

Winlink 2000

Radio Mail System (RMS).

or

Email by Radio

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About the Presentation

- Amateur Radio Safety Foundation
 - WinLink Organisation.
- Winlink system for Radio Email.
 - Elements of the system.
 - Hardware and configurations.
 - Addressing Protocols
 - RMS Express software
- Information flows and system architecture
 - Message sending / receiving
 - WINMOR TNC
 - Ionospheric Predictions
 - Demo
 - Questions.

Amateur Winlink 2000

Winlink 2000 (WL2K) is a worldwide system of volunteer resources supporting e-mail by radio, with non-commercial links to Internet e-mail.

The system provides valuable service to emergency communicators, and to licensed radio Amateur operators.

It can operate independently of the Internet.

Winlink 2000 Messages

Winlink messages - Message sent to another station via the Central Message Server network (CMS).

Peer-to-Peer messages – Message sent from one station to another station in real time.

Position Report – Message and position posted to web and displayed on a google map.

Others

Elements of the System - 1

Central Message Server (CMS)

Winlink 2000 has a network of CMS sites at locations around the world.

Halifax, Brentwood, San Diego, Wien, and Perth.

These are similar to email Post Offices and accessed via the Internet.

Elements of the System - 2

RMS Gateways

These are the portals that Amateurs use to access the Central Message Server (CMS) when sending Winlink 2K messages.

Gateways operate on a number of frequencies and modes. Pactor, WINMOR, Packet and Robust Packet.

Elements of the System - 3

Winlink 2000 Website

Provides real time status of the network.

- CMS - Gateways -

Maps showing Station positions.

- Station position -

Maps of Gateways Types, Modes and Frequency
for HF, VHF/UHF - HF – VHF/UHF -

Elements of the System - 4

Station Hardware

Computer.

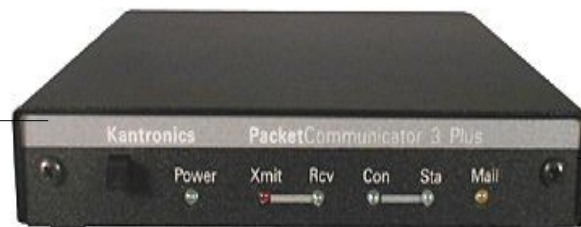
RMS Express software.

Modem or Sound card.

Radio, Antenna etc...



