

Introduction to Outpost Packet Message Manager

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San Joaquin County Ag Center

14 March 2009

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Topics

- 1. Introduction to Outpost**
- 2. Aligning Outpost to the mission**
- 3. Summary**



Introduction to Outpost



Overview

Outpost Packet Message Manager

What is Outpost?

- A Windows-based packet messaging client
- Supports ARES, RACES, and other amateur radio emergency response teams and their need to pass digital traffic
- Helps automate the packet message handling environment
- Manages all message-handling between you and the BBS
- Lets you read, delete, create, reply to, or forward messages back to the BBS



Overview

Outpost Packet Message Manager

Why use Outpost?

- **Leverages the existing packet hardware, network, and BBS infrastructure**
 - Uses your existing TNC and packet radio equipment
 - Compatible with many existing BBSs and TNC PBBSs
 - Only your packet client (end-user program) changes
- **Hides the complexity of the packet operating environment**
 - Similar look and feel to contemporary email programs
 - Shorter learning curve for packet operations
 - Allows users to... *“focus on the message, not the medium”*
- **Implements most local emergency management policies for digital communications**
- **Still under active development based on user requests and on-going alignment with the Outpost mission**



Overview

Outpost Packet Message Manager

Mission

The Outpost *Packet Message Manager* program supports the Emergency Communications Packet User community with a contemporary amateur radio packet messaging client that allows users to focus on the message, and not the medium.

Goal

Help get local ARES/RACES teams on the air with digital messaging using their existing hardware and BBS infrastructure.



Overview

Outpost Packet Message Manager

Feature highlights

- **Message support**
 - Private, NTS, and Bulletin messages
 - Text formatting in a free-form message window
 - NTS Message Maker with an ARL message wizard
 - On-line report builder
- **Send/Receive Session (connection) control**
 - Serial, AGWPE, and Telnet interfacing with over 20 PBBS and BBSs
 - Controls connecting, sending messages to and retrieving messages from the BBS
- **Configurations and Setups**
 - BBS, TNC, and Interface configurations
 - message type and retrieval options
 - supports 3 ways for automatically initiating send/receive sessions

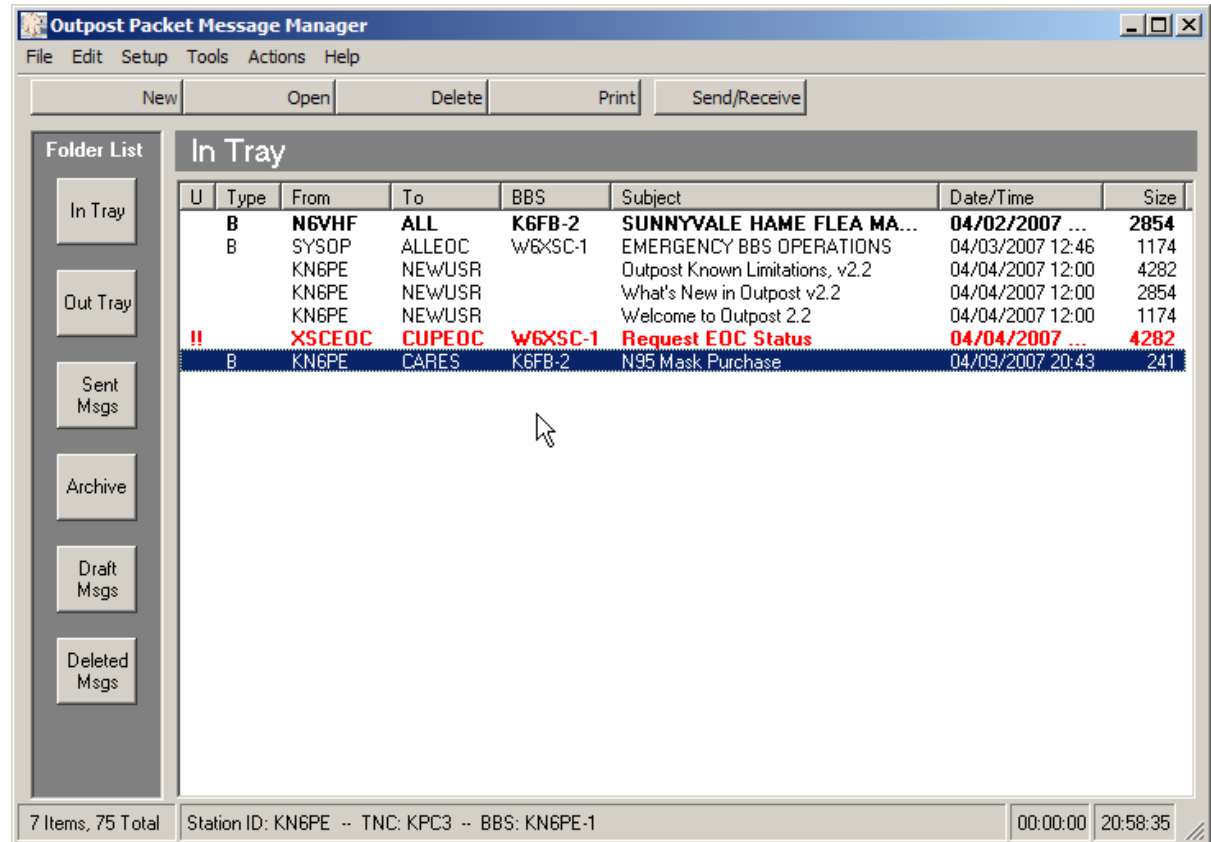


Overview

Outpost Packet Message Manager

Message support

- Familiar email-app look & feel
- Separate folders for message storage
- Clear message identification (unread=**BOLD**, urgent=**Red**)
- Formal message workflow
- BBS and interface setups
- Additional settings control how Outpost behaves

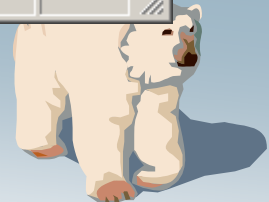
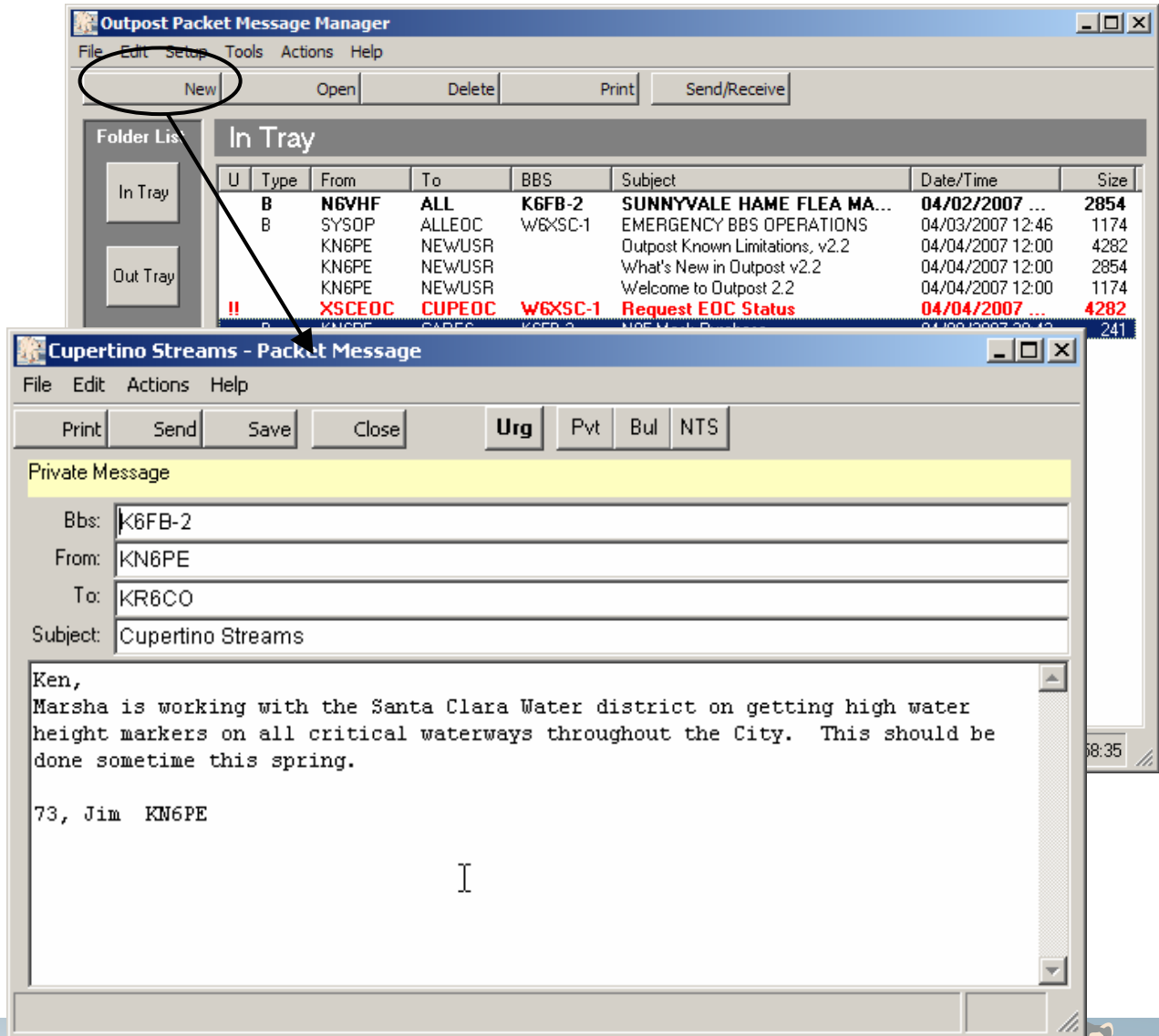


Overview

Outpost Packet Message Manager

Creating Messages

- Supports Private, Bulletin, and NTS message types
- Message formatting before sending
- Set messages to **Urgent**
- Request delivery or read receipts
- Different ways for originating messages
- NTS Message Maker

