

Airmail and TelPac

Digital Messaging for ARES

Harris County ARES

Why are we here?

- **July 23, 2003**

ARRL Board mandates a nationwide system to enhance the communications capability of the Amateur Radio Emergency Service (ARES). There are situations, the Board said, when ARES **"must have the capability to pass traffic across the nation quickly and accurately."**

Today's Discussion

- Winlink System Overview
- Airmail Client Software
- TelPac Gateway

Winlink System Overview

- 1980s: Link HF PMBO to Packet BBS
- 1990s: Messages moved between PMBO via internet (NetLink)
- 2000: Airmail client
- 2003: TelPac gateway

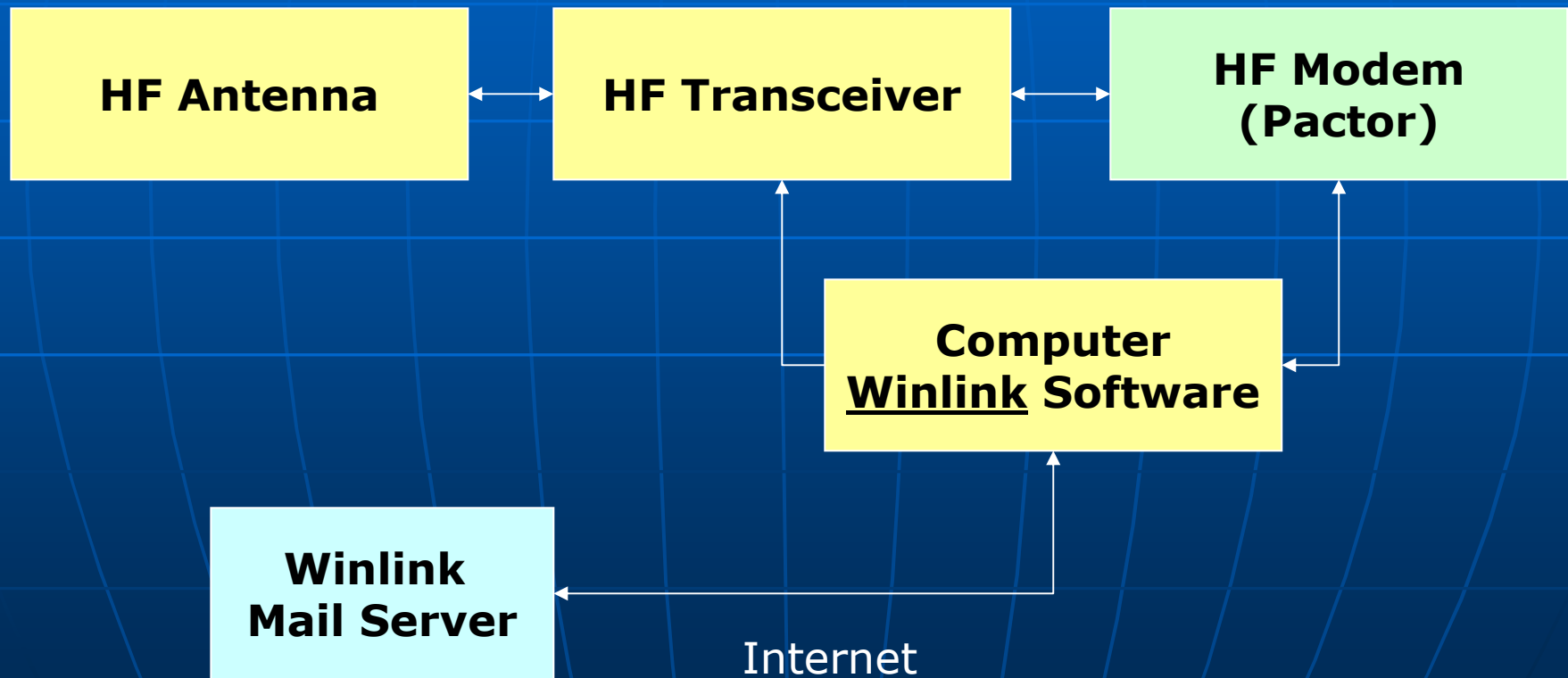
Winlink System Overview

Winlink Participating stations (PMBOs)

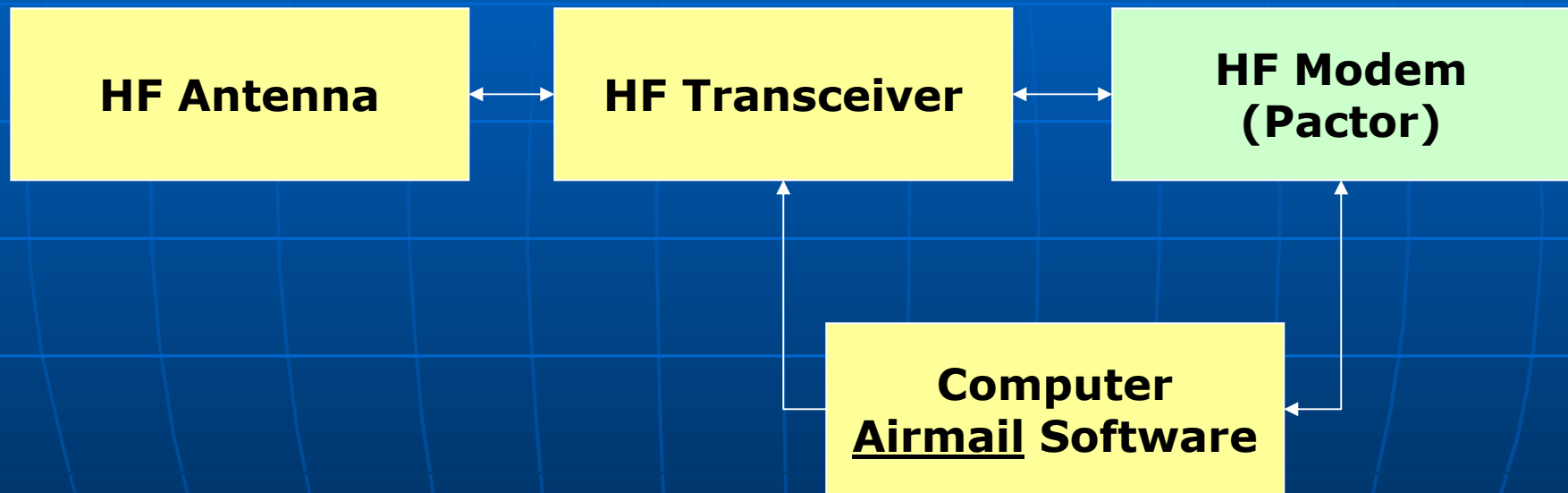
Click on station for details.



Winlink System Overview



Winlink System Overview



Winlink System Overview

Propagation

From our location: Lat: 36°06'N, Lon: 086°48'W, Grid: EM66oc

To station location: Lat: 19°16'N, Lon: 081°18'W, Grid: EK99ig

Parameters: Freq(khz): 07070.9, 07072.9, 10124.9, 10125.9, 14063.9, 14065.9, 14098.7#, 18100.9, 18106.2, 21066.9
 Sunspots: 126 SFI: 170
 ZF1GC, Grand Cayman Isl.: Distance= 1051 NM at 163°T