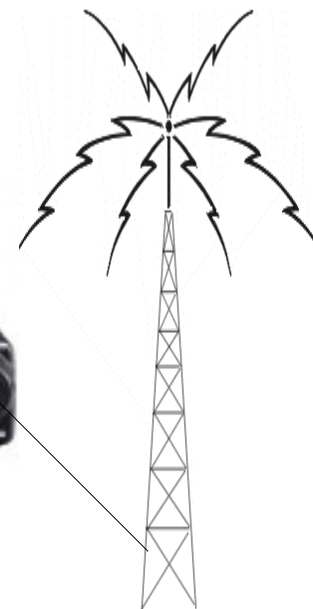
Desktop or Laptop PC



Packet TNC 1200baud



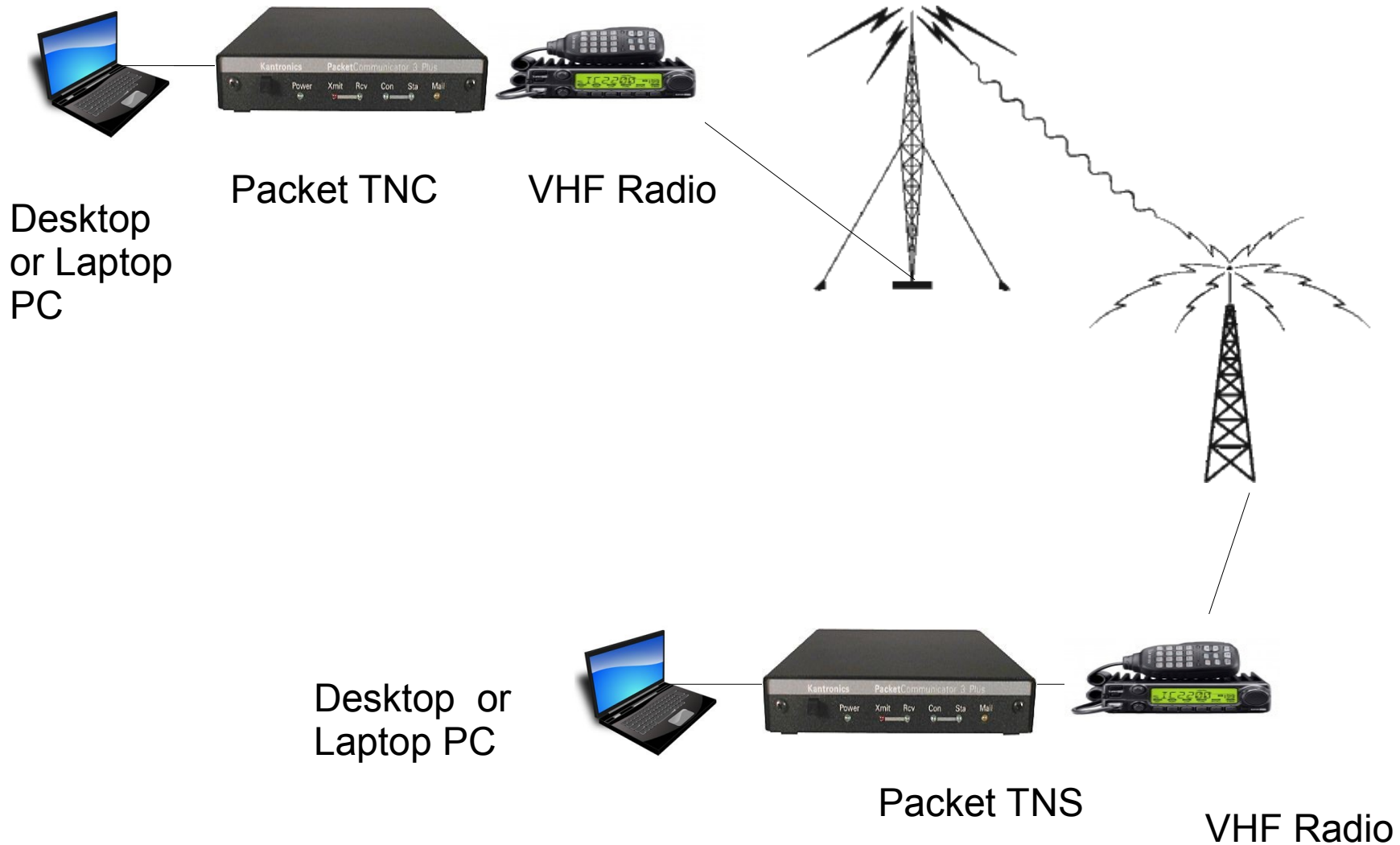
VHF or UHF radio



This is the basic client station hardware setup for Packet.

**RMS Express client application using a Packet WL2K
or Packet P2P communication sessions..**

RMS Packet P2P passing messages between to stations on VHF (UHF) Communication session.



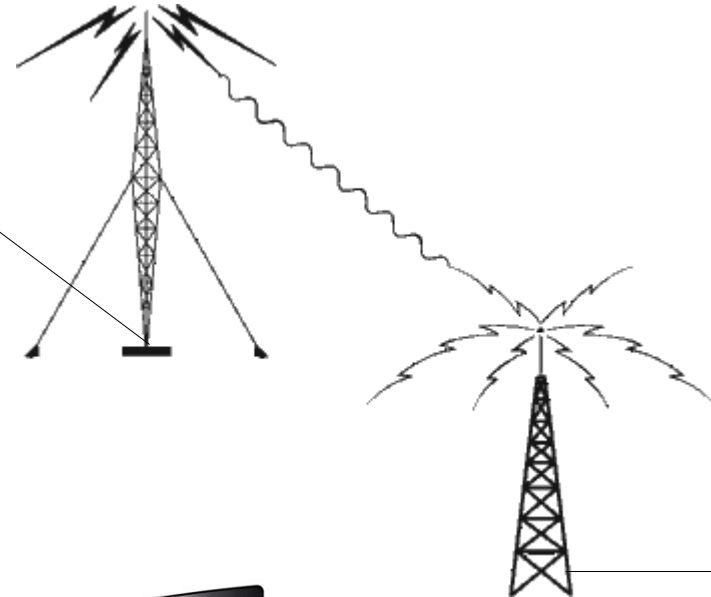
RMS Packet WL2K passing messages between to Central Message Server network and the RMS client software