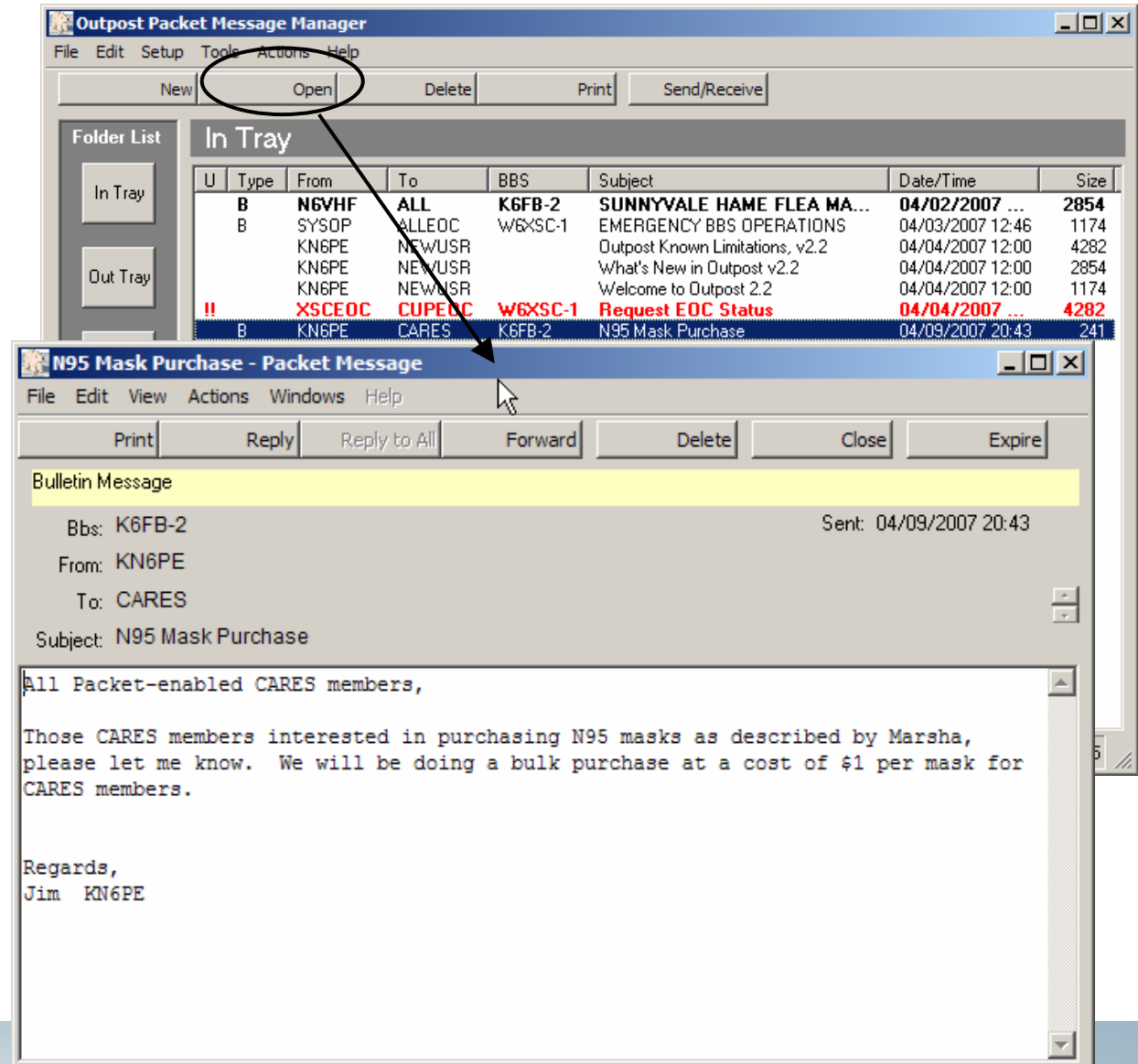


Overview

Outpost Packet Message Manager

Viewing messages

- Supports viewing, printing, deleting or saving a message to a local file
- Reply and Forward message formatting

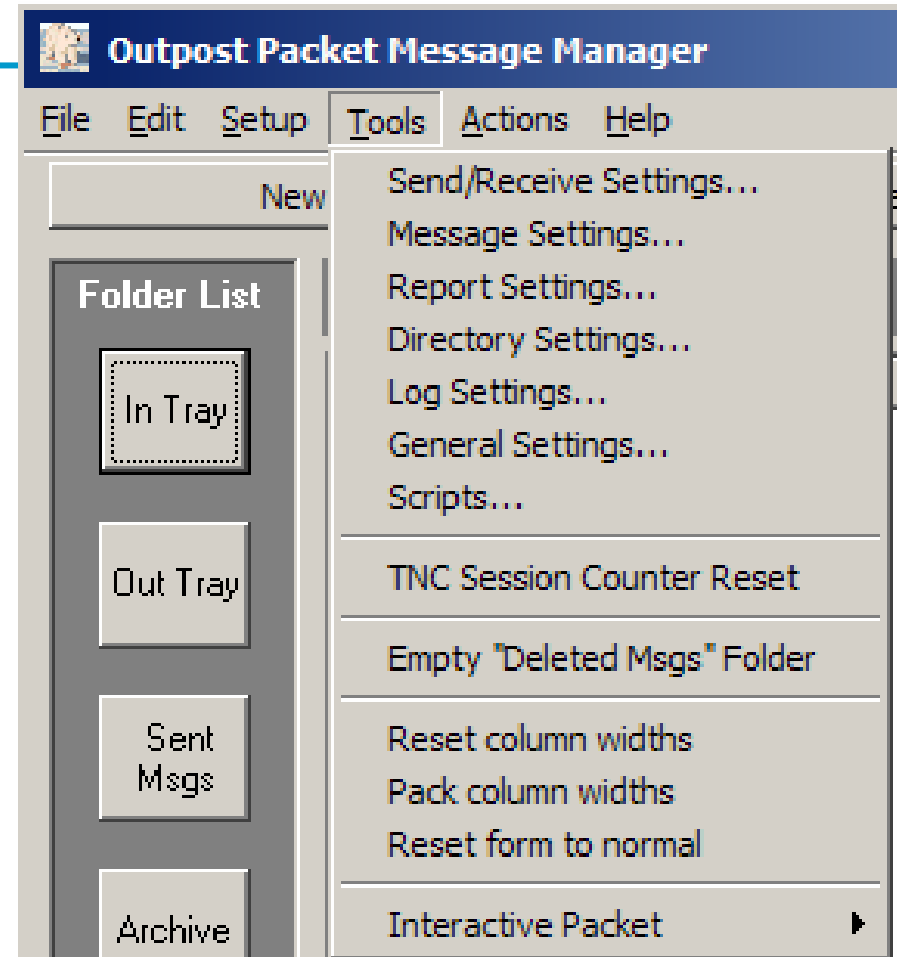


Overview

Outpost Packet Message Manager

Types of controls

- Controls the flow of Send/Receive Sessions
- Sets how messages are created and handled
- Set various data fields to automatically populate on-line reports and messages
- Set up default directory names
- Various log settings
- Outpost Scripting
- Form sizing controls
- Separate Interactive Packet Windows for...
 - Serial TNCs
 - AGWPE
 - Telnet

