



AM DXing at Information Age

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FOTO: LEM284 16NOV2009

Tapio Kalmi (TAK)

- ▶ DX listener since 1976, 157 verified countries and 1211 stations
- ▶ Member of FDXA, NRC and IRCA
- ▶ FDXA Board Member 1996-2007
- ▶ Radiomaailma Editor in Chief 1996-2000
- ▶ KOJE editor since 2008
- ▶ Married, wife Päivi, daughter Kiira, son Leevi
- ▶ Three cats: Luna, Sirius and Titan
- ▶ IT professional since 1985, Data Management Consultant since 1996

AM DXing

- ▶ Frequency ranges where AM mode transmitters broadcast
 - ▶ LW, 30-300 kHz, broadcast stations are fading away
 - ▶ MW, 530-1701 kHz, still interesting target, especially in Europe
 - ▶ European stations moving to FM and Internet giving more space to DX
 - ▶ <http://www.bamlog.com/darkcountries.htm>
 - ▶ SW, 2300-26000 kHz, broadcast stations are fading away to Internet
 - ▶ Tropical Band Surveys by Anker Petersen <https://edxcnews.wordpress.com/>
 - ▶ In USA "AM Band" means 530-1710 kHz in 10 kHz steps
- ▶ Broadcast Mode
 - ▶ AM mode is used at transmitter sites, there are only few exceptions to this
 - ▶ Listeners use AM or SSB (LSB/USB) whichever gives the best results
- ▶ In this presentation AM DXing is 530-1710 kHz distant broadcast signal reception

Information Age

The era in which the retrieval, management, and transmission of information, especially by using computer technology, is a principal (commercial) activity.

Oxford Living Dictionary

https://en.oxforddictionaries.com/definition/information_age

1985 Personal Computers for Home

2000 Public Internet

2004 Public Facebook

1994 Computer Aided Tuning (CAT)

2002 <http://www.dxing.info>

2003 <http://log.hard-core-dx.com/> OLL

2006 [LEM www-pages](http://www.lem-pages.com)

2008 Software Defined Radio (SDR)

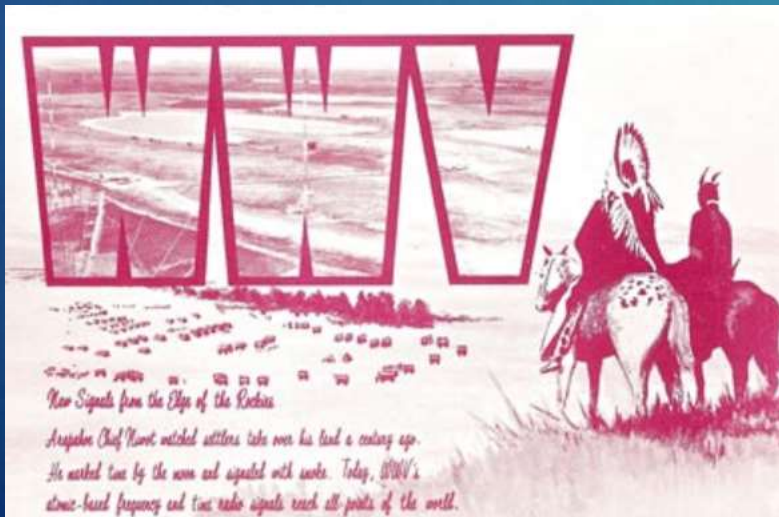
AM Dxing at Information Age

DXer's Information Needs: Introduction

- ▶ CX When is it good time for DXing? When to go for a pedition?
- ▶ TIME When to listen? When to record? Grayline Path?
- ▶ RX Easy to use control software with station lists
- ▶ REC Scheduled recording with frequency, timestamp and antenna info
- ▶ ID Help to identify the station
- ▶ LOG What I have heard? How the others are doing?
- ▶ RPT Where to send the report?
- ▶ QSL What QSLs I have? How about others QSLs?

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DXer's Information Needs: CX 1990