Desktop or Laptop PC
running RMS
Express Client
software



VHF Radio



Central Message Server
network which holds messages.
(post office)



Internet



Packet TNC

VHF Radio

RMS Packet gateway software

RMS Express client application using a WINMOR WL2K or WINMOR P2P communication session..



Desktop or Laptop PC



Signalink USB

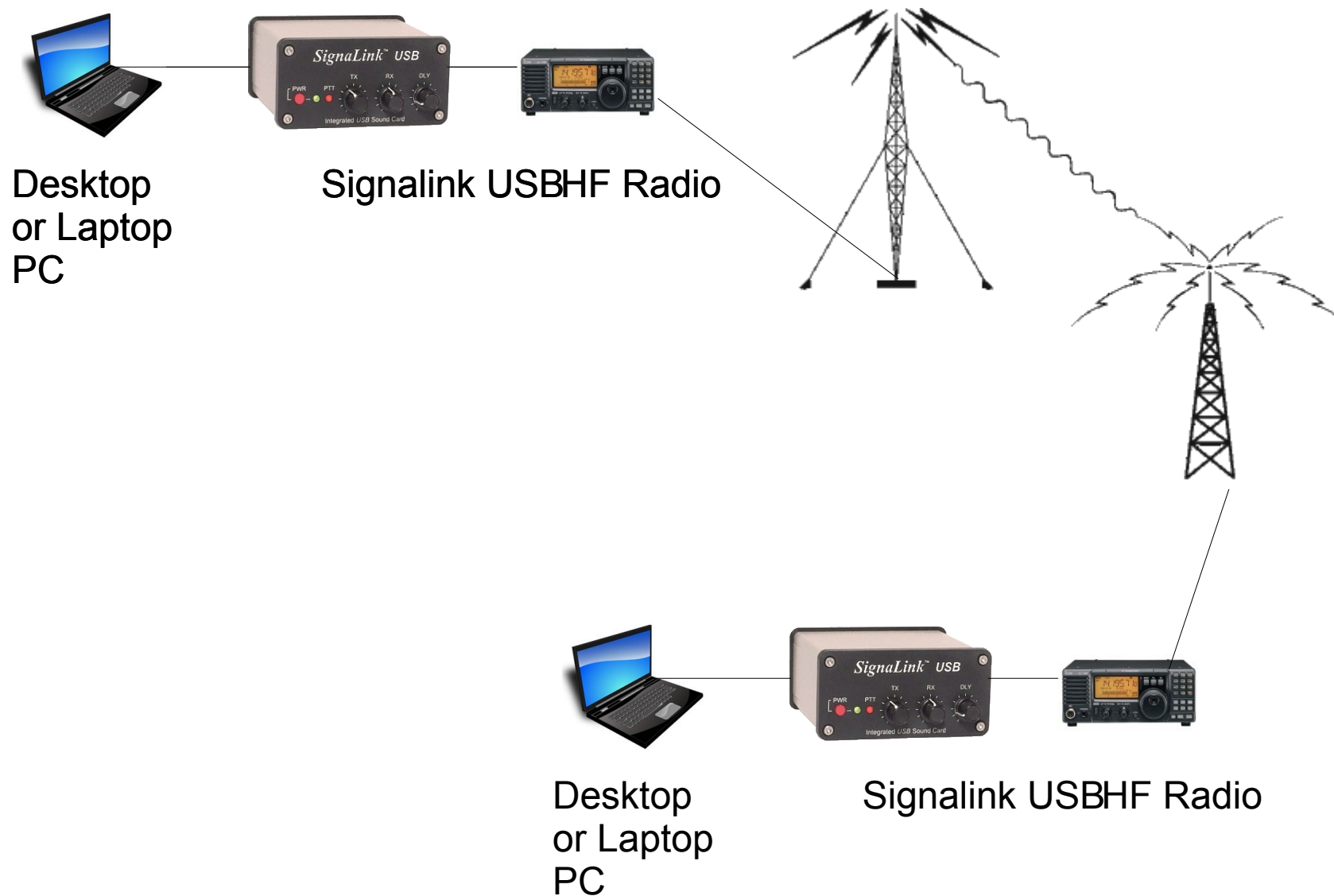


HF Radio

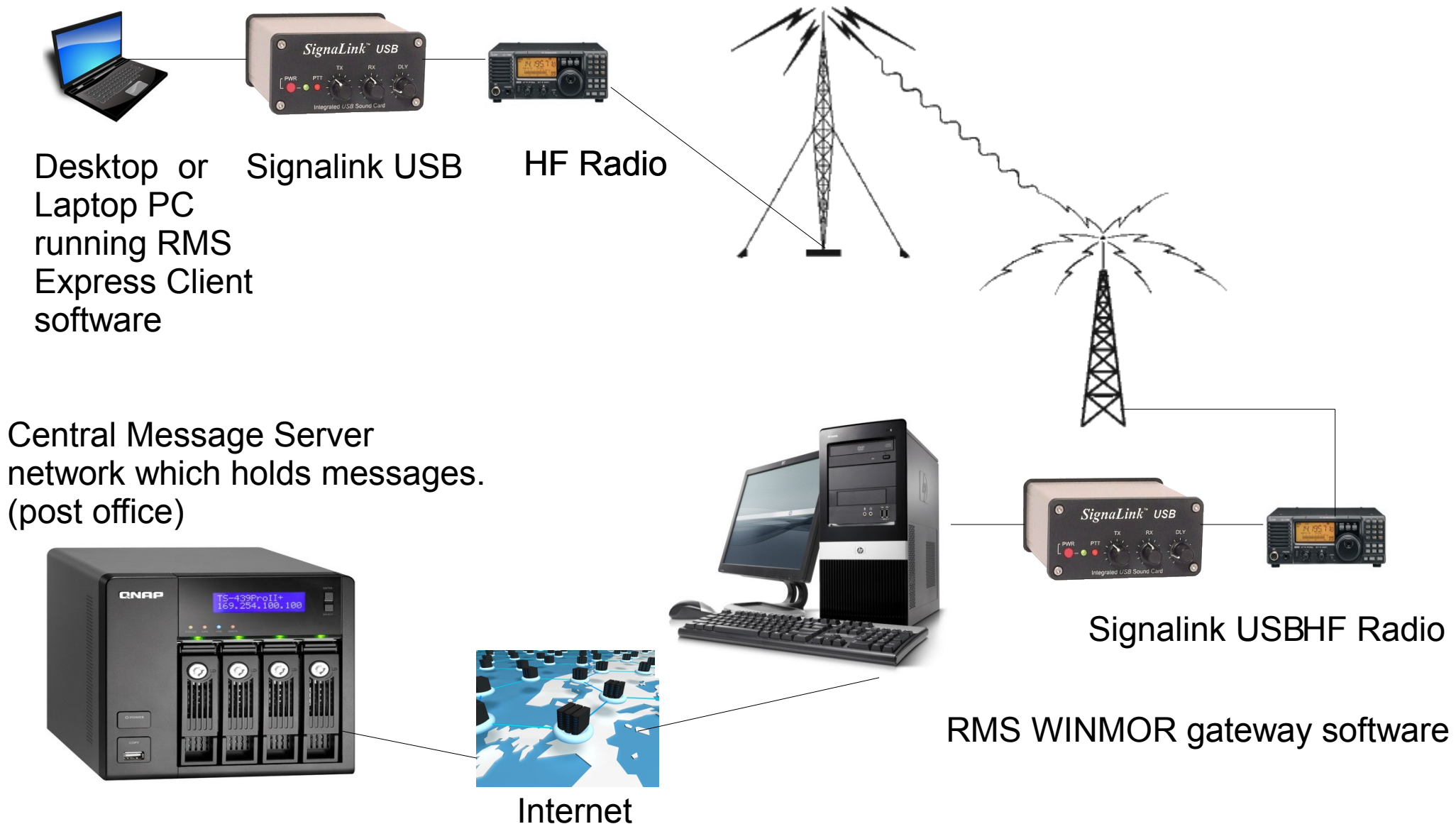
This is the basic client station WINMOR hardware setup.