Rel. SNR

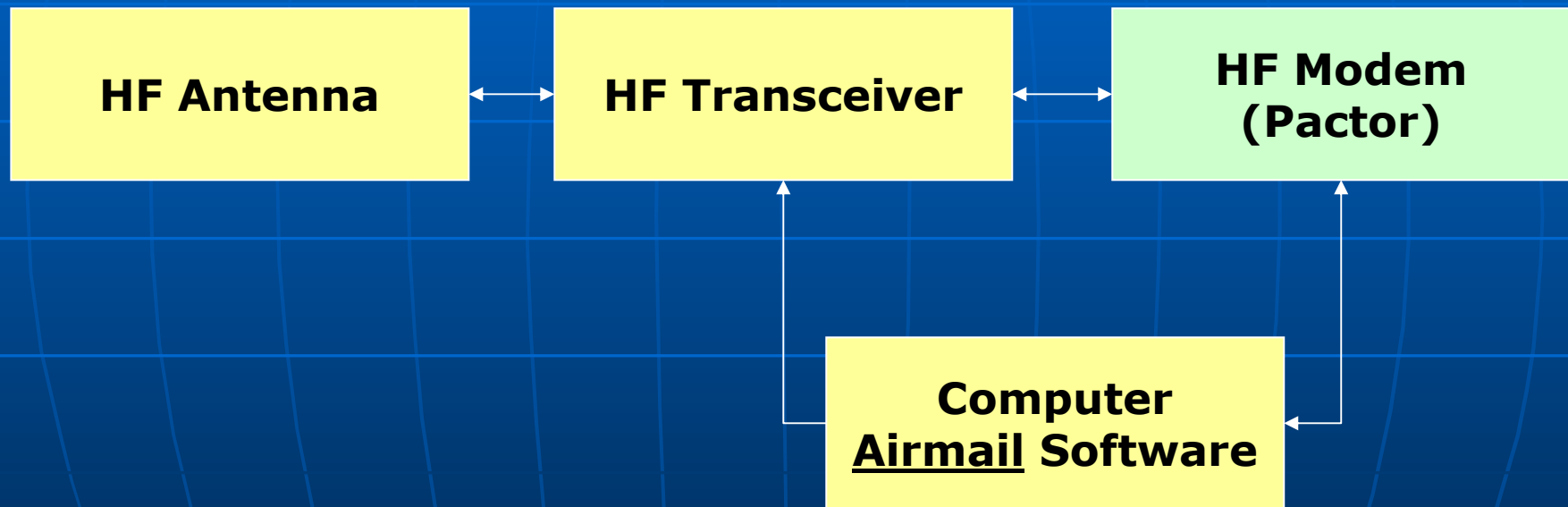
Update

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
7072.9	100	100	100	100	100	100	100	100	100	100	100	98	93	56							57	93	99	100
10125.9	100	100	100	100	100	100	100	100	100	100	100	100	100	96	79	54	5	3	45	77	97	100	100	100
14098.7	100	100	100	100	100	100	99	97	88	87	100	100	100	100	95	93	91	91	94	97	100	100	100	100
18106.2	100	92	78	89	83	80	78	48	17	15	72	99	100	100	100	100	100	100	100	100	100	100	100	100
21066.9	89	57	19	56	53	49	44	2			15	76	100	100	100	100	100	100	100	100	100	100	100	100

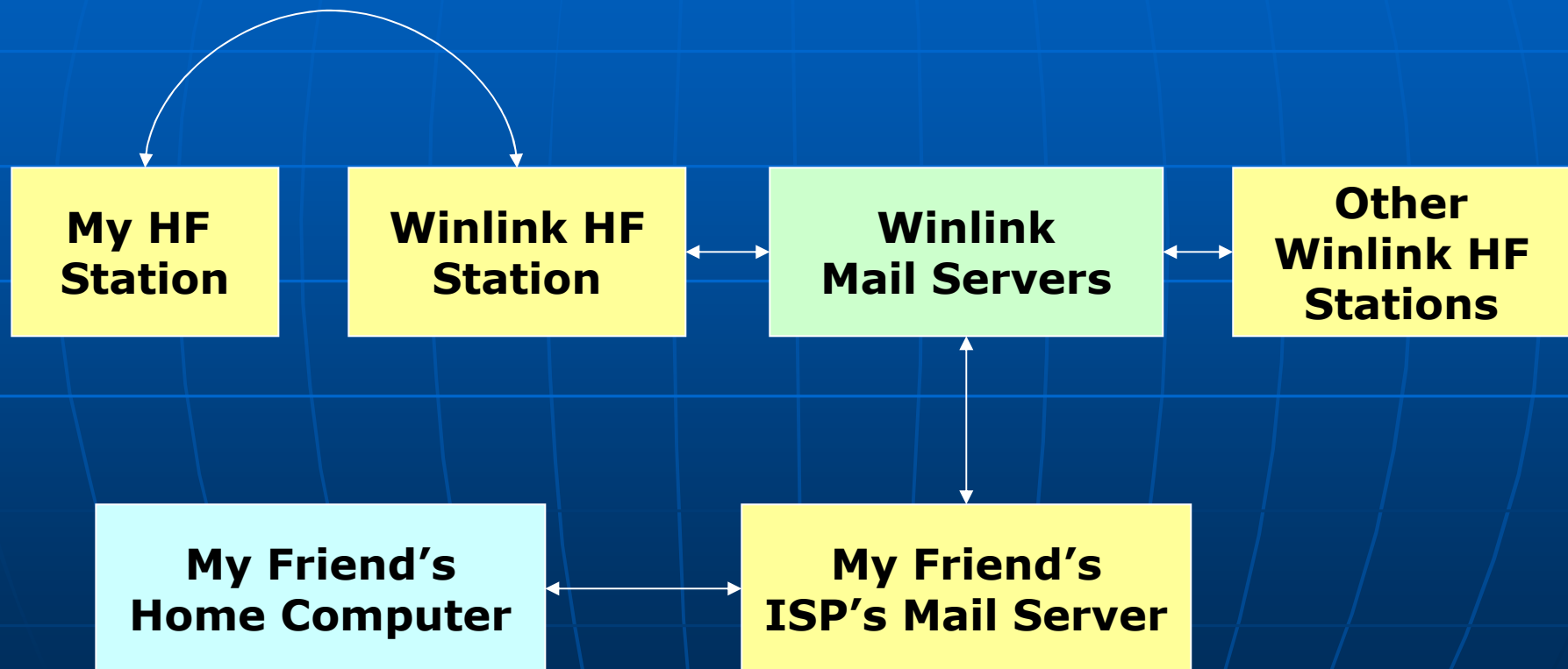
Systems

- HAM
 - F6CDD
 - HSQAC
 - K4CJX
 - K6IXA
 - K7AAE
 - K8BIQA
 - K8BYND

Winlink System Overview

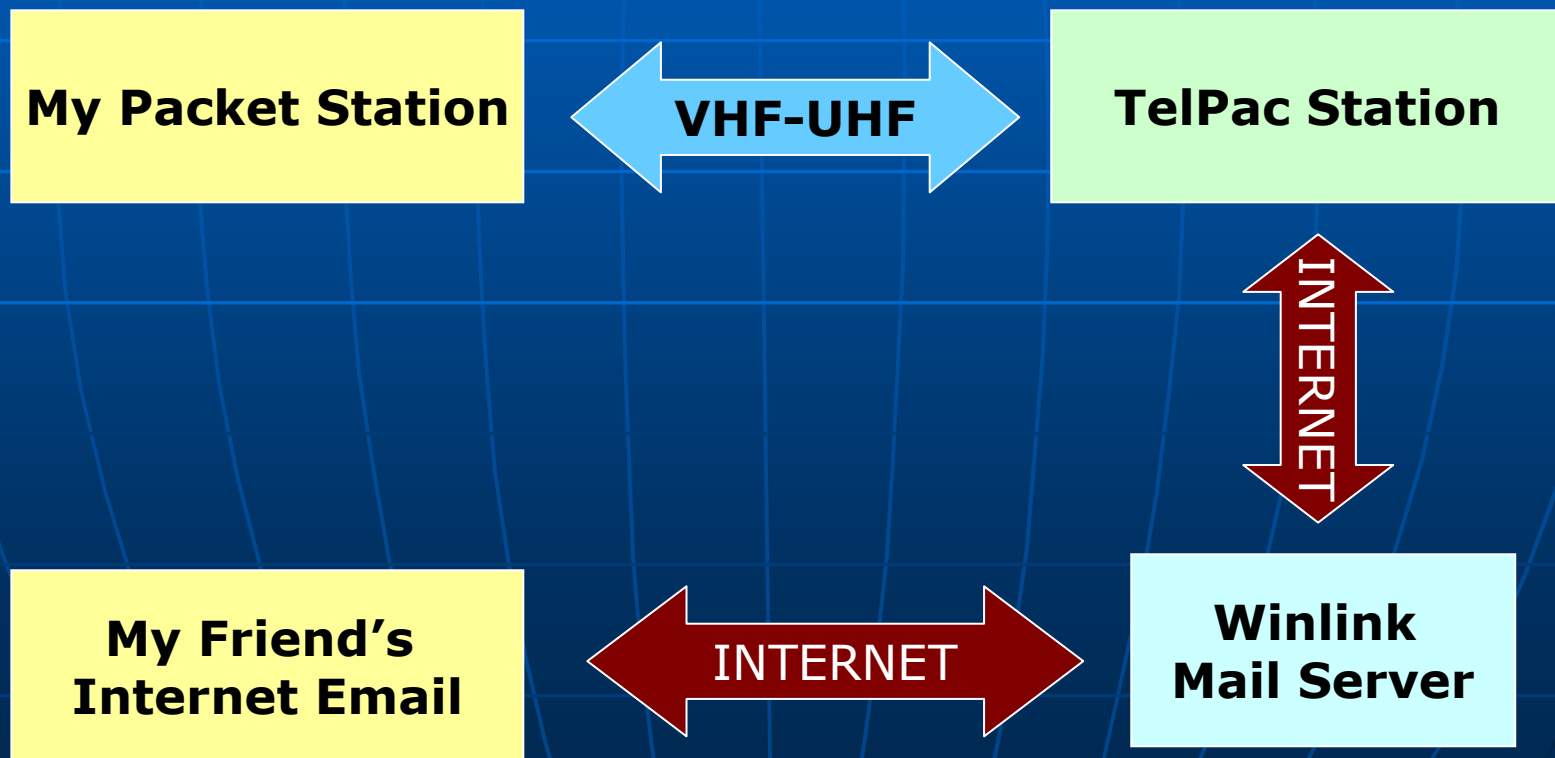


Winlink System Overview



Winlink System Overview

- TelPac – January 2003



Winlink System Overview

■ Features

- Looks and works like common email
- Use any combination of SMTP addresses
- Can send attachments
- Some security because binary mode
- Easy to configure and use
- Low cost – software is free
- Redundant, world wide, system

