Outpost

packet message manager

Packet Radio and
Emergency Communications

EMCOMMWEST 2007
5 May 2007

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Topics

Overview

What's new with Outpost 2.1, 2.2

Survey of PBBS, BBS Apps

Outpost Futures

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

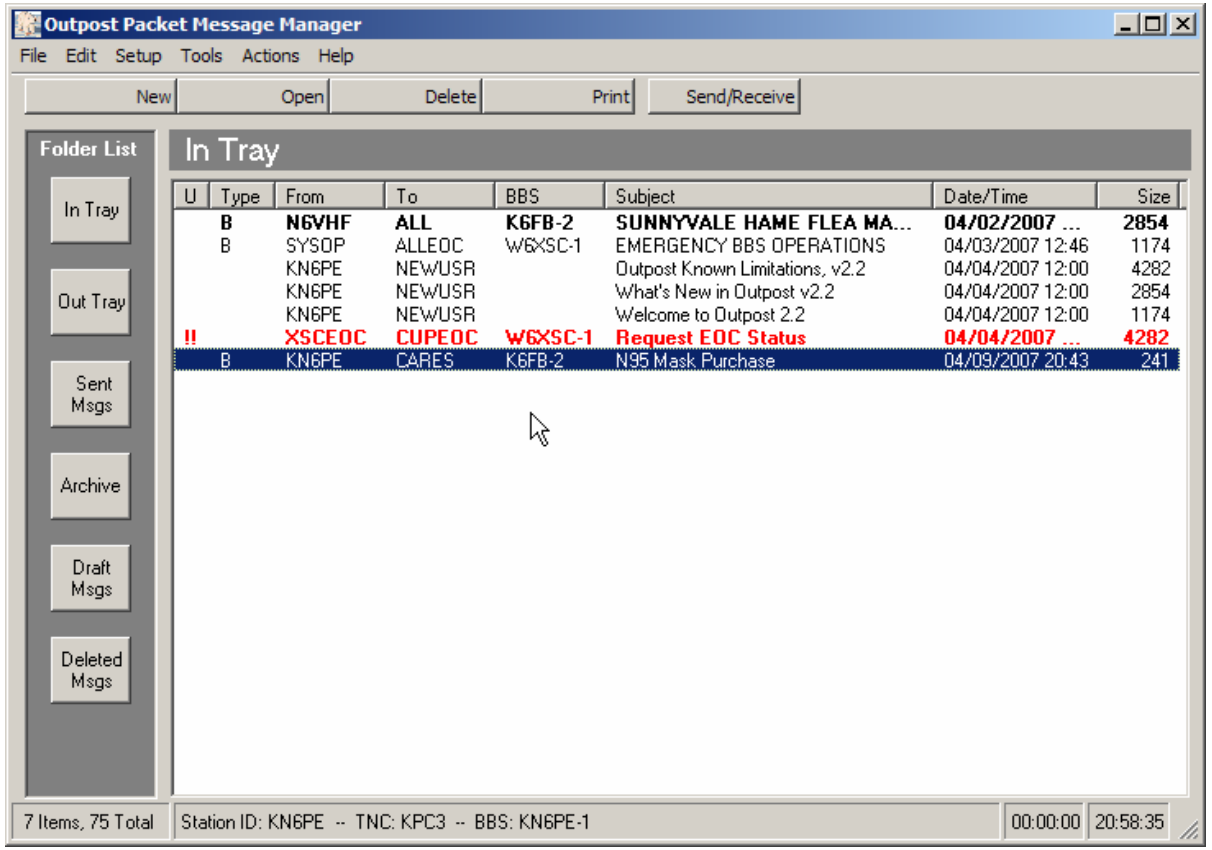
- **Message support**
  - supports Private, NTS, and Bulletin messages
  - text formatting in a free-form message window
  - NTS Message Maker with an ARL message wizard
  - On-line report builder
- **Send/Receive Session (connection) control**
  - supports Serial, AGWPE, and Telnet interfacing with 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

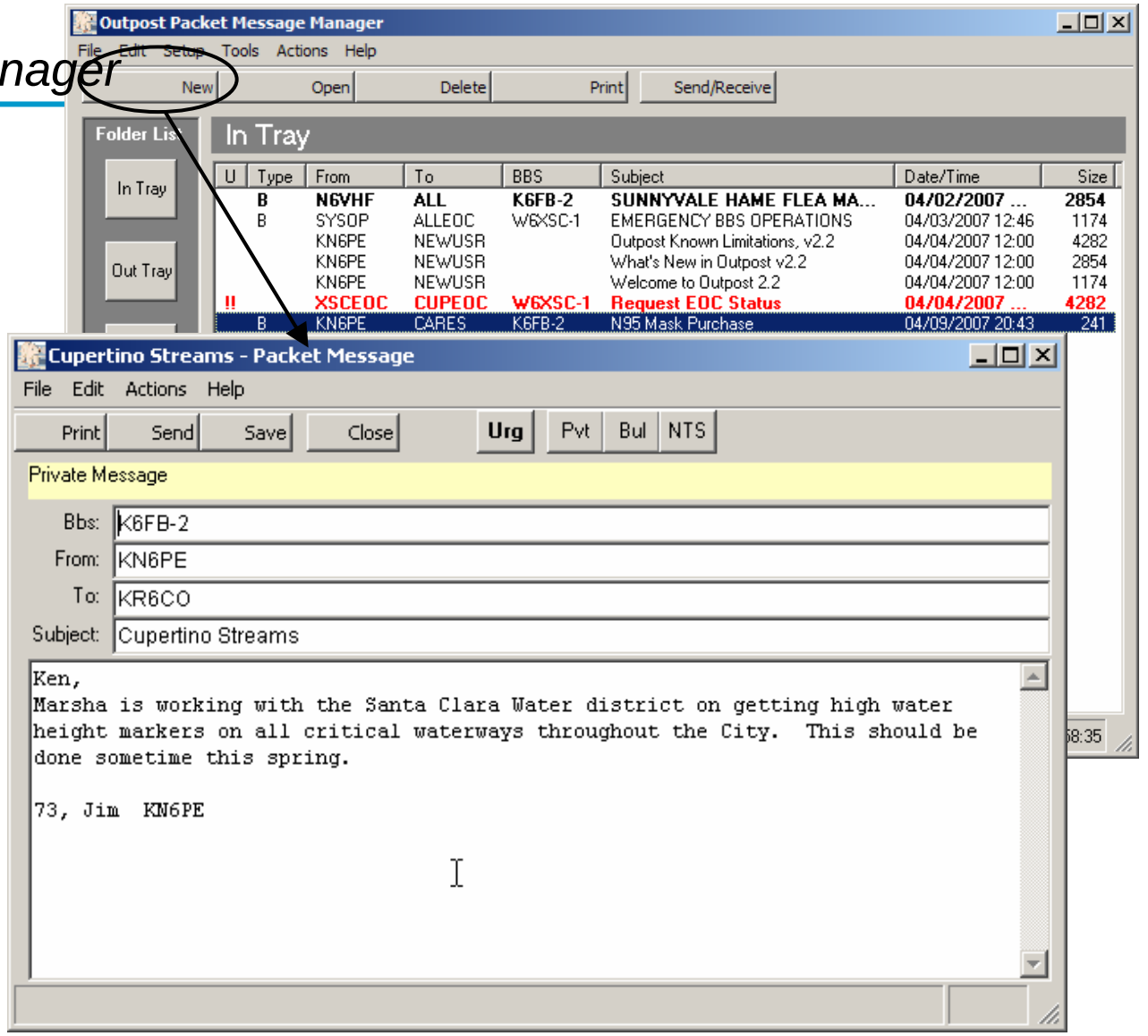


Overview

Outpost Packet Message Manager

Creating Messages

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

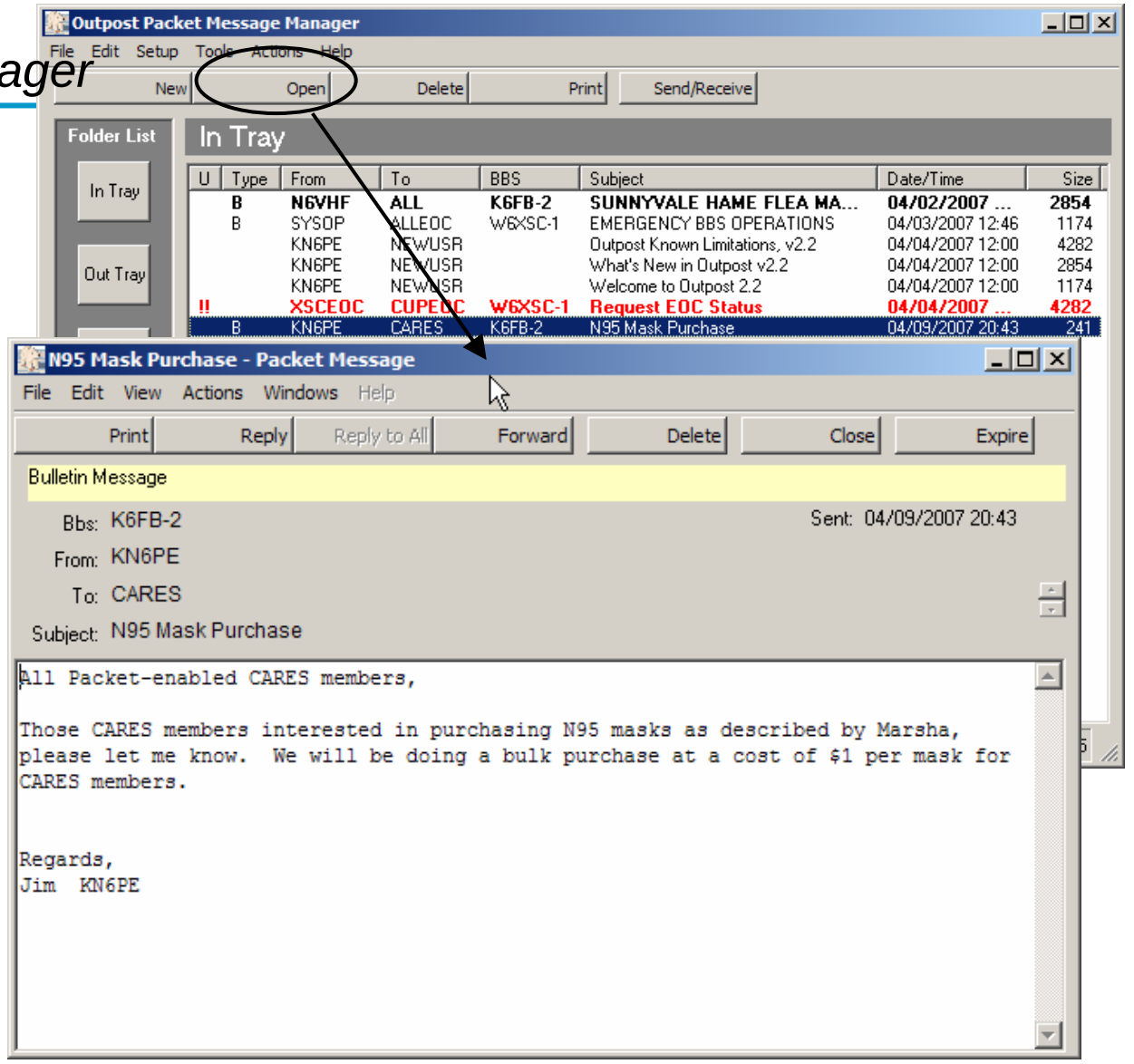


Overview

Outpost Packet Message Manager

Viewing messages

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



Outpost Packet Message Manager
HOW-TOs

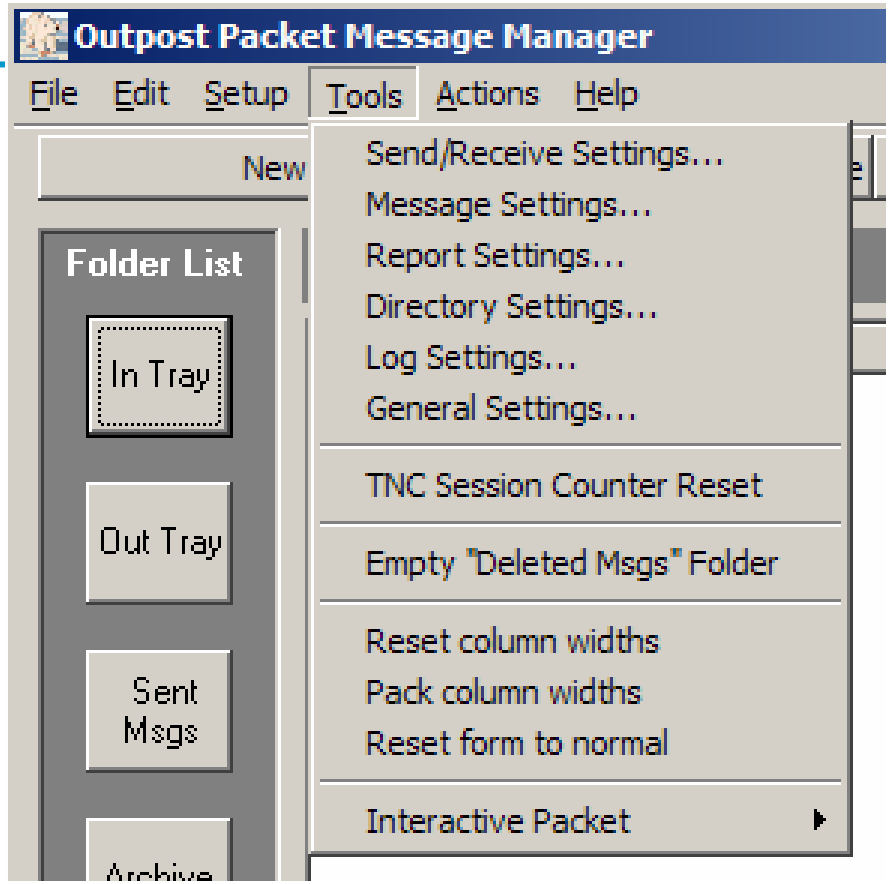
Outpost How-To's

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.

