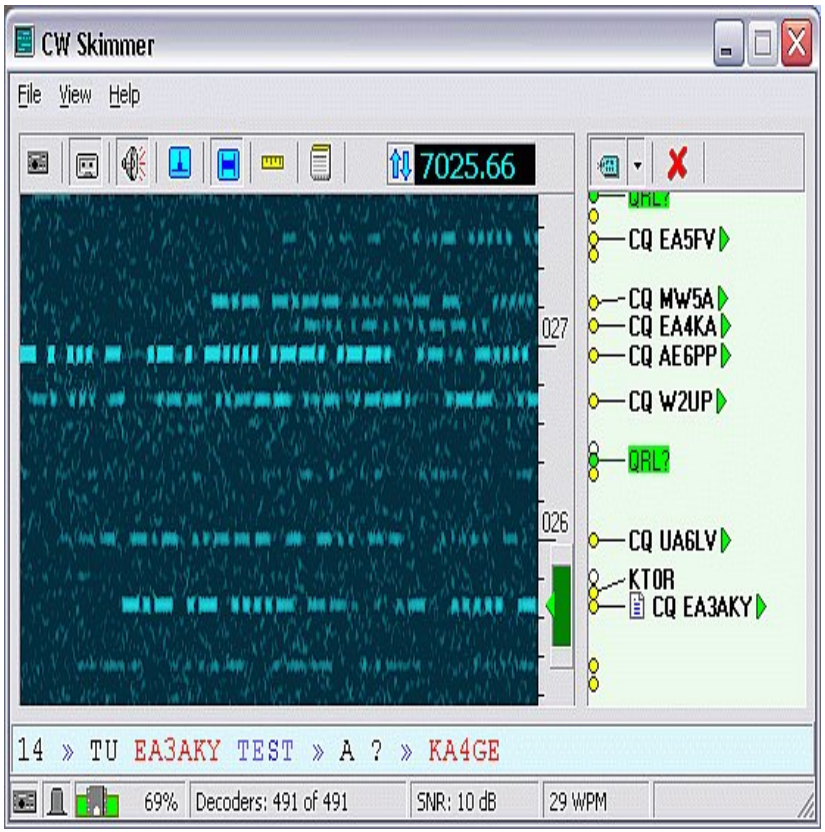
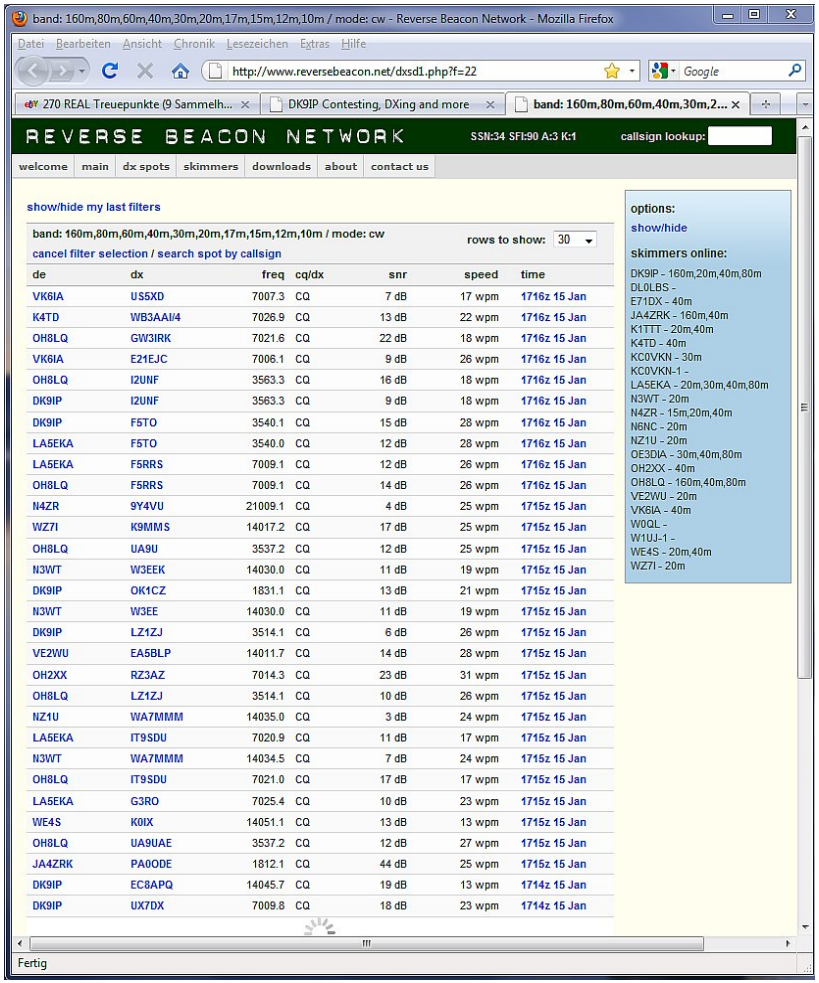
CW-Skimmer
und das Reverse Beacon Project





CW Skimmer

Multi-channel CW decoder and analyzer

Author: Alex Shovkoplyas VE3NEA

- CW-Decoder und Signalanalysator mit Wasserfallanzeige
- Simultane Decodierung aller CW-Signale im Empfangsbereich

