forms

When Reporting an Issue …

- Report issues to our Packet discussion group:
  - https://www.scc-ares-races.org/discuss-groups.html

- For Outpost Issues (non-radio related)
  - Version #.#.# c##
  - Step-by-step how to reproduce
  - Screenshot (if applicable)
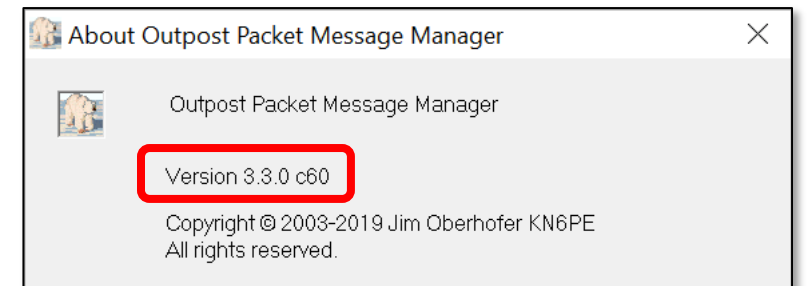
When Reporting an Issue …

- For PackItForms (new)
  - "PIF: #.#" version at top/right of form
  - Browser type and version
  - MS Windows version
  - Screenshot
  - All files from C:\PackItForms\Outpost\SCCo\logs

- For PacFORMS (legacy)
  - "PR-#.#-#.#" at bottom/right of form
  - Browser type and version
  - MS Windows version
  - Screenshot
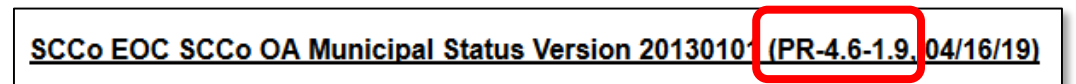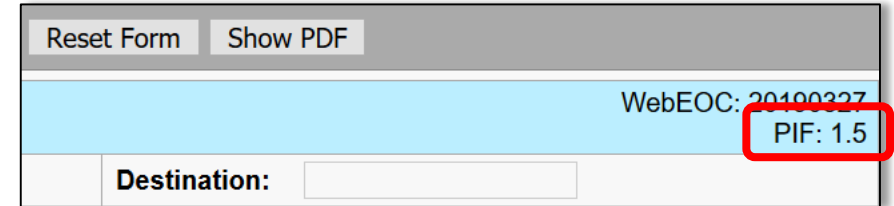
To Test or Not to Test; That is the Question

- How to use the pre-release
  - Best approach: try your best to break it!
  - Also OK: use it like you normally do, plus try out new features
  - Either way, report what you find (good or bad) as soon as you find it

- Those who choose to try the pre-release version
  - Learn breadth and depth of what's included
  - Can help prepare for changes to related procedures and workflows
  - Can put some new capabilities to use right away
  - Can help get the general release out faster by providing more testing sooner

- The better feedback we get, and the faster we get it, the sooner we'll be able to move to General Release

Action Items

- Review pre-release forms
  - Learn about Update vs. Complete workflow
- Watch for pre-release announcement on packet discussion group
  - https://www.scc-ares-races.org/discuss-groups.html
- Jump into testing as soon as possible
  - Try your best to break it
  - Report early and often

Thank You!

Presentation and recording will be posted by tomorrow morning.

www.scc-ares-races.org > Training > Webinars