1. Acknowledge Read, send automatically
2. Create a message
3. Forwarding/Replying to a message
4. KA-Node/Netrom (BPQ) Access
5. Message annunciation
6. Message numbering
7. Message receipts
8. Online reports
9. Printing messages automatically
10. Retrieving messages automatically
11. Retrieving selected bulletins
12. Sending a text file
13. Setting up a BBS
14. Setting up a BBS, Santa Clara County RACES
15. Setting up a TNC
16. Setting up AGWPE
17. Setting up Telnet access
18. Signature, adding to a message
19. Tactical Calls

Overview

Outpost Packet Message Manager



Types of controls

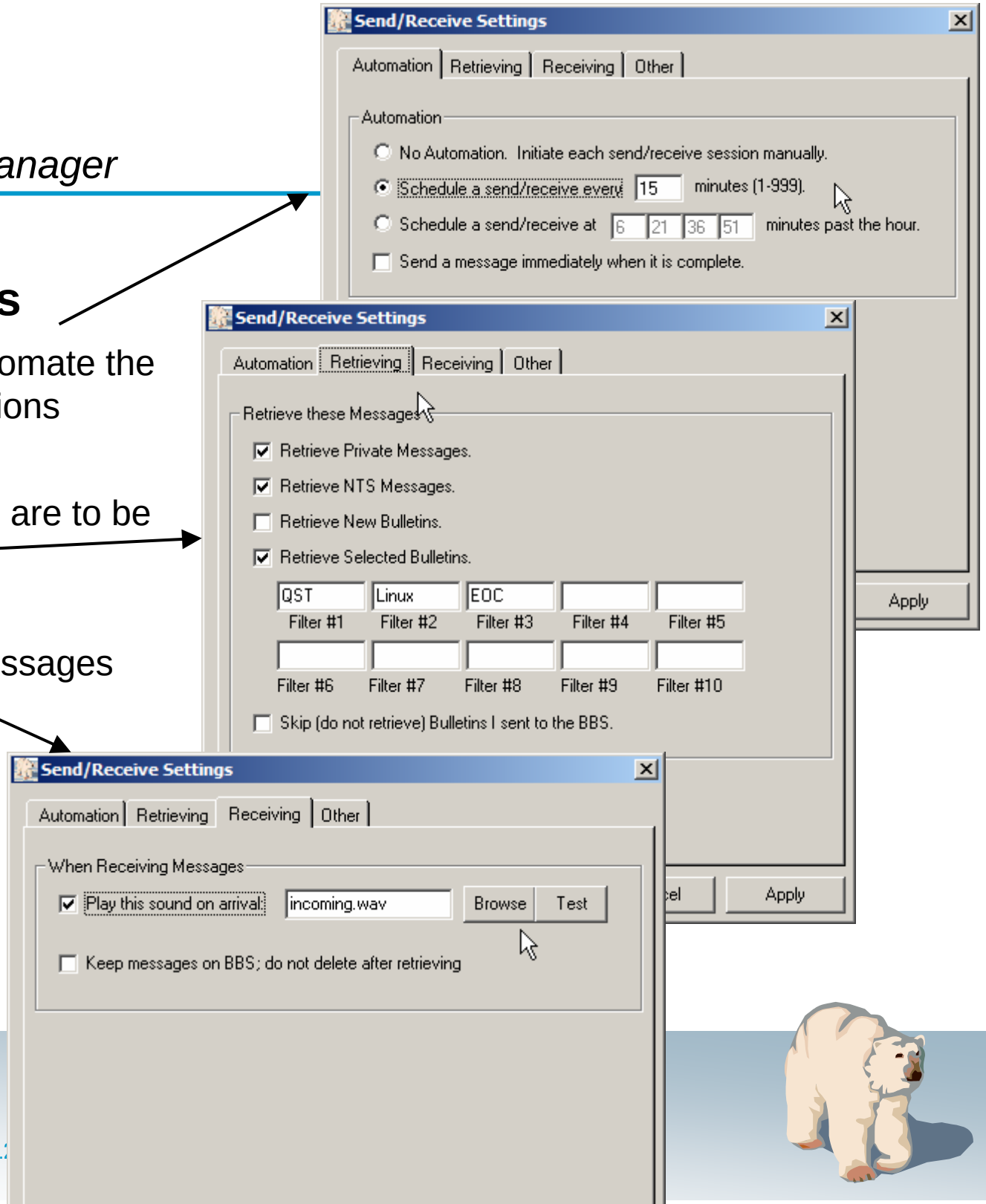
- Controls the flow of Send/Receive Sessions
- Sets how messages are created and handled
- Set various data fields to automatically populate on-line reports and messages
- Set up default Directory Names
- Various Log Settings
- Form sizing Controls
- Separate Interactive Packet Windows for…
    - Serial 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)

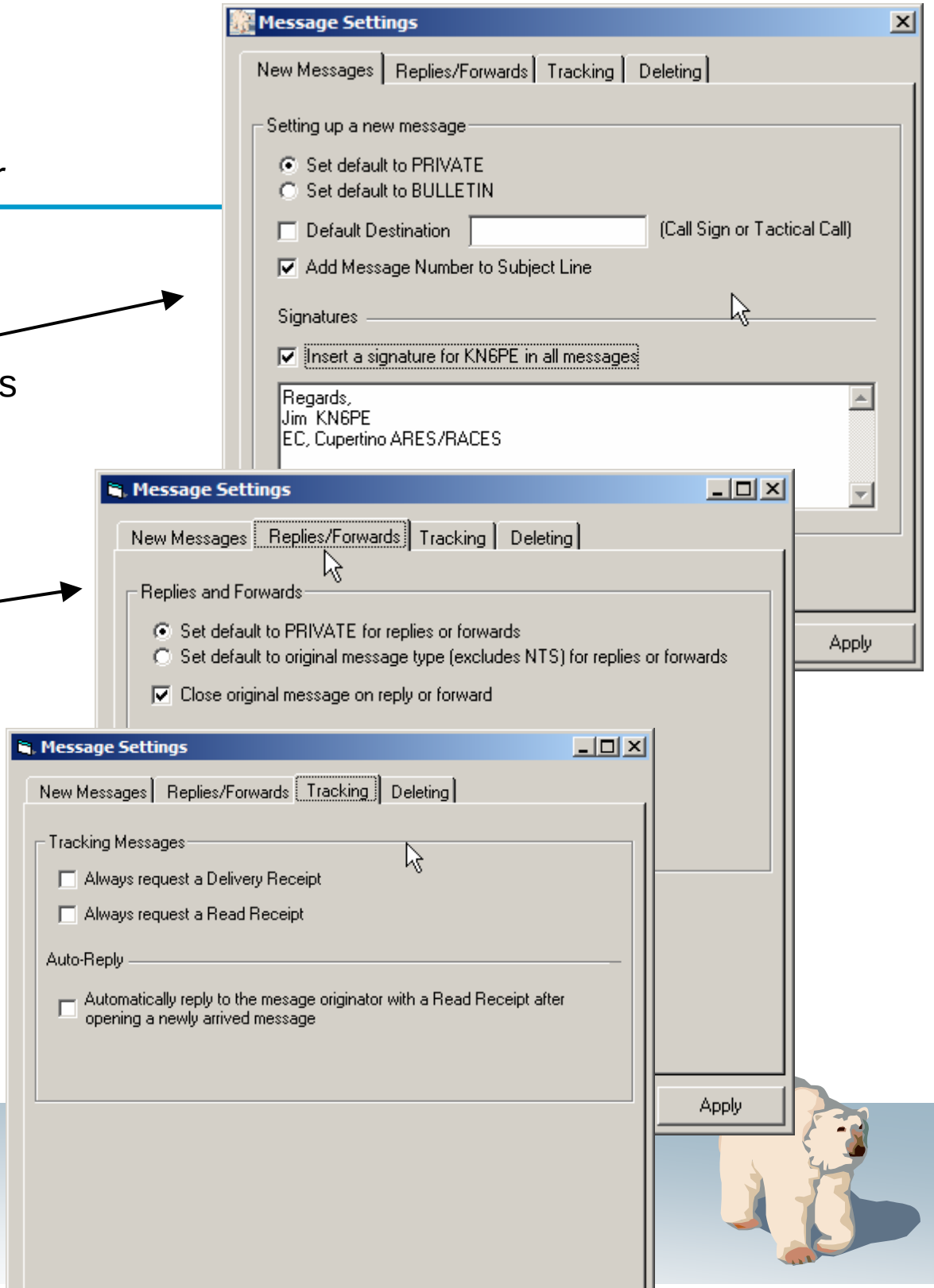


Overview

Outpost Packet Message Manager

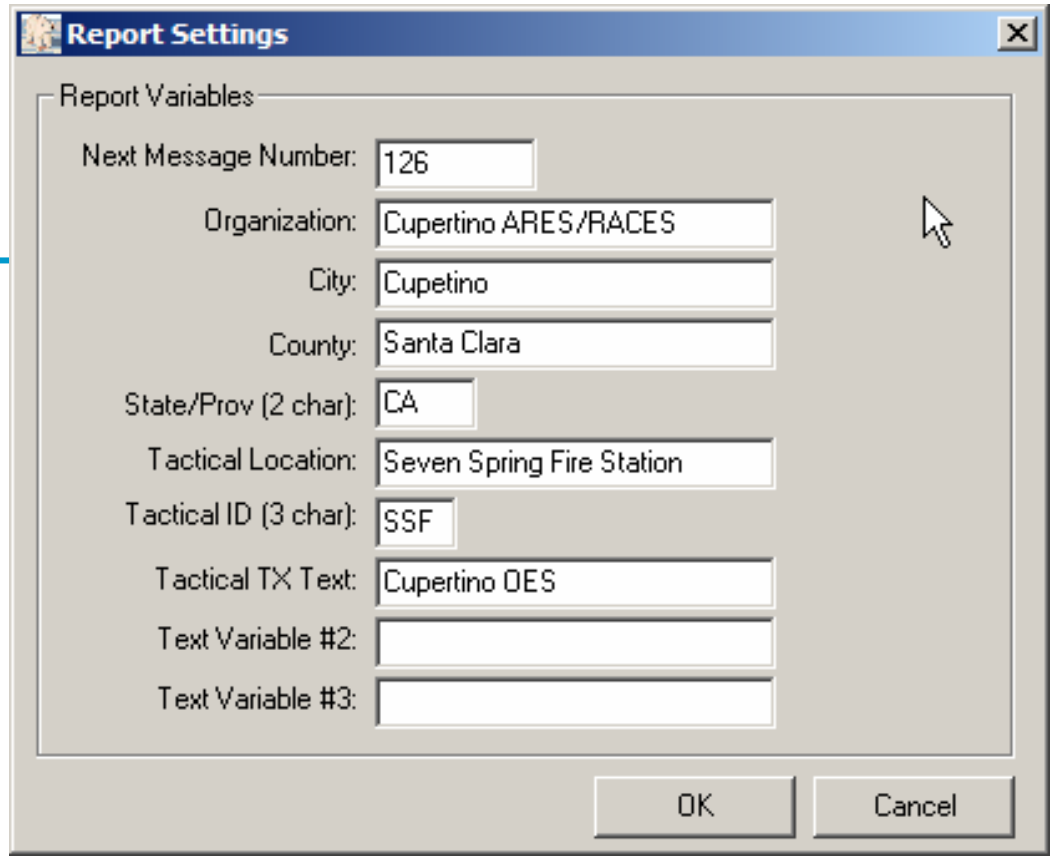
Message Settings

- 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



Overview

Outpost Packet Message Manager



Report Settings

- Message number automatically increments and populates…
  - Subject Line
  - NTS Messages
  - On-line reports
- Standard report variables automatically replace <tags> in On-line Reports (described later)
- Note where tags are used…

Field	On-Line Reports	NTS Message Maker	Message Subject Line
Next Message Number	X	X	X
Organization	X		
City	X	X	
County	X		
State/Prov	X	X	
Tactical Location	X		
Tactical ID	X		X
Tactical TX Text	X		
Text Variable #2, 3	X		

What's new since EmCommWest'06?

v2.2 6-April-2007

- Telpac support
- Enhanced BBS support
- Auto-BBS prompt detect
- Improved message readability
- Warning notifications
- 21 other enhancements and defect changes

v2.1 7-October-2006

- Tactical Calls
- BBS Access through KA-Node, Netrom
- Add Message signature
- Expanded message printing
- 19 other enhancements and defect changes