  (ca. 700 Signale gleichzeitig mit 3 GHz Pentium Rechner)
- Decodierte Rufzeichen und Klartext werden neben dem Signalstrom angezeigt

CW Skimmer

Multi-channel CW decoder and analyzer

- Aufzeichnung des gesamten Signalspektums

  mit 48, 96 oder 192 kHz Bandbreite in WAV-Datei

- Telnet-Server gibt DX-spots aus (read-only)

- Erkennt „CQ“ und „TEST“ Rufe

- Unterstützt verschiedene SDR-Typen

  z.B. SoftRock, SDR-IQ, SDR-14, QS1R, Perseus

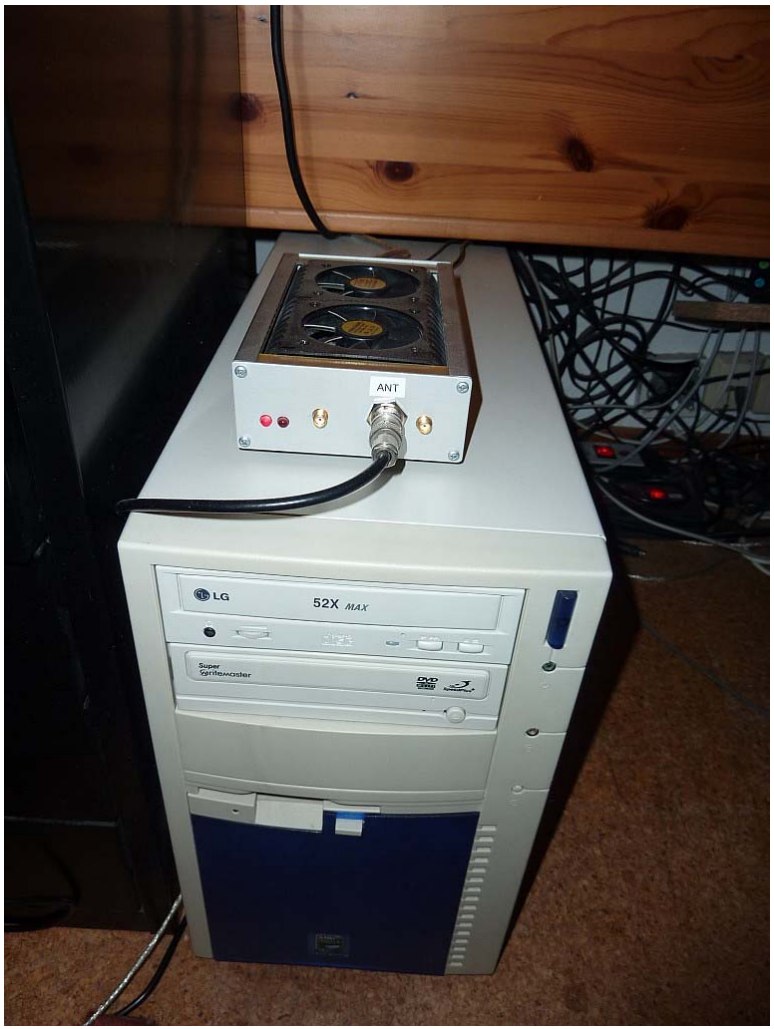
Multiband Skimmer ?

YES WE CAN !

K3LR Skimmer setup

Skimmer Server + QS1R

Multi-band CW decoder + DDC-receiver



DK9IP Skimmer Setup mit QS1R SDR - Input 15 kHz – 300 MHz

Skimmer Server

Multi-band CW decoder

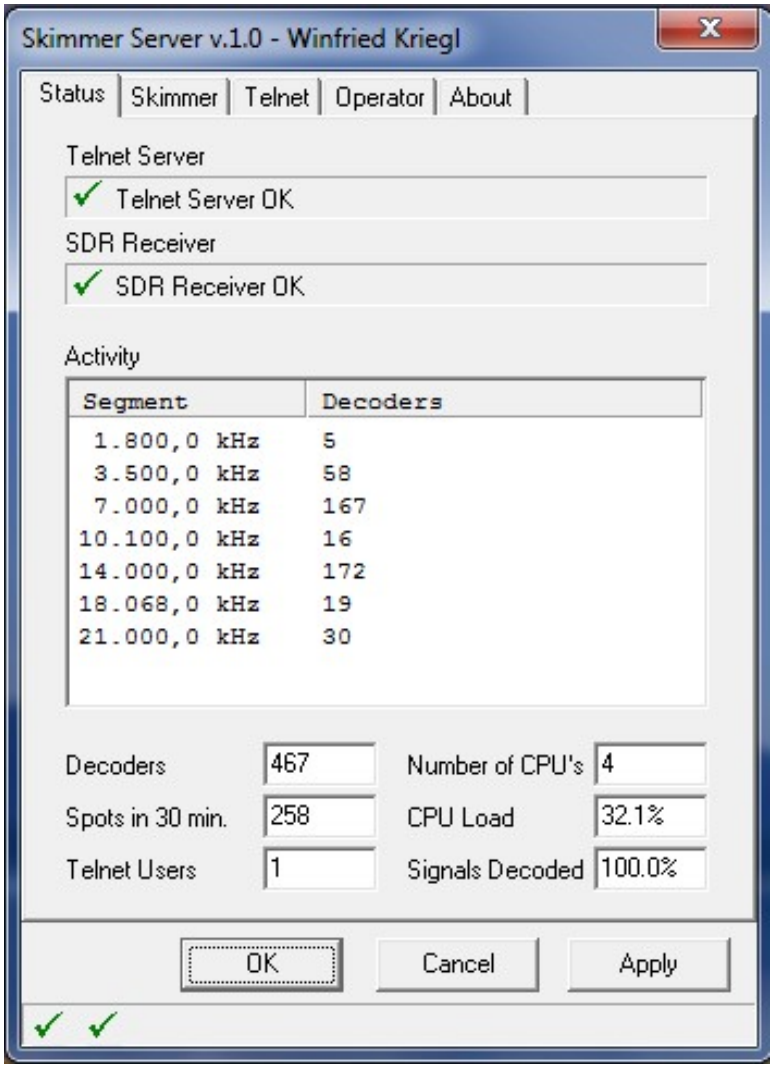
- Simultane Decodierung aller CW-Signale in bis zu