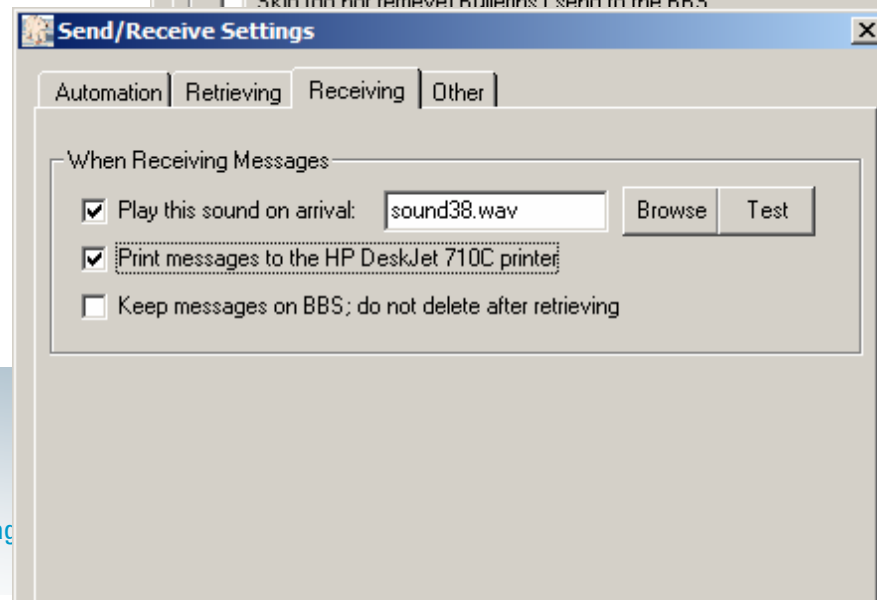
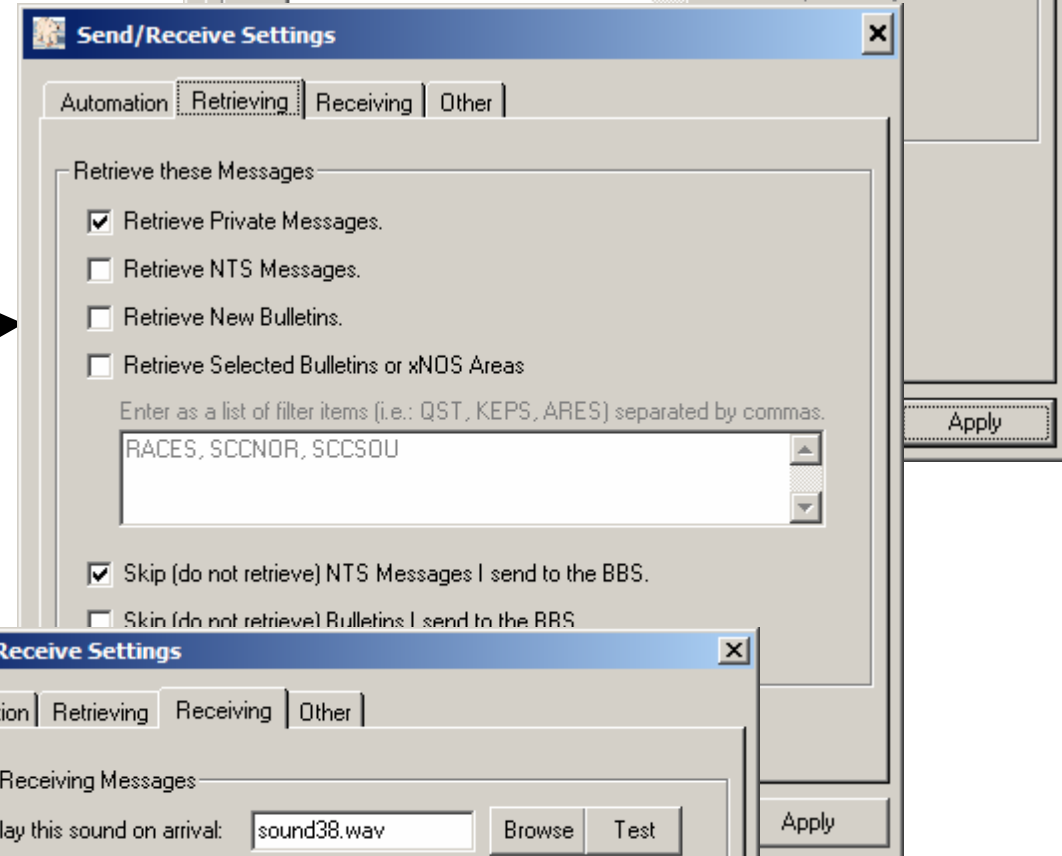
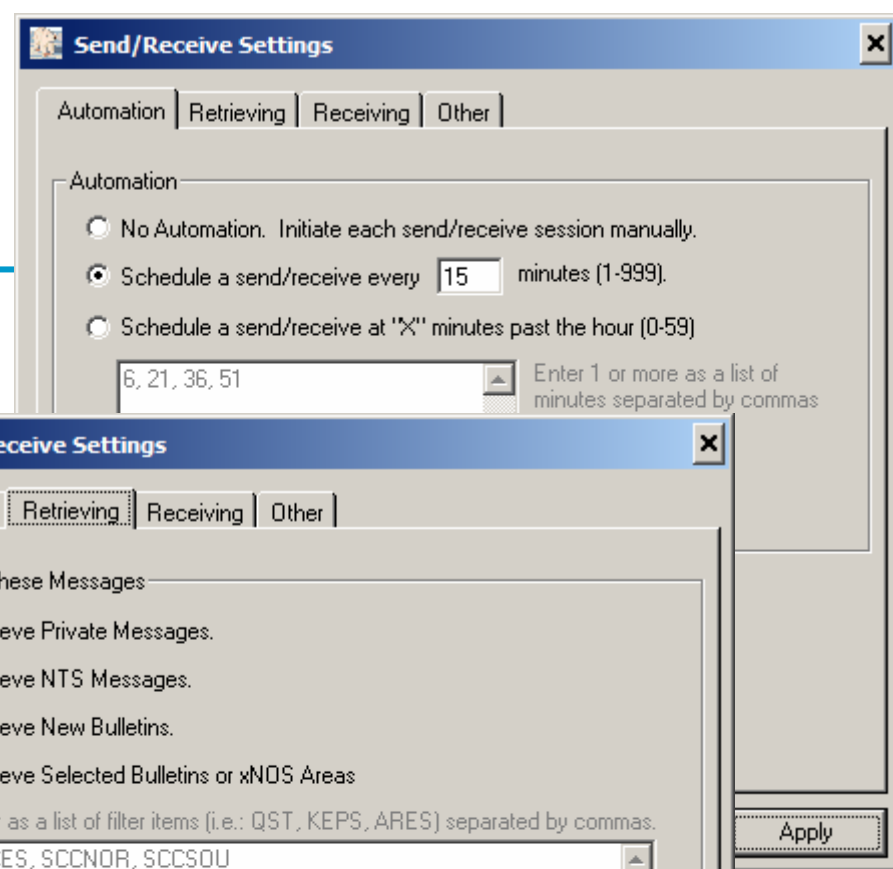


Overview

Outpost Packet Message Manager

Send/Receive Settings

- Selects different ways to automate the message send/retrieve sessions
- Select which message types are to be retrieved
- What to do with received messages
- Additional controls manage printing messages (Other Tab)

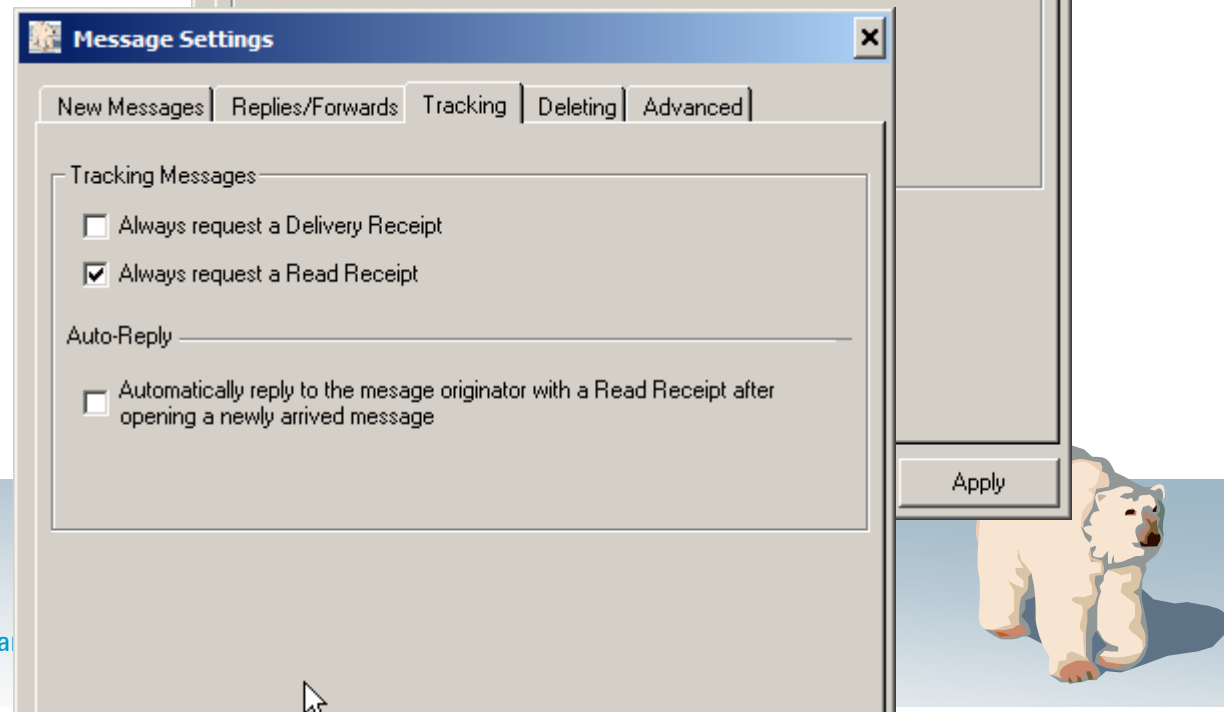
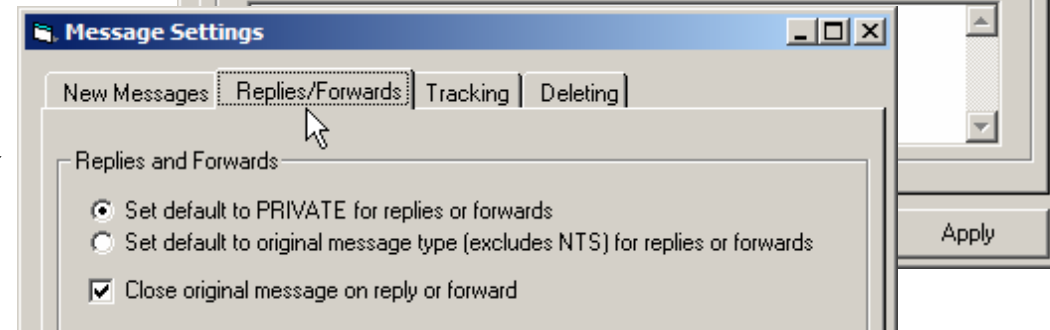
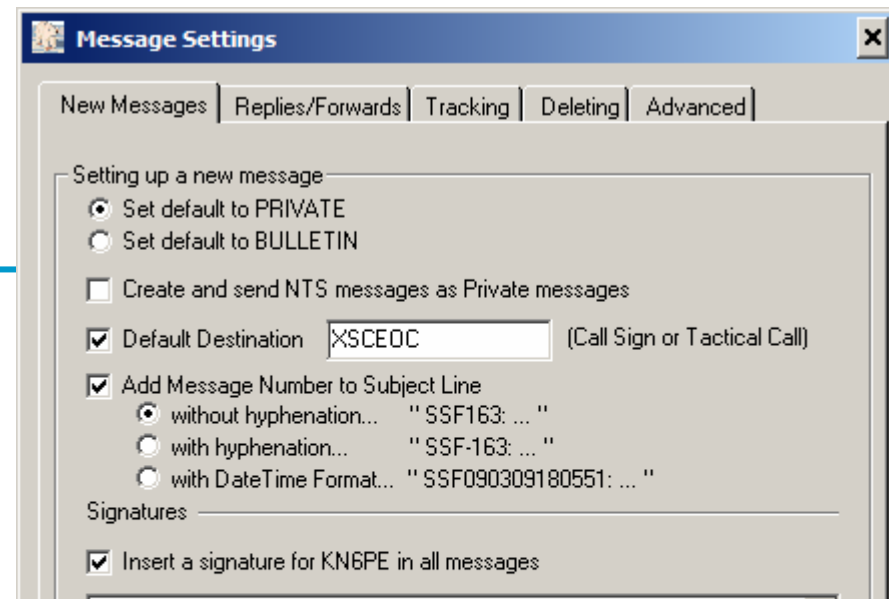


Overview

Outpost Packet Message Manager

Message Settings

- Settings for new messages, includes
 - Default destinations
 - Auto message numbering
 - Add a Signature
- Handling replies and forwards
- Set defaults for requesting message receipts
- Setting for permanently deleting messages





Outpost How-To's

The Outpost program does not include any online help. Instead, a series of HOW-TO files are provided with the application and are available on-line here. See the [Outpost Users Guide](#) for other details.