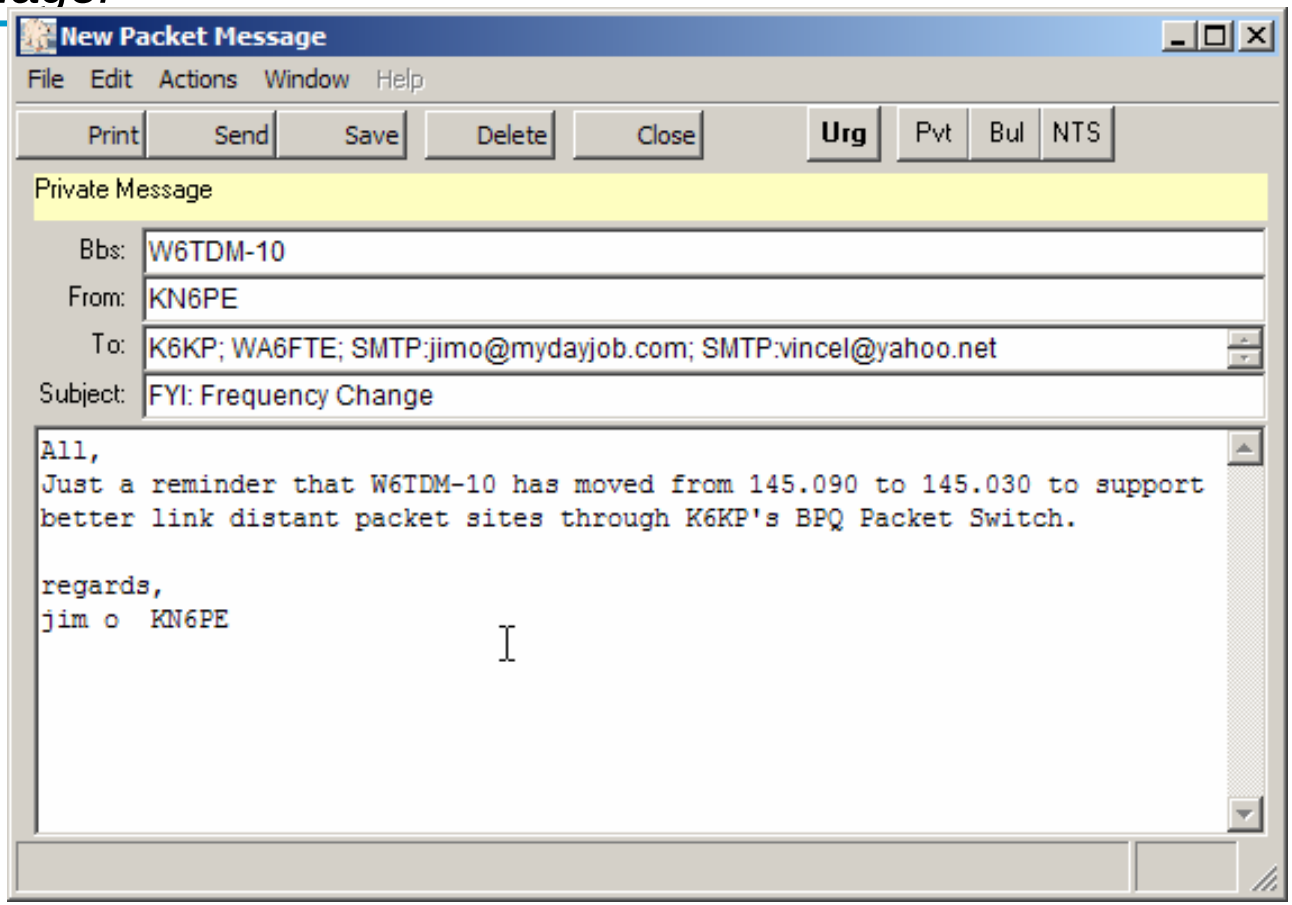
All release details are up at **www.outpostpm.org**

v2.2 Telpac/Winlink

Outpost Packet Message Manager

Telpac/Winlink

- Supports internet email addressing
- Multiple destinations
- Supports Reply-to-all for multi-destination addressed messages
- Handles multiple addresses to non-Telpac BBSs
- No support for attachments

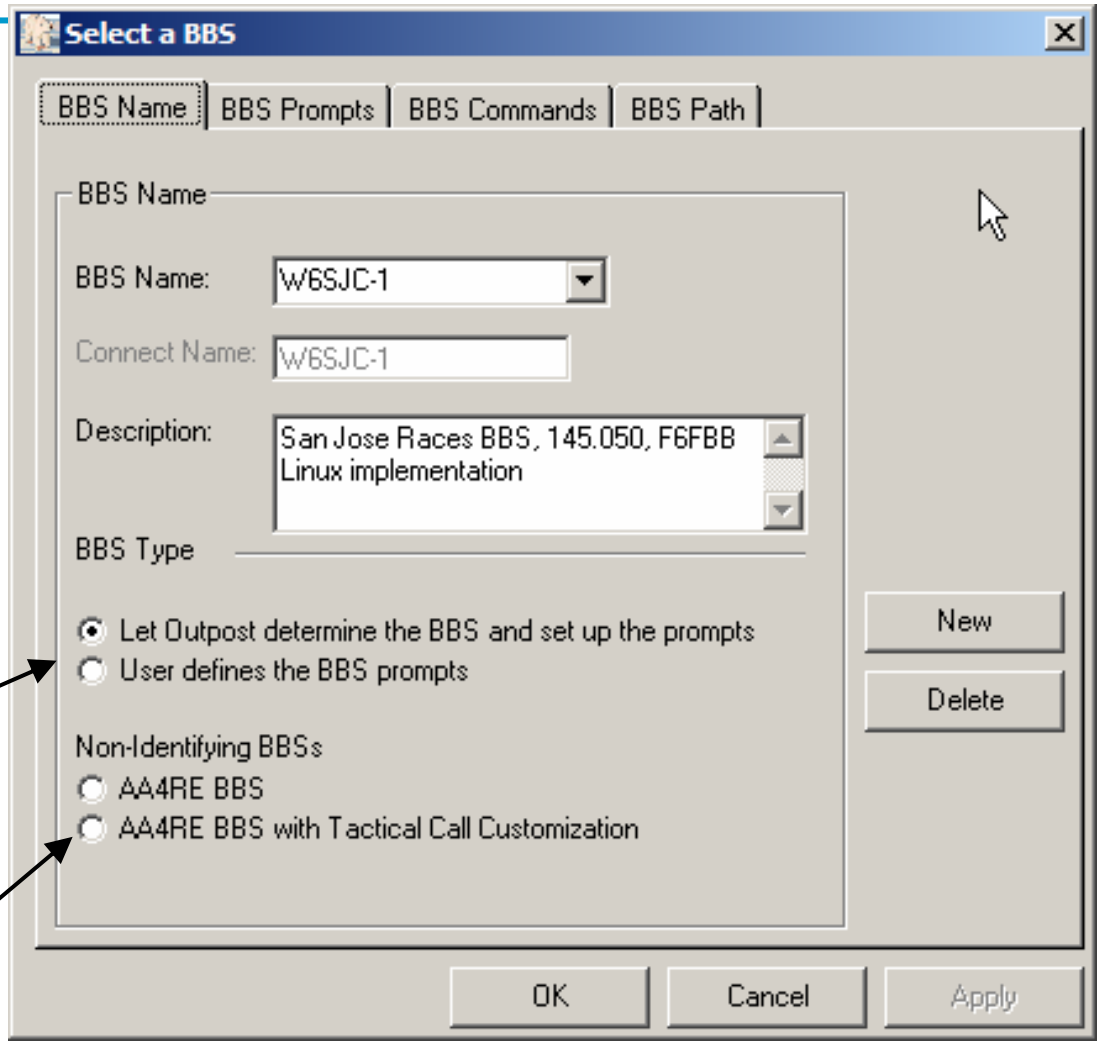


v2.2 Enhanced BBS Support

Outpost Packet Message Manager

BBS setups

- BBSs
  - •BBS Name
  - •BBS Prompts
  - •BBS Commands
  - •BBS Path



Notes...

- Auto-identifies the BBS by reading the SID
- Knows of or figures out the BBS Prompts
- Special handling for non-identifying BBSs

v2.2 Enhanced BBS Support

Current list of supported BBSs (26-April-2007)

PBBSs (Firmware-based, TNC resident)	BBSs (Software-based)	Support requested and pending
KPC3, KPC3+ KPC9612 KAM, KAM-XL, KAM-98, KAM Plus Data Engine (Kantronics) PK-88, PK-232 DSP-232 MFJ-1270x MFJ-1278	AA4RE F6FBB MSYS N0ARY DXNET Telpac/Winlink W0RLI	KPC3 5.1 MFJ-1274 OpenBCM JNOS TNOS

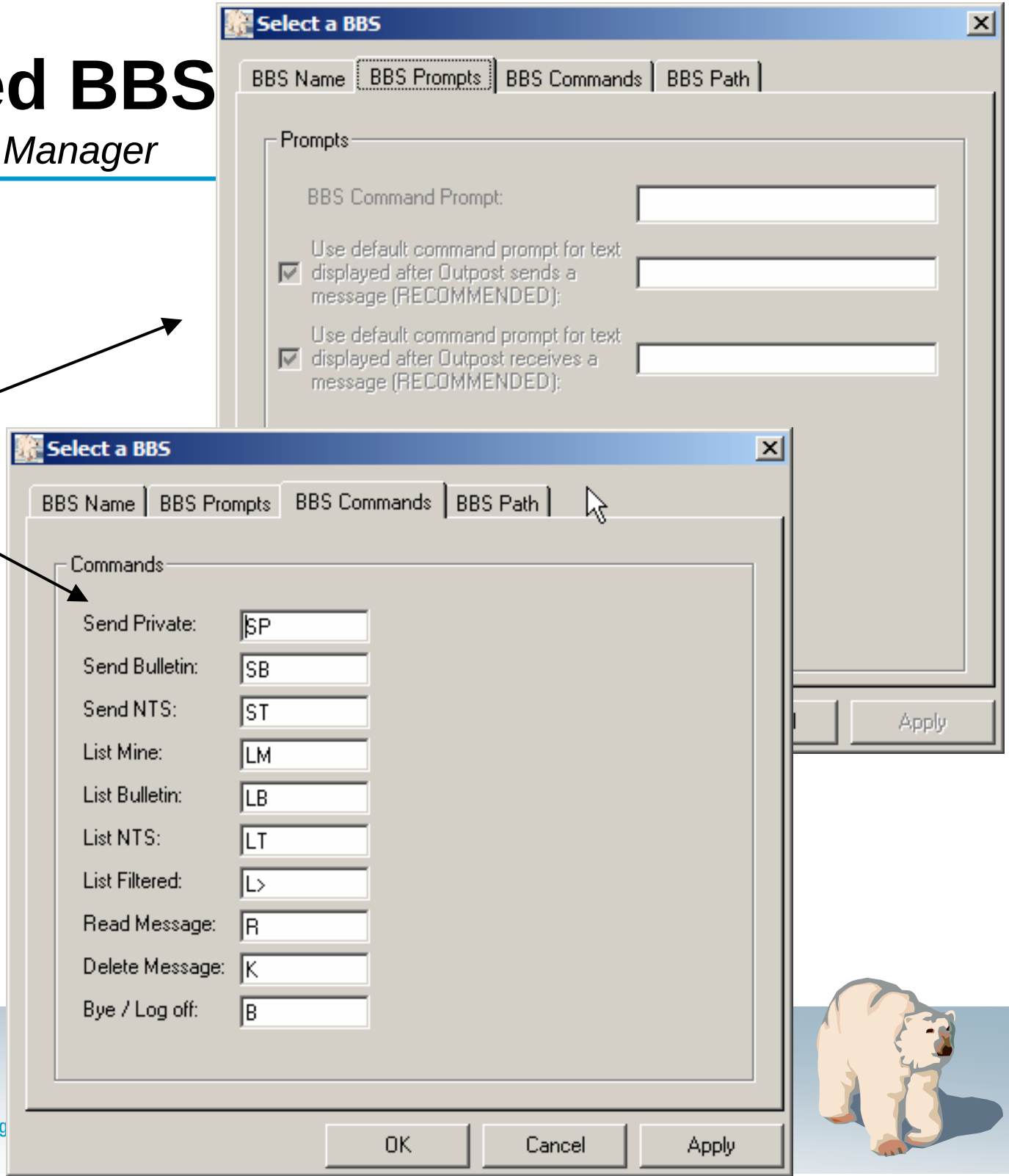
- See **http://www.outpostpm.org/bbs/** for...
  - Updates to the list of supported BBSs
  - Instructions on how to get your BBS supported

v2.2 Enhanced BBS

Outpost Packet Message Manager

BBS setups

- BBSs
  - BBS Name
  - BBS Prompts
  - BBS Commands
  - BBS Path

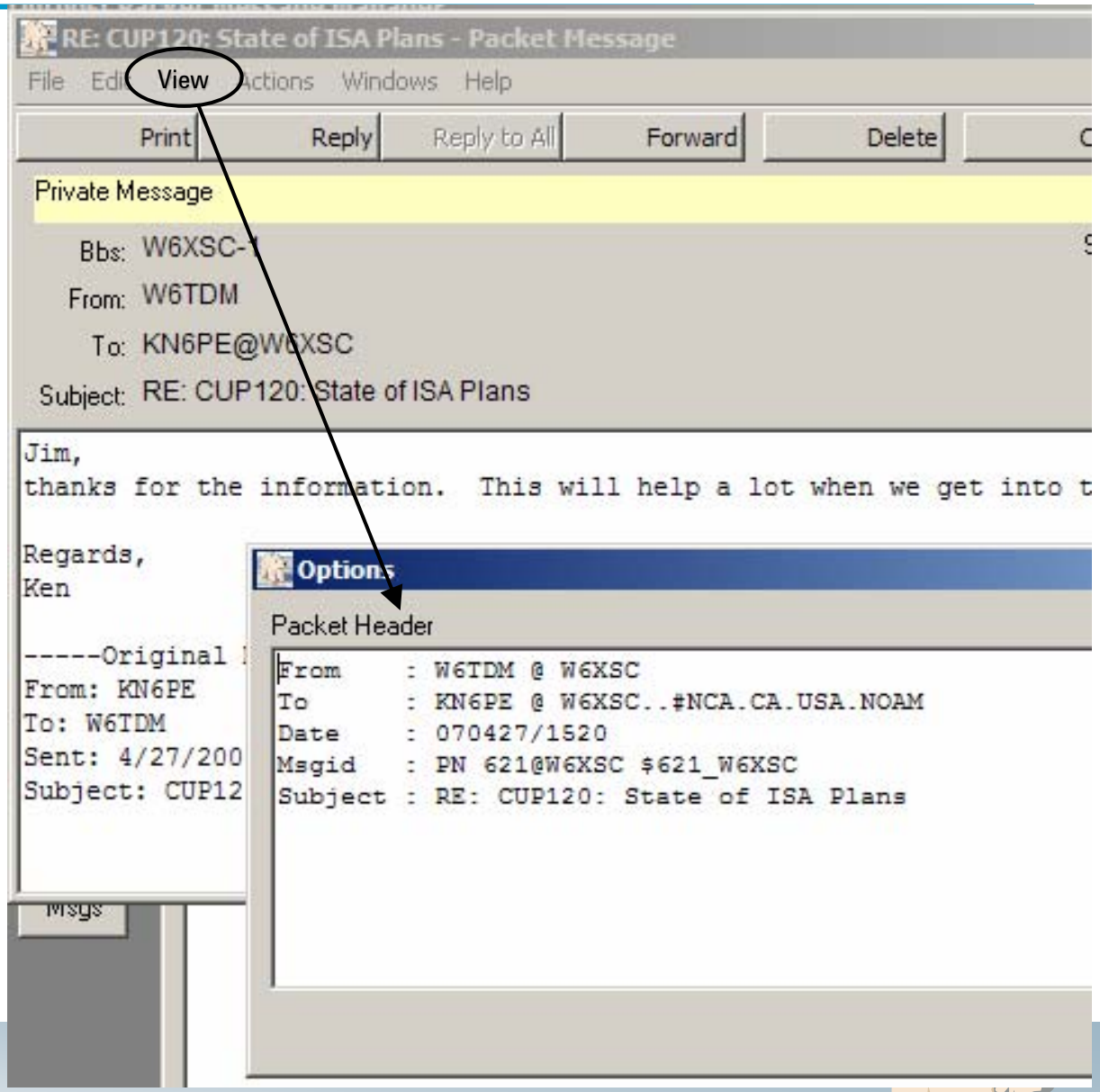


v2.2 Enhanced BBS Support

Outpost Packet Message Manager

Headers & Trailers

- Headers are captured and stored separately.
- Trailers are deleted (single line separator at message end)

