

New Zealand Adventure

Redux 2018



Kai Siwiak, ZL/KE4PT
2019 March 26
GCARA



My son and I were in New Zealand...

- To visit daughter Diana, ZL/KE4QXL, and son-in-law Chris, ZL/KD7CNJ, in “Windy Welly”
- Attend Dai’s PhD Graduation from Victoria University of Wellington NZ
- Tour, explore, seek Amateur Radio opportunities for future visits

New Zealand is on the Underside of Earth 8,135 miles from Florida (took some getting used to the gravity there)



Image by Chris Dean, KD7CNJ



Dr. Diana Siwiak, ZL/KE4QXL, Kaituitui

Dai's Job Title is **Kaituitui (Taura Paerunga, Mana Taurite)**

'Kaituitui' = coordinator that brings together lots of different threads – she is the only one at Victoria with the Kaituitui job title

'Taura Paerunga' = post graduate students

'Mana Taurite' = draws on ideas of equity, inclusion, balance



Ham Radio Site Search Viewed from Botanical Gardens Tramway

explored site #3
"Red Rocks"
6 mi SW

radio site #2

radio site #1

explored sites
#4 "Rivendell" 33 mi NE and
#5 "Zealandia" 5 mi NW



- Toured the North Island
- Visited public art sites
- Searched for suitable ham radio sites

Joe, KF4JAS, *Imagines* a Possibility



Continued Search for Portable Ham Radio Sites among the 'Red Rocks'



Searched High...



Searched Low...

TSUNAMI INFORMATION: OWHIRO BAY



After an earthquake that's long (one minute or more) or strong (it's hard to stand up), quickly move to high ground and/or inland. Don't stop until you're well beyond the yellow zone on this map. Don't stop until you're well beyond the yellow zone on this map. Don't stop until you're well beyond the yellow zone on this map. Don't stop until you're well beyond the yellow zone on this map.

KEY INFORMATION FOR VISITORS

- If you are staying in a caravan or campsite, move to high ground and/or inland.
- If you are staying in a house, move to high ground and/or inland.
- If you are staying in a hotel, move to high ground and/or inland.
- If you are staying in a holiday home, move to high ground and/or inland.
- If you are staying in a holiday home, move to high ground and/or inland.

HOW TO USE THIS TSUNAMI MAP




The map shows the coastline of Owhiro Bay. The red area indicates the highest potential inundation. The yellow area indicates a lower level of inundation. The map is intended to provide a general overview of the potential inundation zones.

SAFETY AND RESOURCES

For more information, visit the website www.govt.nz or call the National Emergency Call Centre on 111. For more information, visit the website www.govt.nz or call the National Emergency Call Centre on 111.



Known hazards in this area include

-  Falling rocks
-  Steep cliffs / Falls
-  Large waves
-  Seals
-  Vehicle / Pedestrian shared access
-  Extreme weather conditions
-  Beach driving required

FOR MORE INFORMATION
Wellington.govt.nz
Phone 499 4444

Absolutely
POSITIVELY
ALL OURS TO PROTECT | Wellington
WELLINGTON CITY COUNCIL

Gates locked Sundays 9am-6pm
No vehicle access permitted.

Consulted
a Wizard...
(got my hat back)