LA 15/10 03:00 P 93-10-2	low - quiet low - quiet	TI 25/10 03:00 P 89-11-3	low - quiet v low - quiet
SU 16/10 03:00 P 91-4-0	v low - quiet low - quiet	KE 26/10 03:00 P 93-8-0	v low - quiet low - quiet
MA 17/10 03:00 P 92-2-0	v low - quiet low - quiet	TD 27/10 03:00 P 93-4-1	v low - quiet low - quiet
TI 18/10 03:00 P 90-2-1	v low - quiet low - quiet	PE 28/10 03:00 P 87-3-3	v low - quiet low - quiet
KE 19/10 03:00 P 91-6-3	mod - quiet low - quiet	LA 29/10 06:00 P 98-39-4	v low - quiet maj storm bar - 1000 UTC 29 Oct
TD 20/10 03:00 P 90-6-1	v low - quiet v low - quiet	SU 30/10 03:00 P 98-31-4	v low - quiet main prog
PE 21/10 03:00 P 88-1-1	v low - quiet low - quiet	MA 31/10 06:00 P 97-34-4	v low - quiet main prog
LA 22/10 03:00 P 86-14-5	v low - quiet low - quiet	TI 1/11 03:00 P 92-16-4	v low - quiet v low - quiet
SU 23/10 03:00 P 84-41-4	low - quiet low - quiet	KE 2/11 03:00 P 91-17-2	v low - quiet v low - quiet
MA 24/10 03:00 P 87-30-2	v low - quiet v low - quiet	TD 3/11 03:00 P 87-8-3	v low - quiet v low - quiet

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NOAA

<http://services.swpc.noaa.gov/text/27-day-outlook.txt>

Kyoto

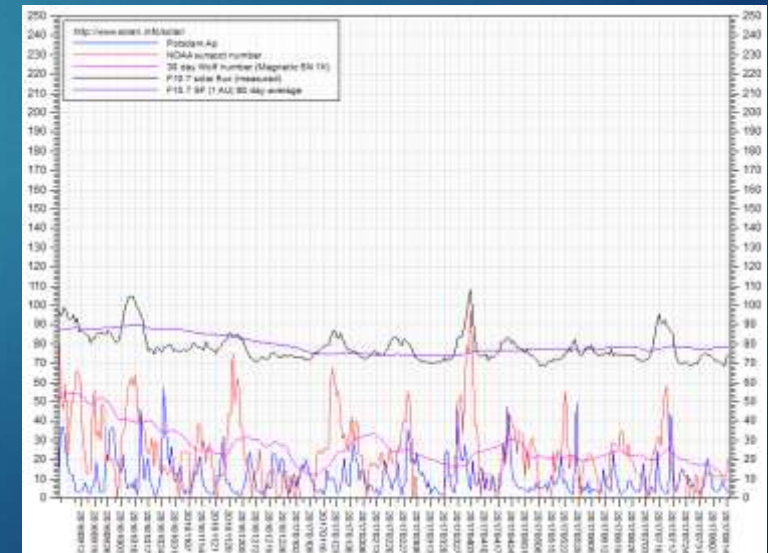
http://aurorasnow.fmi.fi/public_service/