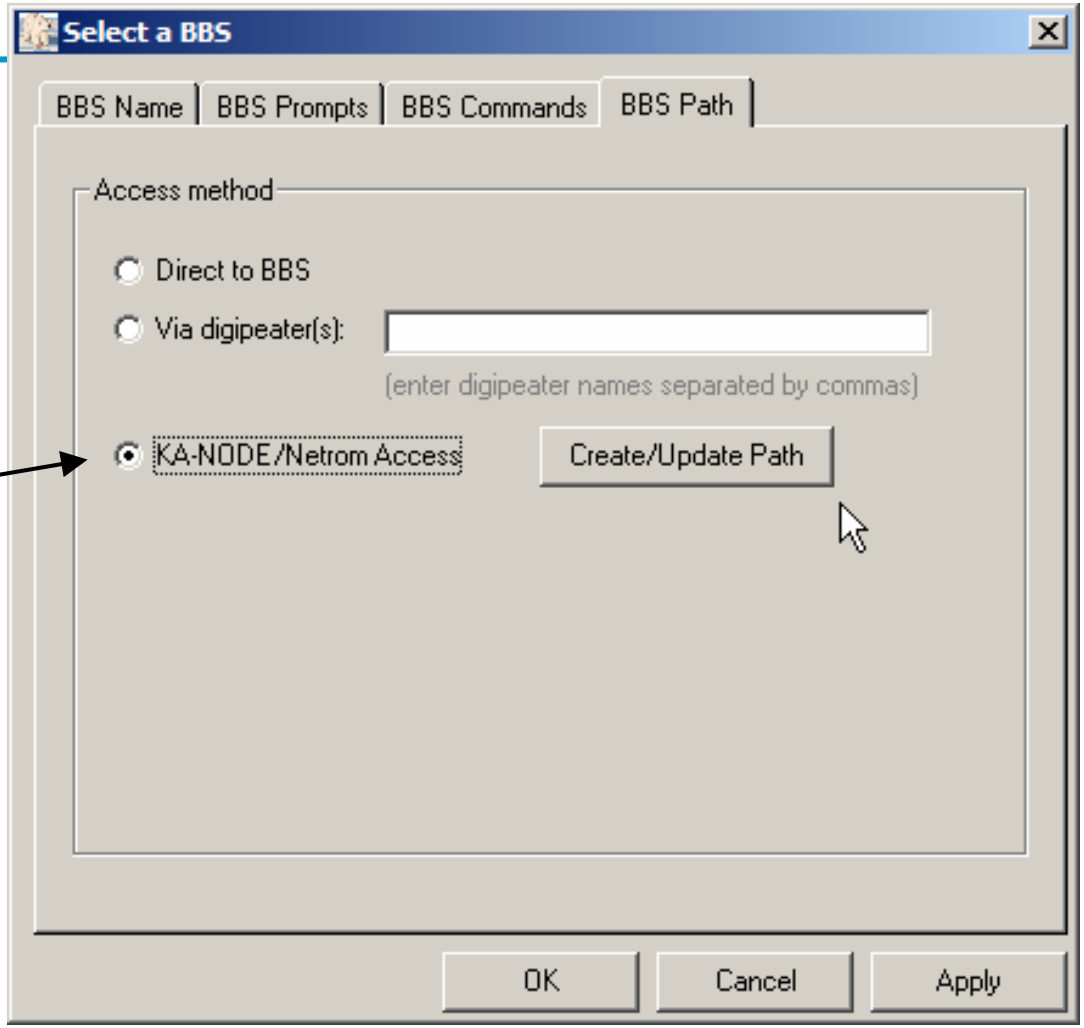


v2.1 KA-Node/Netrom Access

Outpost Packet Message Manager

BBS setups

- BBSs
  - •BBS Name
  - •BBS Prompts
  - •BBS Commands
  - •BBS Path



Notes...

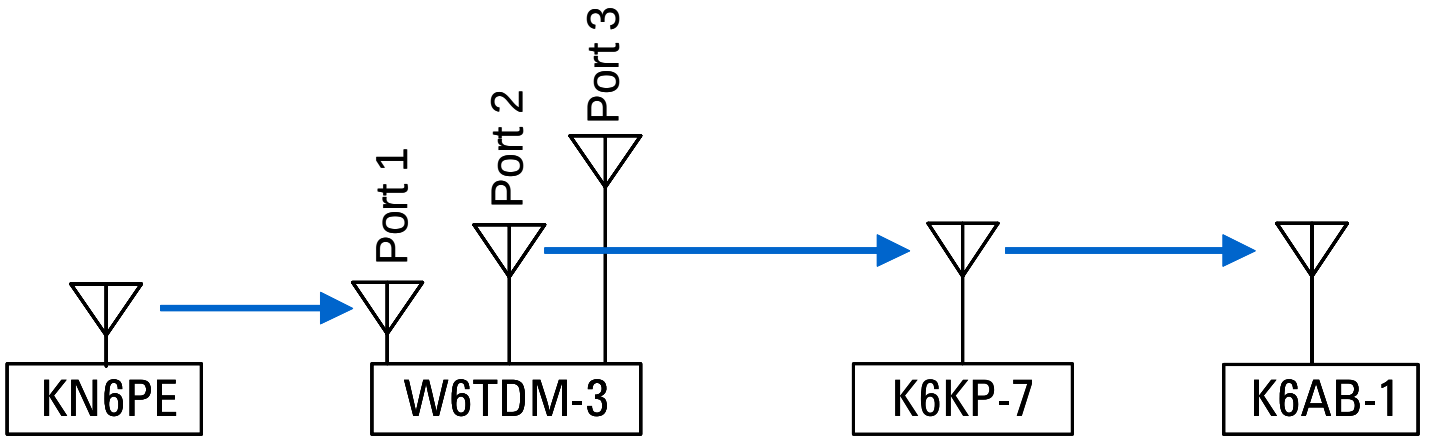
- Direct: from your station to the BBS
- Digipeat: one or more digipeater stations between you and the BBS
- KA-Node/Netrom: one or more nodes between you and the BBS

v2.1 KA-Node/Netrom Access

An Example

The K6AB-1 BBS is accessible only through 2 Nodes:

1. W6TDM-3, a BPQ Packet switch with 3 radio ports
2. K6KP-7, a KA-Node



Outpost
145.050

BPQ Switch
Port 1 = 145.050Mhz
Port 2 = 223.660Mhz
Port 3 = 440.000Mhz

KA-Node
223.660Mhz

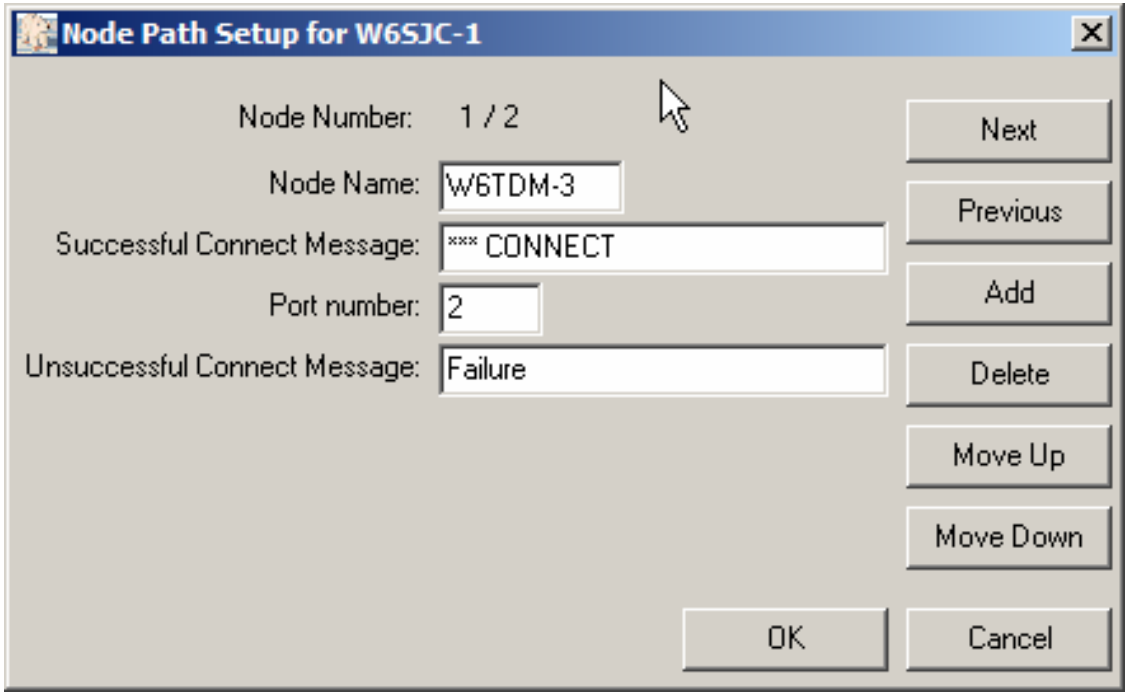
F6FBB BBS
223.660Mhz

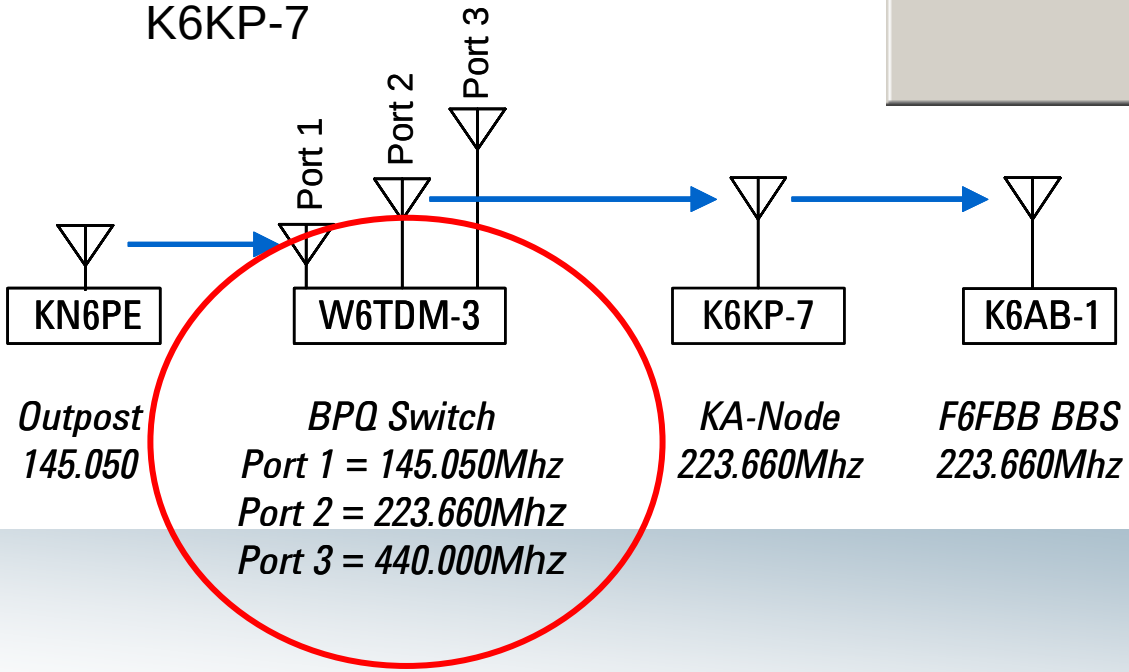
v2.1 KA-Node/Netrom Access

An Example

1st Node – BPQ Switch

1. Standard Setup for K6AB-1 BBS
2. Outpost (home) to W6TDM-3
3. When connected to the 1st node, we see "*** CONNECT"
4. From this node, we transmit on Port 2 to get to the 2nd node – K6KP-7