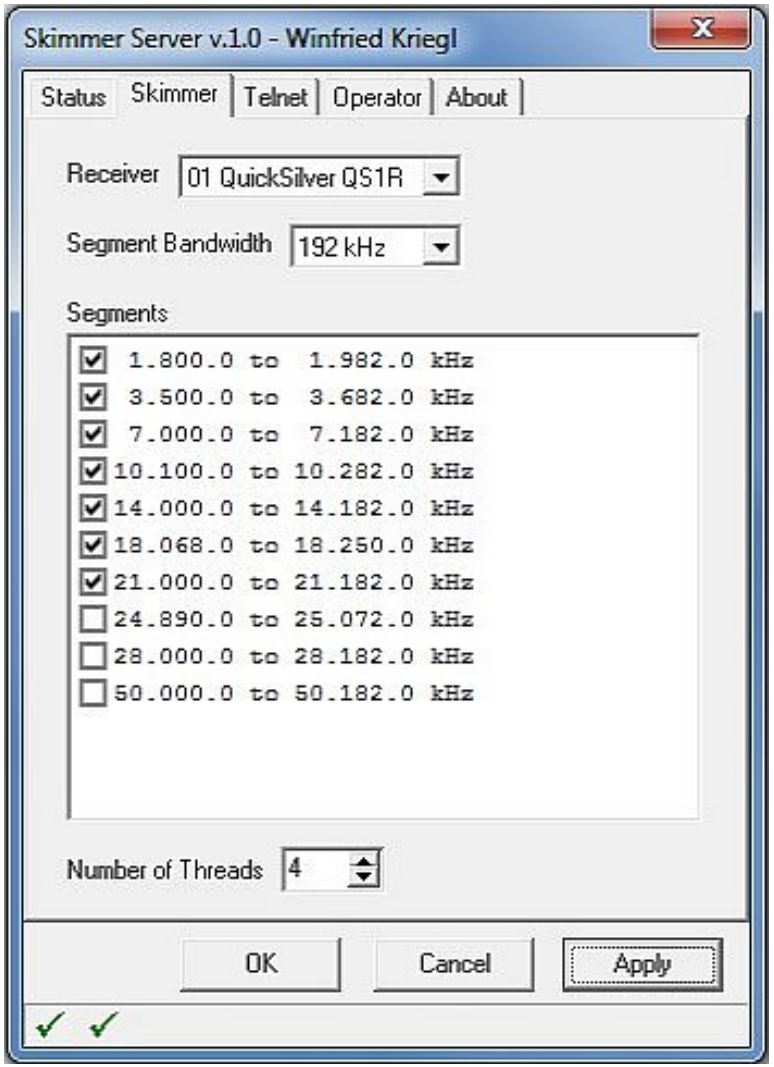
  7 Bandsegmenten in Verbindung mit QS1R-SDR

- 48, 96 oder 192 kHz Bandbreite (mit schnellem Rechner)
- Telnet-Server gibt DX-spots aus
- Qualität der Decodierung verbessert
- Leider keine Aufzeichnungsmöglichkeit

Skimmer Server

Multi-band CW decoder





Skimmer DK9IP

CQWW CW 2009

Statistik CWSkimmer Spots WWDX CW 2009
DK9IP-Skimmer

0000-0059	SPOTS	CALLSIGNS	PREFIXES	DXCC
160m	764	106	83	36
80m	2733	433	278	59
40m	2103	438	275	71
20m	1	1	1	1
TOTAL	5601	881	470	91

0100-0159	SPOTS	CALLSIGNS	PREFIXES	DXCC
160m	716	101	79	36
80m	3015	496	310	55
40m	2207	415	258	61
TOTAL	5938	897	463	77

0200-0259	SPOTS	CALLSIGNS	PREFIXES	DXCC
160m	812	90	72	37
80m	2949	509	306	56
40m	2319	395	257	63
20m	4	1	1	1
TOTAL	6084	887	468	81

0300-0359	SPOTS	CALLSIGNS	PREFIXES	DXCC
160m	666	88	71	32
80m	2735	508	307	57
40m	2055	312	210	59
20m	1	1	1	1
TOTAL	5457	801	438	77

1. Minute 157 spots

1. Stunde 5.601 spots

229.923 spots in 48 Std.