**The Wizard Suggested an
Elvish Ham Shack in Rivendell**

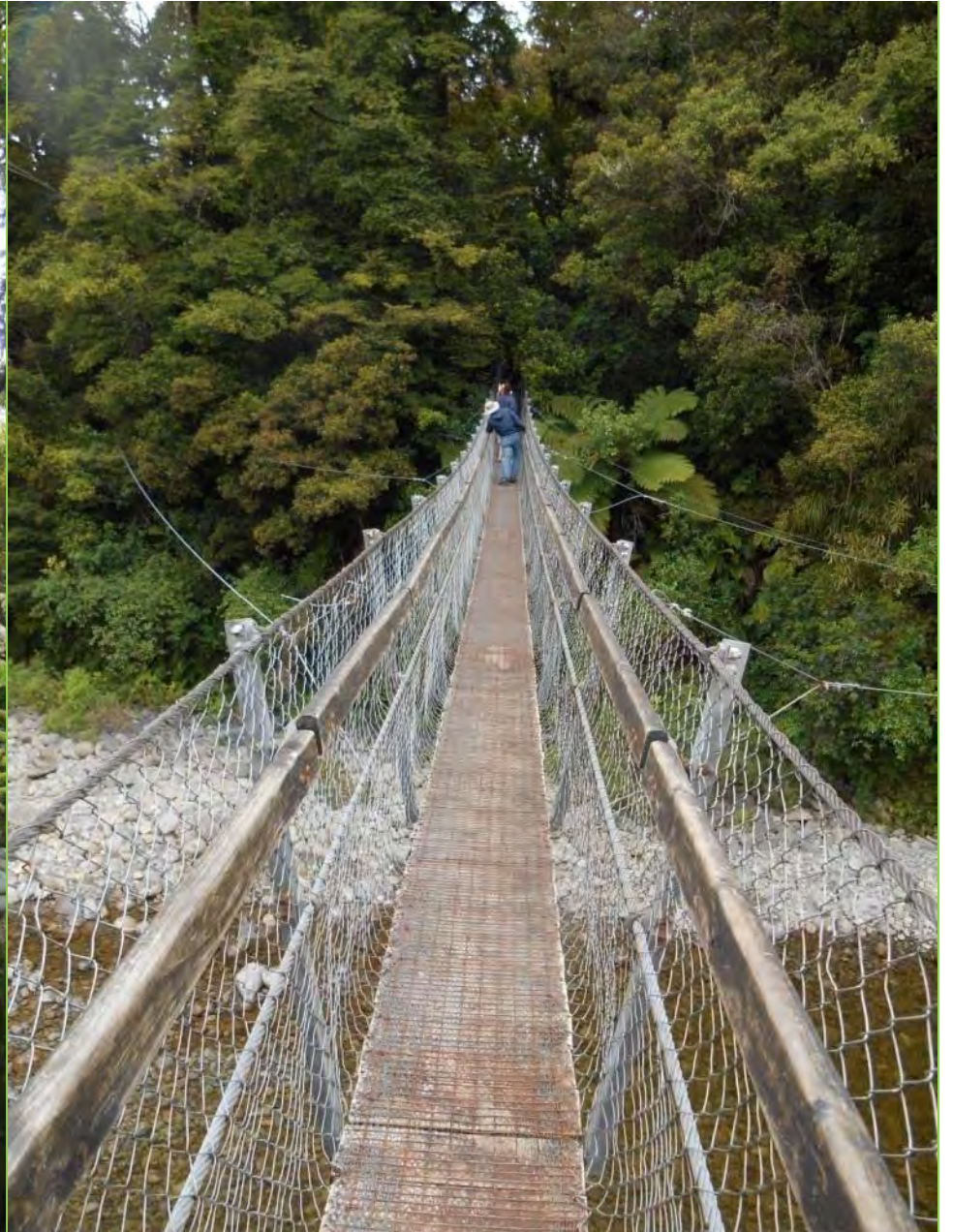
Dai, KE4QXL; Joe, KF4JAS; Chris, KD7CNJ



Elves of Rivendell



Tramping Rivendell



Tramped Rivendell Trails and Bridges

Found a 'promising ham tower' in the Zealandia forest



Welly-Wood, World's Windiest City



Each year “Windy-Welly” experiences the zephyr, which blows down Cook Strait an average **22 days of over 74 km/hr** and **173 days above 59 km/hr** wind speed



- Next: Visited
PUBLIC ART SITES

- **The Zephyrometer is a kinetic art sculpture, hmmm**
- **Designed in 2003 by artist Phil Price**
- **26-m long needle sways to show wind direction and speed**

How I see the Zephyrometer needle

- needle is 26-m tall
- half-wavelength in the 60-m Amateur Radio band
- ripe for QSOs



Suitable Ham Station (2014+)

- **DX Go-Bag “SDR” system**

- 5 W 1.8–450 MHz transceiver
- Morse key
- 98 Wh battery pack
- Loop and OCEF dipole
- DAC/ADC sound card interface
- UTC clock ± 1 second
- small laptop computer