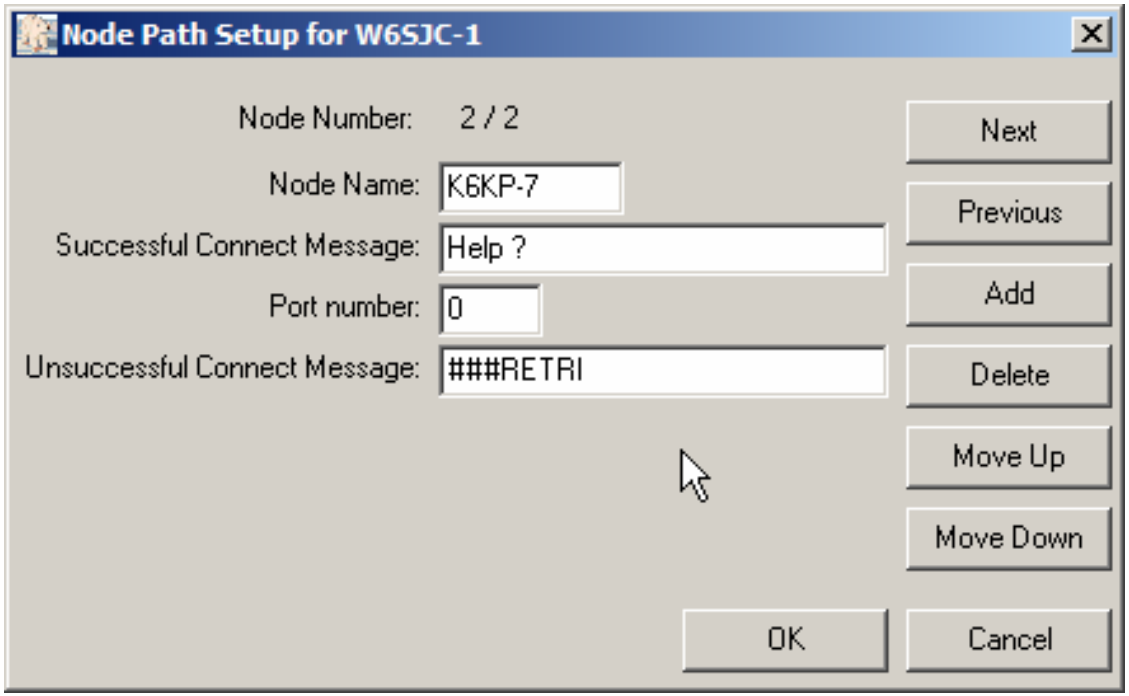


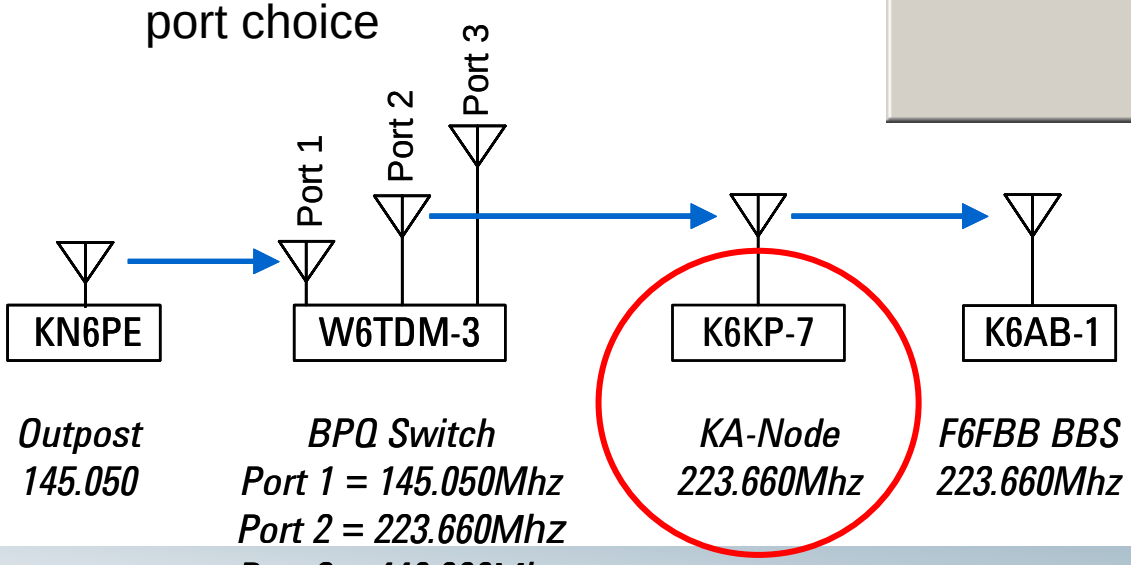
v2.1 KA-Node/Netrom Access

An Example

2nd Node – KA-Node

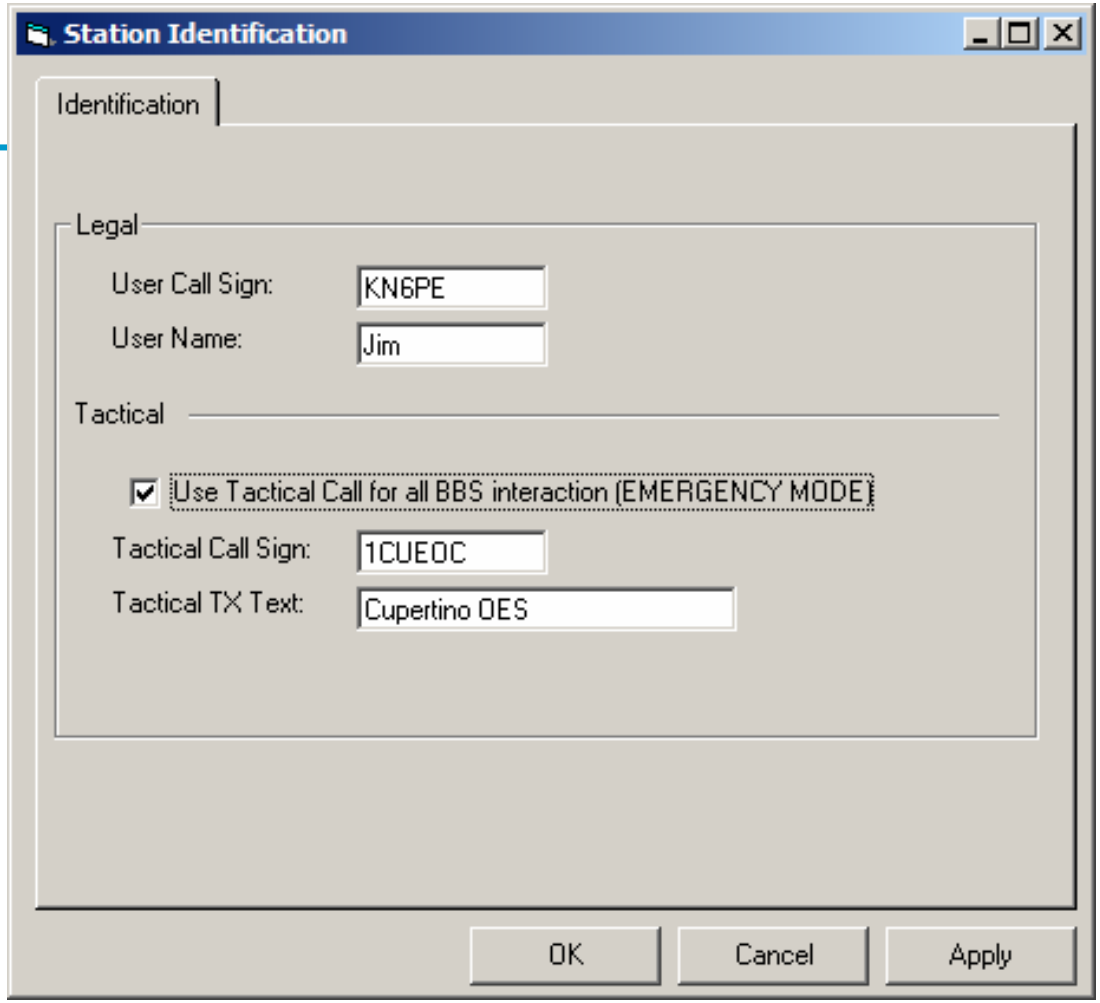
1. When connected to the 2nd node, we see "… `Help ?`", essentially the Node Prompt
2. From this node, we transmit to get to the BBS… K6AB-7
3. Port number is 0 since there is no port choice





v2.1 Tactical Calls

Outpost Packet Message Manager



Tactical Calls

- ***Definition:*** a call sign that identifies a tactical location and is operator-neutral allowing the operators to change, without having the assignment name change.
- Implemented by Outpost, not the BBS
- Example: For the Santa Clara County Hospital System, hospitals are assigned Tactical Calls such as:
  - 1MVECH Mountain View El Camino Hospital
  - 1PASMC Palo Alto Stanford Medical Center
  - 1SJVMC San Jose Valley Medical Center
  - 1SJGSH San Jose Good Samaritan Hospital

v2.1 Tactical Calls

Outpost Packet Message Manager

Tactical Calls

Notes

- Before using tactical a call, register the call sign with the BBS if required.

Is it legal?

- AX.25 extended address field contains source & 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-7.04j-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>>:

Overview

Outpost Packet Message Manager

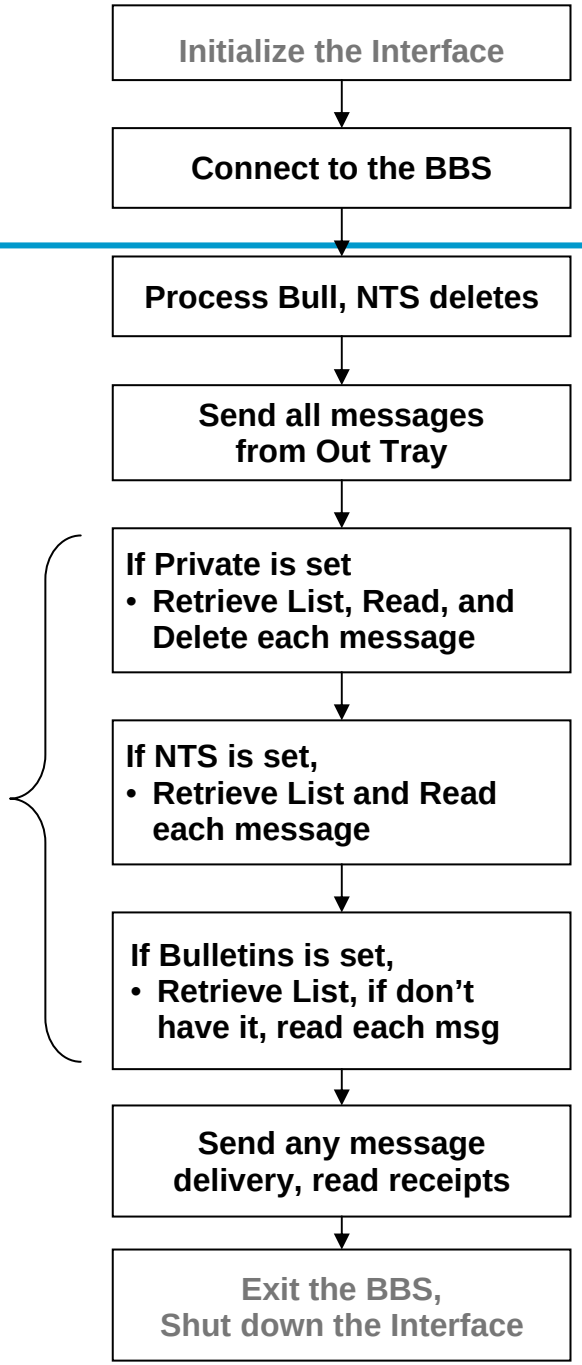
How Outpost works

- **You tell Outpost about…**
  - the type of Interface (Serial TNC, AGWPE, Telnet)
  - the name of the BBS
  - the path to get to the BBS (direct, digipeaters, KA/Netrom nodes)
- **Outpost knows the TNC and BBS commands and their prompts**
- **Outpost automatically sequences what you would do manually…**
  - send commands to set up the TNC or interface
  - send the commands to connect to the BBS
  - look for prompts from the BBS, and
  - send the commands to send, list, read, or delete messages

Overview

Outpost Packet Message Manager

- **Connect to the BBS**
  - Determines the BBS type
  - Figures out the BBS prompts
- **Send Messages**
  - Only send from the Out Tray to this BBS
  - Messages must be “Sent” not “Saved”
  - Once sent, message is moved to Sent Folder
- **Retrieve Messages**
  - Depends on the Retrieve settings
  - New messages are stored in the In Tray
  - Depends on the “Keep on BBS” setting
  - Bulletins are never deleted, except…
  - NTS Messages are never deleted, except…
- **Send Receipts**
  - Any pending Delivery and Read Receipts are sent back to the requester



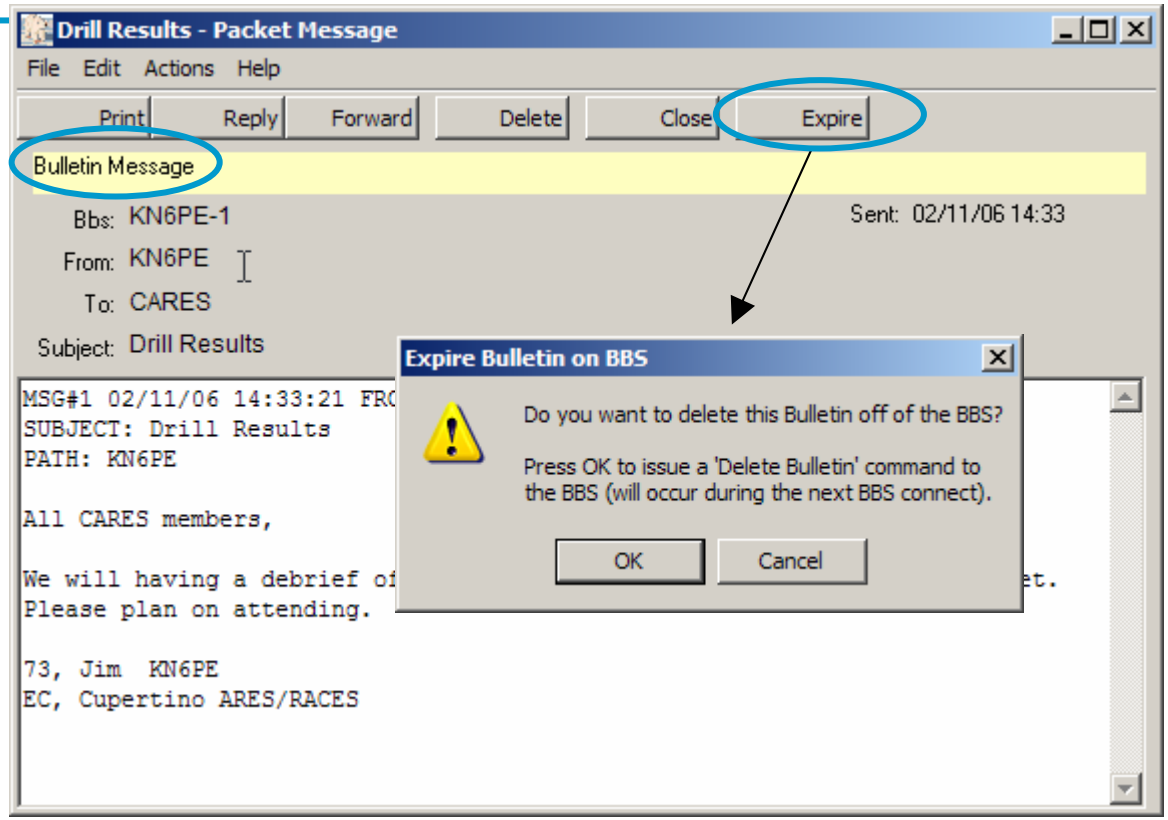
Special Message Handling

Outpost Packet Message Manager

Bulletins

To delete a bulletin off of the BBS that you originated…

- Retrieve the bulletin from the BBS
- Open the message
- Press Expire
- On the next send/receive session, the bulletin will be deleted off of the BBS.