WHOLE LOG	SPOTS	CALLSIGNS	PREFIXES	DXCC
160m	26751	590	280	60
80m	94799	3622	840	121
40m	87843	3947	1000	150
20m	18315	1695	639	123
15m	2215	194	124	28
TOTAL	229923	6803	1258	168

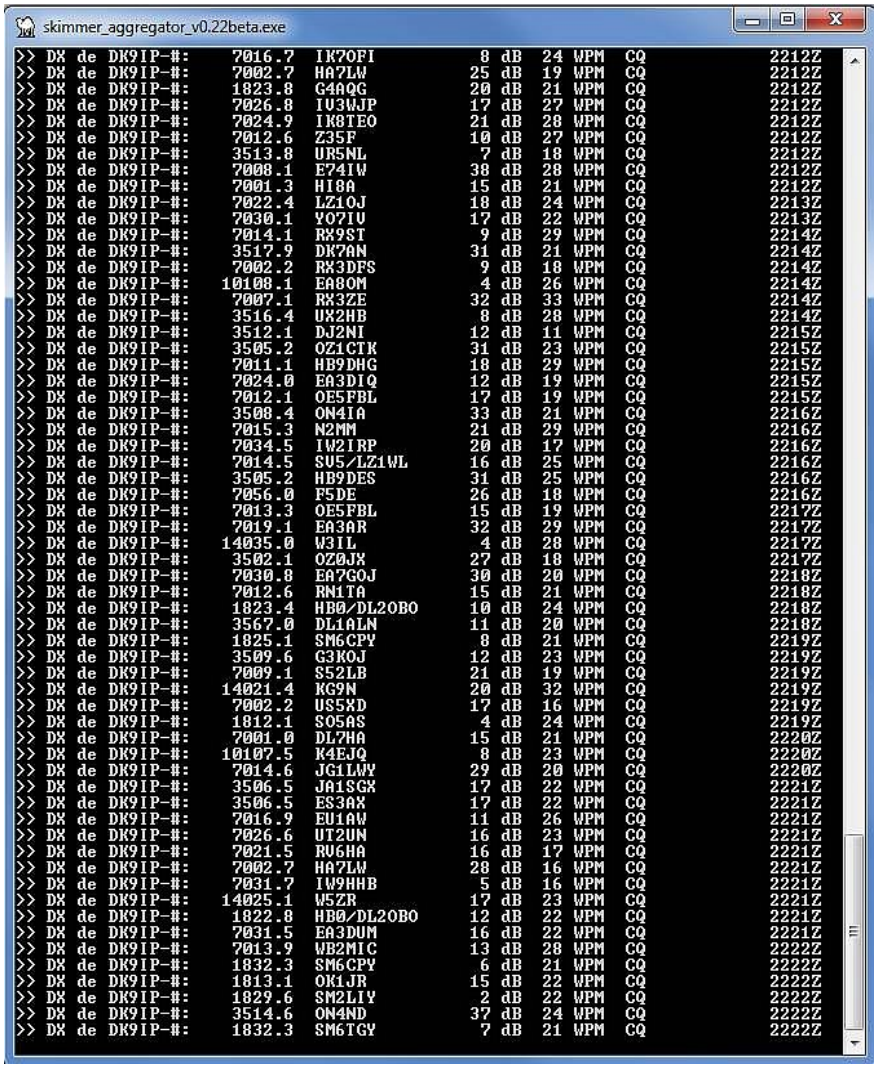
Reverse Beacon Network

von Pete Smith, N4ZR und Felipe Ceglia PY1NB
www.reversebeacon.net

- DX-Cluster für CW Skimmer spots
- Derzeit ca. 30 aktive Skimmer weltweit
- Bandöffnungen können zeitnah erkannt werden
- Signal Comparison: wie laut ist/war wer wo und wann?
- Spot search mit Landkarte
- Umfangreiche Filtermöglichkeiten

Reverse Beacon Network

von Pete Smith, N4ZR und Felipe Ceglia PY1NB



options:

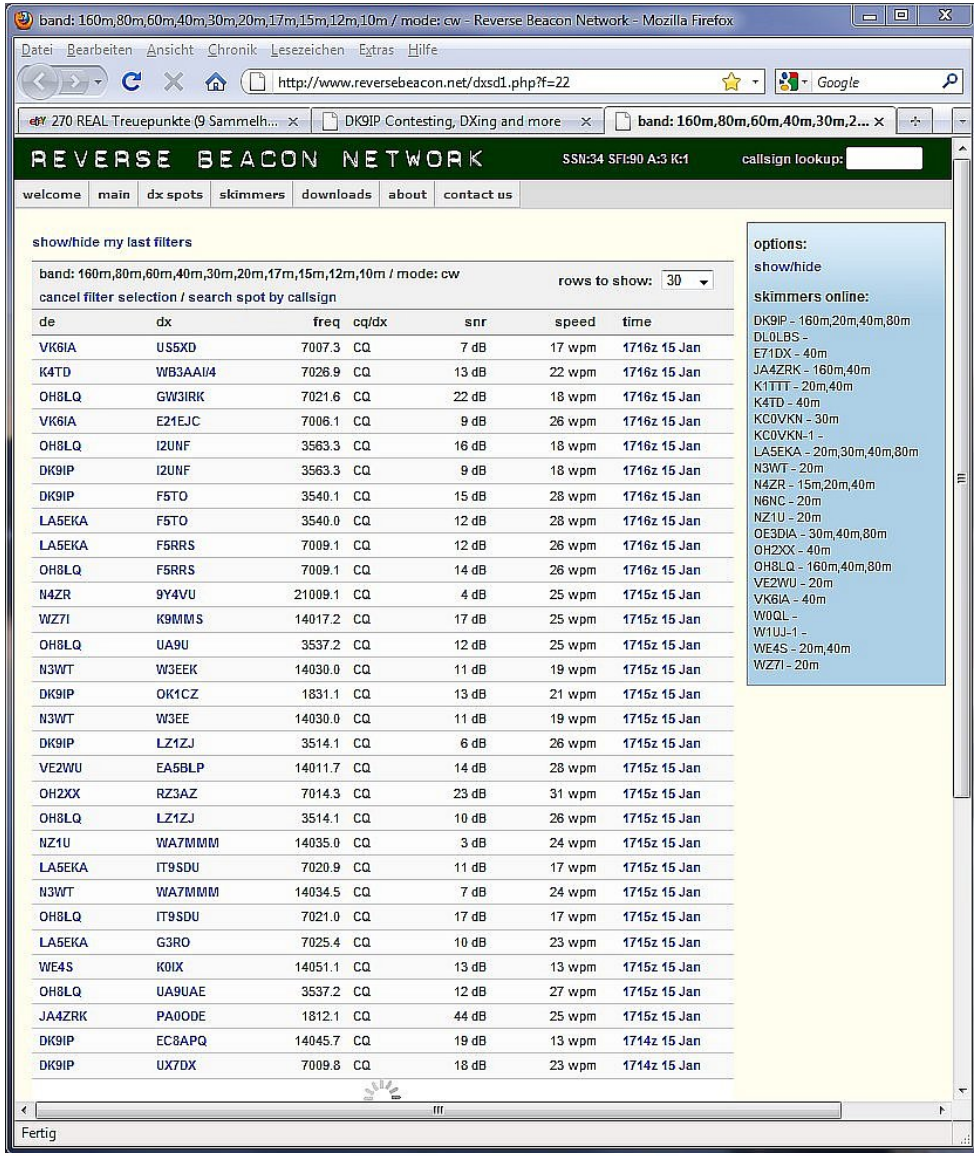
show/hide

skimmers online:

DK9IP - 160m,20m,30m,40m,80m
DL0LBS -
JA4ZRK - 160m,40m,80m
K1MK - 160m,20m,40m,80m
K4TD - 20m,40m,80m
KC0VKN - 30m
KC0VKN-1 -
LA5EKA - 30m,40m,80m
N0XR-10 -
N0XR-2 - 20m
N0XR-4 - 40m
N0XR-5 - 15m
N0XR-6 -
N0XR-8 - 80m
N4ZR - 160m,20m,40m,80m
NZ1U - 40m,80m
OE3DIA - 160m,30m,40m,80m
OY3JE - 40m
PA1T - 160m,40m,80m
VE2WU - 20m
W0QL - 20m
W1UJ-1 - 30m,40m
WE4S - 160m,20m,40m,80m
WZ7I - 160m,20m,30m,40m,80m

Reverse Beacon Network

von Pete Smith, N4ZR und Felipe Ceglia PY1NB



de	dx	freq	cq/dx	snr	speed	time
VK6IA	US5XD	7007.3	CQ	7 dB	17 wpm	1716z 15 Jan
K4TD	WB3AAI/4	7026.9	CQ	13 dB	22 wpm	1716z 15 Jan
OH8LQ	GW3IRK	7021.6	CQ	22 dB	18 wpm	1716z 15 Jan
VK6IA	E21EJC	7006.1	CQ	9 dB	26 wpm	1716z 15 Jan
OH8LQ	I2UNF	3563.3	CQ	16 dB	18 wpm	1716z 15 Jan
DK9IP	I2UNF	3563.3	CQ	9 dB	18 wpm	1716z 15 Jan
DK9IP	F5TO	3540.1	CQ	15 dB	28 wpm	1716z 15 Jan
LA5EKA	F5TO	3540.0	CQ	12 dB	28 wpm	1716z 15 Jan
LA5EKA	F5RRS	7009.1	CQ	12 dB	26 wpm	1716z 15 Jan
OH8LQ	F5RRS	7009.1	CQ	14 dB	26 wpm	1716z 15 Jan
N4ZR	9Y4VU	21009.1	CQ	4 dB	25 wpm	1715z 15 Jan
WZ7I	K9MMS	14017.2	CQ	17 dB	25 wpm	1715z 15 Jan
OH8LQ	UA9U	3537.2	CQ	12 dB	25 wpm	1715z 15 Jan
N3WT	W3EEK	14030.0	CQ	11 dB	19 wpm	1715z 15 Jan
DK9IP	OK1CZ	1831.1	CQ	13 dB	21 wpm	1715z 15 Jan
N3WT	W3EE	14030.0	CQ	11 dB	19 wpm	1715z 15 Jan
DK9IP	LZ1ZJ	3514.1	CQ	6 dB	26 wpm	1715z 15 Jan
VE2WU	EA5BLP	14011.7	CQ	14 dB	28 wpm	1715z 15 Jan
OH2XX	RZ3AZ	7014.3	CQ	23 dB	31 wpm	1715z 15 Jan
OH8LQ	LZ1ZJ	3514.1	CQ	10 dB	26 wpm	1715z 15 Jan
NZ1U	WA7MMM	14035.0	CQ	3 dB	24 wpm	1715z 15 Jan
LA5EKA	IT9SDU	7020.9	CQ	11 dB	17 wpm	1715z 15 Jan
N3WT	WA7MMM	14034.5	CQ	7 dB	24 wpm	1715z 15 Jan
OH8LQ	IT9SDU	7021.0	CQ	17 dB	17 wpm	1715z 15 Jan
LA5EKA	G3RO	7025.4	CQ	10 dB	23 wpm	1715z 15 Jan
WE4S	K0IX	14051.1	CQ	13 dB	13 wpm	1715z 15 Jan
OH8LQ	UA9UAE	3537.2	CQ	12 dB	27 wpm	1715z 15 Jan
JA4ZRK	PA0ODE	1812.1	CQ	44 dB	25 wpm	1715z 15 Jan
DK9IP	EC8APQ	14045.7	CQ	19 dB	13 wpm	1714z 15 Jan
DK9IP	UX7DX	7009.8	CQ	18 dB	23 wpm	1714z 15 Jan