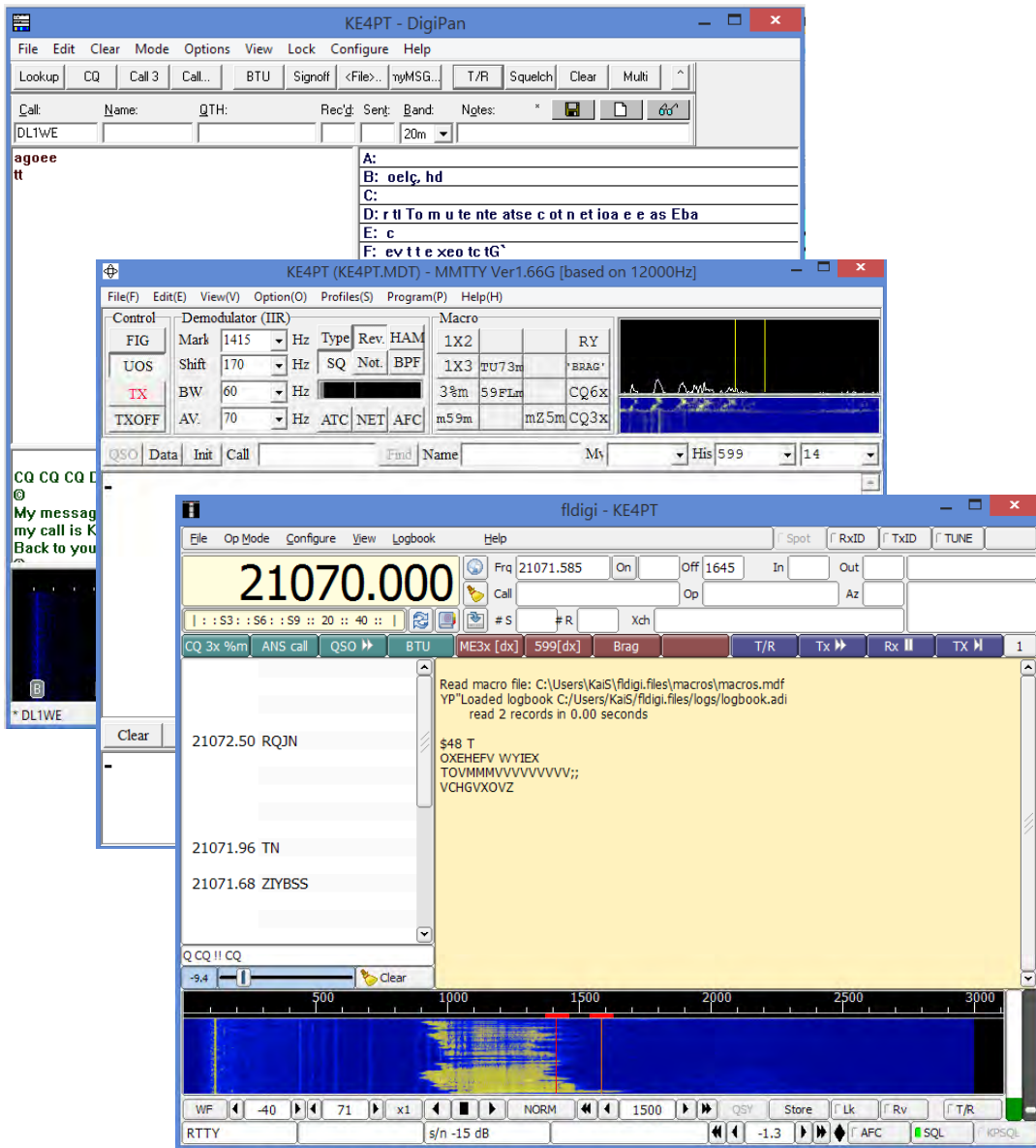


- **CW, Phone, and digital modes**

- **SDR extension: Digital-mode software on computer**



Digital Modulation Software



- Use your SSB analog or SDR transceiver as a **Software Defined Radio System**
- **Digipan** for PSK
- **MMTTY** for RTTY
- **Fldigi** for *dozens* of digital modes
- More free software being produced!