Alvestad

N3KL

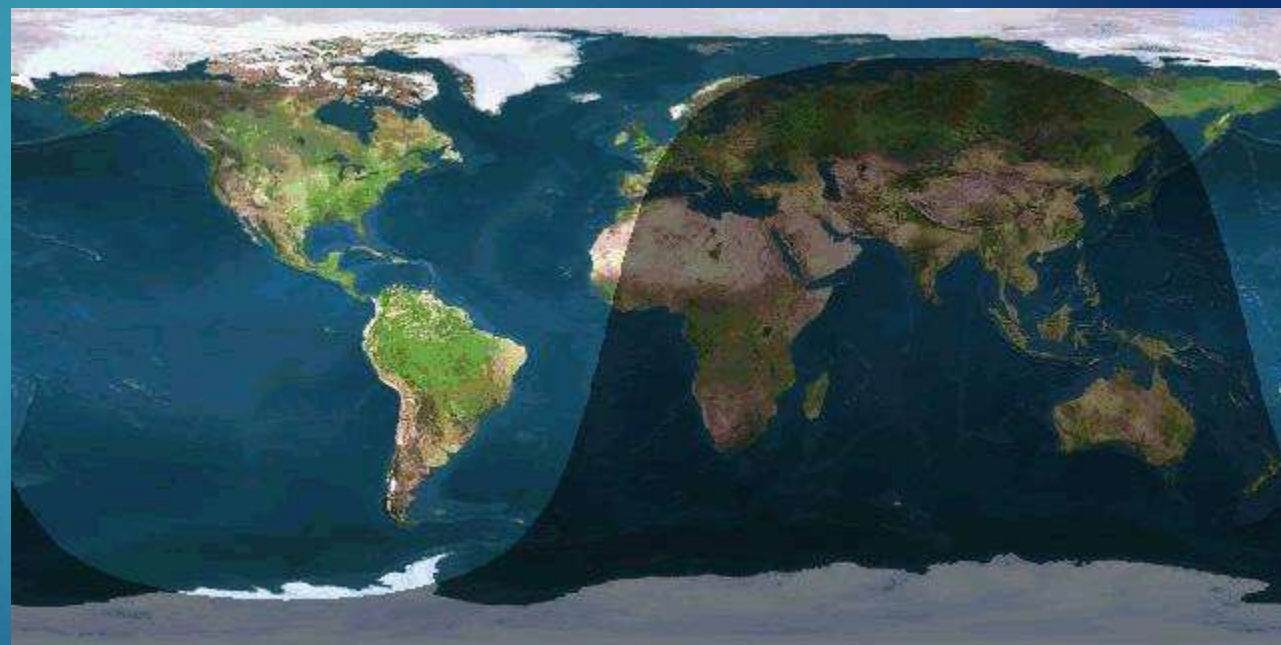
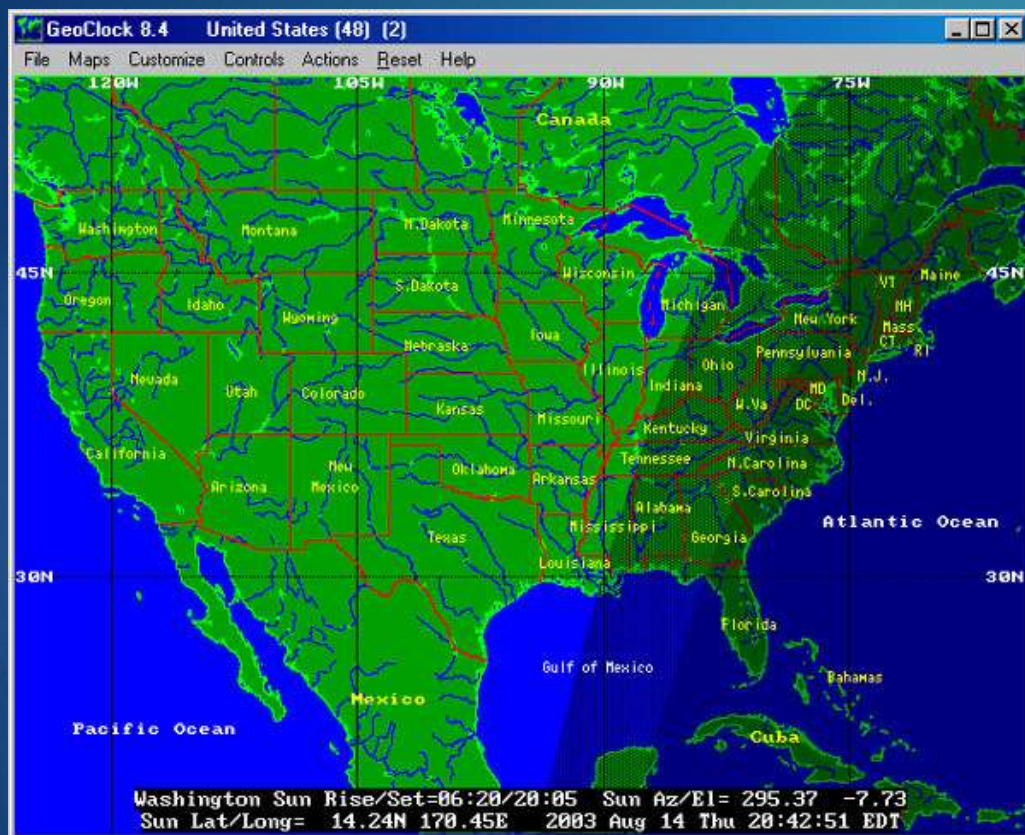
VE3EN

...



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DXer's Information Needs: Time / Grayline

