



WHAT IS PACKET COMMUNICATIONS?

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PURPOSE

- What?
- How?

SENDING MESSAGES

- Sending messages during a disaster
- Voice communications
- Morse Code
- Packet Communications

RADIOGRAM



The American Radio Relay League
RADIOGRAM
 Via Amateur Radio

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date

To:

This Radio Message was received at:

Amateur Station _____ Date _____
 Name _____
 Street Address _____
 City, State, Zip _____

Telephone Number:

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

REC'D	From	Date	Time	SENT	To	Date	Time

A licensed Amateur Radio Operator, whose address is shown above, handled this message free of charge. As such messages are handled solely for the pleasure of operating, a "Ham" Operator can accept no compensation. A return message may be filed with the "Ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225, Main Street, Newington, CT 06111.

The American Radio Relay League, Inc. is the National Membership Society of licensed radio amateurs and the publisher of QST Magazine. One of its functions is promotion of public service communication among Amateur Operators. To that end, The League has organized the National Traffic System for daily nationwide message handling.

VOICE COMMUNICATIONS



- Radio
- Microphone
- Antenna
- Handling messages
- Slow, phonetic spelling
- Prone to errors

VOICE COMMUNICATIONS

- Slow, speak only as fast as you can write
- Stop after every fourth or fifth word
- Prone to errors

PHONETIC SPELLING

LTR	SPOKEN	PRONOUNCED	LTR	SPOKEN	PRONOUNCED
A	Alfa	AL FAH	N	November	NO VEM BER
B	Bravo	BRAH VOH	O	Oscar	OSS CAH
C	Charlie	CHAR LEE	P	Papa	PAH PAH
D	Delta	DELL TAH	Q	Quebec	KAY BECK
E	Echo	ECK OH	R	Romeo	ROW ME OH
F	Foxtrot	FOKS TROT	S	Sierra	SEE AIR RAH
G	Golf	GOLF	T	Tango	TANG GO
H	Hotel	HOH TELL	U	Uniform	YOU NEE FORM
I	India	IN DEE AH	V	Victor	VIK TOR
J	Juliet	JU LEE ETT	W	Whiskey	WISS KEY
K	Kilo	KEY LOH	X	X-ray	ECKS RAY
L	Lima	LEE MAH	Y	Yankee	YANG KEY
M	Mike	MIKE	Z	Zulu	ZOO LOO