Interface How-Tos

1. **AGWPE Setup**
2. **Telnet Setup**
3. **Telnet Setup with Winlink**
4. **TNC Command File**
5. **TNC Setup**

BBS/PBBS How-Tos

1. **BBS Setup**
2. **BBS Setup for Santa Clara County RACES**
3. **Connecting to a local KPC3/KPC9612 PBBS**
4. **Connecting to a local KPC3/KPC9612 PBBS**
5. **Connecting to a local MFJ-127X PBBS**
6. **Connecting to a local PK-232/DSP-232 PBBS**
7. **Using KA-Node/Netrom (BPQ) Access**

Messaging How-Tos

1. **Acknowledge Read, send automatically**
2. **Add a Signature**
3. **Annunciation**
4. **Automatic Retrieval**
5. **Create a message**
6. **Drag and Drop**
7. **Forwarding/Replying**
8. **Numbering messages**
9. **Online reports**
10. **Online reports, one-touch loading**
11. **Printing automatically**
12. **Requesting Delivery and Read Receipts**
13. **Retrieving selected bulletins**
14. **Send as Urgent**
15. **Sending a text file**

Miscellaneous How-Tos

1. **Enhanced Channel Monitoring**
2. **Tactical Calls**



Aligning features



Aligning features to needs

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?



Our Environmental situation

- What BBSs do we use to pass messages among ourselves?
- How far away is the BBS?
- What interface methods can I use to access the BBS?
- What is my computing environment?



BBS Support

Current list of supported BBSs (January 2009)

PBBSs (TNC Firmware-based)	BBSs (Software-based)	Support requested and pending
KPC2, KPC3, KPC3+ KPC9612 KAM, KAM-XL, KAM-98, KAM Plus Data Engine (Kantronics) PK-88, PK-232 DSP-232 MFJ-1270x, -1278	AA4RE DXNET F6FBB HAMSERV JNOS, SNOS, TNOS MSYS N0ARY Telpac/Winlink WORLI	MFJ-1274 OpenBCM

- See <http://www.outpostpm.org/bbs/> for...
 - Updates to the list of supported BBSs
 - Instructions on how to get your BBS supported



Elements of a packet operating policy

1. All stations will identify with a tactical call sign
2. All messages are sent as private messages
3. All messages are uniquely identified
4. All messages are as short as possible
5. All stations will poll the BBS on a periodic basis
6. All stations will poll for specific message types
7. All message traffic becomes part of the official event documentation package



Policy #1: Tactical Calls

General Implementation

Definition: a call sign that identifies a tactical location; is operator-neutral allowing the operators to change, without having the assignment name change.

General Implementation:

No readily available and supported BBS offers native tactical call support.

The Outpost approach supports most BBSs; connect with the Tactical Call; Outpost manages the legal identifier.

For the Santa Clara County Hospital System, hospitals are assigned Tactical Calls such as:

- 1MVECH Mountain View El Camino Hospital
- 1PASMCM Palo Alto Stanford Medical Center
- 1SJVMC San Jose Valley Medical Center
- 1SJGSH San Jose Good Samaritan Hospital

Station Identification

Identification

Legal

User Call Sign: KN6PE

User Name: Jim

Tactical

Use Tactical Call for all BBS interaction (EMERGENCY MODE)

Tactical Call Sign: 1CUEOC

Tactical TX Text: Cupertino OES

OK Cancel Apply



Policy #1: Tactical Calls

General Implementation

Definition: a call sign that identifies a tactical location; is operator-neutral allowing the operators to change, without having the assignment name change.

Implementation #2:

Is it legal?

- AX.25 extended address field contains source and destination call sign
- Outpost uses the TNC's "my call" command to set the Tactical Call as the station identifier.
- The selected Tactical Call needs to be a sufficiently valid call sign to "fool" the BBS's call sign checking logic
- Outpost sends a "Legal Identifier String" that satisfies FCC Part 97.119

```
1CUEOC>W6SJC-1: <<C>>:
W6SJC-1>1CUEOC: <<UA>>:
W6SJC-1>1CUEOC: <<I00>>:
[FBB-7.04]-AB1FHMRX$]
Hello Jim,
Welcome to The San Jose EOC Mailbox

W6SJC >
1CUEOC>W6SJC-1: <<I01>>:
LM

W6SJC-1>1CUEOC: <<I11>>:
*** : Nothing found
*** : TO Field Filter is set to:- [ * ]

W6SJC >
1CUEOC>W6SJC-1: <<I12>>:
B

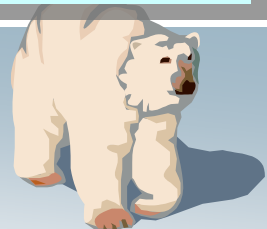
W6SJC-1>1CUEOC: <<I22>>:
73 Jim,

W6SJC-1>1CUEOC: <<D>>:
1CUEOC>W6SJC-1: <<I23>>:
StationID=KN6PE, TacCall=1CUEOC, Cupertino OES

1CUEOC>W6SJC-1: <<I33>>:

1CUEOC>W6SJC-1: <<I43>>:

1CUEOC>W6SJC-1: <<UA>>:
```

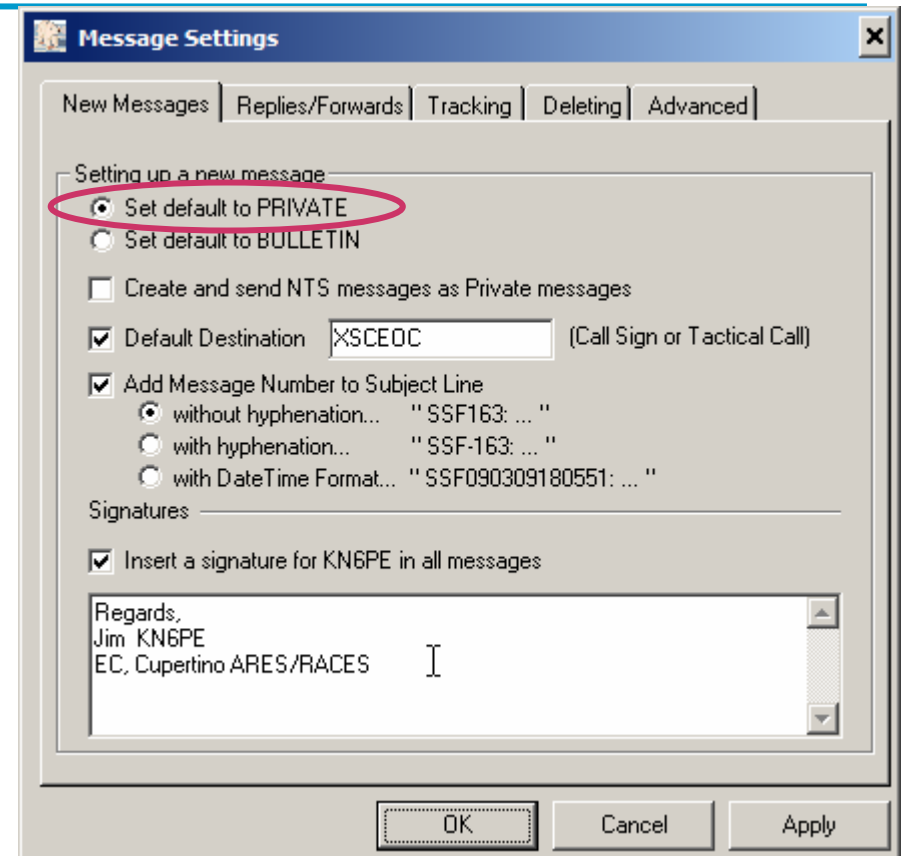


Policy #2: Send Private Messages

Policy: Private messages are addressed to a specific station and retrievable only by that station. Private messages should be sent when the message is intended for one other station.

Implementation:

- A Private message policy contributes to lower channel traffic by ensuring only the intended station retrieves the message.
- Option to set the default message type to either private or public.
- Option can be overridden at message create time.



Policy #3: Unique Message Identification

Policy: Each packet message sent within the operational area must be uniquely identified. Replies to messages must reference the message identifier.

Implementation:

- Unique identifiers are generated by each Outpost station based on the entered Report Settings
- When enabled, the next “Message Number” or “Tactical_ID + Message Number” is placed in the subject line.
- Subject line can be appended to or overwritten at message create time.