Winlink System Overview

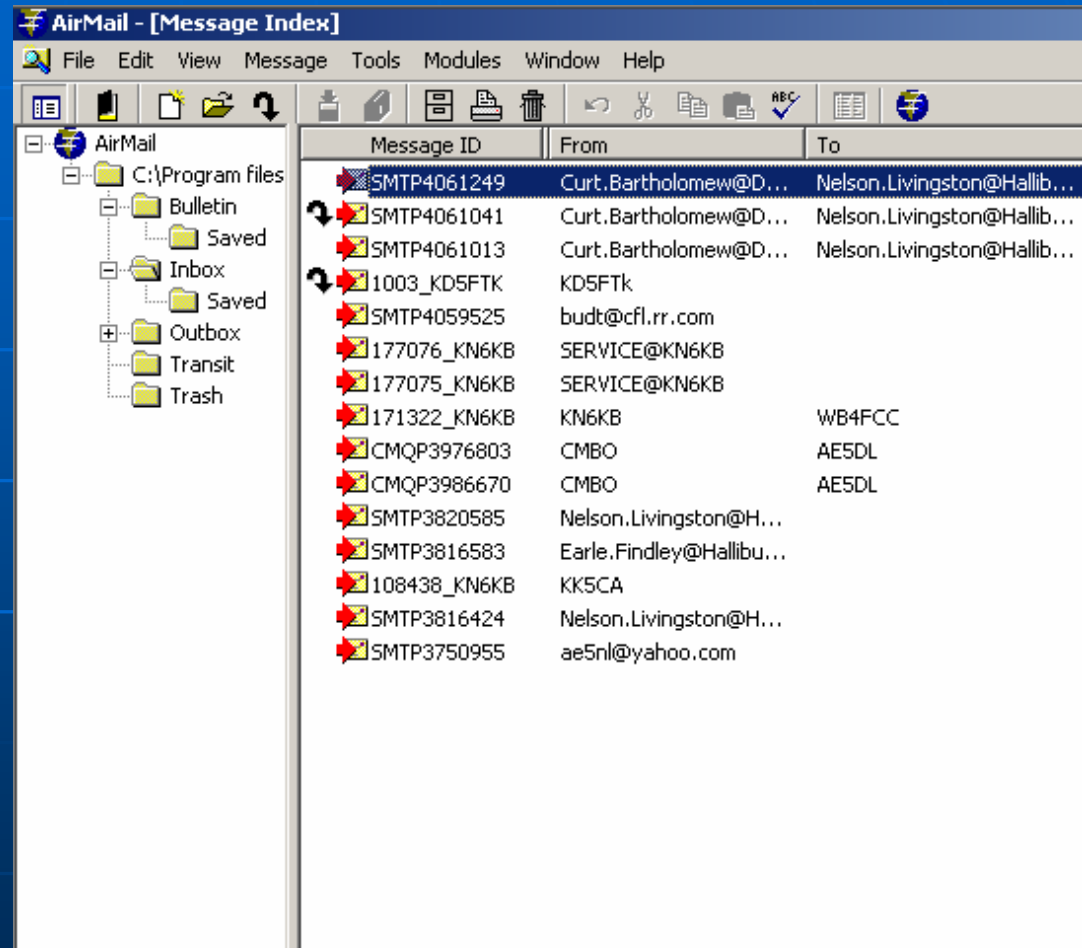
- Features (continued)
 - Fault tolerant
 - Multiple internet topologies
 - Flexible
 - Can use existing packet nodes or digi's
 - Can use voice repeaters
 - Can use APRS digipeaters
 - Data compression increases speed

Winlink System Overview

- Features (continued)
 - Intelligent auto-forwarding
 - “Instant” registration of hams
 - Ham only system

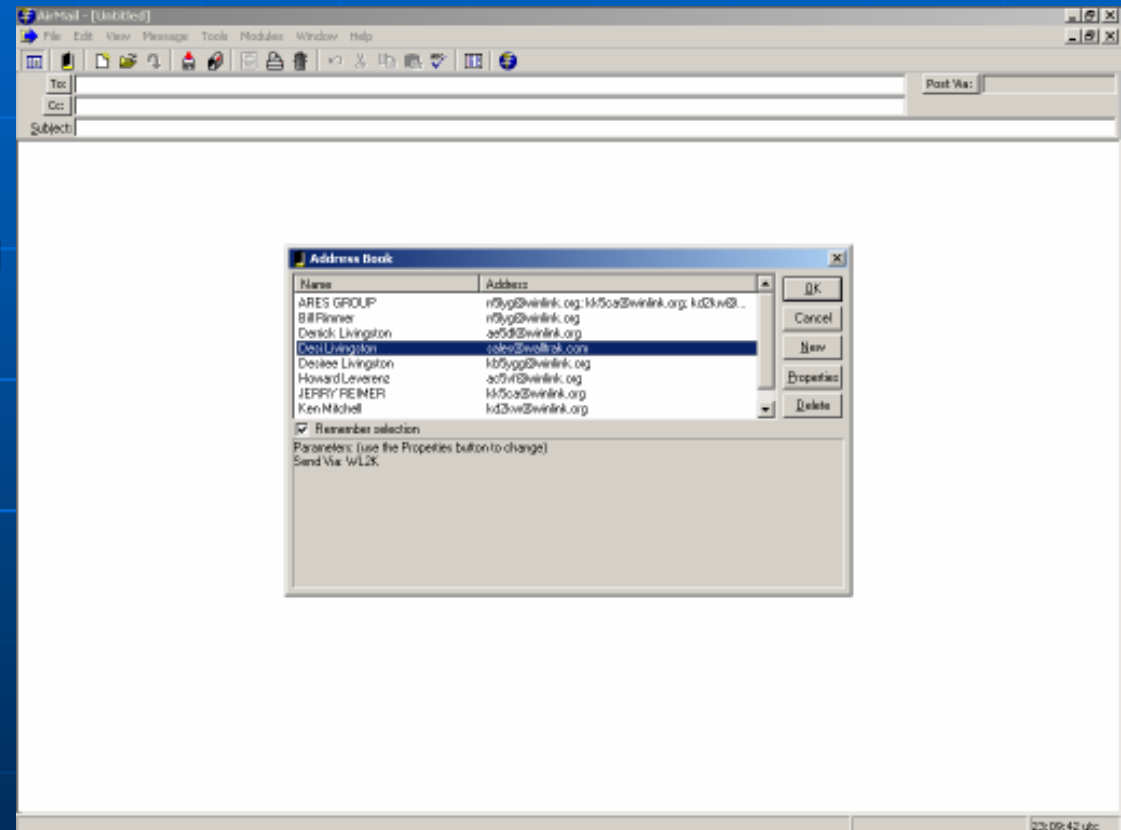
Familiar Interface / Inbox

- Very first screen is the inbox.
- Start the Packet module. Then minimize it.