MORSE CODE



- Early Digital Communications
- The final method of sending a message

PACKET

- Data vs. Voice
- Accurate
- Faster
- Batch Processing
- Paper Trail

EQUIPMENT



- Hamlink Computer



- Terminal Node Controller



- RADIO

RADIOGRAM

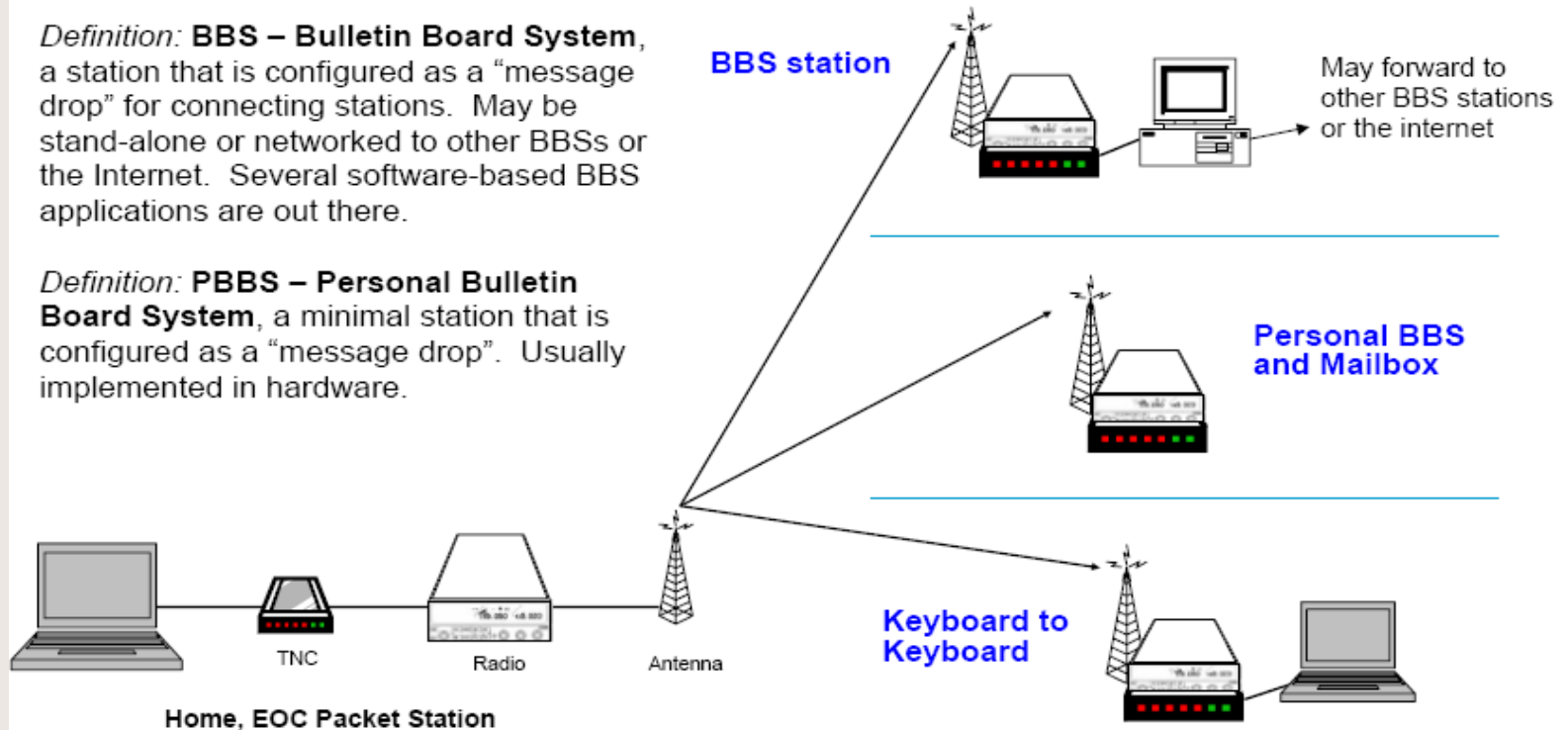
RADIOGRAM VIA AMATEUR RADIO								
Number	Precedence ?	HX ?		Station of Origin ?	Check ?	Place of Origin ?	Time Filed ?	Date
	Priority ▼	HXG ▼		SHELTER1	11	RENO,NV	12:51	09/27/2009
TO:(Name,address,zip) Northern Nevada Red Cross 1190 Corporate Blvd Reno, NV 89502-2330								
Phone: 775-856-1000								
Enter Message Here: (MAX-25 words. Watch the check count above, as you type.) Request the following: 200 Cots 400 Blankets Food for 200 people plus shelter staff				Entered by BOB MILLER ; for: <input type="text" value="Rob Gillmore Shelter Manager"/> Signature(Type Full Name With Middle Initial) <hr/> By entering a name in the above block, you certify that this is the person that originated this message. (Leave blank if this is self originated)				

MAIL BOX BBS

What can we connect to?

Definition: **BBS – Bulletin Board System**, a station that is configured as a “message drop” for connecting stations. May be stand-alone or networked to other BBSs or the Internet. Several software-based BBS applications are out there.

Definition: **PBBS – Personal Bulletin Board System**, a minimal station that is configured as a “message drop”. Usually implemented in hardware.