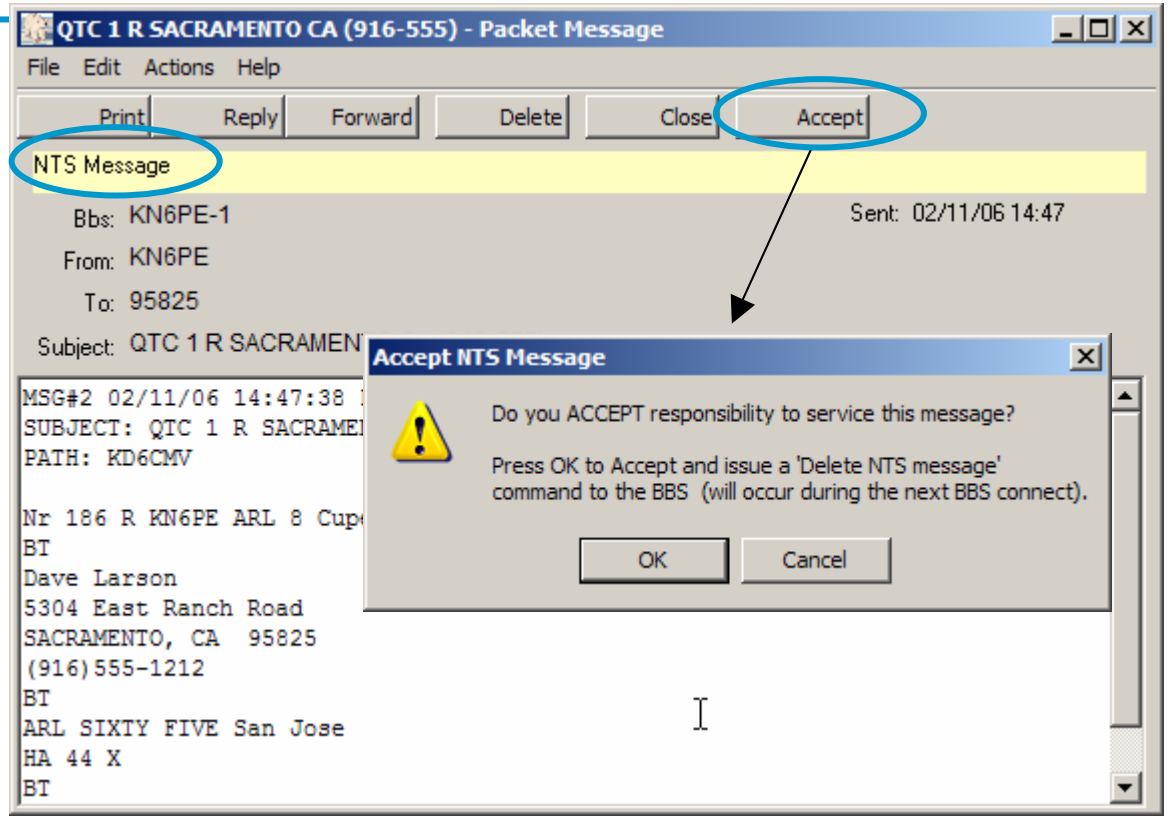


Special Message Handling

Outpost Packet Message Manager

NTS Messages

- Retrieved NTS messages are not automatically deleted off of the BBS.
- To accept a message for servicing…
  - Retrieve the NTS message from the BBS
  - Open the message
  - Press Accept
  - On the next send/receive session, the NTS message will be deleted off of the BBS.



Notes

- If you change your mind and do not plan to service the NTS message, it is common courtesy to post it back up on the BBS

Survey of PBBSs

Supported by Outpost

Kantronics

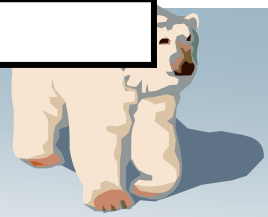
KPC3+	**On Price list;** Single port, multi-user mailbox (v9.0, 6/2005)
KPC9612+	**On Price list;** Multi-port, multi-user mailbox (v9.0, 6/2005)
KAM-XL	**On Price list;** All Mode, 2 Port, 3 data rates, single user mailbox
KPC3	Discontinued 1996, single user mailbox, replaced with KPC3+
KPC9612	Discontinued 1996, replaced with KPC9612+
KAM98	Discontinued 2005, replaced with KAM-XL
KAM+	Discontinued 1998
Data engine	Discontinued, replaced with either KPC3+ or KPC9612+

Time Wave

PK-232	**On Price list;** All mode, single user mail drop
DSP-232	**On Price list;** All mode, 2 port, single user mail drop
PK-88	Discontinued, single port TNC, 1200 baud packet

MFJ

MFJ-1270A/B/C	Discontinued, but firmware upgrades still offered for sale
MFJ-1278B	Discontinued, but firmware upgrades still offered for sale



Survey of BBS Apps

Supported by Outpost

Telpac/Winlink	**Last update: 2006**; Linux, Windows (.NET framework); message forwarding (compressed)
F6FBB	Last update: 2001; DOS, Windows, Linux; multi-port, Multi connect full service BBS; message forwarding (compressed)
AA4RE	Last update: 1999 (for Y2K); DOS; Turbo Pascal, Multi-connect Full service BBS, phone, server, call book support
N0ARY	Last update: circa 1995; Sun workstation; innovative natural language parser for interacting with the user; internet gateway
W0RLI	Last update: circa 1994; C; Full service BBS; requires DesqView and 286/386. Callbook with G8BPQ node.
MSYS	Last update: ~1991; Multi connect full service BBS node; tcp/ip support; last SID is [MSYS-1.20beta4-BFXM HI$] (beta release?)
DXNET	Last update: ~unknown; DOS, Windows, Linux; C++; DX Cluster and BBS

Survey of BBS Apps

Outpost Support Pending

JNOS	**Last update: 2007**; Linux, DOS, Windows, O/S2, MAC; BBS, IP router, Internet Gateway, Node, Telnet node… more
OpenBCM	**Last update: 2006**; Linux, DOS, Windows; C++; amateur radio and citizen band (Europe) AX.25 BBS, AX.25 store and forward capabilities
TNOS	Last Update: 2001; All BSD/POSIX platforms, Linux, Solaris, AIX, Windows, open source; BBS, chat, other internet servers

Outpost futures

Under investigation

- Message Audit Reports
- Address book (Telpac driven, include distribution lists)
- Attachments Phase 1 (.txt, .uue)
- Emulation support for Linux, Mac

Futures

- F2B Forwarding Protocol
- Multiple addressing for non-Telpac BBSs?
- Native support for Linux, Mac
- Others?

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/


!
Background Information

Messages

Outpost Packet Message Manager

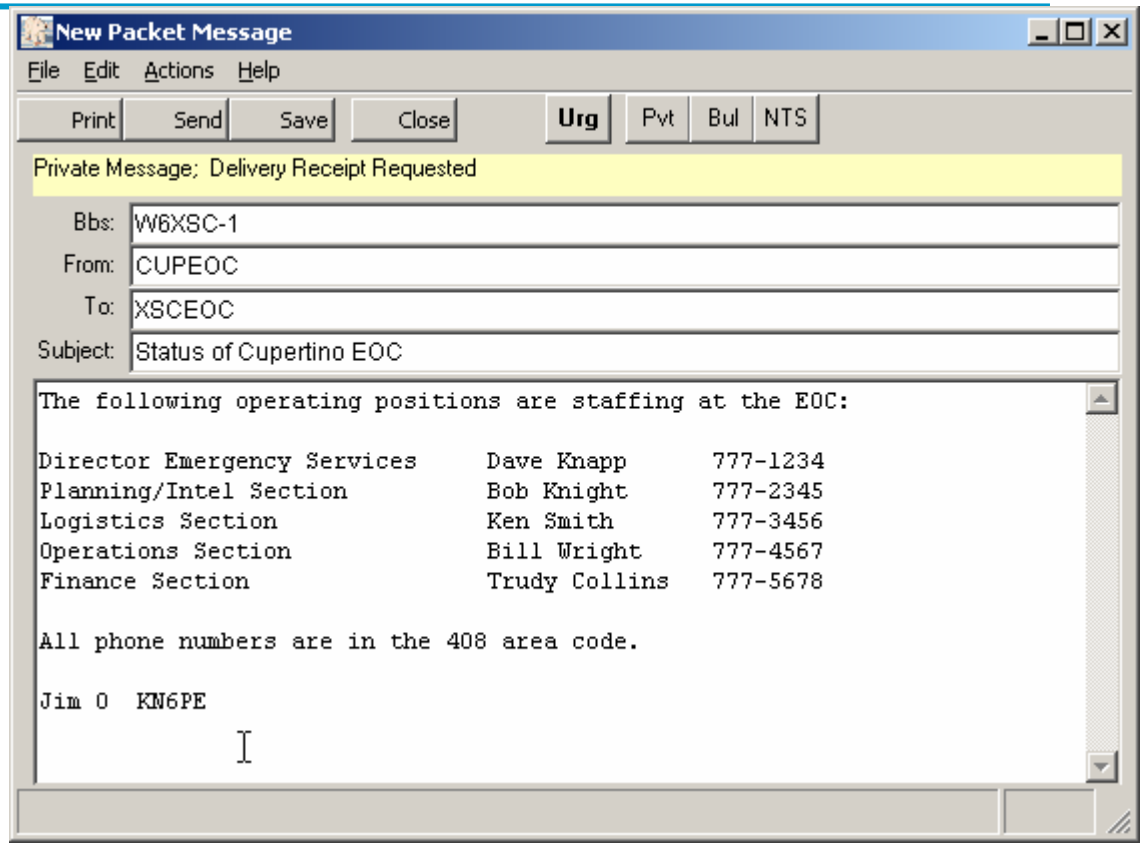
- **Creating Messages**
  - Direct Entry
  - NTS Message Maker
  - On-line Report Builder
  - Cut-and-paste from other apps
  - Import Text from a file
- **Special Message Handling**
  - Bulletins
  - NTS
  - Telpac/Winlink messages
  - Tactical Calls

Creating Messages

Outpost Packet Message Manager

1. Direct entry

- Allows cursor placement within the text field
- Supports TAB characters (cntl-tab) thereby reducing character count
- Allows text files to be directly imported into the message form