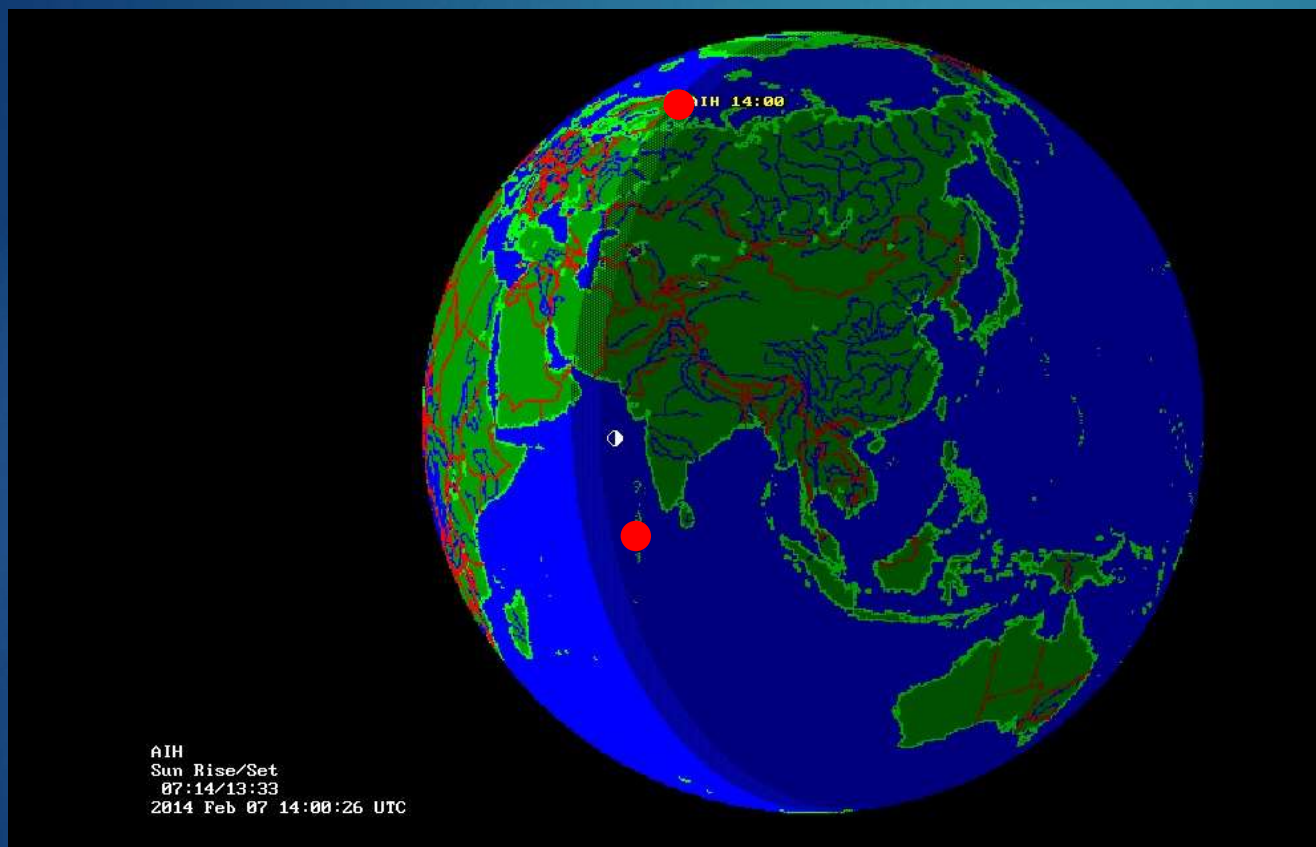


No Homepage = No new versions anymore

<http://dx.qsl.net/propagation/grayline.html>

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DXer's Information Needs: Time / Grayline



1449 7.2.14 1400-1420

MLD: Vo Maldives, Male. Came nearly all the way in grayline zone, so the signal was quite nice. Compared the live audio to the net stream and the program was the same. Station identification after the news at 1418 UTC (same ID as mentioned in WRTH). TOH ID didn't come so well, so need to try that later ... One main targets of the pedition accomplished, thanks Aihkiniemi. NOTE: Iran started today later on the same frequency (at 1420 UTC ;-). AIH33/TAK

<http://www.tapiokalmi.net/dx/aih33/>

<http://log.hard-core-dx.com> Online Log

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DXer's Information Needs: RX

From Computer Aided Tuning (CAT)



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DXer's Information Needs: RX To Software Defined Radio (SDR)



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DXer's Information Needs: RX

Control Software with Station List

The screenshot shows a software window titled "JB's Station List [MW / TV]". It features a menu bar with "File", "Edit", "Show-List", and navigation buttons "< = > ? 1 2 3". Below the menu is a table with columns: "Fre ▲", "Offset", "ITU", "Info", "Site", and "PS". The table lists various radio stations, with "KNX-1070 Newsradio" highlighted in blue. A context menu is open over the highlighted row, offering actions such as "add to Log", "add to Log with comment", "add to Watch list", "add to Watch list with comment", "Distance= 9019 km 318°", "show in Google Maps", "show only tx around Los Angeles (CA)", "Lookup in MWLIST.org", "Lookup in FMSCAN.org", "Lookup in FCC database", "Lookup in Victor's site", "Delete this line" (with a keyboard shortcut "Strg+Entf"), "Copy entry to clipboard", "Paste from clipboard", and "Tune +6.0 MHz". At the bottom of the window, there is a status bar showing "14 / 6201", "mw-offset.dl", and "320° Bev".