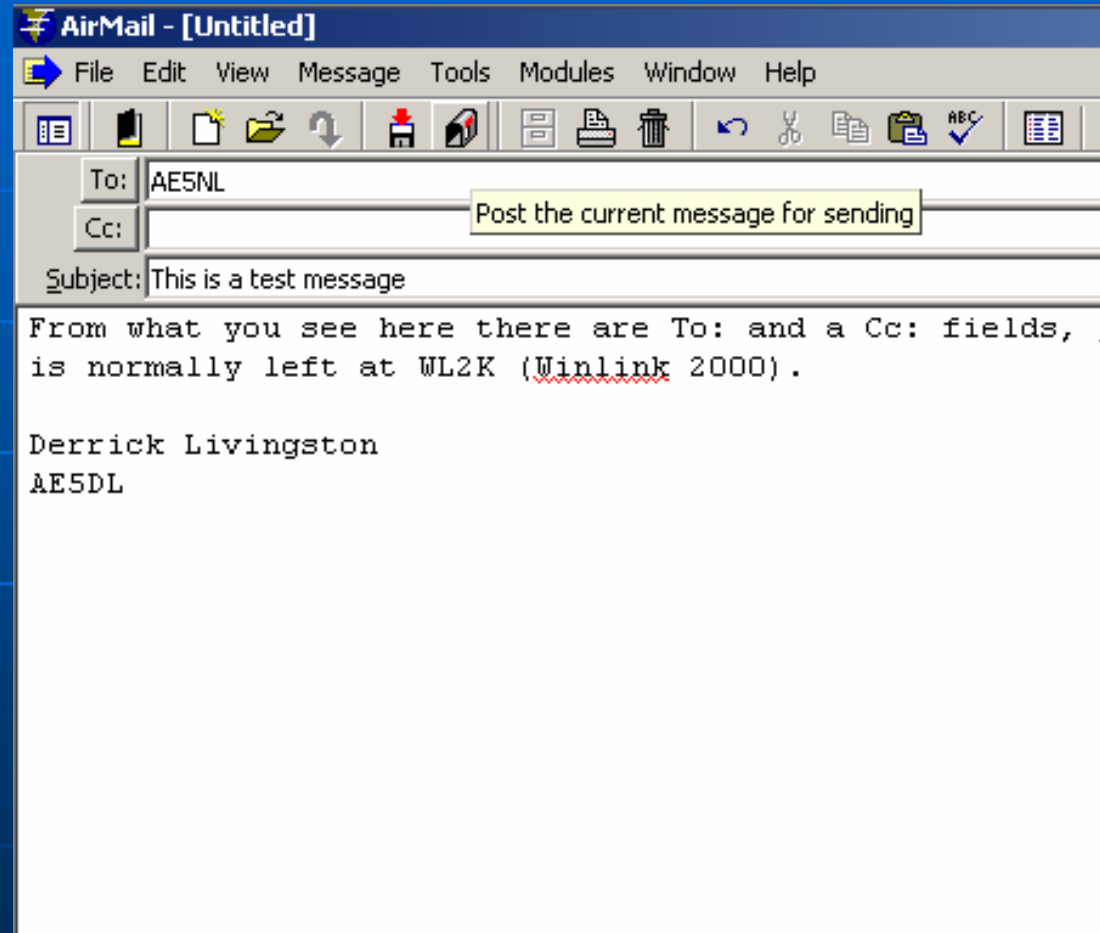
Composing a Message

- Click on the Format a New Message Icon.
- You will get an address book.
- Choose a contact or cancel and enter in the message.



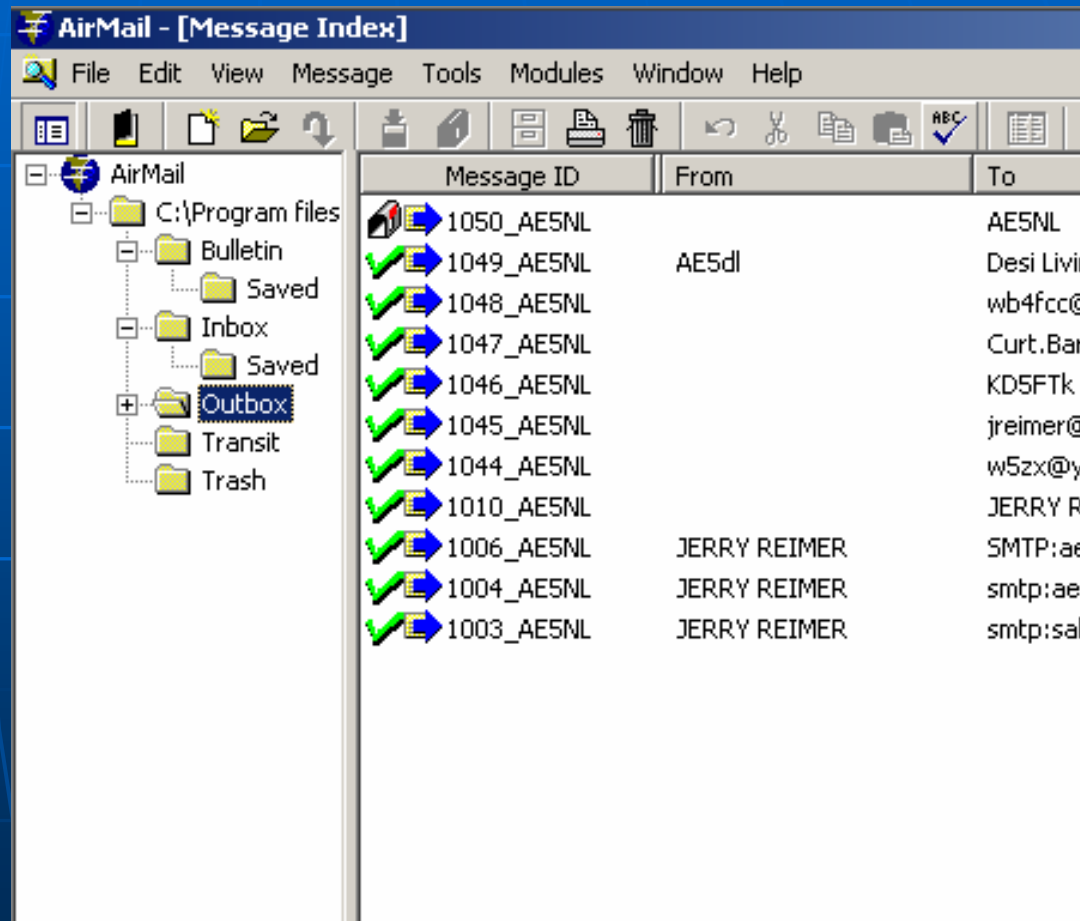
Composing a Message

- Enter Email address as you normally would To: and CC:.
- Enter subject
- Enter Message
- Signature if Necessary.
- Post for sending
- Leave via WL2K



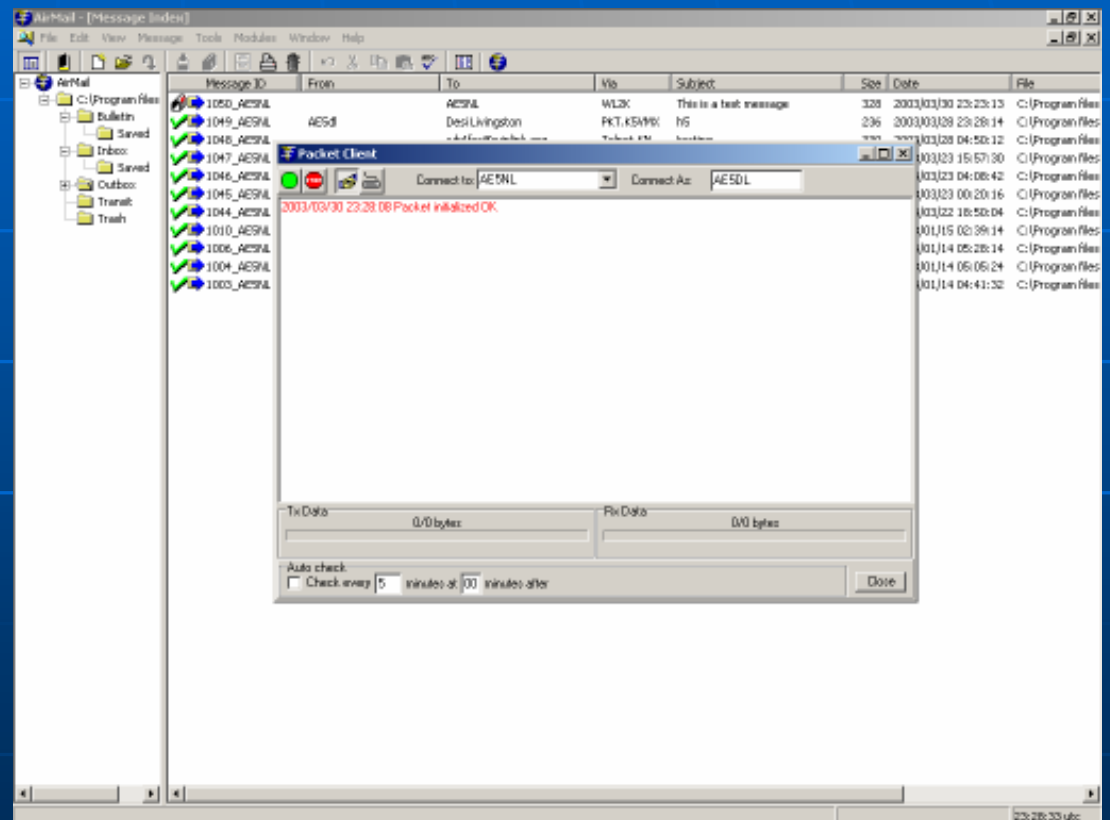
Send And Receive Messages

- One item in outbox.
- Continue composing if you have multiple messages.