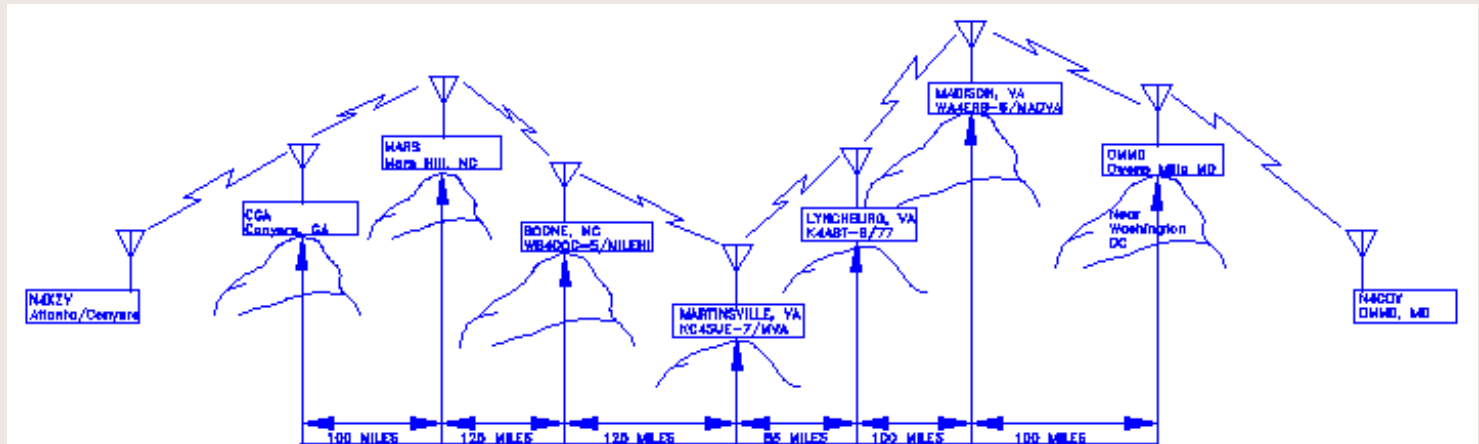


MAIL BOX BBS

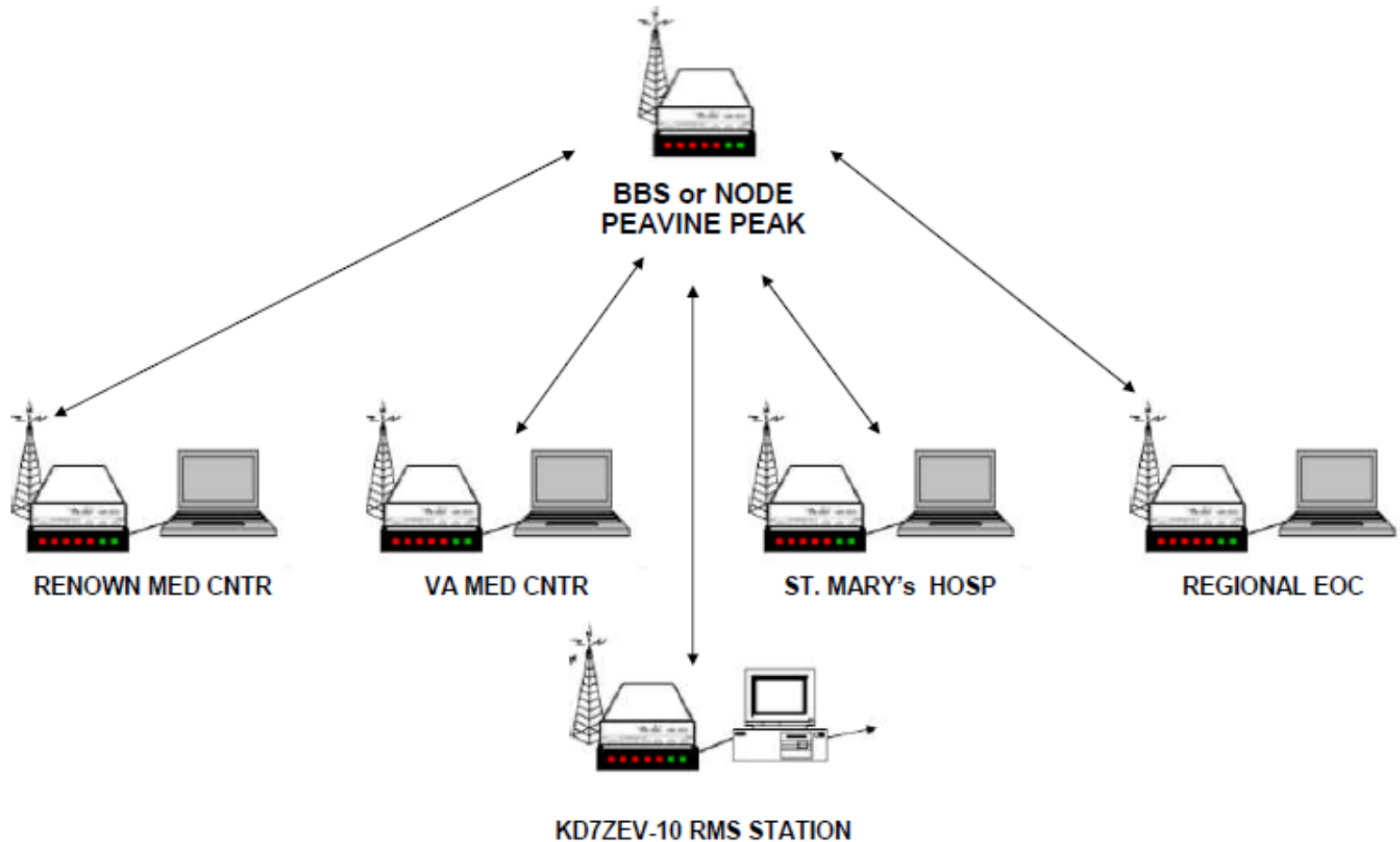
- TNC storage folder is a Bulletin Board System
- Strategically located
- Regional EOC
- Salvation Army
- Red Cross
- VA Medical Center