Message Settings

New Messages | Replies/Forwards | Tracking | Deleting | Advanced

Setting up a new message

Set default to PRIVATE
 Set default to BULLETIN

Create and send NTS messages as Private messages

Default Destination: (Call Sign or Tactical Call)

Add Message Number to Subject Line

without hyphenation... " CUP190: ... "
 with hyphenation... " CUP-190: ... "
 with DateTime Format... " CUP090309181310: ... "

Signatures

Report Settings

Report Variables

Next Message Number: 190

Organization: Cupertino OES

City: Cupertino

County: Santa Clara

State/Prov (2 char): CA

Tactical Location: Cupertino EOC Radio Room

Tactical ID (3 char): CUP

Tactical TX Text: Cupertino OES

New Packet Message

File Edit Actions Help

Print Send Save Delete Close Urg Pvt

Private Message

Bbs: K6SJC-1

From: KN6PE

To:

Subject: CUP190: Availability of N95 Masks

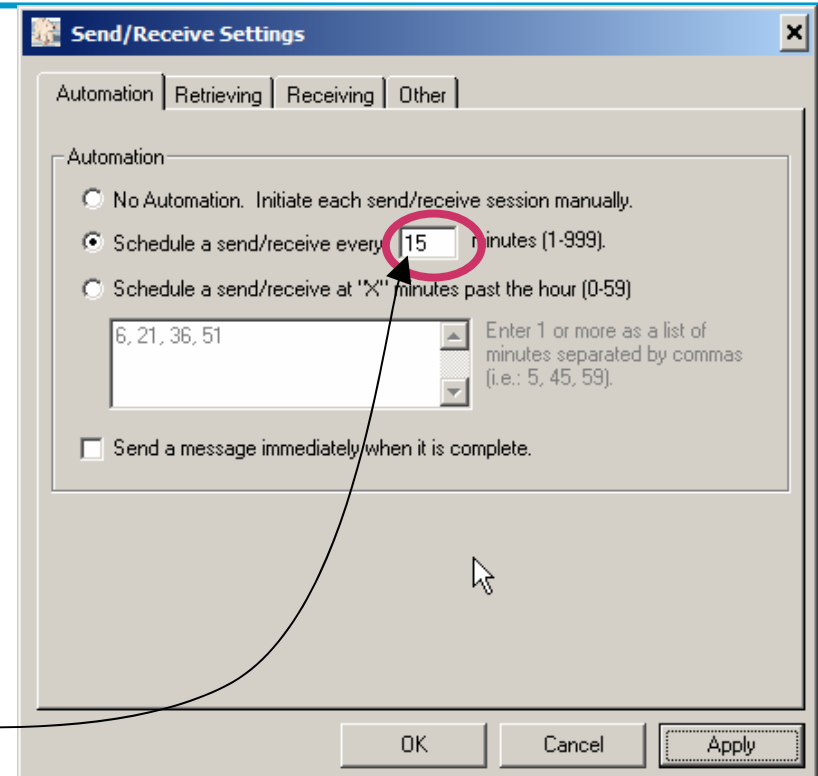


Policy #5: BBS polling period

Policy: Each packet station should poll the BBS at a rate sufficient for timely message retrieval without creating excessive channel congestion.

Implementation #1:

- *Example:* Santa Clara County has about 15 stations and 3 BBS access frequencies.
- A periodic polling every “X” minutes is established and allows for unattended operation.
- Consideration should be given to...
 - the number of stations requiring access to the BBS on a given frequency, and
 - the phase of the emergency (for instance: heavy traffic: longer period... light traffic, shorter period).



Policy #5: BBS polling period

Policy: Each packet station should poll the BBS at a rate sufficient for timely message retrieval without creating excessive channel congestion.

Implementation #2:

- *Example:* Santa Clara County Hospital has 14 regional hospitals and 1 BBS access frequency.
- One or more specific polling slots (minutes within an hour) are assigned to each hospital packet station.
- Considerations...
 - All PC clocks need to be set to the same time (voice net coordination).
 - Quality of the connection (extent of retries)

Send/Receive Settings

Automation | Retrieving | Receiving | Other

Automation

No Automation. Initiate each send/receive session manually.

Schedule a send/receive every 15 minutes (1-999).

Schedule a send/receive at "X" minutes past the hour (0-59)

6, 21, 36, 51

Enter 1 or more as a list of minutes separated by commas (i.e.: 5, 45, 59).

Send a message immediately when it is complete.

OK Cancel Apply

Station	minutes past the hour			
1MVECH	0	15	30	45
1PASMV	1	16	31	46
1SJVMC	6	21	36	51
:				
1SJGSH	14	29	44	59

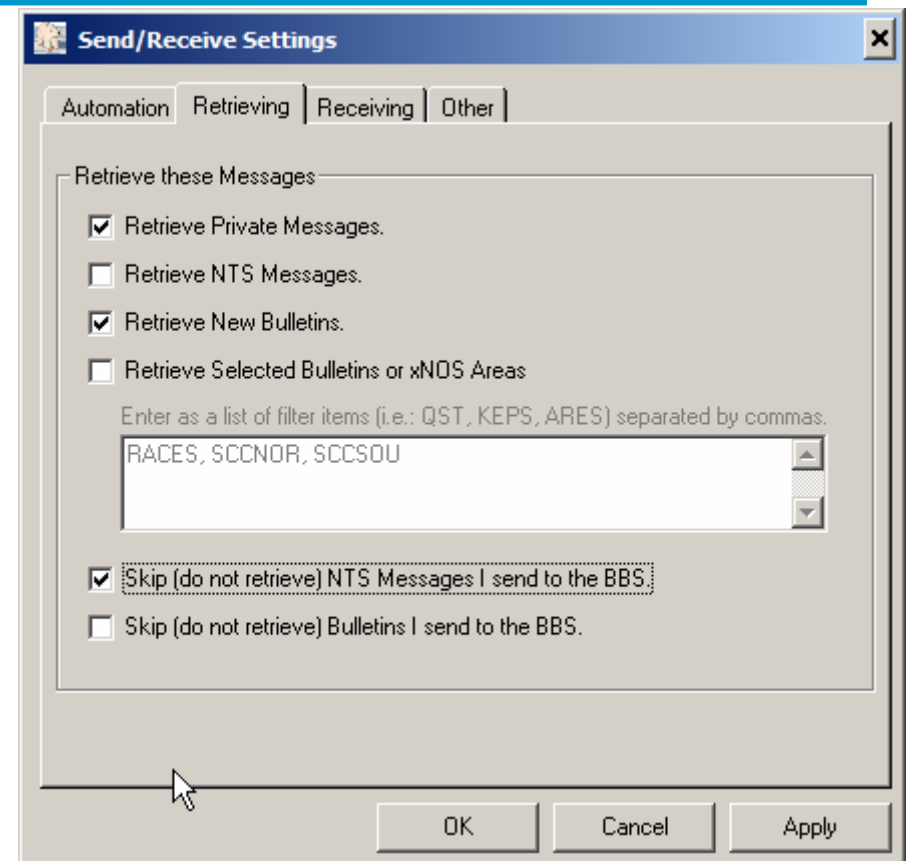


Policy #6: Poll for message types

Policy: All stations will poll for specific message types. This approach also reduces channel congestion.

Implementation:

- Select the message types that will be sent within your operational area
 - Private messages: between 2 stations
 - NTS messages: standard ARRL protocol
 - Bulletins: all broadcast messages
 - Selected Bulletins: specific messages found on a public bulletin board

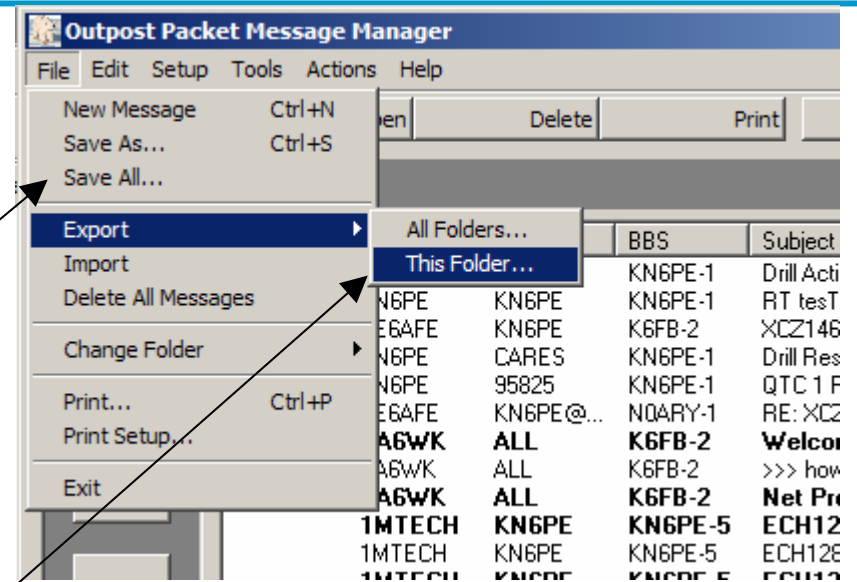


Policy #7: Documentation

Policy: All message traffic becomes part of the official event documentation package.