Send And Receive Messages

- Open packet module
- Enter "connect to" Station call sign
- Start sending and Receiving



Send And Receive Messages

The screenshot shows the Packet Client interface. On the left, a list of messages is visible, including 1050_AE5NL, 1049_AE5NL, 1048_AE5NL, 1047_AE5NL, 1046_AE5NL, 1045_AE5NL, 1044_AE5NL, 1010_AE5NL, 1006_AE5NL, 1004_AE5NL, and 1003_AE5NL. The main window displays the details of a message being sent. The 'Connect to' field is set to 'AE5NL' and the 'Connect As' field is set to 'AE5DL'. The message content includes a test message, a solar flux index report, and a confirmation of a binary upload.

Message ID	From	To	Subject	Size	Date
1050_AE5NL	AE5NL	WL2K	This is a test message	346	2003/03/30
1049_AE5NL	AE5dl	Desi Livingston	PKT.K5VMX h5	236	2003/03/29
1048_AE5NL	ub4fcs@winlink.org	Telnet KM	testing	220	2003/03/28
1047_AE5NL					/03/27
1046_AE5NL					/03/27
1045_AE5NL					/03/27
1044_AE5NL					/03/27
1010_AE5NL					/01/19
1006_AE5NL					/01/19
1004_AE5NL					/01/19
1003_AE5NL					/01/19

Packet Client

Connect to: AE5NL Connect As: AE5DL

Please wait while I check your mail ...
Telnet Logon to k4cix.no-ip.com OK!
[WL2K-2.0.26-B2FHIM\$]
Welcome to "Express" PMBO K4CJX (EM66oc) and WinLink 2000

10 cm Solar Flux Index {SFI = 155 on 2003/03/30 02:50 UTC}

MAIL MAY BE DELAYED. ALL BACK ON-LINE NOW.

- Thanks for using K4CJX!

AE5DL de K4CJX QTC 0 Msgs 0 bytes>
[AirMail-3.1.902-B2FHIM\$]
; AE5NL de AE5DL (EL29aw) QTC: 1 335 264
FC EM 1050_AE5NL 335 264 0
F> 57
FS Y
Starting binary upload
Sending "This is a test message", 264 bytes (21% compressed)
.....

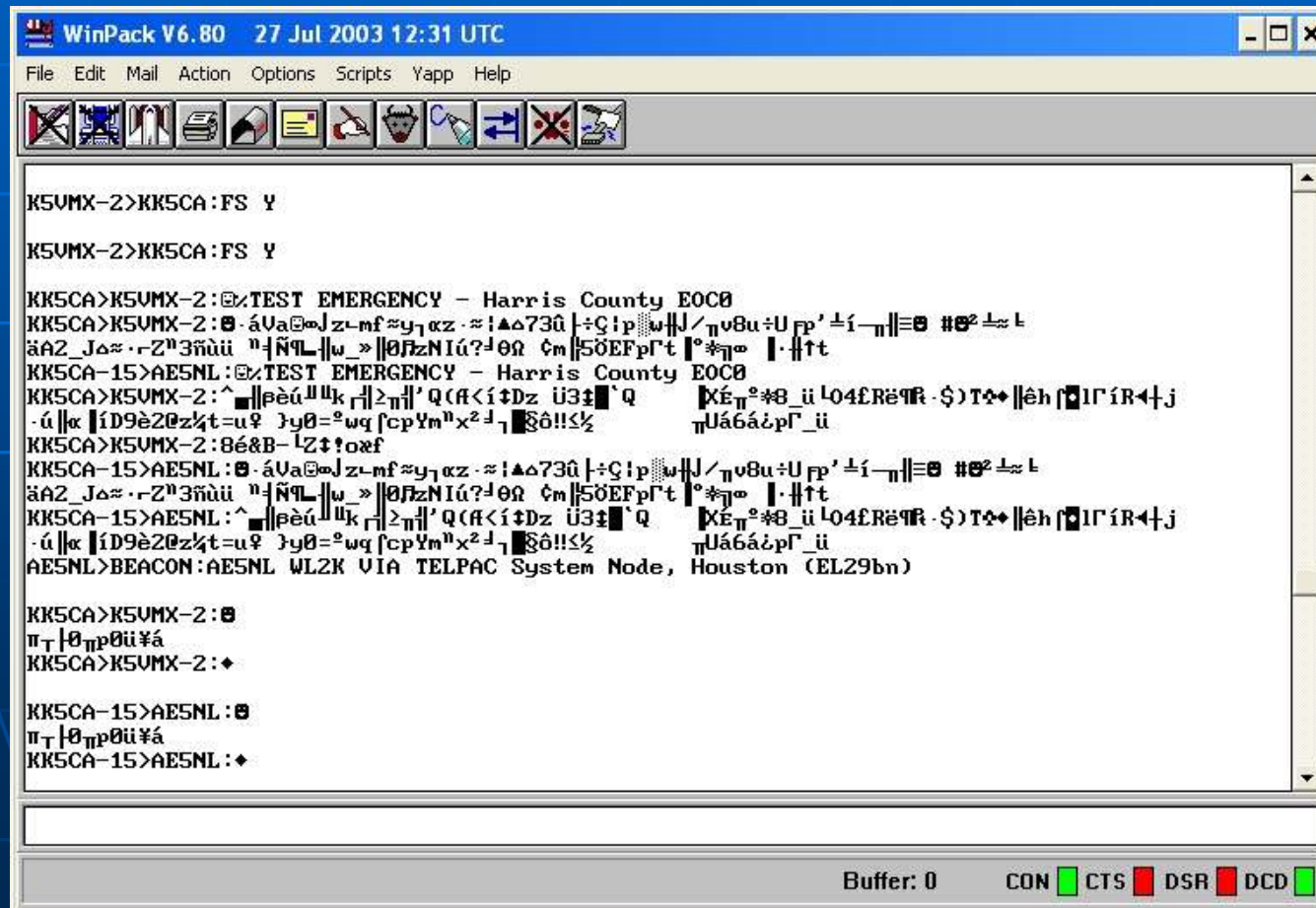
Tx Data: 264/264 bytes Rx Data: 0/0

Auto check
 Check every 5 minutes at 00 minutes after

Close

Send And Receive Messages

- Secure Transmission



```
WinPack V6.80 27 Jul 2003 12:31 UTC
File Edit Mail Action Options Scripts Yapp Help

K5VMX->KK5CA:FS Y
K5VMX->KK5CA:FS Y

KK5CA>K5VMX-2:@TEST EMERGENCY - Harris County EOC0
KK5CA>K5VMX-2:áVa@z-mfzy-az-!A730|-GipwJ/v8u:Upp'±i-||=0 #e²±L
äA2_Jd~·-Z³ñüü "NQL||w »||0BzNIú?d0Ω Cm||50EFpΓt |°*η° |·||ft
KK5CA-15>AE5NL:@TEST EMERGENCY - Harris County EOC0
KK5CA>K5VMX-2: ^||èú||k r||≥π||' Q(A<i±Dz ü3±' Q XÉπ°*B_ü l04ERe9R·$)T±•||éh|ΓíR<+j
·ú||α |iD9è20z¼t=u♀ }y0=°wq|cpYm"x²j_||§ô!!≤½ πUá6áálpΓ_ü
KK5CA>K5VMX-2:8é&B-LZ†!oæf
KK5CA-15>AE5NL:áVa@z-mfzy-az-!A730|-GipwJ/v8u:Upp'±i-||=0 #e²±L
äA2_Jd~·-Z³ñüü "NQL||w »||0BzNIú?d0Ω Cm||50EFpΓt |°*η° |·||ft
KK5CA-15>AE5NL: ^||èú||k r||≥π||' Q(A<i±Dz ü3±' Q XÉπ°*B_ü l04ERe9R·$)T±•||éh|ΓíR<+j
·ú||α |iD9è20z¼t=u♀ }y0=°wq|cpYm"x²j_||§ô!!≤½ πUá6áálpΓ_ü
AE5NL>BEACON:AE5NL WL2K VIA TELPAC System Node, Houston (EL29bn)

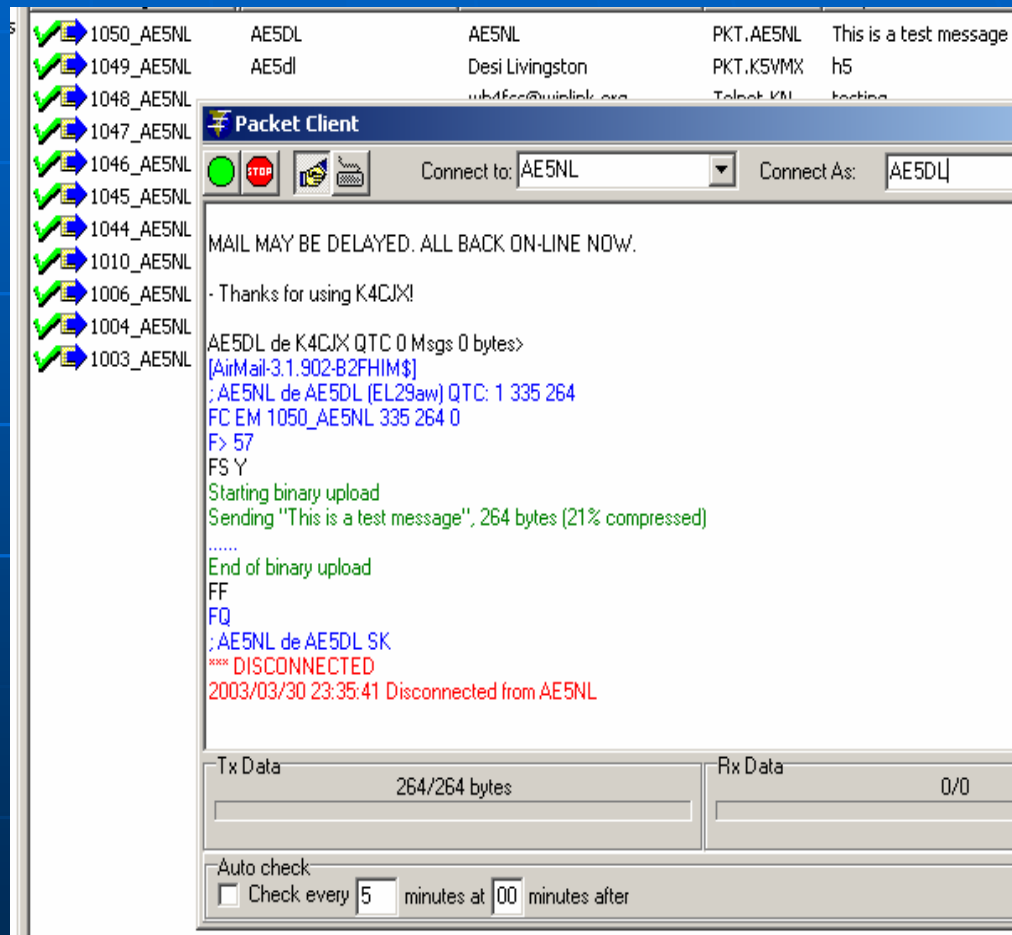
KK5CA>K5VMX-2:0
π_T|0πp0ü¥á
KK5CA>K5VMX-2:♦

KK5CA-15>AE5NL:0
π_T|0πp0ü¥á
KK5CA-15>AE5NL:♦

Buffer: 0 CON CTS DSR DCD
```