DIGITAL REPEATERS

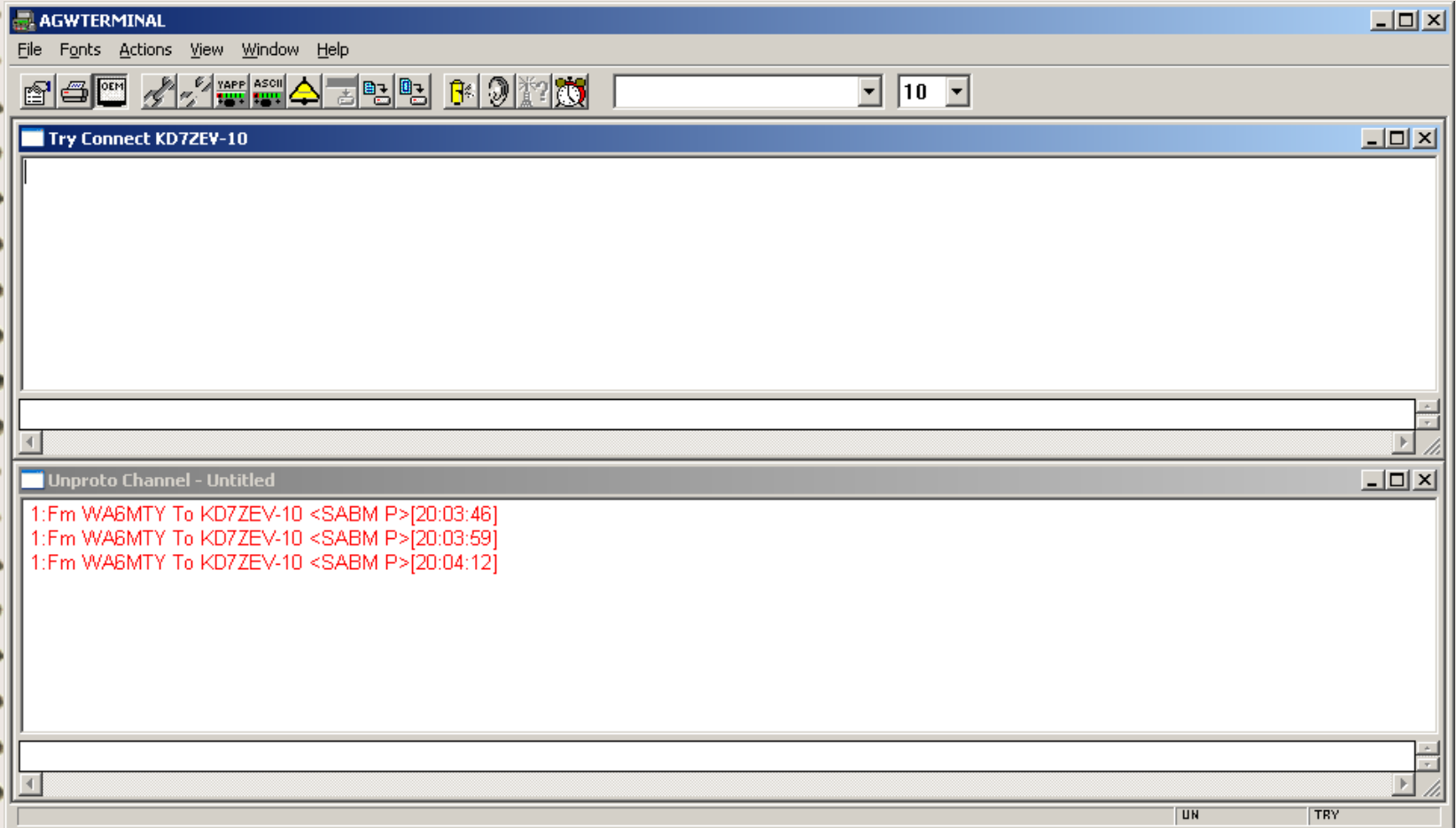
- Digipeater
- Hilltop repeaters that store and forward
- Any Packet Station