Implementation:

- Message archiving...
 - Save All: writes a single text file of all messages, with embedded Form Feeds
 - Archive: writes one or more folders to an Outpost archive file. Can be re-imported later if required
- Message audit report (pending, ER #416)



Mission Support

Outpost Packet Message Manager

- Understanding the mission and purpose of the agencies we serve.
- Ensure our mission aligns with the needs of our served agencies.
- What our served agencies need from us...
 - Pass message traffic
 - Documentation
 - Audit trail

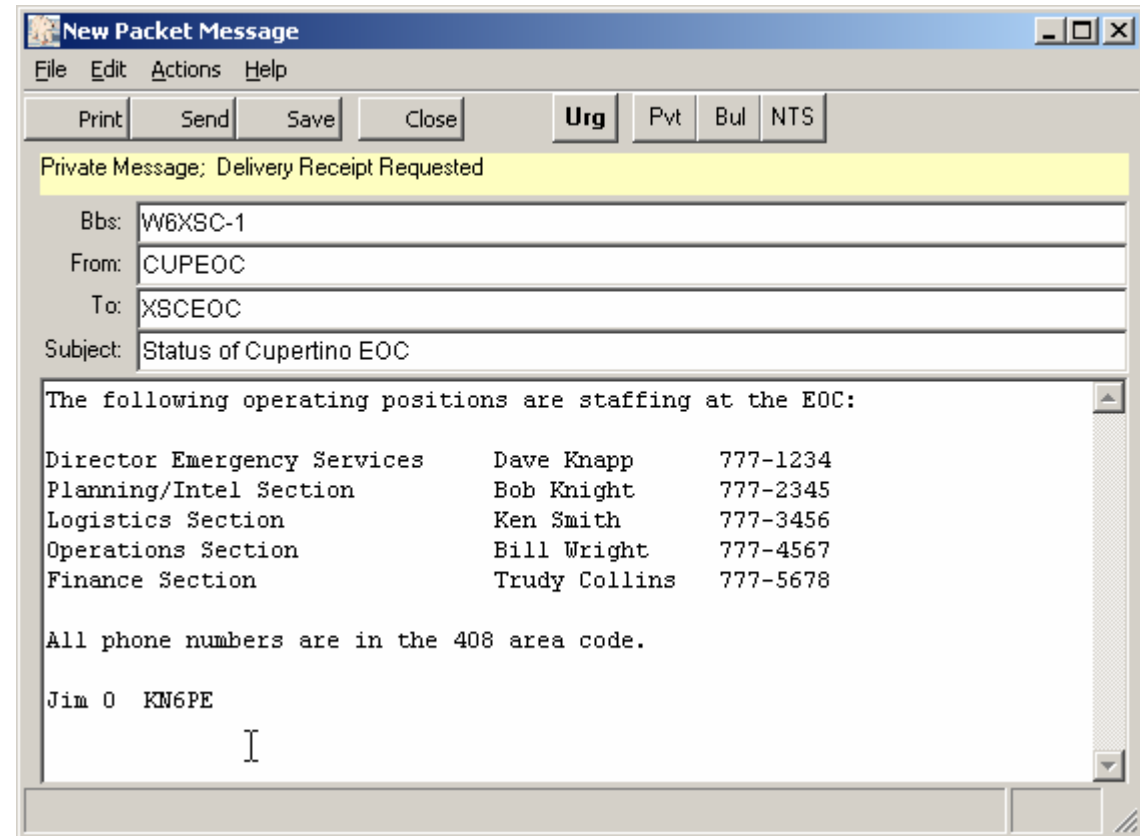


Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry with cntl-Tab formatting
- Cut-and-paste from other apps
- NTS Message Maker
- On-line report builder
- Import text from a file
- Remote message origination

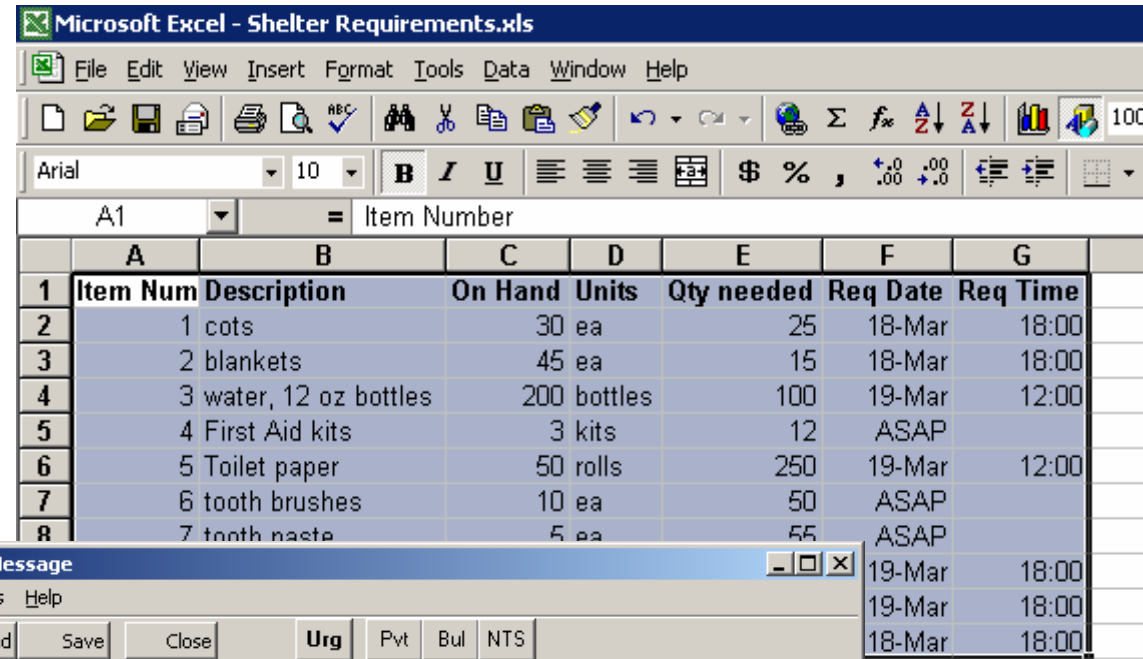


Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

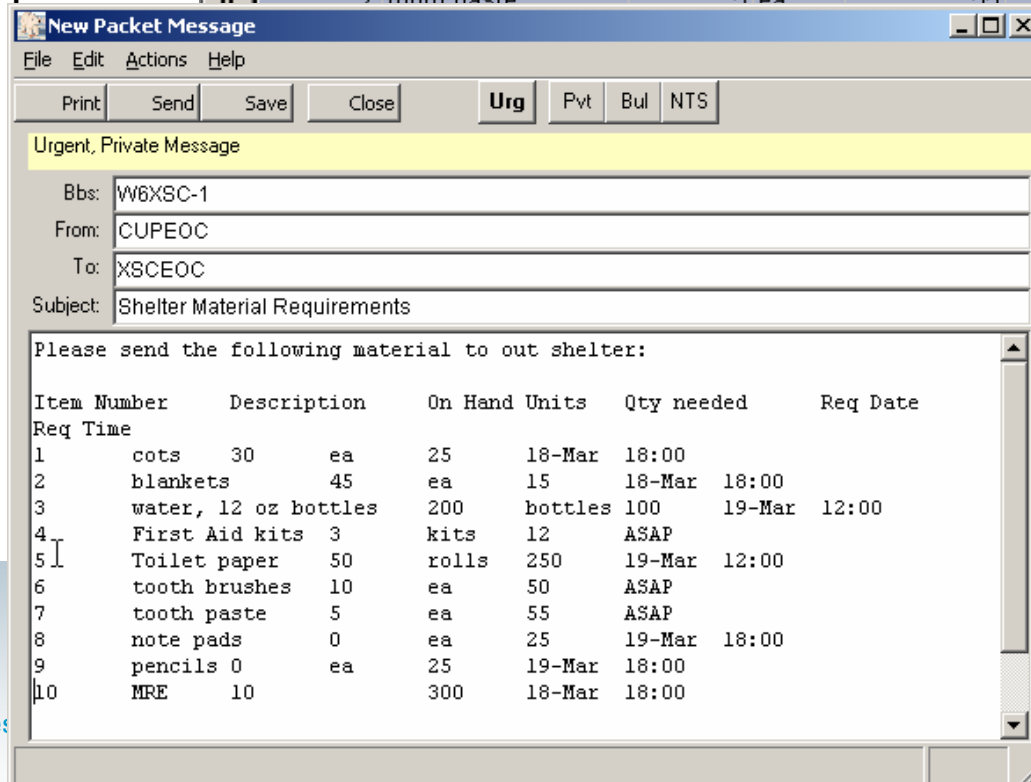
Implementation:

- Direct entry (with cntl-Tab formatting)
- **Cut-and-paste** from other apps
- NTS Message Maker
- On-line report builder
- Import text from a file
- Remote message origination



Microsoft Excel - Shelter Requirements.xls

Item Num	Description	On Hand	Units	Qty needed	Req Date	Req Time
1	cots	30	ea	25	18-Mar	18:00
2	blankets	45	ea	15	18-Mar	18:00
3	water, 12 oz bottles	200	bottles	100	19-Mar	12:00
4	First Aid kits	3	kits	12	ASAP	
5	Toilet paper	50	rolls	250	19-Mar	12:00
6	tooth brushes	10	ea	50	ASAP	
7	tooth paste	5	ea	55	ASAP	
8	note pads	0	ea	25	19-Mar	18:00
9	pencils	0	ea	25	19-Mar	18:00
10	MRE	10	300	18-Mar	18:00	



New Packet Message

Urgent, Private Message

Bbs: W6XSC-1
From: CUPEOC
To: XSCEOC
Subject: Shelter Material Requirements

Please send the following material to out shelter:

Item Number	Description	On Hand	Units	Qty needed	Req Date	Req Time
1	cots	30	ea	25	18-Mar	18:00
2	blankets	45	ea	15	18-Mar	18:00
3	water, 12 oz bottles	200	bottles	100	19-Mar	12:00
4	First Aid kits	3	kits	12	ASAP	
5	Toilet paper	50	rolls	250	19-Mar	12:00
6	tooth brushes	10	ea	50	ASAP	
7	tooth paste	5	ea	55	ASAP	
8	note pads	0	ea	25	19-Mar	18:00
9	pencils	0	ea	25	19-Mar	18:00
10	MRE	10	300	18-Mar	18:00	



Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry (with cntl-Tab formatting)
- Cut-and-paste from other apps
- **NTS Message Maker**
 - Create...
- On-line report builder
- Import text from a file
- Remote message origination

NTS Message Maker

File Edit

ARL Msg Check Save Clear Msg Cancel

Preamble

Msg No: 183

Precedence: R (R, W, P, E)

Handling Instr: HX

Station of Origin: KN6PE

ARL Message:

Check:

Place of Origin: Cupertino, CA

Time of Origin: 22:13

Date of Origin: Feb 06

Destination Address

Name: Dave Larson

Call Sign:

Address: 5304 East Ranch Road

City: SACRAMENTO

State/Prov: CA Zip/Postal: 95825

Phone No: 916 555 1212

Message

Cannot attend the meeting this week. All airports are closed. Please advise the repeater committee that the project is almost complete.