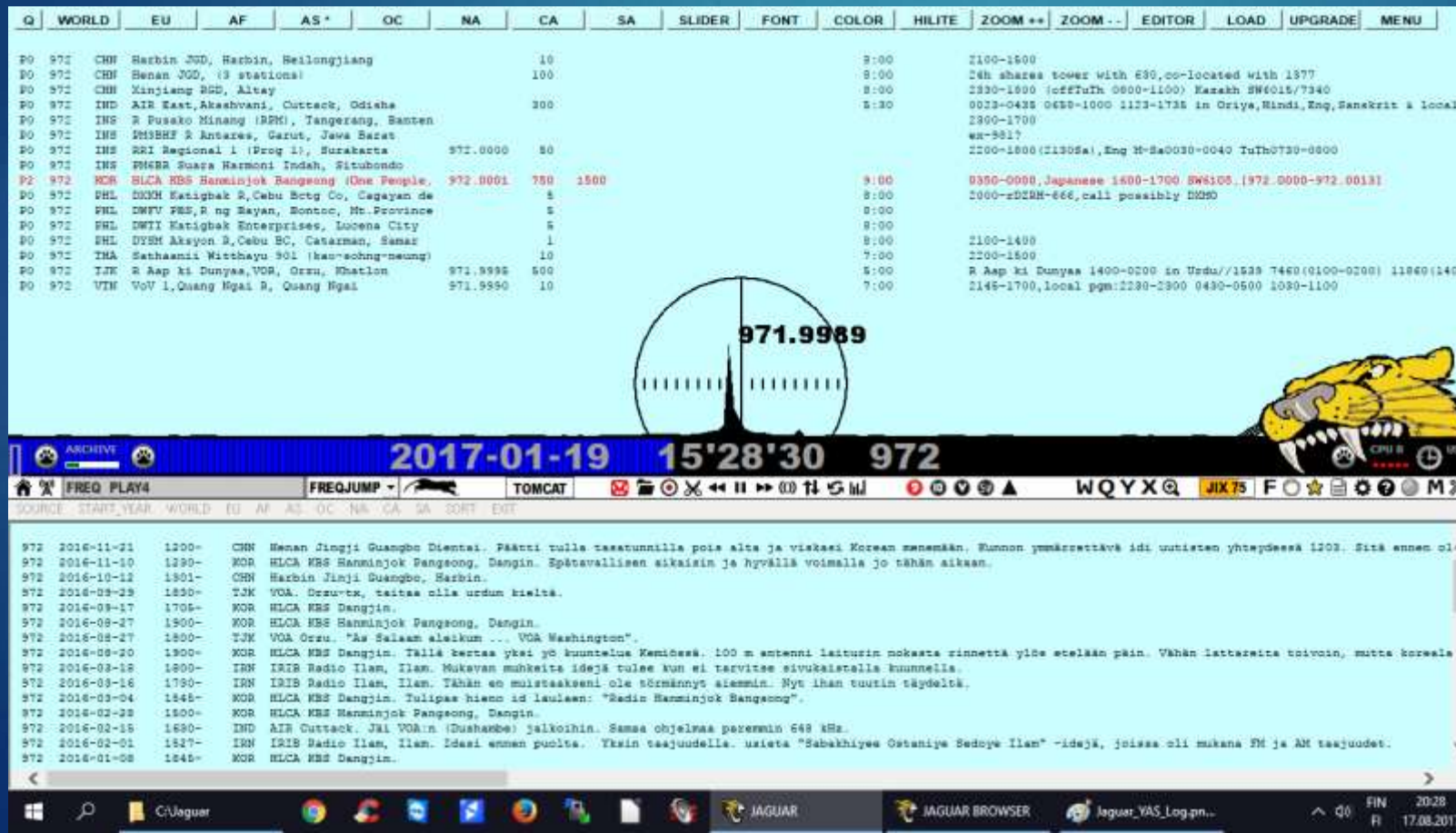
Fre ▲	Offset	ITU	Info	Site	PS
1070	1069.95	B			
1070	1069.95	CUB	unid, tent.		
1070	1069.9885	CAN	CHOK Country 103.9	Sarnia, ON	-1069
1070	1069.991	ARG	LR1 R.El Mundo	Buenos Aires	
1070	1069.992	VEN	YVMA R.Mundial Zulia	Maracaibo	1069.!
1070	1069.9947	CAN	CFAX	Victoria, BC	-1070
1070	1069.996	PTR	WMIA R.Arecibo	Arecibo	
1070	1069.997	USA	WAPI-Big Talker	Birmingham, AL	
1070	1069.998	CLM	HJVR R.Super	Popayan	
1070	1069.9982	USA	WDIA	Memphis, TN	
1070	1070	CUB	CMKS R.Trinchera Antim	Guantánamo	
1070	1070.00006	USA	KNX-1070 Newsradio	Los Angeles	
1070	1070.001	CLM	HJAH Emisora Atlantico	Barranquilla	
1070	1070.012	CLM	HJCG R.Santa Fé	Bogotá D. C.	1070.!