WSJT-X jt9, jt65 Software

WSJT-X v1.5.0-devel by K1JT

File View Mode Decode Save Help

Band Activity

UTC	dB	DT	Freq	Message
1735	-13	-1.1	1963	# F6GCP WB9IIV -01
1724	-15	1.9	1661	# CQ DB9HL JO53
1724	-9	2.1	876	# CQ YY6FEF FJ97
1724	-15	1.8	1078	# DL7ACA RRR73
1724	-1	1.7	1300	# OH1NDA YV4OW R-15
1724	-10	1.6	2018	# W8XLR F4BAL 73
1724	-22	1.6	2233	# CQ ZS6WB KG44
1724	-19	2.0	2469	# WOVLL PA3FOE -23

Rx Frequency

UTC	dB	DT	Freq	Message
1724	-15	1.9	1661	# CQ DB9HL JO53
1724	-22	1.6	2233	# CQ ZS6WB KG44

Log QSO Stop Monitor Erase Decode Enable Tx Halt Tx Tune

15m 21.076 000

+2 kHz

50 40 30 20 10 31 dB

DX Call ZS6WB DX Grid KG44

Az: 106 13114 km

Lookup Add

2017 Apr 02 16:33:41

Tx even

Tx JT65 #

Tx 2233 Hz Tx<Rx

Rx 2233 Hz Rx<Tx

Lock Tx=Rx

Report -22

Generate Std Msgs

Next	Now
<input checked="" type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>

400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800

17:24

17:24

17:35

Bins/Pixel 4 Start 300 Hz Zero 0 Palette Adjust... Flatten

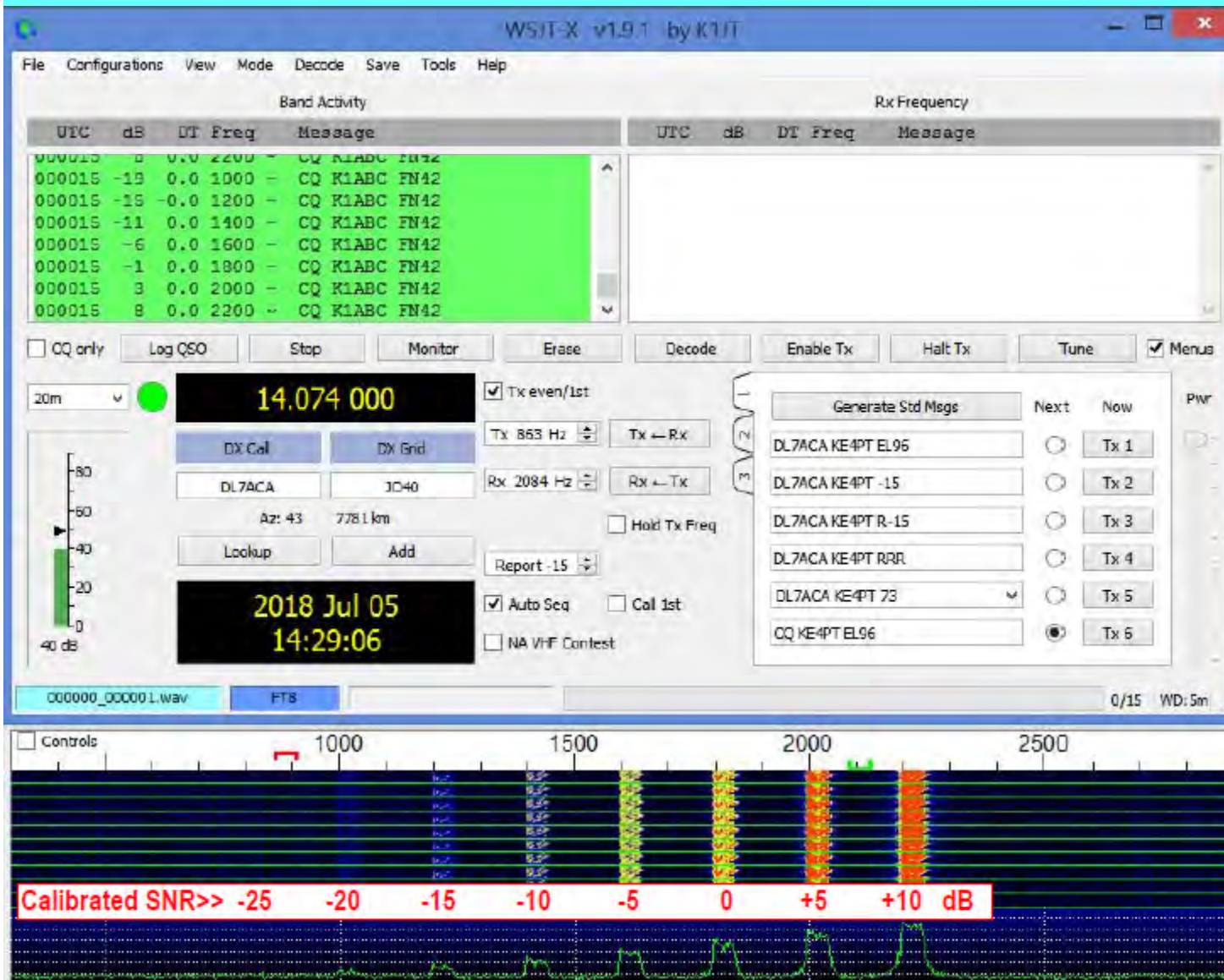
JT65 2500 JT9 N Avg 5 Gain 3 Default Cumulative

