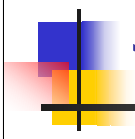

5MHz Forum

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Licensing

- NoV for holders of Full Amateur Licence
- NoV expires 30th June 2010
- http://www.ofcom.org.uk/radiocomms/ifi/licensing/classes/amateur/applications/ofw285.pdf

IARU Region 1: 5MHz proposal

- Co-primary or secondary 5.25 – 5.45MHz
- Not an alternative to 7MHz extension
- 3.5 and 7MHz don't provide day-time regional coverage for low-powered stations
  - 5MHz does give that coverage
- Combination of 3.5 and 5MHz would give good night-time regional coverage
- Raised within CEPT
  - Objections from Russia & NATO
    - RSGB 5MHz Working Group paper
  - Support from Canada

5MHz access worldwide

UK	Canada	Finland	Iceland	Norway	USA
5260 (FA)	5260				
	5269				
5280 (FB)	5280	5280	5280	5280	
5290 (FC)	5290	5290	5290	5290	
		5300			
	5319				
	5329				
		5332	5332	5332	5332
		5348	5348	5348	5348
5368 (FK)		5368	5368	5368	5368
5373 (FL)		5373	5373	5373	5373
5400 (FE)	5400		5400	5400	5400
5405 (FM)	5405		5405	5405	5405

Relationships within SINPO

April 2003

	S	I	N	P	O
S	1.00	0.33	0.51	0.50	0.82
I		1.00	0.51	0.47	0.46
N			1.00	0.59	0.62
P				1.00	0.60
O					1.00

April 2005

	S	I	N	P	O
S	1.00	0.28	0.39	0.40	0.83
I		1.00	0.29	0.32	0.29
N			1.00	0.39	0.46
P				1.00	0.48
O					1.00

August 2006

	S	I	N	P	O
S	1.00	0.19	0.31	0.37	0.83
I		1.00	0.27	0.26	0.25
N			1.00	0.34	0.41
P				1.00	0.41
O					1.00

The analysis shown on this slide was used as an example of what can be done with the 5MHz database in just an hour or so. This was done before breakfast on the day of the 5MHz Forum and it shows the improvement on a year by year basis in terms of the relationship between the various elements of the SINPO reporting system

The analysis for 2006 was carried out extracting all of the "sent SINPO" data in the Log table into a spreadsheet. Then by applying the standard filters checked for any errors, I.e. blank, zero or numbers greater than 5 in any of the SINPO elements. The set of data was then applied to the standard correlation function to produce the numbers shown in the table. For those not familiar with correlation, it is a statistical function that shows the relationship between two variables – where there is little relationship the number is close to 0, when there is a close relationship the number approaches 1.