WL2K sends and receives messages from the Central Message Server network.
P2P transfers messages directly between two RMS Express stations.

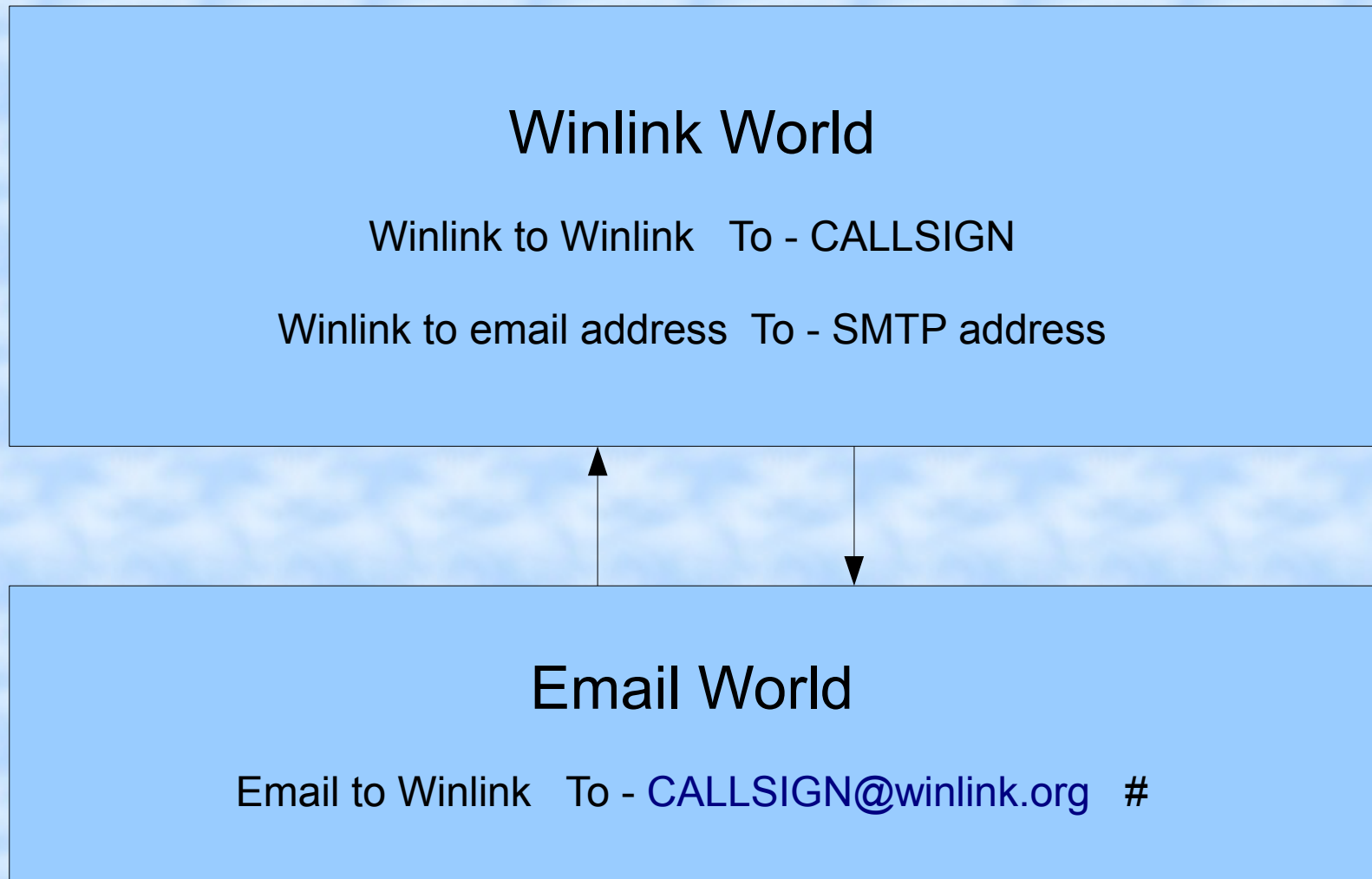
RMS WINMOR P2P passing messages between to stations



RMS WINMOR WL2K passing messages between to Central Message Server network and the RMS client software



Address Format



Title starts with //WL2K to get through WL spam filter.