Signature

Jim KN6PE

Ready for NTS message entry



Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry (with cntl-Tab formatting)
- Cut-and-paste from other apps
- **NTS Message Maker**
 - **Create... Check...**
- On-line report builder
- Import text from a file
- Remote message origination

The screenshot shows the NTS Message Maker application window. The title bar reads "NTS Message Maker". The menu bar includes "File" and "Edit". The toolbar contains buttons for "ARL Msg", "Check" (circled in red), "Save", "Clear Msg", and "Cancel".

The "Preamble" section includes the following fields:

- Msg No: 183
- Precedence: R (R, W, P, E)
- Handling Instr: HX
- Station of Origin: KN6PE
- ARL Message:
- Check: 23
- Place of Origin: Cupertino, CA
- Time of Origin: 22:13
- Date of Origin: Feb 06

The "Destination Address" section includes the following fields:

- Name: Dave Larson
- Call Sign:
- Address: 5304 East Ranch Road
- City: SACRAMENTO
- State/Prov: CA Zip/Postal: 95825
- Phone No: 916 555 1212

The "Message" section contains a text area with the following text:

```
Cannot attend the meeting this
week X All airports are
closed X Please advise the
repeater committee that the project
```

The "Signature" section contains the text: Jim KN6PE

The status bar at the bottom of the window displays the message: "Message looks good!"

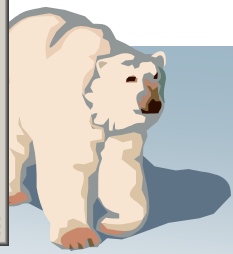
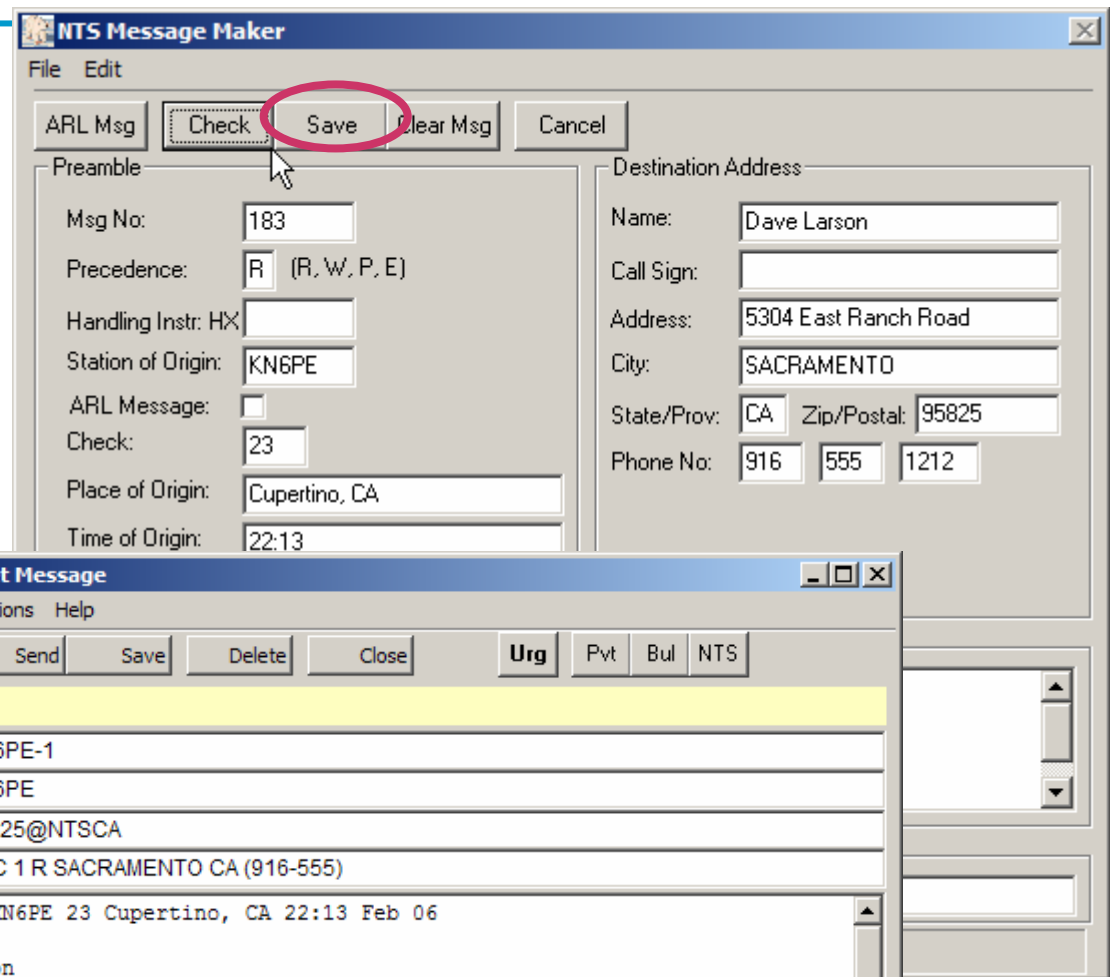


Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry (with cntl-Tab formatting)
- Cut-and-paste from other apps
- **NTS Message Maker**
 - **Create... Check... Save**
- On-line report builder
- Import text from a file
- Remote message origination



Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry (with cntl-Tab formatting)
- Cut-and-paste from other apps
- **NTS Message Maker (ARL support)**
- On-line report builder
- Import text from a file
- Remote message origination

The screenshot displays the NTS Message Maker interface. The main window has a menu bar with 'File' and 'Edit', and buttons for 'ARL Msg', 'Check', 'Save', 'Clear Msg', and 'Cancel'. The 'Preamble' section includes fields for 'Msg No: 184', 'Precedence: R (R, W, P, E)', 'Handling Instr: HX', 'Station of Origin: KN6PE', 'ARL Message: [checkbox]', 'Check: [checkbox]', 'Place of Origin: Cupertino, CA', 'Time of Origin: 21:17', and 'Date of Origin: Feb 08'. A 'Destination Address' field is also present. An 'ARL Message Wizard' dialog box is open, showing 'Message Type: ROUTINE' and 'ARL Number: SIXTY FIVE'. It contains a text area with the instruction: 'Arriving <Location> on <Flight No/Train No/etc>. Please arrange to meet me there.' and buttons for 'Next' and 'Previous'. Below it, an 'ARL Message Information' dialog box prompts for 'Location' information, with 'San Jose' entered in the text field and 'OK' and 'Cancel' buttons. The main window's 'Message' field shows the generated text: 'ARL SIXTY FIVE San Jose HA 44 X'. The 'Signature' field is empty. At the bottom, it says 'Ready for NTS message entry'. A small bear illustration is in the bottom right corner.

Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry (with cntl-Tab formatting)
- Cut-and-paste from other apps
- NTS Message Maker
- **On-line report builder**
 - **Reports...**
- Import text from a file
- Remote message origination

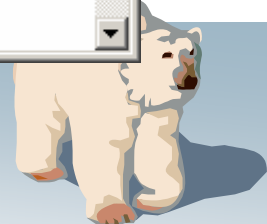
```
DamageAssesment 3.txt - Notepad
File Edit Format View Help
/*****
/ Author:      Jim Oberhofer KN6PE
/ Rev Date:   29-May-2004
/*****
<subj>ARC DSR 5972
/
DAMAGE ASSESSMENT REPORT:  <org>
-----
DATE/TIME: <D>, <T>  Message Number: <tacid><msg#>

TOWN: <city>
ADDRESS OR LOT NUMBER: =
SUBDIVISION: =
PROPERTY TYPE: =
DAMAGE->(DESTROYED, MAJOR, MINOR, AFFECTED): =
DAMAGE DESCRIPTION:
=

OWNER INFORMATION:
NAME: =
PHONE NUMBER: =
NUMBER OF PEOPLE AFFECTED: =
      ADULTS: =      CHILDREN: =
      HANDICAP: =      ELDERLY: =

NUMBER OF CONFIRMED INJURIES: =
NUMBER OF CONFIRMED DEATHS: =

OPERATOR: <name> <C>
STATION TACTICAL: <tacloc>
AR
----- End of message -----
```



Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry (with cntl-Tab formatting)
- Cut-and-paste from other apps
- NTS Message Maker
- On-line report builder
 - Reports... Tags...
- Import text from a file
- Remote message origination