14 / 6201 mw-offset.dl 320° Bev

http://zeiterfassung.3sdesign.de/station_list.htm

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DXer's Information Needs: RX Control Software with Station Lists



Jaguar Software TOMCAT view
When playing the recording

Top:
MWLIST information about
stations on 972 kHz
Bottom:
Online Log Asia
information about logged
stations on 972 kHz

Many other nice features
all around the screen to
be popped up with
a single mouse click.

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DXer's Information Needs: RX Control Software with Station Lists

- ▶ So, we have control software to use the station lists
- ▶ Now the main question is, where to find good lists which can be integrated with receiver?
 - ▶ http://www.mwlist.org/ul_login.php MWLIST
 - ▶ Best list of AM stations and transmitters from all over the world, LW, MW and SW
 - ▶ Weak point: Information about schedules and program content varies a lot
 - ▶ The whole list can be downloaded for Jaguar software
 - ▶ <http://www.radioheritage.net/pal.asp> PAL – Pacific-Asian Log and <http://www.asiawaves.net/> Radio and TV Broadcasting in South and South-East Asia
 - ▶ Best lists of stations and transmitters from Pacific and Asia Region
 - ▶ A lot of information about schedules and identifications, but no data integration to any software
 - ▶ <http://www.tapiokalmi.net/dx/koje/> KOJE – KOH – KOMEX
 - ▶ Especially for Nordic DX listeners who listen to North America, Hawaii and Mexico
 - ▶ Another station list in the list: stations which have been heard in Finland, Norway and Sweden
 - ▶ The whole list can be downloaded for Perseus software or Jaguar software

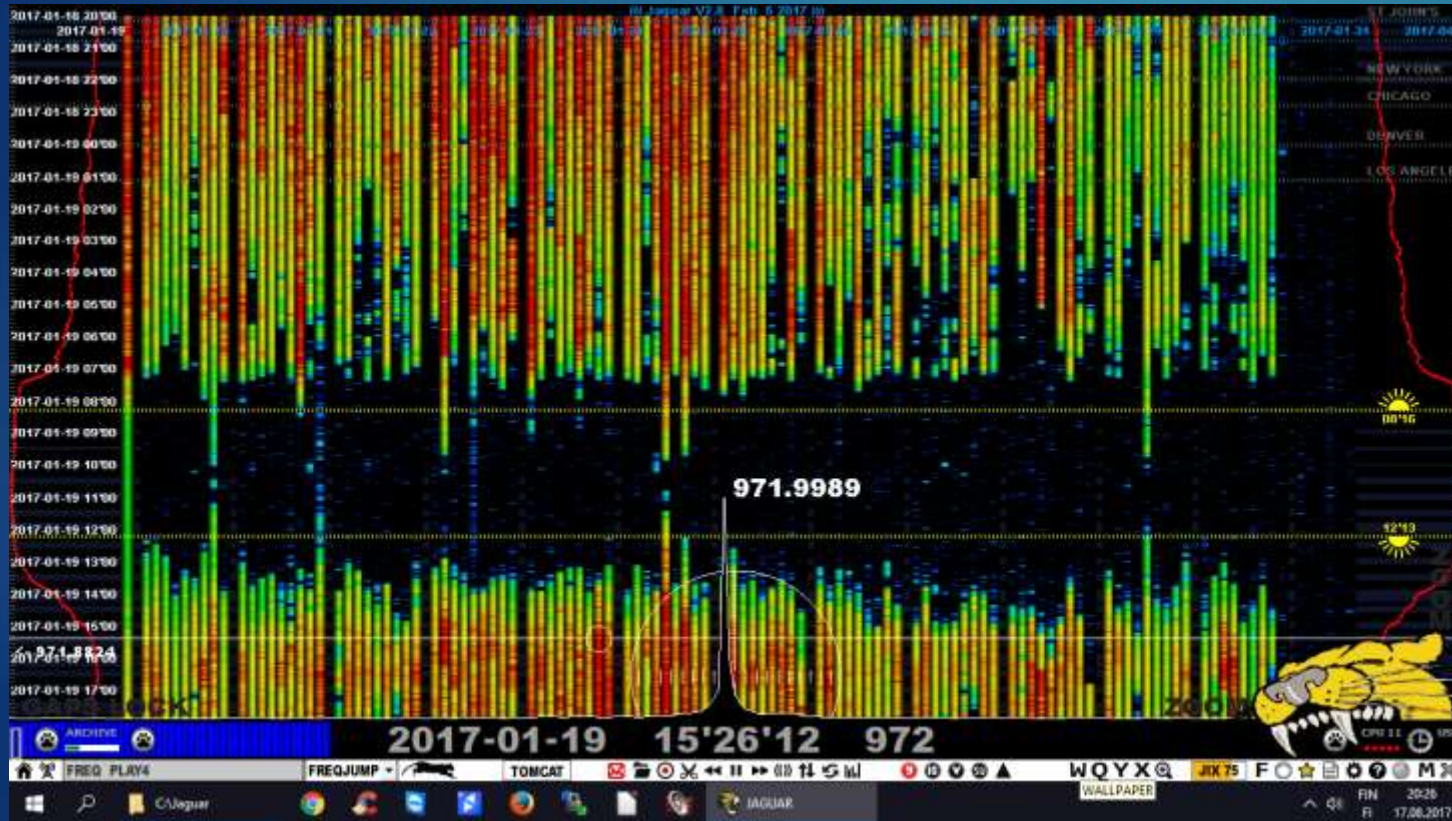
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DXer's Information Needs: REC