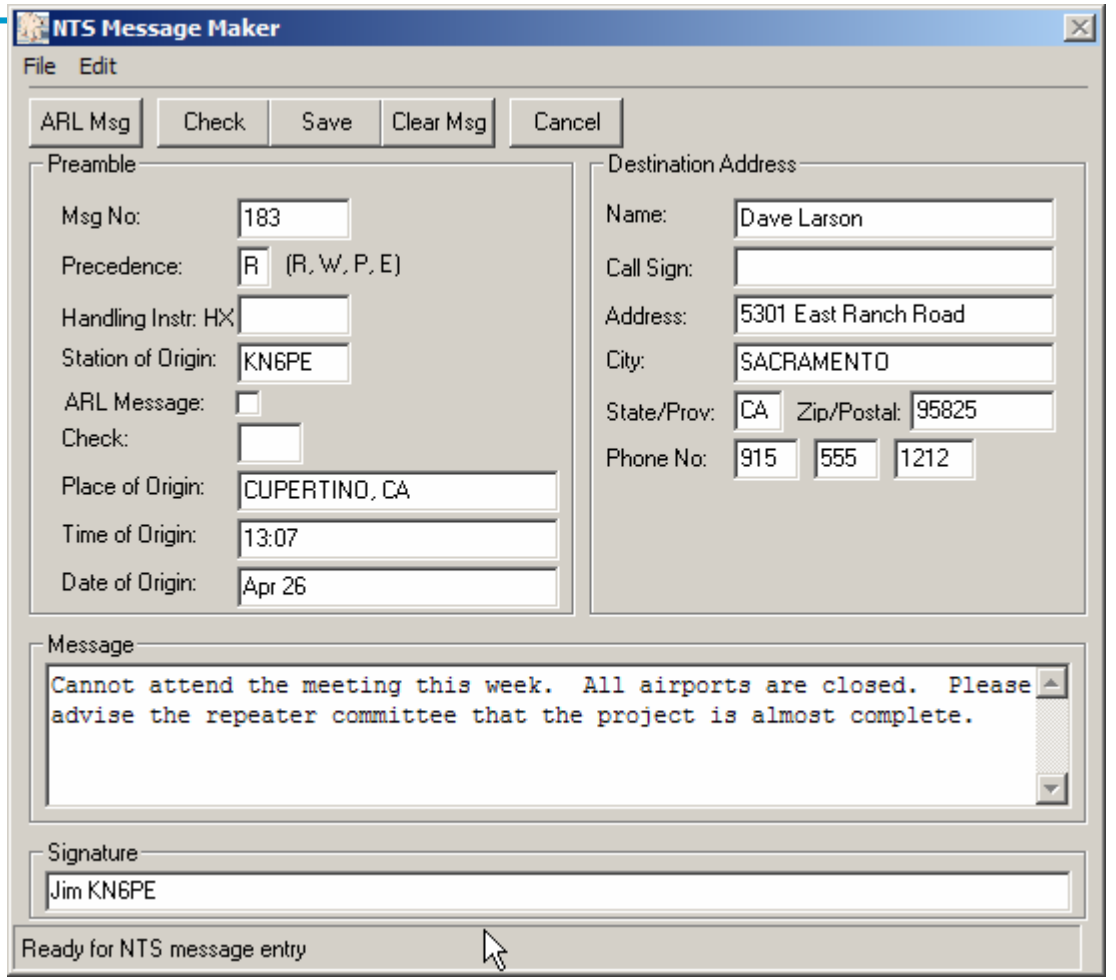


Creating Messages

Outpost Packet Message Manager

2. NTS Message Maker

- Step 1: Forms-based with field validity checking

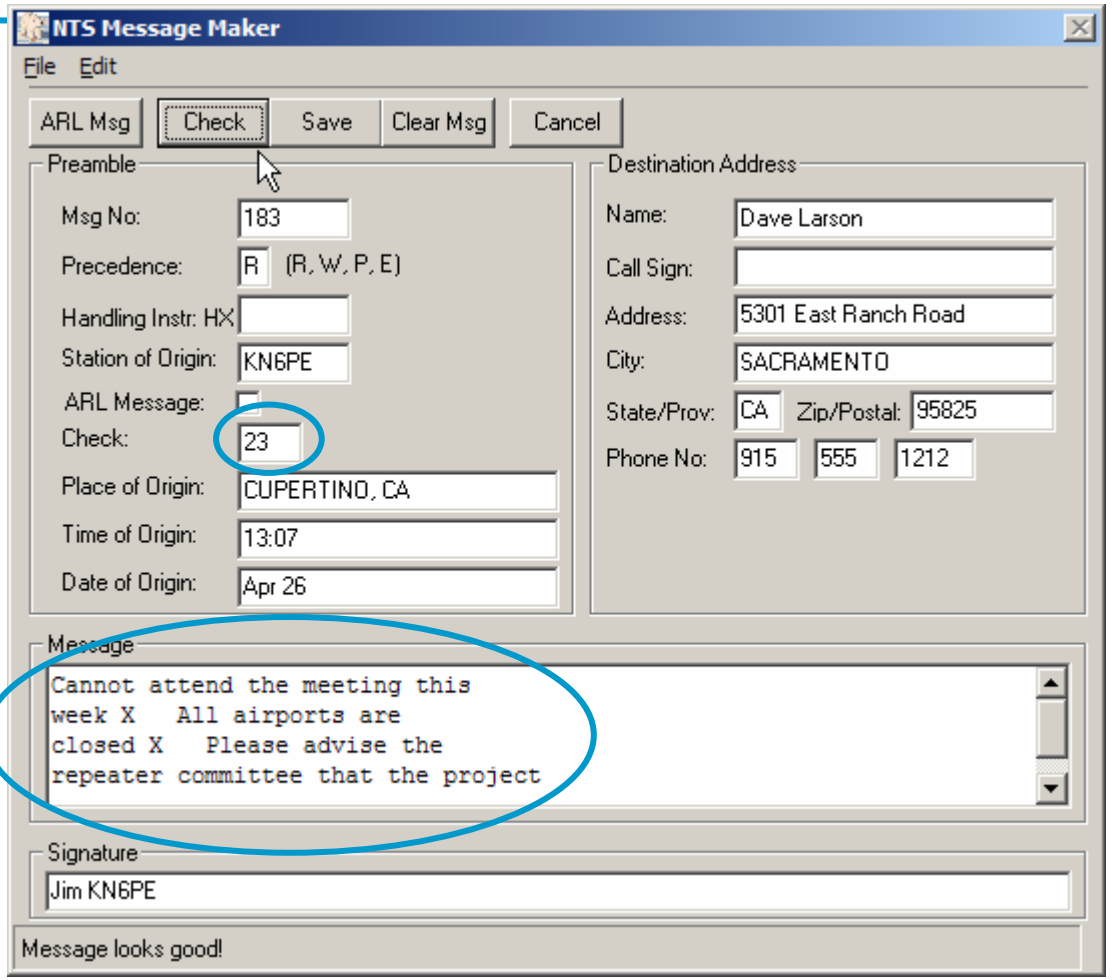


Creating Messages

Outpost Packet Message Manager

2. NTS Message Maker

- Step 1: Forms-based with field validity checking
- Step 2: Press Check; reformats the message per the NTS Packet message standard

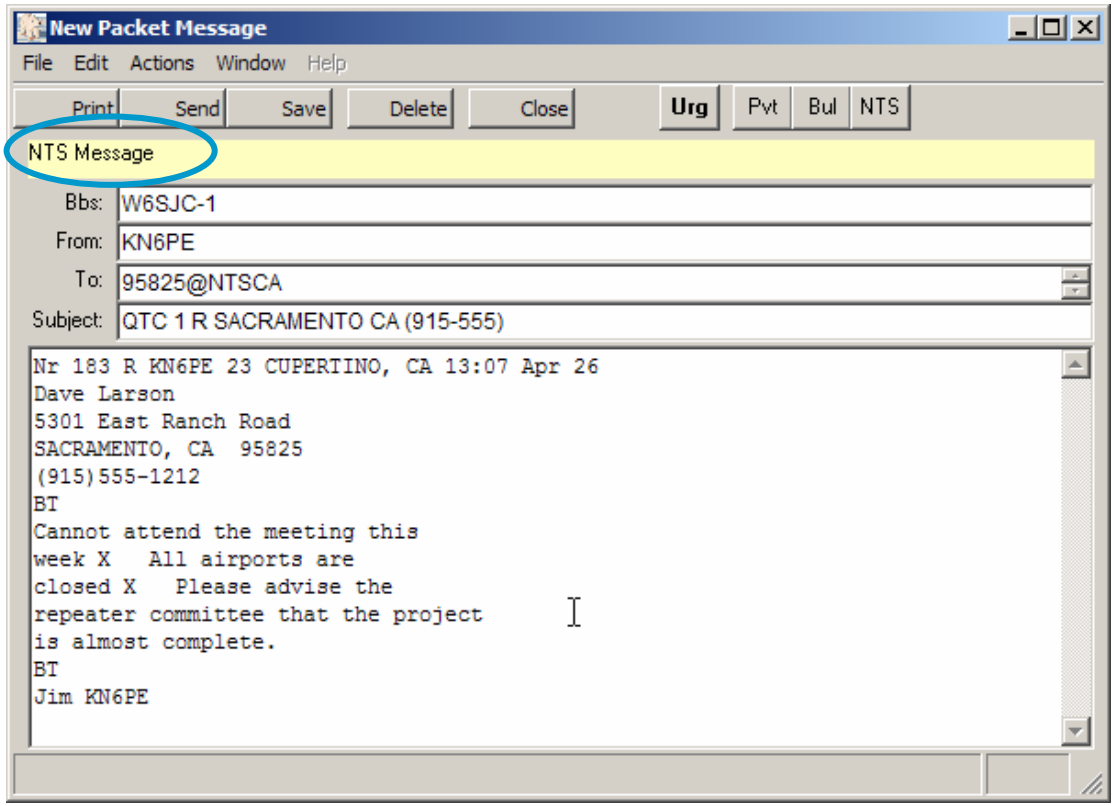


Creating Messages

Outpost Packet Message Manager

2. NTS Message Maker

- Step 1: Forms-based with field validity checking
- Step 2: Press Check; reformats the message per the agreed NTS Packet message standard
- Step 3: Saves the message to a message window; message type is NTS. Press Send when ready.

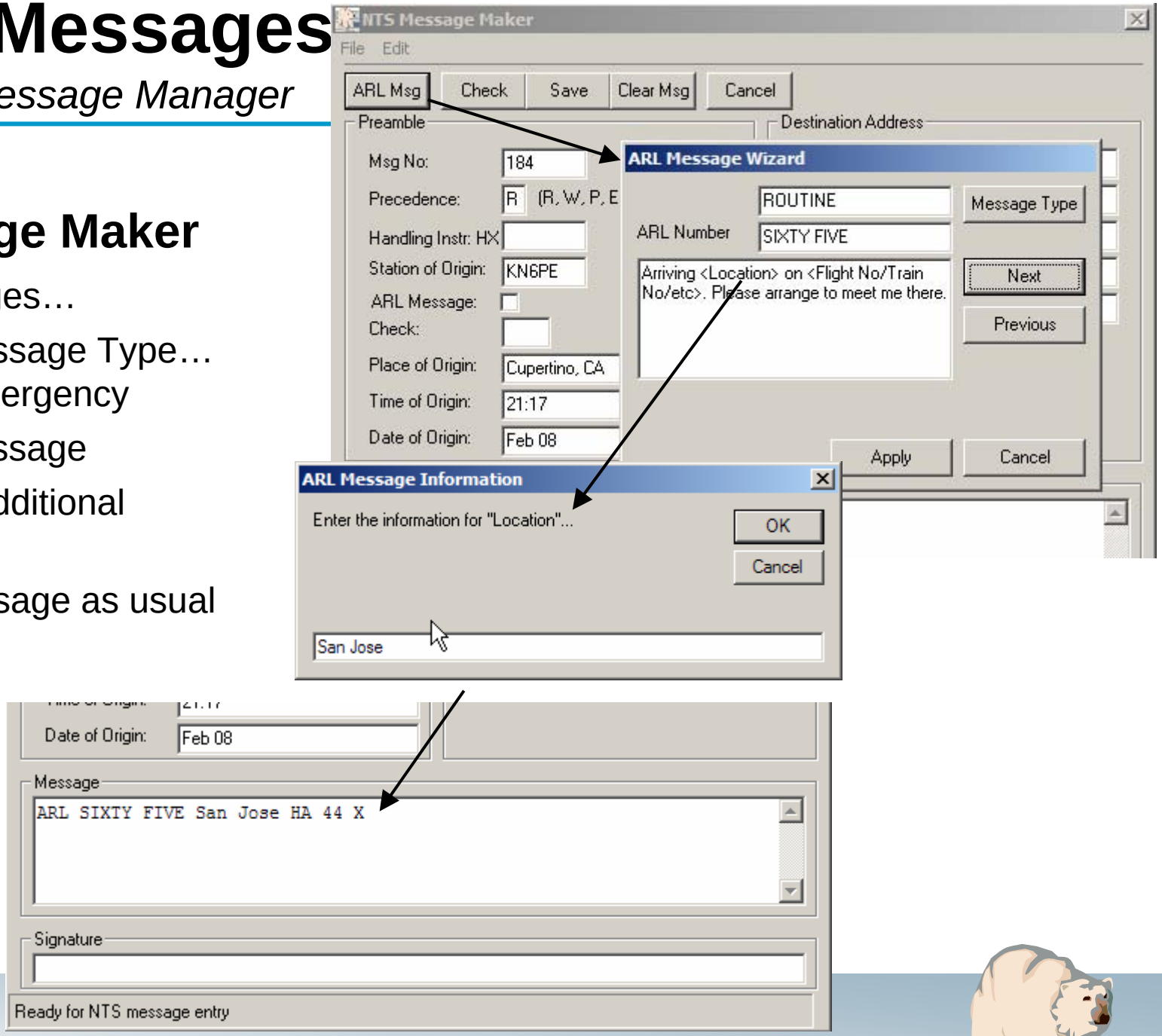


Creating Messages

Outpost Packet Message Manager

2. NTS Message Maker

- and ARL Messages…
  - Select the message Type… Routine or Emergency
  - Select the message
  - Provide any additional information
  - Send the message as usual



Creating Messages

Outpost Packet Message Manager

3. On-line Report Builder

- Step 1: Set up the Report Settings (described previously)
- Step 2: Understand the list of Report <tags>

NOTE: there are some report variables that have to methods for representing them

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>	Province name, 2 char; instead of state	
<tacloc>	Tactical Location; from Report Settings	
<tacid>	Tactical ID, 3 char; from Report Settings	
<text1, 2, 3>	User defined text; from Report Settings	
=	Prompt	
/ comment	Place a comment in the report	

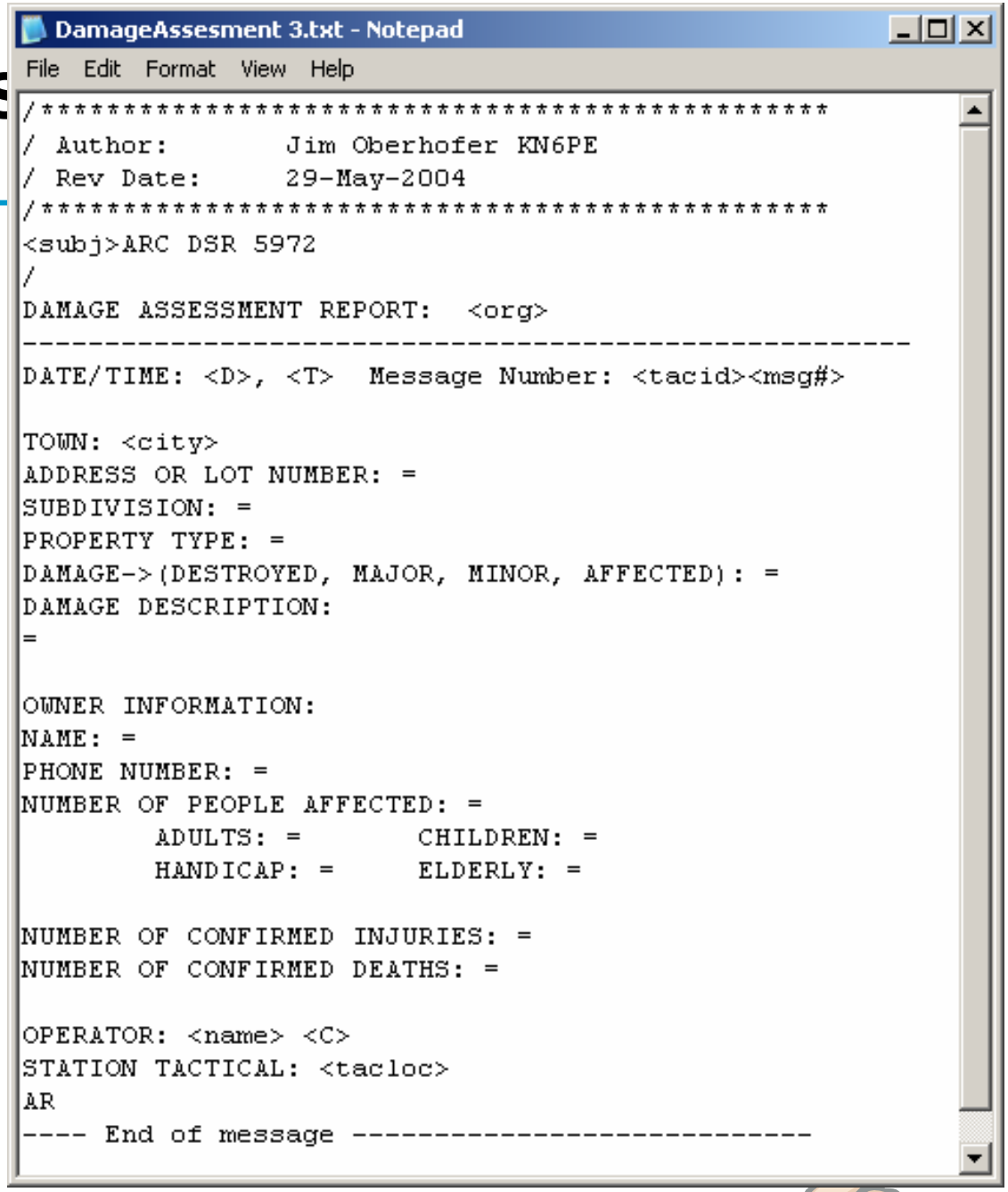
Creating Messages

Outpost Packet Message Manager

3. On-line Report Builder

- Step 1: Set up the Report Settings (Tools > Report Settings)
- Step 2: Collect the list of Report tags, most in the format “<tag>”
- Step 3: Develop the report template, save as a .txt file.