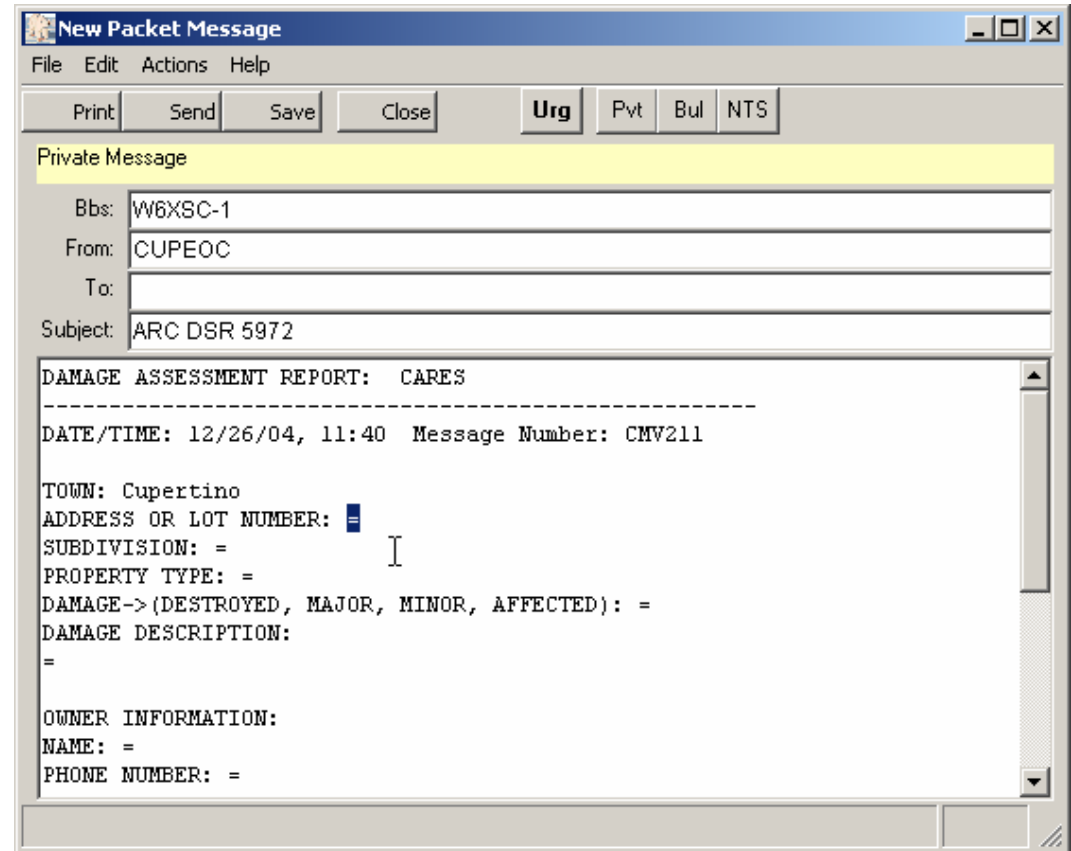
Tag	Description
<D>, <date1>	mm/dd/yy (5/21/04).
<date2>	dd-mmm-yyyy (21-May-2004)
<T>, <time>	hh:mm (22:45)
<M>, <msg#>	Message Number; from Report Settings
<C>, <call>	Call, as entered at the Station ID form
<name>	Name, as entered at the Station ID form
<bbs>	BBS name; current BBS
<subj>text	Places "text" on subject line
<org>	Organization; from Report Settings
<city>	City name; from Report Settings
<county>	County name; from Report Settings
<state>	State name, 2 char; from Report Settings
<province>	
<tacloc>	
<tacid>	
<text1, 2, 3>	
=	
/ comment	

Mission support: Message origination

Requirement: Originate messages based on the content and format of our served agencies.

Implementation:

- Direct entry (with cntl-Tab formatting)
- Cut-and-paste from other apps
- NTS Message Maker
- **On-line report builder**
 - **Reports... Tags... Processing**
- Import text from a file
- Remote message origination



The screenshot shows a window titled "New Packet Message" with a menu bar (File, Edit, Actions, Help) and a toolbar (Print, Send, Save, Close, Urg, Pvt, Bul, NTS). The form is labeled "Private Message" and contains the following fields:

- Bbs: W6XSC-1
- From: CUPEOC
- To: (empty)
- Subject: ARC DSR 5972

The main text area contains the following text:

```
DAMAGE ASSESSMENT REPORT: CARES
-----
DATE/TIME: 12/26/04, 11:40 Message Number: CMW211

TOWN: Cupertino
ADDRESS OR LOT NUMBER: =
SUBDIVISION: =
PROPERTY TYPE: =
DAMAGE->(DESTROYED, MAJOR, MINOR, AFFECTED): =
DAMAGE DESCRIPTION:
=

OWNER INFORMATION:
NAME: =
PHONE NUMBER: =
```

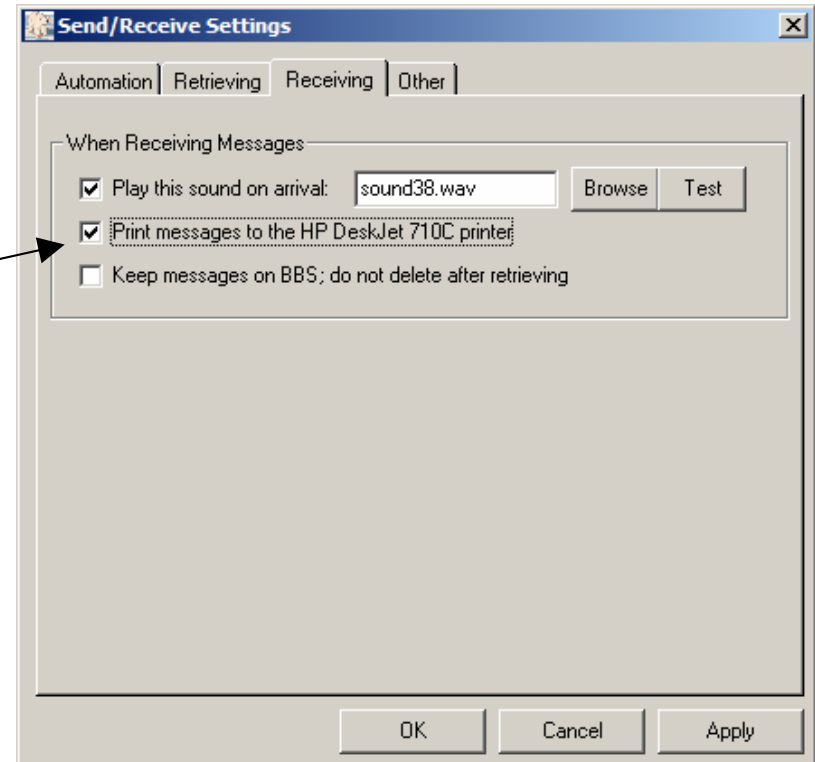


Mission support: Documentation

Requirement: All packet message traffic must be submitted to the EOC for disposition.

Implementation:

- Incoming message distribution
- Outgoing message printing record keeping, specify # copies

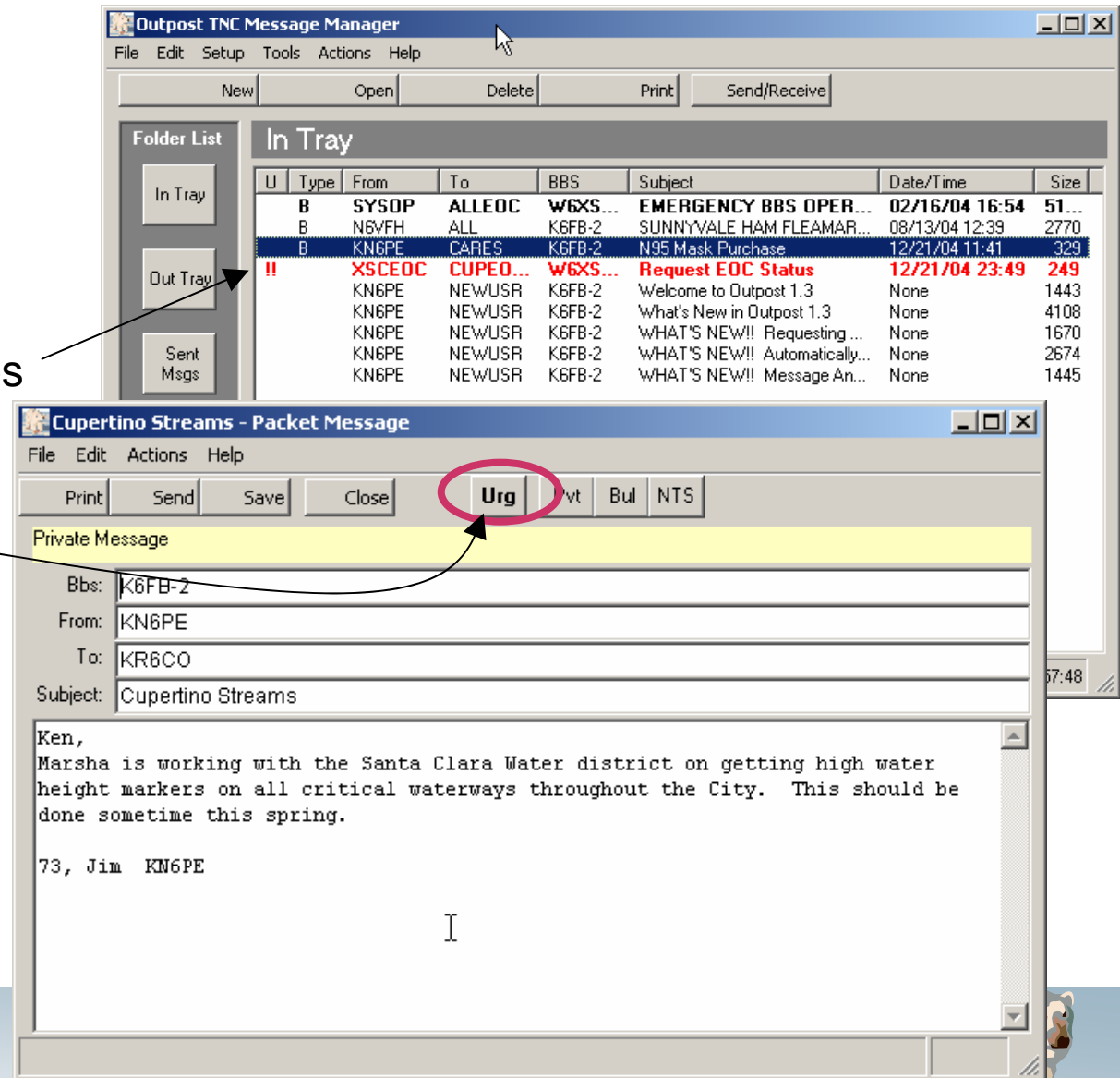


Mission support: Message Alerts

Requirement: Prioritize traffic according to the needs of our served agencies. Identify priority traffic on its arrival.

Implementation:

- Identify incoming urgent messages
- Set message priorities for outgoing messages



Need more information?

- User Guide... www.outpostpm.org#documentation
 - A complete description of all features, forms, fields, and controls in Outpost
- HOW-TO pages... www.outpostpm.org/howto.html
 - Specific How-To's for the most common tasks performed
- Application Notes... www.outpostpm.org#documentation
 - Write-ups with more details on a specific topic.
- Troubleshooting page...
www.outpostpm.org/troubleshooting.html
- Users group...
<http://groups.yahoo.com/group/outpostpacket/>



Thank you

Any Questions?