RMS Express

RMS Express 1.1.8.0 - VK3IFM

VK3IFM Files Message Attachments Move To: Saved Items Delete Open Session: Packet WL2K Logs Help

No active session...

	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
	2012/06/18 22:48	CJ2POGSWXNE6	514	VK3CVF	VK3CVF	VK3IFM	Re:Weekly Report 001
	2012/06/18 08:56	HQJCQIC7D5U3	616	VK3KAN	VK3KAN	VK3IFM	Re:Weekly Report 001
	2012/06/12 23:19	FO30OZTQXZLV	584	VK3CVF	VK3CVF	VK3IFM	Re:multi frequency
	2012/06/12 23:19	FYBXETH028IX	419	VK3CVF	VK3CVF	VK3IFM	FW: 80 Meters
	2012/06/05 06:59	VK6T18JA42OJ	348	VK3KAN	VK3KAN	VK3IFM	Packet WL2K
	2012/06/05 06:59	S515GTMFXU2Q	296	System	SERVICE	VK3IFM	Position Report Acknowledgement
	2012/05/30 09:48	FOK5A0B7Z0ZT	391	VK3XY	VK3XY	VK3IFM	Back on the Winlink tram...
	2012/05/30 09:48	X9O35IGBY5YN	364	VK3CVF	VK3CVF	VK3PG	Re:FYI

Message ID: S515GTMFXU2Q
 Date: 2012/06/05 06:59
 From: SERVICE
 To: VK3IFM
 Source: SYSTEM
 Subject: Position Report Acknowledgement

The following position report for VK3IFM has been entered.