- Turns your SSB analog or SDR radio into a **Software Defined Radio System**

- WSJT-X supports **JT9** and **JT65** ensemble modes

- Adds 14 to 20 dB to the link margin over CW

WSJT-X ft8 Software



- **FT8** is one of the most popular digital protocols on the planet

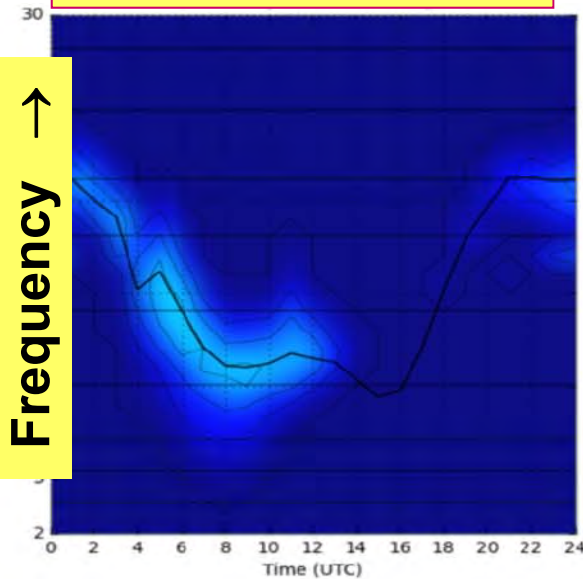
- WSJT-X supports **JT9** and **JT65** and **FT8 ensemble modes**

- **FT8** adds 10 to 16 dB to the link margin over CW

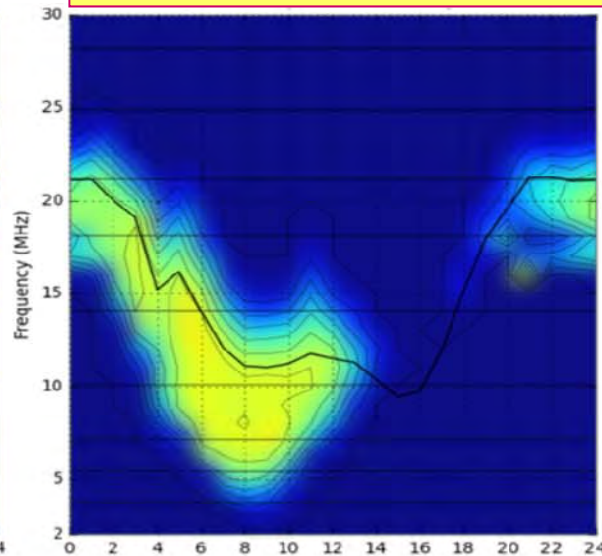
Propagation Planning ZL ↔ FL

“Fool” www.voacap.com/prediction.html into predicting other digital modes:

For CW at 5 W:
Select ‘CW’ at 5 W

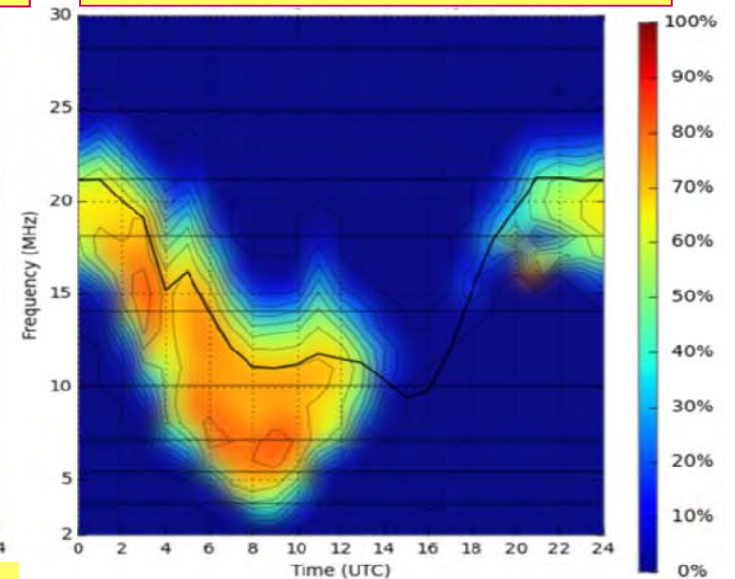


For FT8 at 5 W:
Select ‘CW’ at 500 W



Time of day, UTC →

For JT65/JT9 at 5 W:
Select ‘CW’ at 1500 W



Bonus keyboard mode: for PSK31 at 5 W select ‘CW’ at 25 W

Wizard's Choice: Portable Sites for the 2014 Visit



JT65 from Frank Kitts Park,
Wellington, New Zealand,
radio site #1



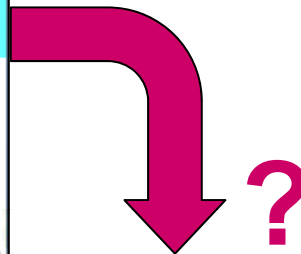
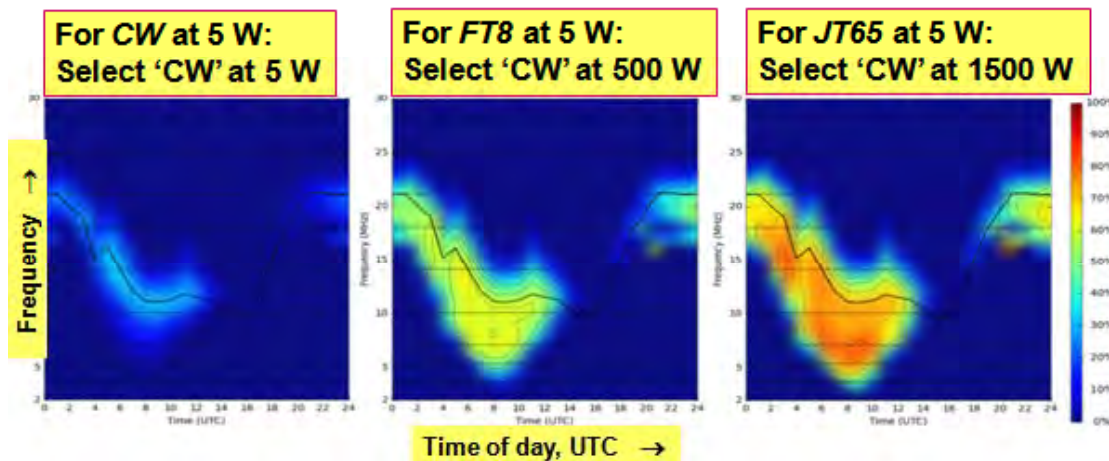
CW from Mount Victoria,
Wellington, New Zealand,
radio site #2

That's the Theory!

What about the Practice?