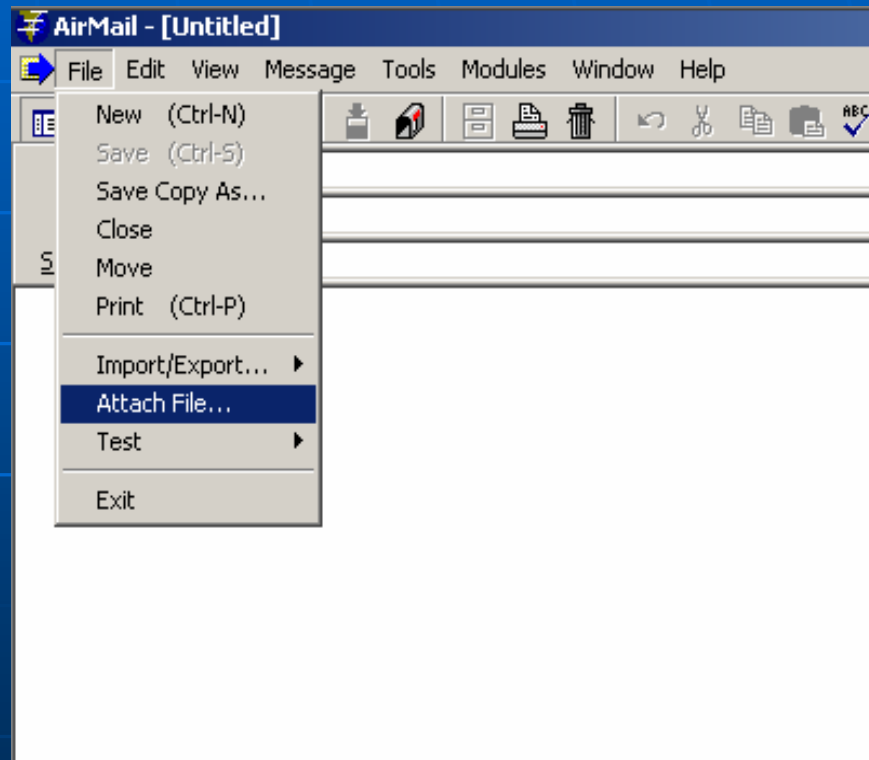
Send And Receive Messages

- Outbox now shows Green Check for delivery status
- No inbound mail
- Disconnected

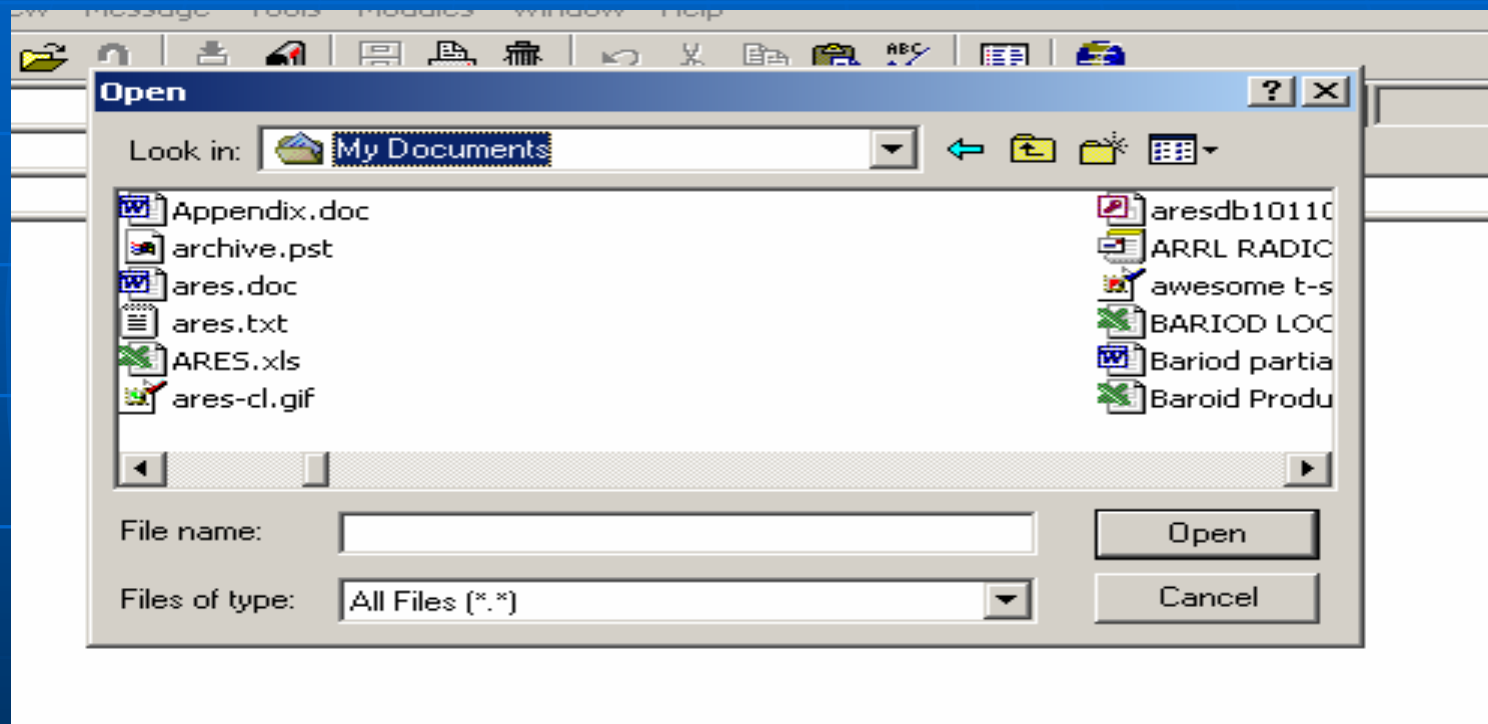


Message with Attachment

- Start with normal message
- Select file from the menu bar go to menu bar select file
- Chose file to attach