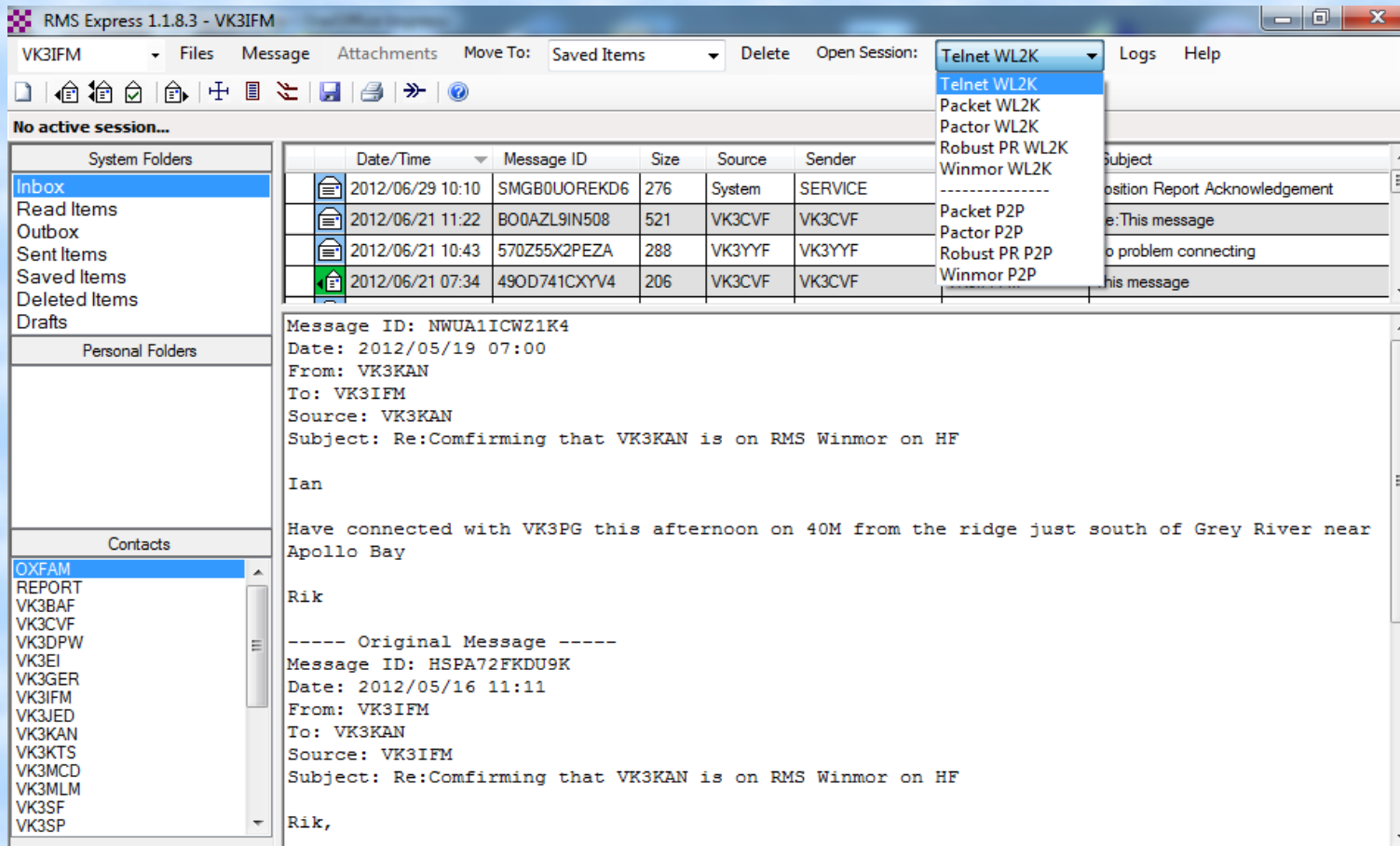
Date/Time: 2012/06/04 12:04:21
 Latitude: 37-53.85S
 Longitude: 145-13.36E
 Comment: Home Position

System Folders
 Inbox
 Read Items
 Outbox
 Sent Items
 Saved Items
 Deleted Items
 Drafts