- ▶ Minidisk
 - ▶ Scheduling and automatic recording timestamps, no need for counter notes
- ▶ Audio files from various devices (PC, MuVo, etc digital recording devices)
 - ▶ More options for scheduling
 - ▶ Unlimited recording time
 - ▶ Graphical audio displays
- ▶ RF files (SDR recordings are not audio but radio frequency files)
 - ▶ The whole AM Band with frequencies and timestamps recorded at once, no need for recording book keeping anymore
 - ▶ Re-tuning / Re-filtering / etc possibilities
 - ▶ Graphical User Interfaces to ease the use of different functions
- ▶ Digital recordings are shared over the internet
 - ▶ Possibility to study station identifications, slogans and other program content
 - ▶ Possibility to ask natives help to identify the station

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DXer's Information Needs: REC



Jaguar Software YAS LOG view when listening to the recordings

Waterfall shows the history over time for each frequency in 9 or 10 kHz steps depending of the users choice.

On the left and right J1X index level with Red lines. These are calculated from signal levels of each frequency.

Sunrise and sunset times shown graphically.

Detail information about the selected frequency

- Exact frequency of the signal
- If offset FRQ match, also station name

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DXer's Information Needs: ID

- ▶ Station lists filtering and searches help a lot as well as Internet Streaming and DX recording sharing over the Internet, but Jaguar software has also "AM RDS", automated AM station identification using information about
 - ▶ Offset frequencies
 - ▶ Antenna direction



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DXer's Information Needs: LOG



Worldwide Visual Logbook 20JAN2017 at <http://www.mwlist.org>

Individual logs in blogs and personal web pages

Still most of the edited logs are in the same format as in printed papers. They are only stored and delivered in PDF files:

- IRCA Soft DX News, USA
- NRC DX News, USA
- DX Aktuell, Nordics
- DX Clusive, Finland
- Radiomailma, Finland