Reverse Beacon Network

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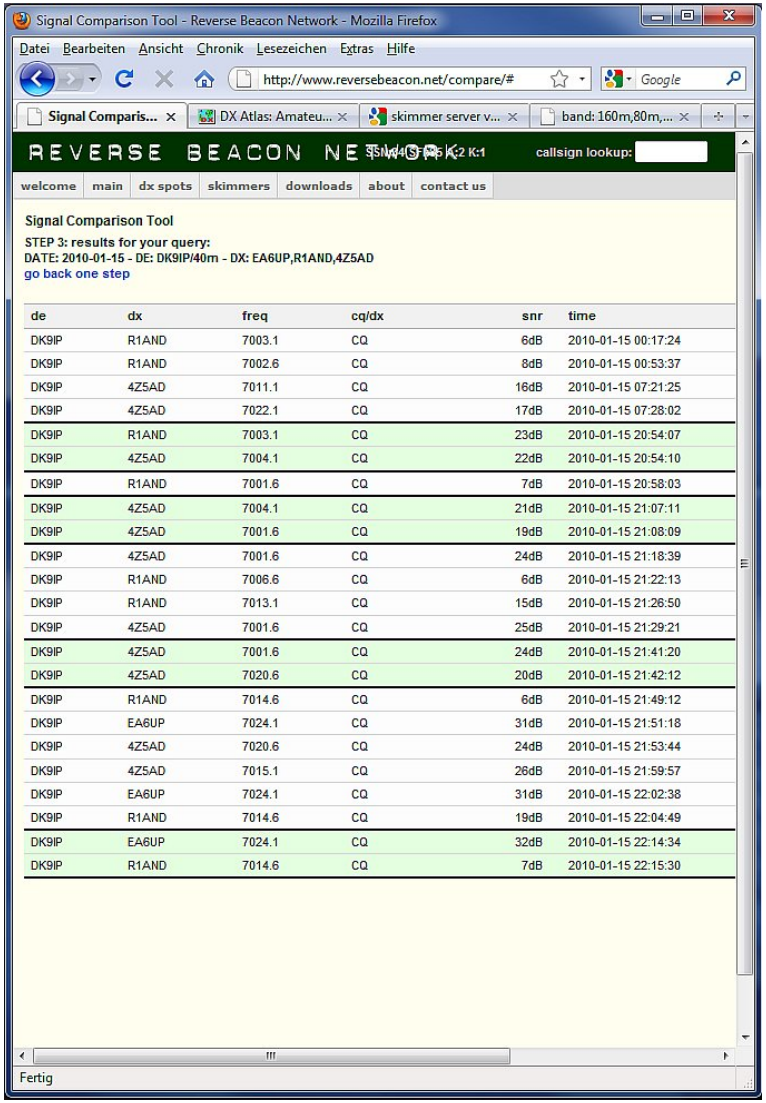
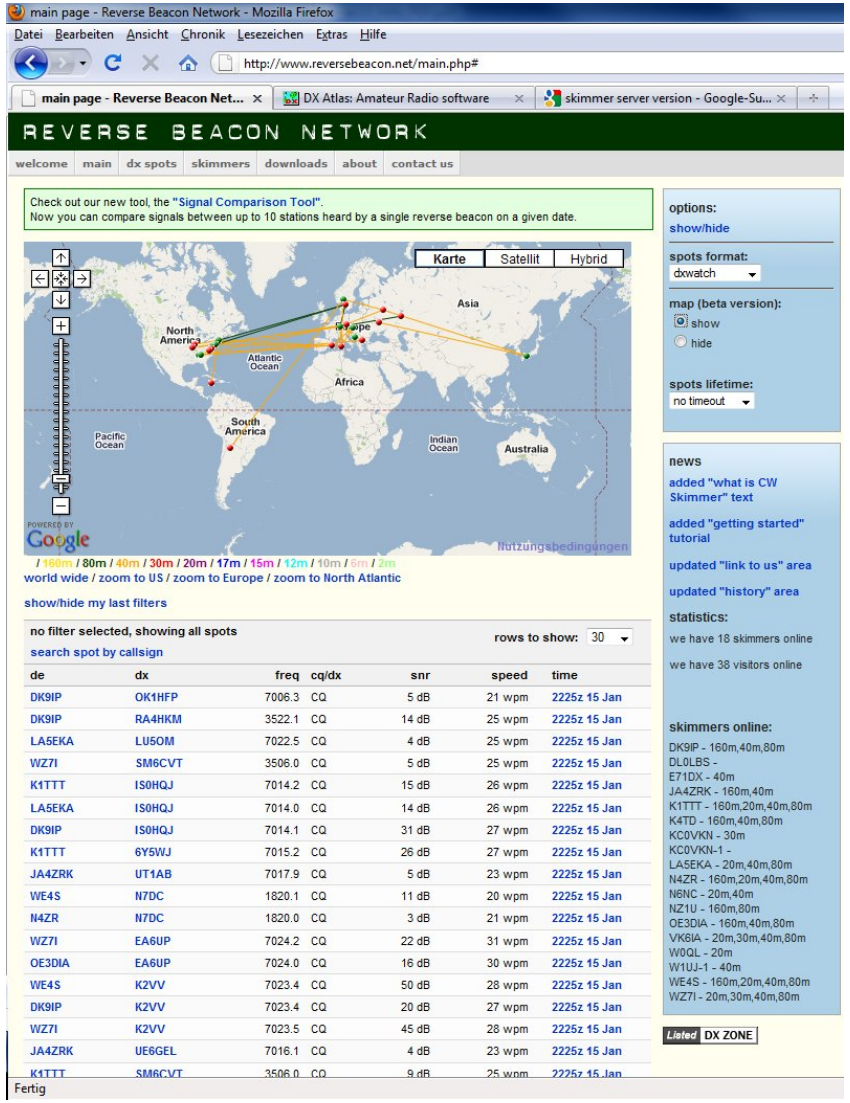