Personal Folders

Contacts
 OXFAM
 REPORT
 VK3BAF
 VK3CVF
 VK3DPW
 VK3EI
 VK3GER
 VK3IFM
 VK3JED
 VK3KAN

Open a Communication Session



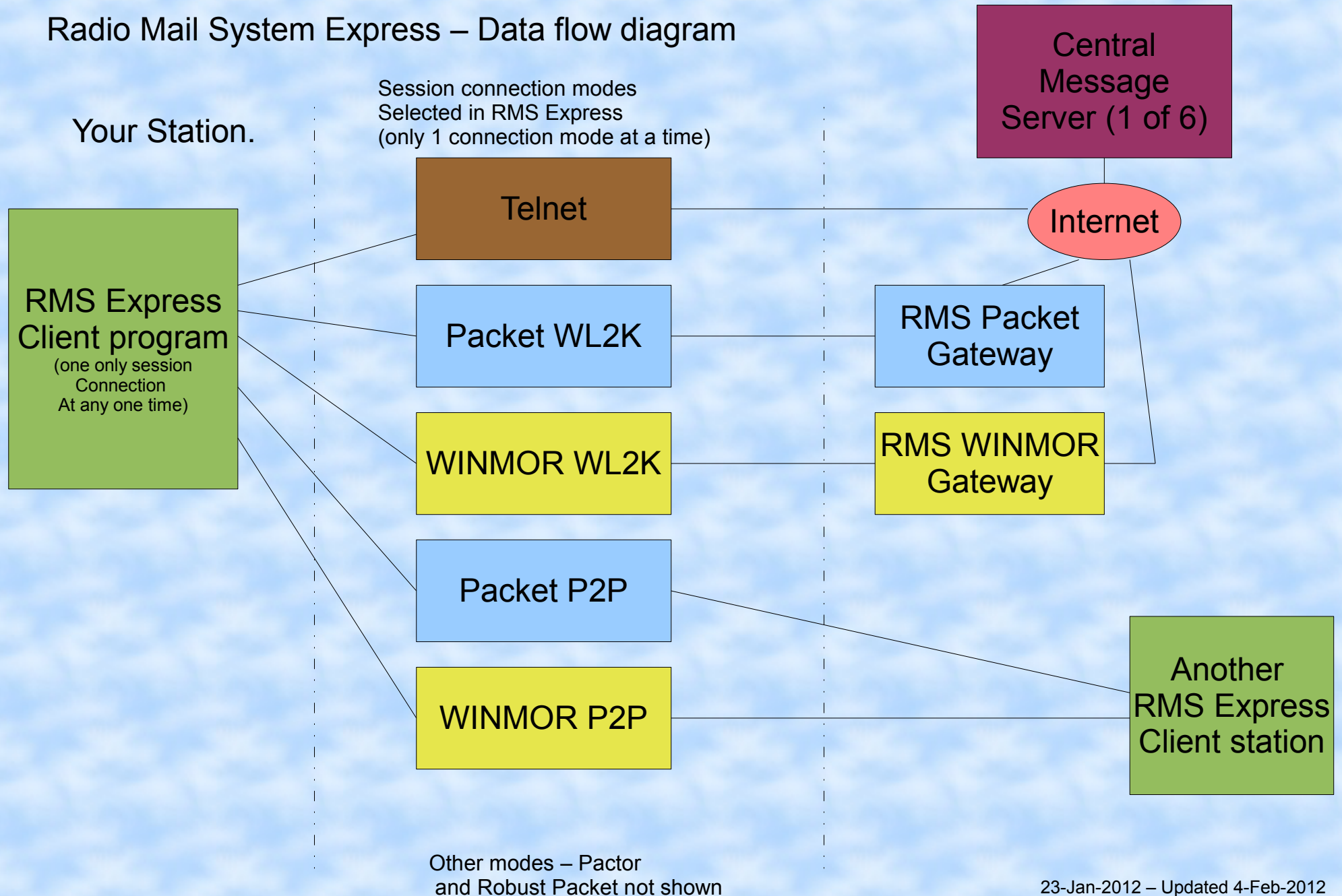
Telnet

Packet WL2K
Pactor WL2K
Robuts PR WL2K
WINMOR WL2K

Packet P2P
Pactor P2P
Robust PR P2P
WINMOR P2P

The Communication is then “opened” and the session started.

Radio Mail System Express – Data flow diagram



Message Transfer Sequence

Winlink Message

Message transfer is started.

Connection to a Winlink gateway or portal.

WL gateway connects via the internet CMS

Messages are transferred between your stations
and the CMS.

Comms session is closed.

Message Transfer Sequence

Point to Point

Message transfer is started.

Connection to the other station is established.

Messages are transferred between stations.

Comms session is closed.

Winlink Message Over Radio

WINMOR TNC

WINMOR is a HF digital mode.

It uses a virtual Terminal Node Controller

[Click Here](#)

Ionospheric Predictions

HF Channel Selector								
Exit Filter Select Update Table Update Table Via Radio SFI								
All Winmor channels, Up to 5000 Kilometers, Q >= 0								
Callsign	Frequency (kHz)	Mode	Grid Square	Hours	Group	Distance (Kilometers)	Bearing (Degrees)	Path Quality Estimate
VK3IFM-5	3635.000	1600	QF220C	00-23	PUBLIC	0	000	100
VK2JN-6	14112.000	1600	QF560G	00-23	PUBLIC	712	051	37
VK2JN-5	3631.500	1600	QF560G	00-23	PUBLIC	712	051	2
ZK9EAA-5	5321.500	500	RE66GL	00-23	PUBLIC	2373	114	0
ZK9EAA-5	7031.500	500	RE66GL	00-23	PUBLIC	2373	114	0
ZL1BDL-5	3646.000	500	RF75GM	00-23	PUBLIC	2646	091	0

Next steps - Demo

- Preparing an email message.
- Sending a message to the CMS via VK3IFM-5 using WINMOR
- Post a position report.
- View the position report on the Internet.
- Category request
- GRIB request Grided binary file.
- Questions