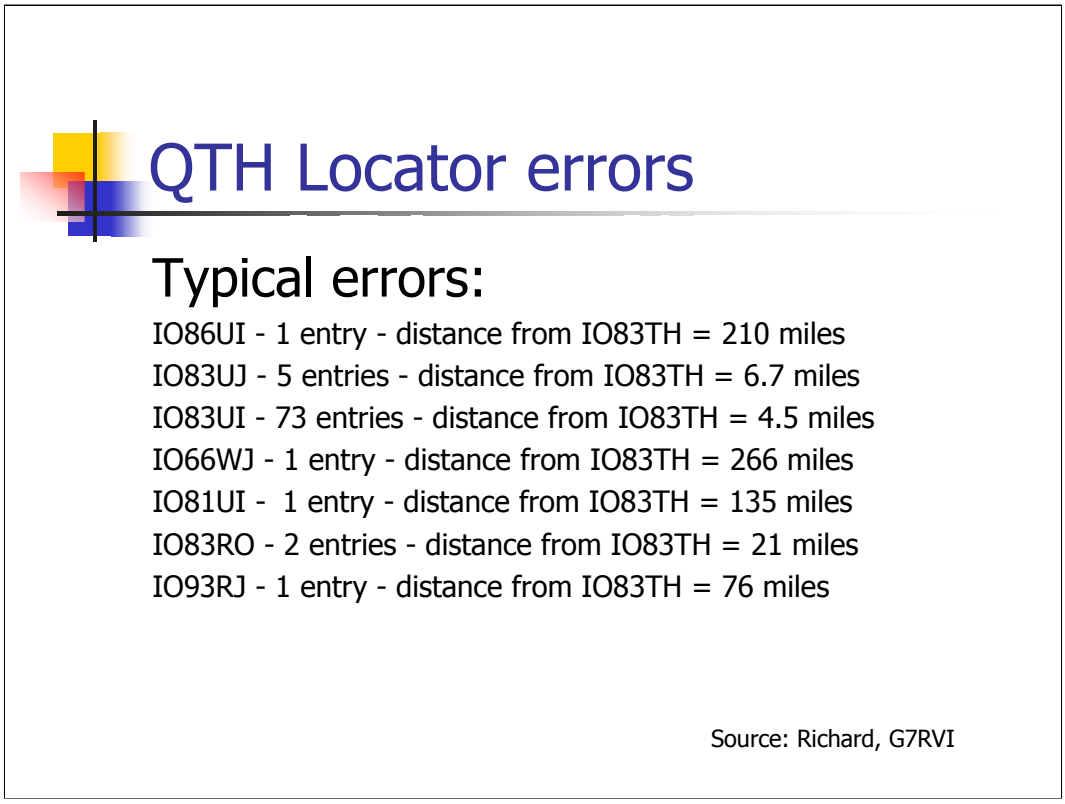
One can see that the overall assessment, O, is quite well related to signal strength in terms of the 0.83 relationship. Whereas, at the other end of the scale Interference, I, is only loosely related to signal strength, S, in terms of 0.25. A good sign is that I, N and P are all related to each other by either 0.41 or less. Thus, our use of SINPO seems to be quite good, and by comparison with tables shown at previous HF Conventions, it is gradually improving.

Receiving aerials

	S	I	N	P	O
RD	4.18	4.84	4.53	4.35	4.37
NRD	4.05	4.67	4.19	4.20	4.18
V	4.00	4.61	4.06	4.16	4.06
L	3.00	4.23	4.23	3.92	4.00
O	3.94	4.79	4.06	4.22	4.07

Best Signal	RD	Worst for Signal Strength	L
Best for Interference	RD	Worst for Interference	L
Best for Noise	RD	Worst for Noise	V
Best for Propagation	RD	Worst for Propagation	L
Best Overall	RD	Worst Overall	L

This is another quick form of analysis that anyone can do from the data in the database. Here, the averages for each of the SINPO elements was calculated for the various aerial types recorded in the database against the QSOs.



This slide is just an example of some typical variation of QTH Locator that can be found in the database against a single station. They are all different reports of the QTH Locator of a single station that is not thought to be operating at other than the station's normal QTH. This list isn't by any means unique, there are many examples of apparently multiple QTH Locators for the same station.

Whilst the previous slide suggests that SINPO isn't being recorded too badly for a subjective assessment, this slide suggest that the accuracy of recording QTH Locators is a larger problem. Absolute location accuracy isn't needed for the type of analysis being considered, as we suspect that accuracy of around 5km will probably suffice. However, with potentially gross errors in location by a digit or two change in the QTH Locator the actual location error could be much greater than 5km.

5MHz Analysis Group

- 5MHzAG@yahoogroups.com
- Wide range of skills required
- Goal of developing a model for 5MHz propagation
- Currently focusing on data correction and validation

Validation work in progress

- Specialised 5MHz logging program
  - Correcting errors at source
  - Core validation routine to be re-used later for validating existing database records
  - Alan, G0TLK
- QTH Locator on-line validation facility
  - Nick, G4IRX