de	dx	freq	cq/dx	snr	time
DK9IP	R1AND	7003.1	CQ	6dB	2010-01-15 00:17:24
DK9IP	R1AND	7002.6	CQ	8dB	2010-01-15 00:53:37
DK9IP	4Z5AD	7011.1	CQ	16dB	2010-01-15 07:21:25
DK9IP	4Z5AD	7022.1	CQ	17dB	2010-01-15 07:28:02
DK9IP	R1AND	7003.1	CQ	23dB	2010-01-15 20:54:07
DK9IP	4Z5AD	7004.1	CQ	22dB	2010-01-15 20:54:10
DK9IP	R1AND	7001.6	CQ	7dB	2010-01-15 20:58:03
DK9IP	4Z5AD	7004.1	CQ	21dB	2010-01-15 21:07:11
DK9IP	4Z5AD	7001.6	CQ	19dB	2010-01-15 21:08:09
DK9IP	4Z5AD	7001.6	CQ	24dB	2010-01-15 21:18:39
DK9IP	R1AND	7006.6	CQ	6dB	2010-01-15 21:22:13
DK9IP	R1AND	7013.1	CQ	15dB	2010-01-15 21:26:50
DK9IP	4Z5AD	7001.6	CQ	25dB	2010-01-15 21:29:21
DK9IP	4Z5AD	7001.6	CQ	24dB	2010-01-15 21:41:20
DK9IP	4Z5AD	7020.6	CQ	20dB	2010-01-15 21:42:12
DK9IP	R1AND	7014.6	CQ	6dB	2010-01-15 21:49:12
DK9IP	EA6UP	7024.1	CQ	31dB	2010-01-15 21:51:18
DK9IP	4Z5AD	7020.6	CQ	24dB	2010-01-15 21:53:44
DK9IP	4Z5AD	7015.1	CQ	26dB	2010-01-15 21:59:57
DK9IP	EA6UP	7024.1	CQ	31dB	2010-01-15 22:02:38
DK9IP	R1AND	7014.6	CQ	19dB	2010-01-15 22:04:49
DK9IP	EA6UP	7024.1	CQ	32dB	2010-01-15 22:14:34
DK9IP	R1AND	7014.6	CQ	7dB	2010-01-15 22:15:30



de	dx	freq	cq/dx	snr	speed	time
DK9IP	OK1HFP	7006.3	CQ	5 dB	21 wpm	2225z 15 Jan
DK9IP	RA4HKM	3522.1	CQ	14 dB	25 wpm	2225z 15 Jan
LA5EKA	LU5OM	7022.5	CQ	4 dB	25 wpm	2225z 15 Jan
WZ7I	SM6CVT	3506.0	CQ	5 dB	25 wpm	2225z 15 Jan
K1TTT	IS0HQJ	7014.2	CQ	15 dB	26 wpm	2225z 15 Jan
LA5EKA	IS0HQJ	7014.0	CQ	14 dB	26 wpm	2225z 15 Jan
DK9IP	IS0HQJ	7014.1	CQ	31 dB	27 wpm	2225z 15 Jan
K1TTT	6Y5WJ	7015.2	CQ	26 dB	27 wpm	2225z 15 Jan
JA4ZRK	UT1AB	7017.9	CQ	5 dB	23 wpm	2225z 15 Jan
WE4S	N7DC	1820.1	CQ	11 dB	20 wpm	2225z 15 Jan
N4ZR	N7DC	1820.0	CQ	3 dB	21 wpm	2225z 15 Jan
WZ7I	EA6UP	7024.2	CQ	22 dB	31 wpm	2225z 15 Jan
OE3DIA	EA6UP	7024.0	CQ	16 dB	30 wpm	2225z 15 Jan
WE4S	K2VV	7023.4	CQ	50 dB	28 wpm	2225z 15 Jan
DK9IP	K2VV	7023.4	CQ	20 dB	27 wpm	2225z 15 Jan
WZ7I	K2VV	7023.5	CQ	45 dB	28 wpm	2225z 15 Jan
JA4ZRK	UE6GEL	7016.1	CQ	4 dB	23 wpm	2225z 15 Jan
K1TTT	SM6CVT	3506.0	CQ	9 dB	25 wpm	2225z 15 Jan