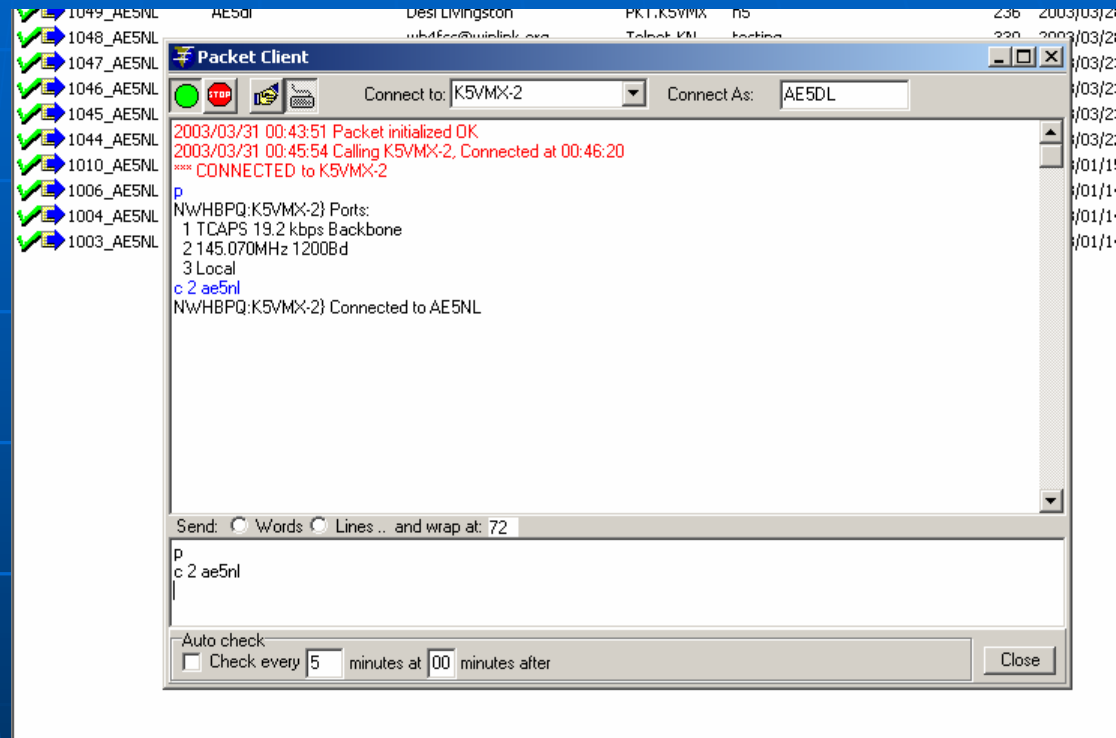


Attaching a file



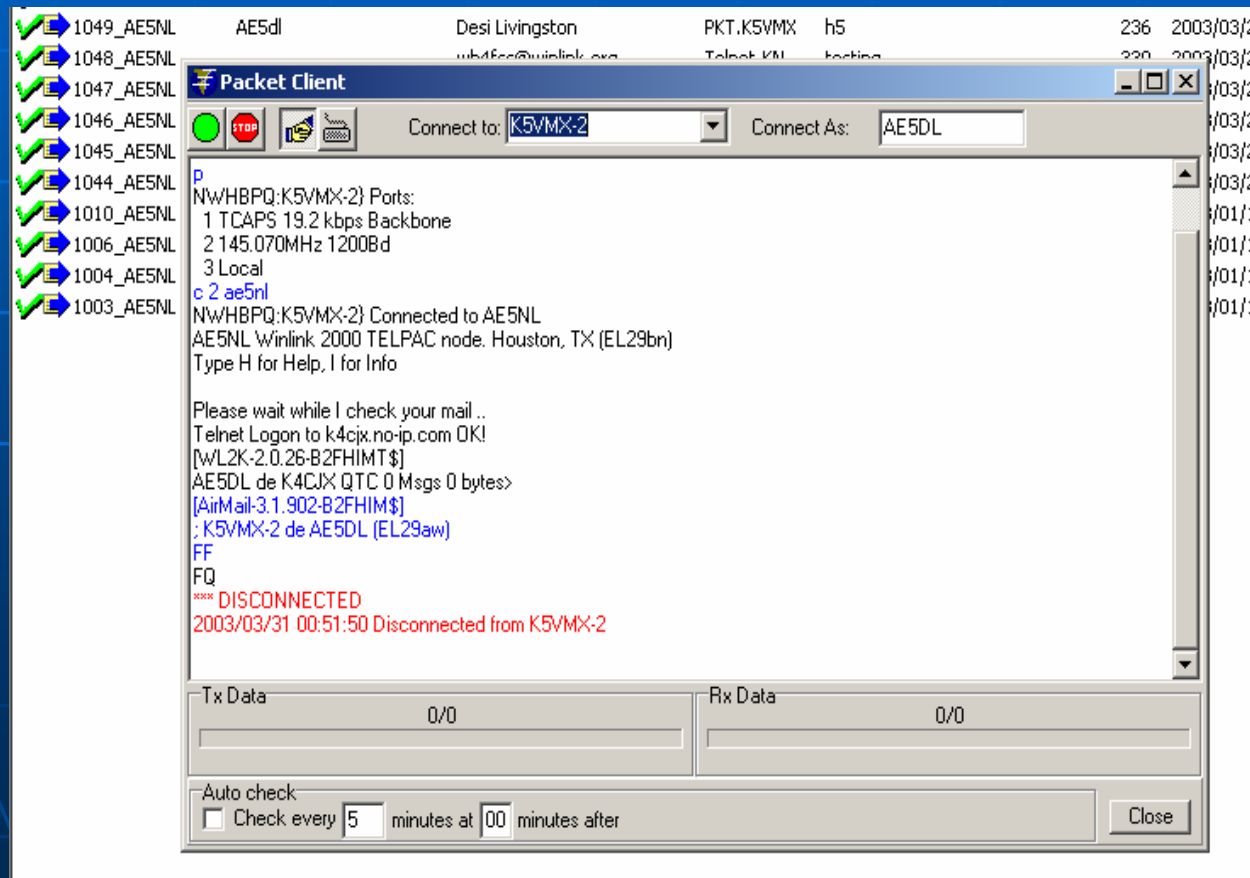
Send and Receive through a Node

- Go to keyboard mode
- Use node call sign
- Issue all interim connections



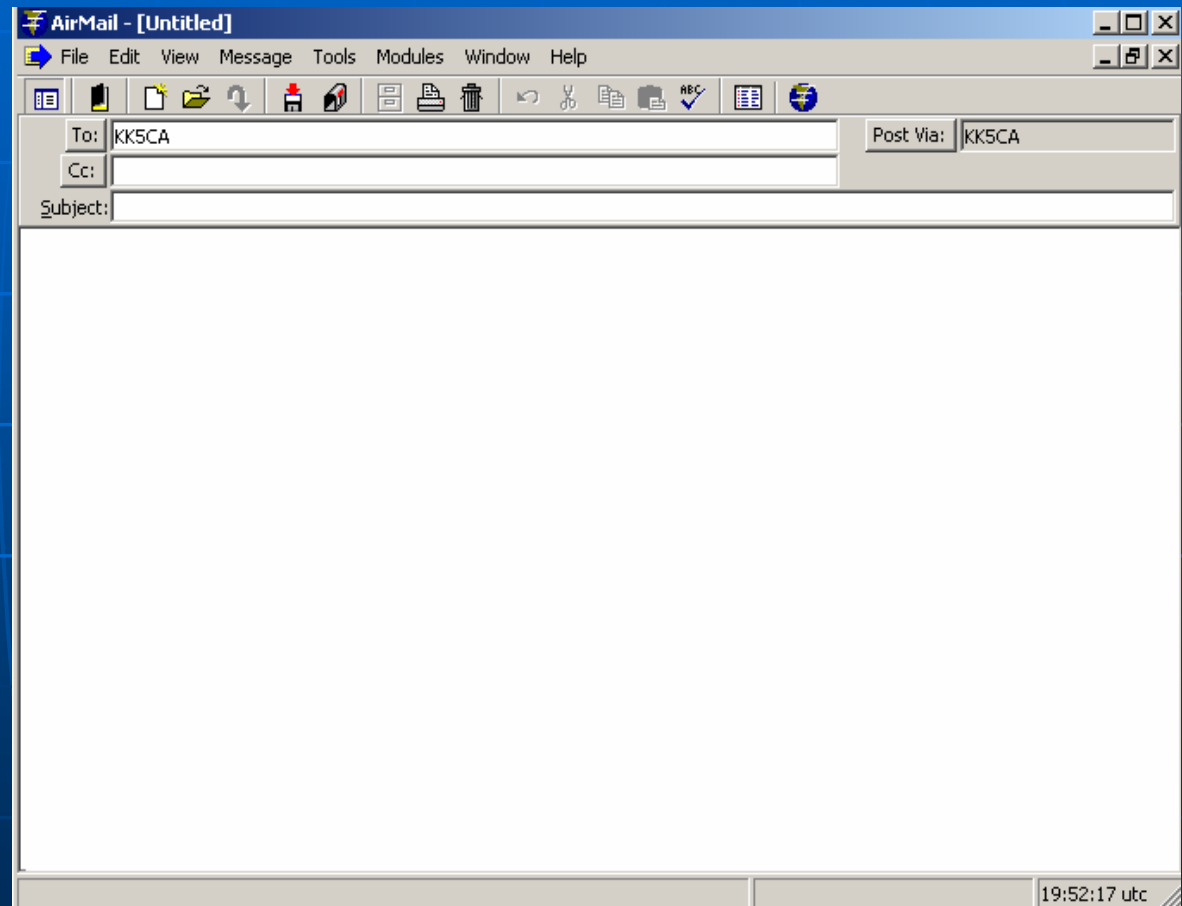
Send and Receive through a Node

- Back to handshake mode



Send and Receive with another Airmail User

- Same as other types of connection
- Key difference is post VIA
- Consider using simplex freq w/dual port