Planning before Going ZL ↔ FL

“Fool” www.voacap.com/prediction.html into predicting other digital modes:



Wizard's Choice of Portable Station Sites

- JT65 proved robust in 2014
- FT8 should be possible
- CW will be “iffy”



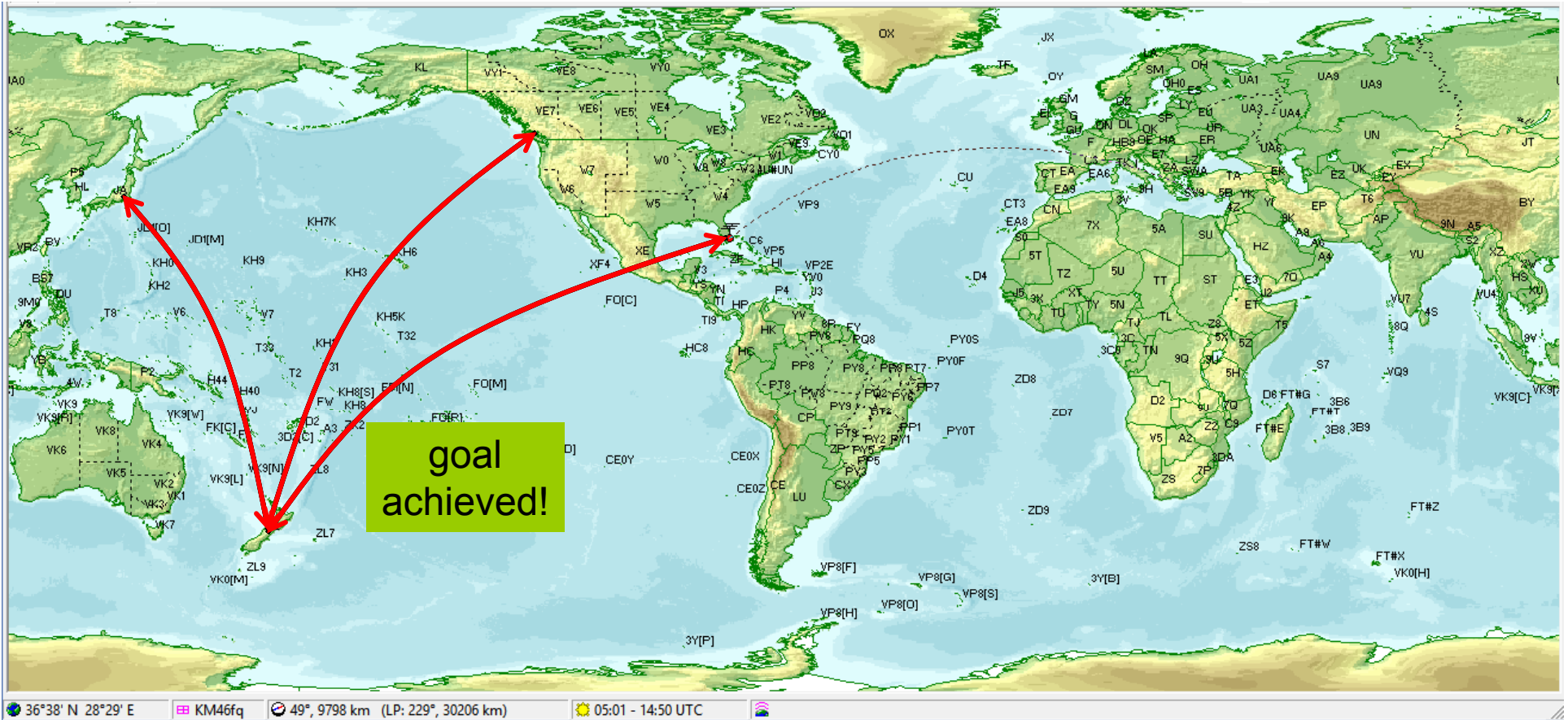
“Are you a spy?”

JT65 from Frank Kitts Park, Wellington, New Zealand, radio site #1



CW from Mount Victoria, Wellington, New Zealand, radio site #2

In 2014 Worked Three Countries using JT65



There is a lot of Pacific Ocean between ZL and populous land to North and North East: it's 8,000 miles or nothing!



Thank You!

73 es gd DX de

ZL/KD7CNJ

ZL/KE4PT

ZL/KE4QXL

ZL/KF4JAS



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Cath E. Tezel
& Tunc Tezel

<http://apod.nasa.gov/apod/ap131222.html>