Reverse Beacon Network

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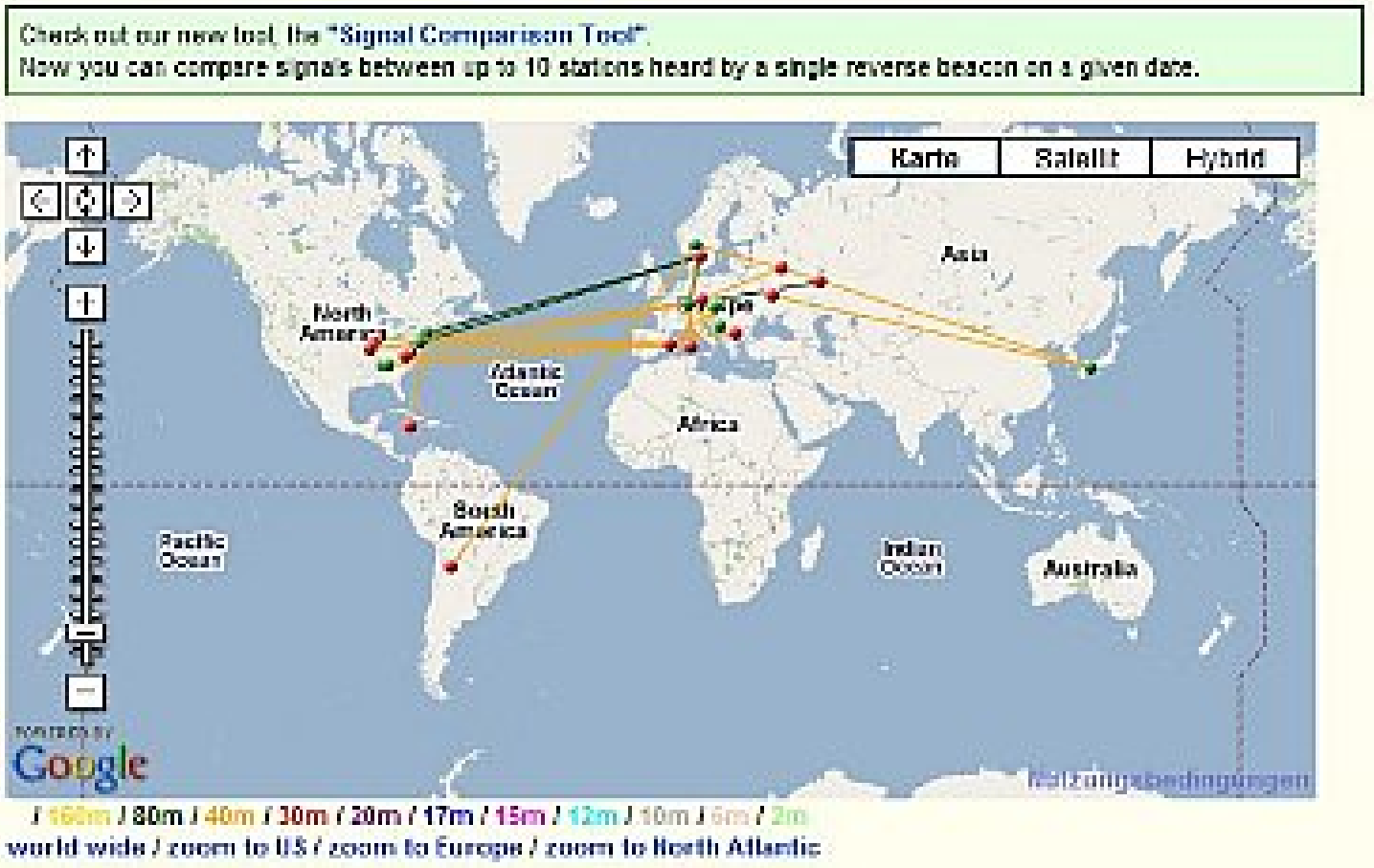

Erweiterungsmöglichkeiten Skimmer Server

- Recorder-Funktion für alle decodierten Bänder
- Erweiterte Steuerungs- und Abfragemöglichkeiten
- Unterstützung Perseus SDR
- Weitere Verbesserung der Decodierung

Erweiterungsmöglichkeiten Reverse Beacon Network

- Telnet-Interface zur Verwendung im Contest
- Ausfiltern einzelner Skimmer