  NOTE: see the use of comments (/), <tags>, and prompts (=)



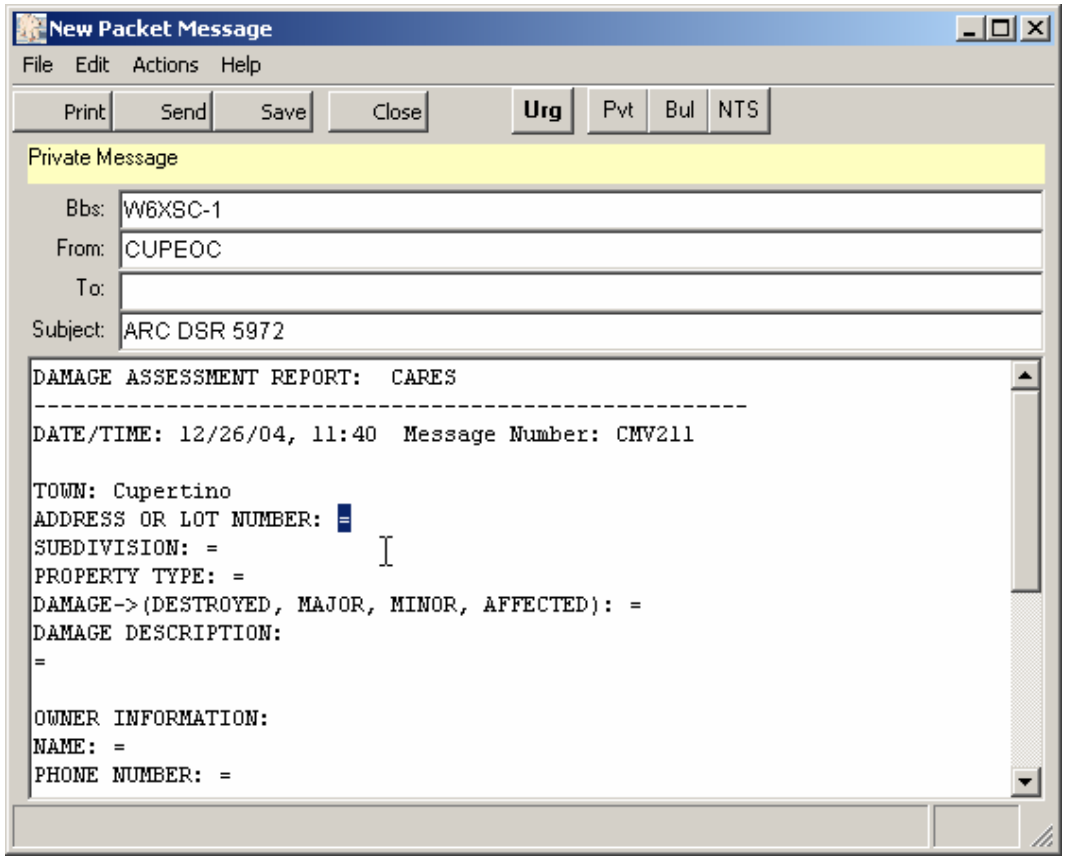
Creating Messages

Outpost Packet Message Manager

3. On-line Report Builder

- Step 1: Set up the Report Settings (Tools > Report Settings)
- Step 2: Collect the list of Report tags, most in the format “<tag>”
- Step 3: Develop the report template, save as a .txt file.
- Step 4: From a new message form, “File > Open a Report” and choose a report template.

  NOTE: Subject line is updated, <tags> are replaced, and cursor is positioned at the first prompt.



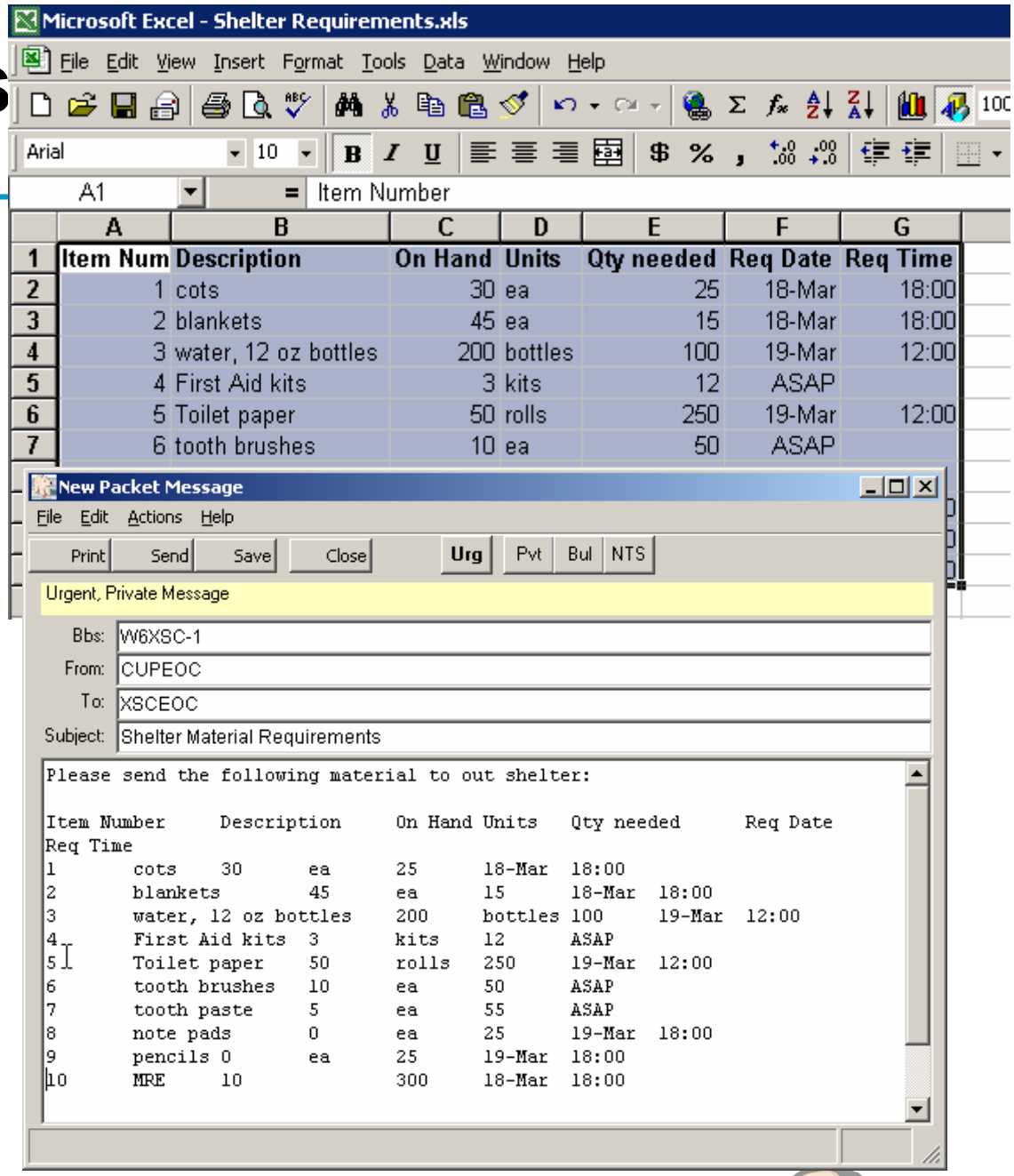
- Press cntl-Tab or left-mouse to progress to the next prompt.
- Press “File > Clear Remaining Prompts” for any unfilled prompts
- Press Send when done.

Creating Messages

Outpost Packet Message Manager

4. Cut-and-Paste from other apps

- From Excel, highlight the fields to be copied, then paste into an Outpost message.
- At the receiving station, highlight and copy the message, then paste back into Excel.
- Tabs are preserved so the message can be pasted back into another spreadsheet.

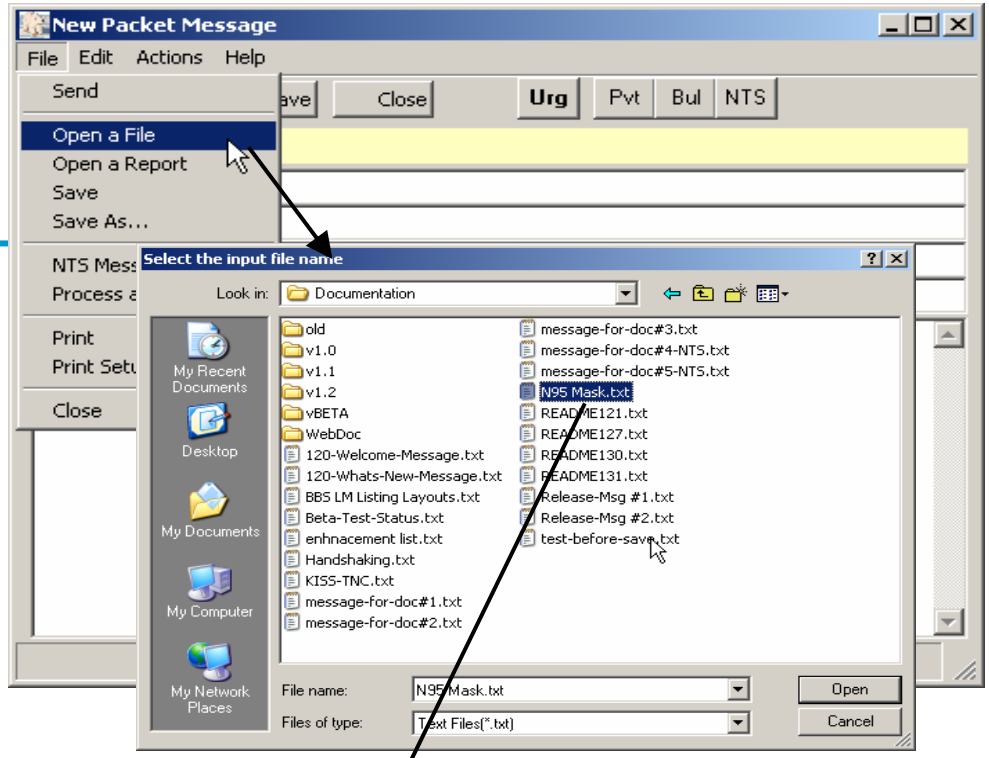


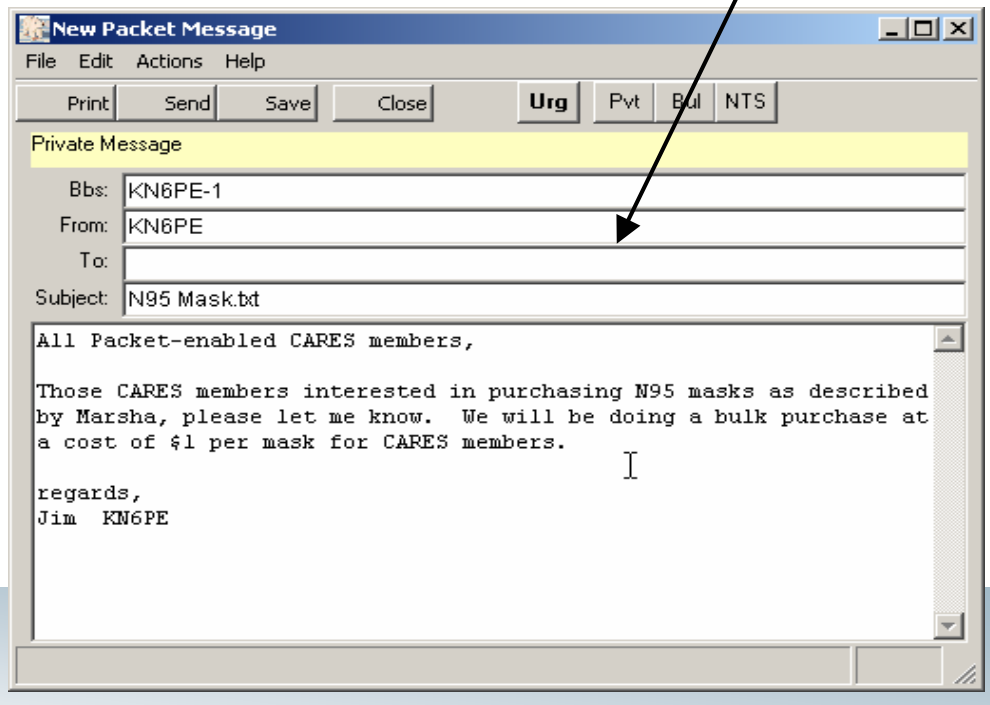
Creating Messages

Outpost Packet Message Manager

5. Import text from a file

- Open a new message
- File > Open a file
- Select the text file, press OK
- Full in the Destination and Subject.
- Press Send when done.





Tools and Controls

Outpost Packet Message Manager

Interactive Packet Window

- Programs to manually interact with the TNC (serial only) and BBS by
  - AGWPE
  - Telnet
  - Serial
- Logging controls
- Cut-and-paste clipboard support into and out of the IPW window
  - use the Edit control on the menu
  - cntl-c gets the TNC's attention
- Directly create an Outpost message from highlighted IPW text