Some AM log databases exist, but only few of AM DXers use them

- MWLIST, Germany
- OnLineLog, Nordics

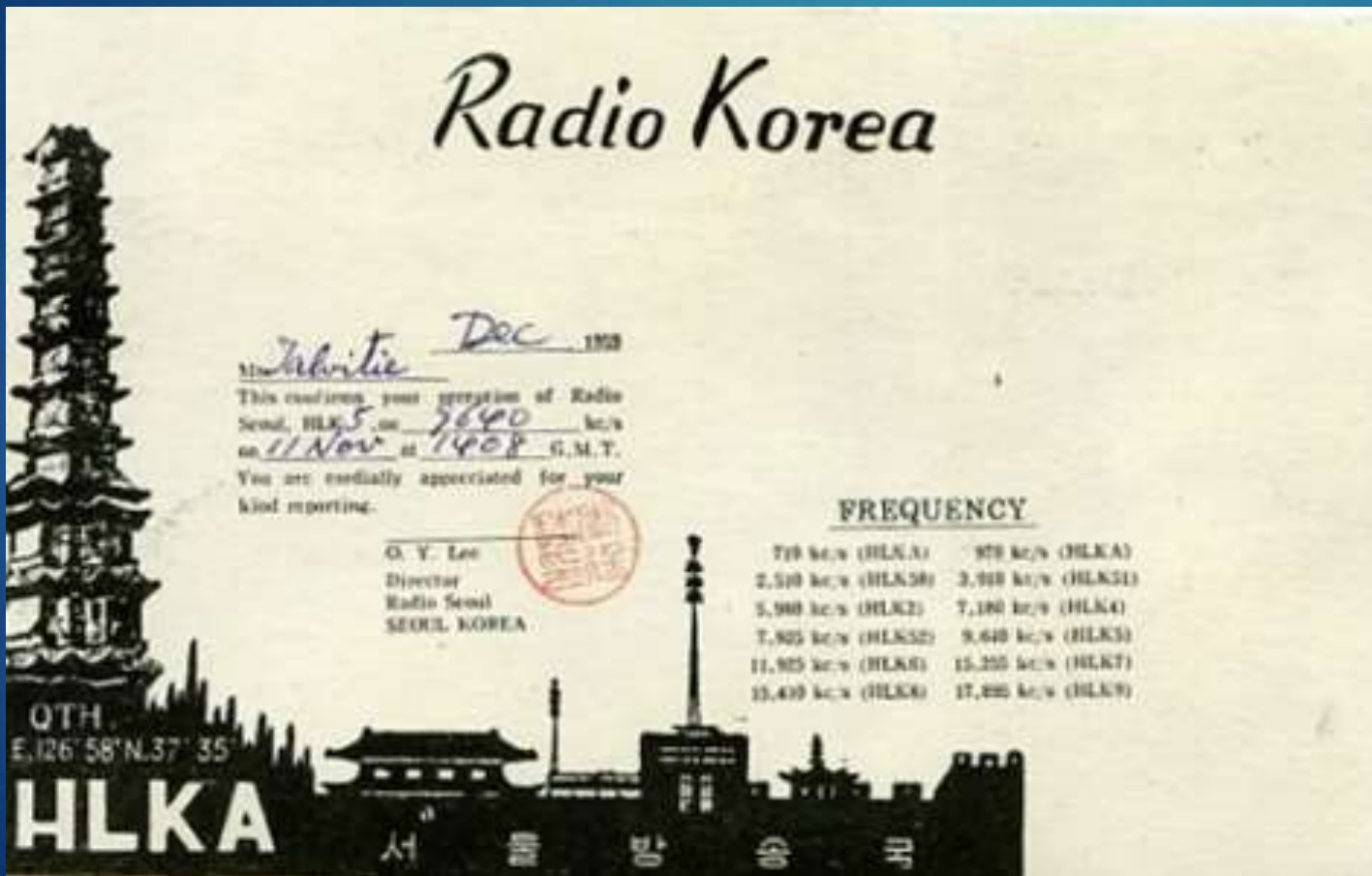
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DXer's Information Needs: RPT

- ▶ Radio station v/s lists or QSL pictures in various DX magazines
 - ▶ www page addresses
 - ▶ Email addresses
 - ▶ Snail Mail addresses
- ▶ Commercially available lists
 - ▶ For example from Radio Locator: <https://radio-locator.com/>
- ▶ Google search
 - ▶ any document with station name and/or call sign
 - ▶ Email addresses are in many cases quite hard to find

AM Dxing at Information Age

DXer's Information Needs: QSL



Individual DXer's QSL pictures are in blogs and personal web pages etc.

Still most of the edited QSL listings are in the same format as in printed papers. They are only stored and delivered in PDF files ...

Have not found any real QSL database of DX listeners QSLs.

There are many QSL database applications available for radio amateurs.

Some statistics has information about the first verifications, but not full data of all verifications.

AM Dxing at Information Age

DXer's Information Needs: Summary

EASY LIVING

- ▶ **CX** A lot of summarized and visualized history data available. Forecasts getting better all the time, but we still have a lot to learn.
- ▶ **TIME** Knowledge available in nice user friendly format and integrated in RX controls.
- ▶ **RX** User interfaces developing step by step.
- ▶ **REC** RF recordings integrate all needed info (timestamp, FRQ, QTH, ANT) Jaguar makes also visual CX summary on the fly.
- ▶ **ID** A lot of sample material and native listeners help available over Internet.

BUT SOME MORE THINGS TO DO

- ▶ **LOG** Surprisingly low level of integration. Only some databases. Data quality issues. Most of logs still in the same format as in the 80's. Many different formats and therefore hard to combine.
- ▶ **RPT** Very hard to find direct contact information because stations avoid spam
- ▶ **QSL** Information in blogs, web pages and magazines. Many different formats and therefore hard to combine.

A photograph of a cluttered home workspace. In the background, a wooden desk holds several pieces of audio equipment, including a stack of amplifiers and a tuner. Two laptops are open on the desk, displaying waveforms. A desk lamp is positioned over the equipment. In the foreground, a green desk holds two more laptops, also displaying waveforms. A chair is positioned in front of the green desk. To the right, a yellow table with a patterned cloth holds a laptop and other items. The room has a window with patterned curtains and a power outlet on the wall.

Thank you for listening!
Any questions?