Access to Mail from the Web

- This is a picture of the inbox

Winlink 2000 Pending Messages - Microsoft Internet Explorer provided by Halliburton Company

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Copy Paste

Address <http://www.winlink.org/mail/mailpending.asp> Go Links >>

Winlink! 2000

←-----→

Pending Messages [New](#) - [Unhide](#) - [Sign Out](#) - [Help](#)

←-----→

Mid	From	Subject	Received
SMTP4096856	SMTP:n6ou@arrl.net	Re: ARRL RFI Course	03/31 0526Z
1050_AE5NL	AE5DL	This is a test message	03/30 2335Z

←-----→

Web Access

The screenshot shows a Microsoft Internet Explorer browser window with the title "Winlink 2000 Message Display - Microsoft Internet Explorer provided by Halliburton Company". The address bar contains the URL "http://www.winlink.org/mail/maildisplay.asp?MID=1050_AE5NL". The main content area displays the "Winlink! 2000" logo in red and blue. Below the logo is a "Message Display" header with navigation links: "New - Reply - Reply All - Forward - Hide - Delete - Sign Out - Help". The message details are as follows:

Message Identifier (MID): 1050_AE5NL
Date Originated: 3/30/2003 11:32:00 PM UTC
Date Received: 3/30/2003 11:35:19 PM UTC

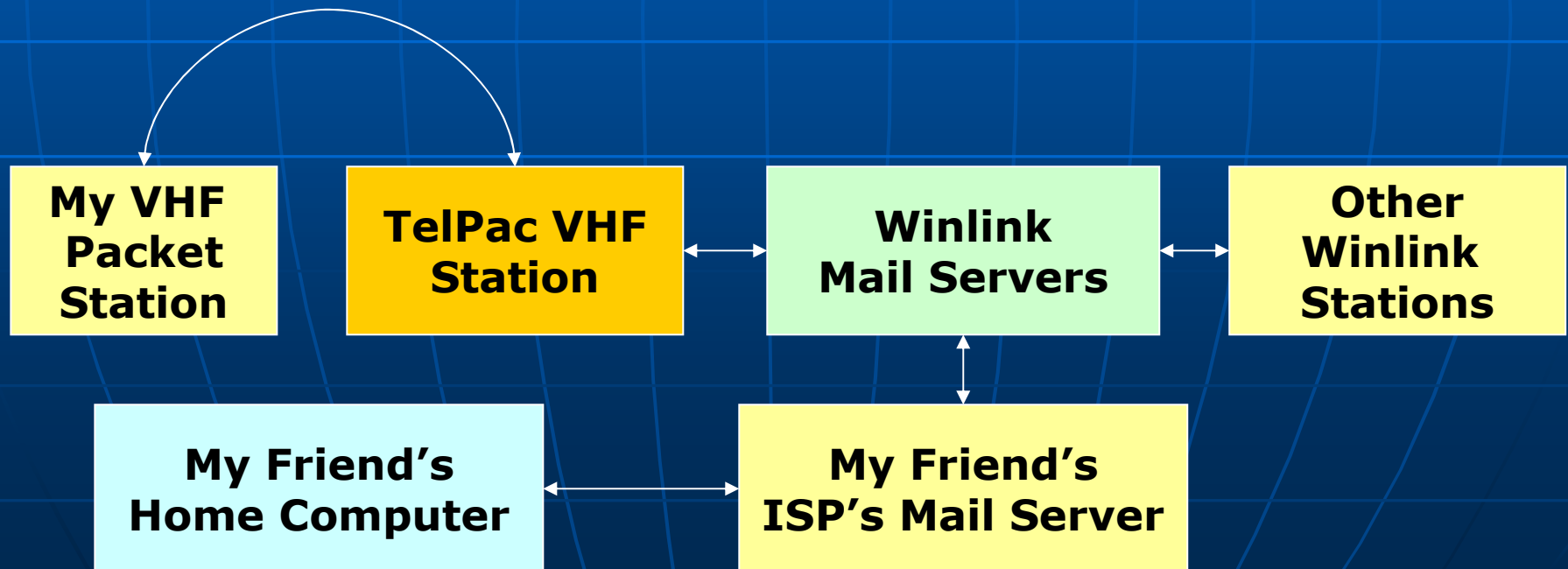
From: AE5DL
To: AE5NL
Subject: This is a test message

From what you see here there are To: and a Cc: fields, just like normal email. Make special note of the Post Via: box. This is normally left at WL2K (Winlink 2000).

Derrick Livingston
AE5DL

TelPac

- TelPac
 - Tel = TELNET
 - Pac = PACKET



TelPac

WL2K TELPAC Instance 1

Initialize Cancel Check TNC Comm

Node Call Sign Inactivity Timeout (min)

Comm port: **TNC Comm OK!** Enable Logging

Baud Rate: Restore TNC settings on shutdown

Data Length

Parity

Stop

Flow Ctrl

TNC Type

File Path

Telnet Host

Primary Host	Port	Password
<input type="text" value="kn6kb.no-ip.com"/>	<input type="text" value="12001"/>	<input type="text" value="WL2KTELNETCLIENT"/>
Backup Host (optional)		
<input type="text"/>	<input type="text"/>	<input type="text"/>

IP Connection Type

Full time

Dial Up

TelPac

■ Available WL2K Mail Servers

WL2K PMBO	Remote Host	Port	Password
• K4CJX	k4cjsx.no-ip.com	12001	WL2KTELNETCLIENT
• KN6KB	kn6kb.no-ip.com	12001	WL2KTELNETCLIENT
• WB0TAX	208.214.45.102	12001	WL2KTELNETCLIENT
• AH6QK	ah6qk.no-ip.com	12001	WL2KTELNETCLIENT
• K6IXA	206.62.222.199	12001	WL2KTELNETCLIENT
• KB6YNO	kb6yno.no-ip.com	12001	WL2KTELNETCLIENT
• WA6OYC	66.120.169.90	12001	WL2KTELNETCLIENT
• AB7AA	ab7aa.no-ip.com	12001	WL2KTELNETCLIENT
• VE6KBS	ve6kbs.no-ip.com	12001	WL2KTELNETCLIENT

TelPac

*** WL2K TELPAC (TELnet PACket bridge: 1)

Connections Sysop Setup About Exit

Connections

TNC Status

KPC3 OK on Comm4

Telnet Monitors

Visible

Hide

Save Monitor to Log

Stream Monitor

1/A:
1/A: Telnet Connect to kn6kb.no-ip.com @ 1/6/2003 10:16:07
1/A: Telnet Logon to kn6kb.no-ip.com OK!
1/A: [WL2K-2.0.23-B2FHIMT\$]
1/A: KN6KB-1 de KN6KB QTC 0 Msgs 0 bytes>

Log (saved to C:\Program Files\TELPAC\KN6KB_1_01.log)

1/A: CONNECTED to KN6KB-1 @ 1/6/2003 10:12:30
1/A: DISCONNECTED from KN6KB-1 @ 1/6/2003 10:12:48
1/A: CONNECTED to KN6KB-1 @ 1/6/2003 10:16:06

Port/Stream	Call sign	Traffic	Mon	Telnet Server
1/A	KN6KB-1	<-----	<input checked="" type="radio"/>	kn6kb.no-ip.com
1/B			<input type="radio"/>	
1/C			<input type="radio"/>	
1/D			<input type="radio"/>	
1/E			<input type="radio"/>	
1/F			<input type="radio"/>	
1/G			<input type="radio"/>	
1/H			<input type="radio"/>	
1/I			<input type="radio"/>	
1/J			<input type="radio"/>	

What Is Next?

- Where do we go from here?
 - Learn and use the software
 - One TelPac gateway per county
 - TelPac stations designated as OES

What Is Next?

International Health Service of Minnesota

www.ihsfmn.org



Links to Software

- www.airmail2000.com
- www.winlink.org
- www.winlink.org/telpac.htm
- www.arrlstx.org/austin.htm

Nelson Livingston AE5NL & Jerry Reimer KK5CA