WASHOE COUNTY PACKET



PACKET SOFTWARE



PACKET SOFTWARE

The image shows a screenshot of a software window titled "New Packet Message". The window has a menu bar with "File", "Edit", "Actions", "Window", and "Help". Below the menu bar is a toolbar with buttons for "Print", "Send", "Save", "Delete", "Close", "Urg", "Pvt", "Bul", and "NTS". The "Urg" button is highlighted. Below the toolbar is a yellow header bar labeled "Private Message". Underneath, there are four input fields: "Bbs:" with the value "KE7R-1", "From:" with the value "SHLTR1", "To:" (empty), and "Subject:" (empty). A large text area for the message body is located below these fields. The window has standard Windows-style window controls (minimize, maximize, close) in the top right corner.

New Packet Message

File Edit Actions Window Help

Print Send Save Delete Close **Urg** Pvt Bul NTS

Private Message

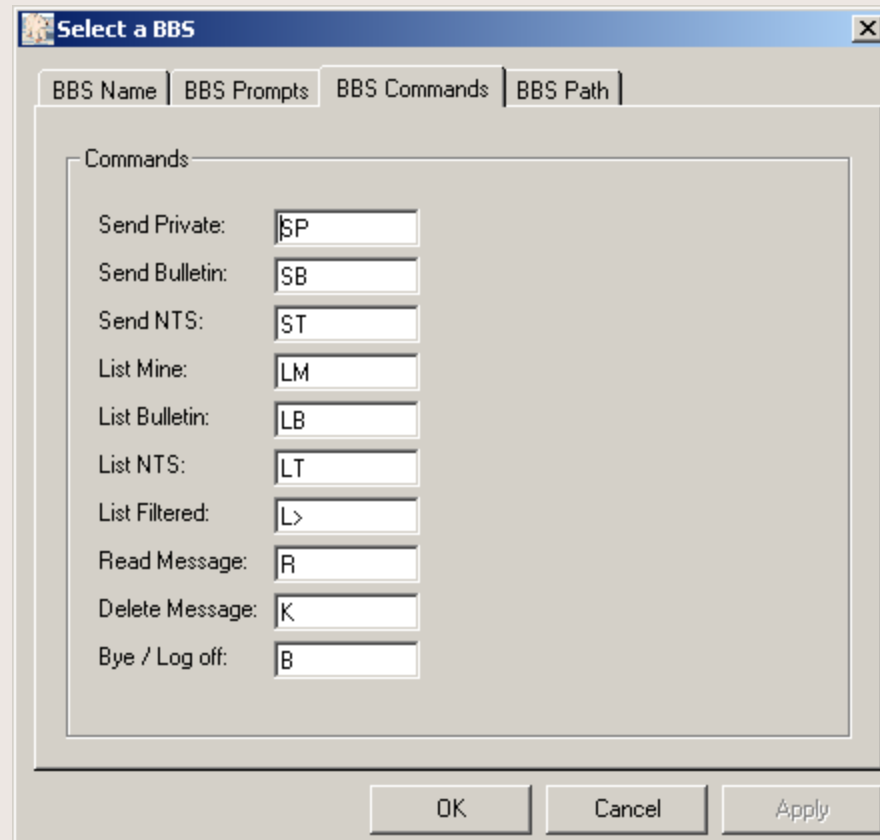
Bbs: KE7R-1

From: SHLTR1

To:

Subject:

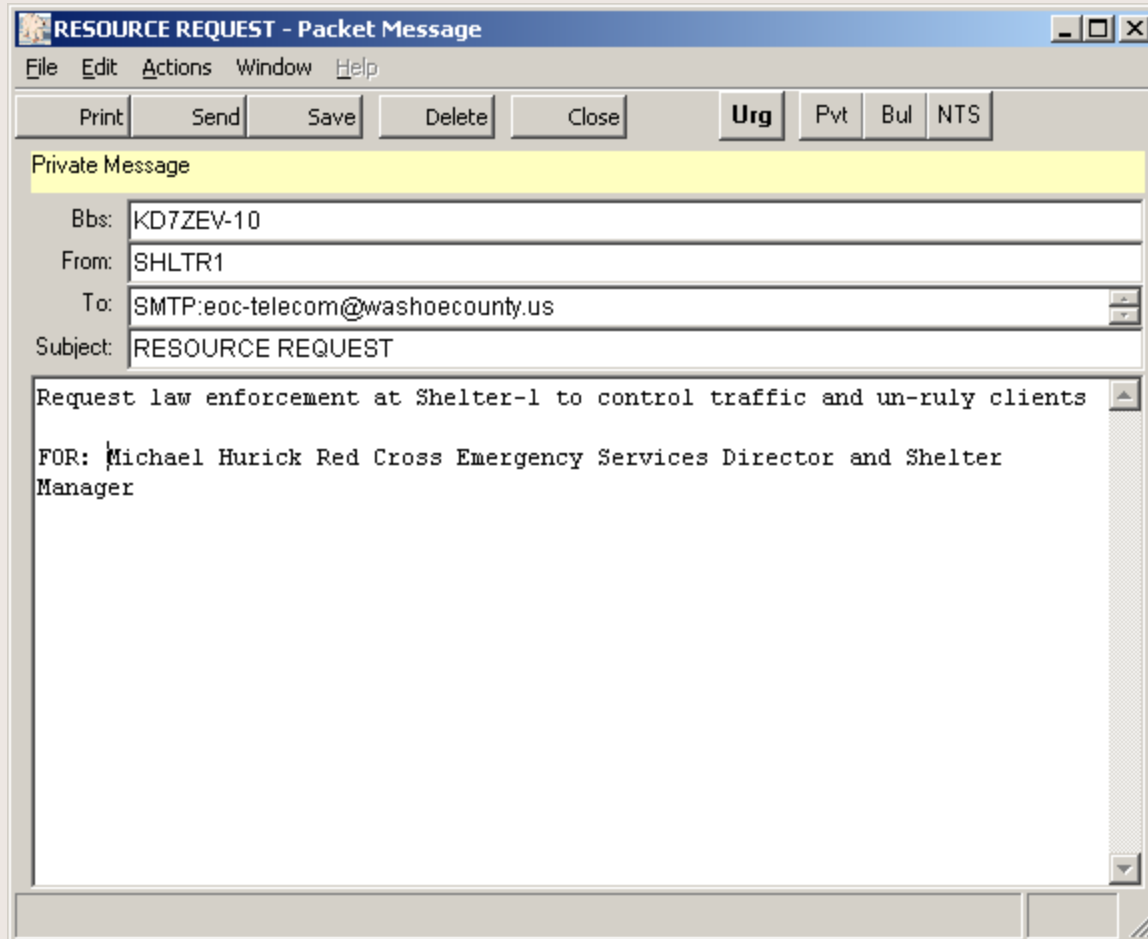
PACKET SOFTWARE



The image shows a screenshot of a Windows-style dialog box titled "Select a BBS". The dialog has four tabs: "BBS Name", "BBS Prompts", "BBS Commands", and "BBS Path". The "BBS Commands" tab is currently selected. Inside the dialog, there is a section labeled "Commands" which contains a list of command names and their corresponding values in text input fields. The commands and their values are: "Send Private:" with "SP", "Send Bulletin:" with "SB", "Send NTS:" with "ST", "List Mine:" with "LM", "List Bulletin:" with "LB", "List NTS:" with "LT", "List Filtered:" with "L>", "Read Message:" with "R", "Delete Message:" with "K", and "Bye / Log off:" with "B". At the bottom of the dialog, there are three buttons: "OK", "Cancel", and "Apply".

Command	Value
Send Private:	SP
Send Bulletin:	SB
Send NTS:	ST
List Mine:	LM
List Bulletin:	LB
List NTS:	LT
List Filtered:	L>
Read Message:	R
Delete Message:	K
Bye / Log off:	B

E-MAIL



SUMMARY

- Sending messages during a disaster
- Voice communications
- Morse Code
- Packet Communications

Questions???



HAMLINK Incident Management System

[http:// WWW.HAMLINKOnline.com](http://WWW.HAMLINKOnline.com)

