

Planning for WRTC2014

HAM RADIO 2013
Friedrichshafen

Doug Grant, K1DG

Outline



- WRTC – the Olympics of Ham Radio
- Goals of WRTC2014
- WRTC2014 Station Setups
- July 2012 Site Test
- News

The "other" Every-4-Year Championships

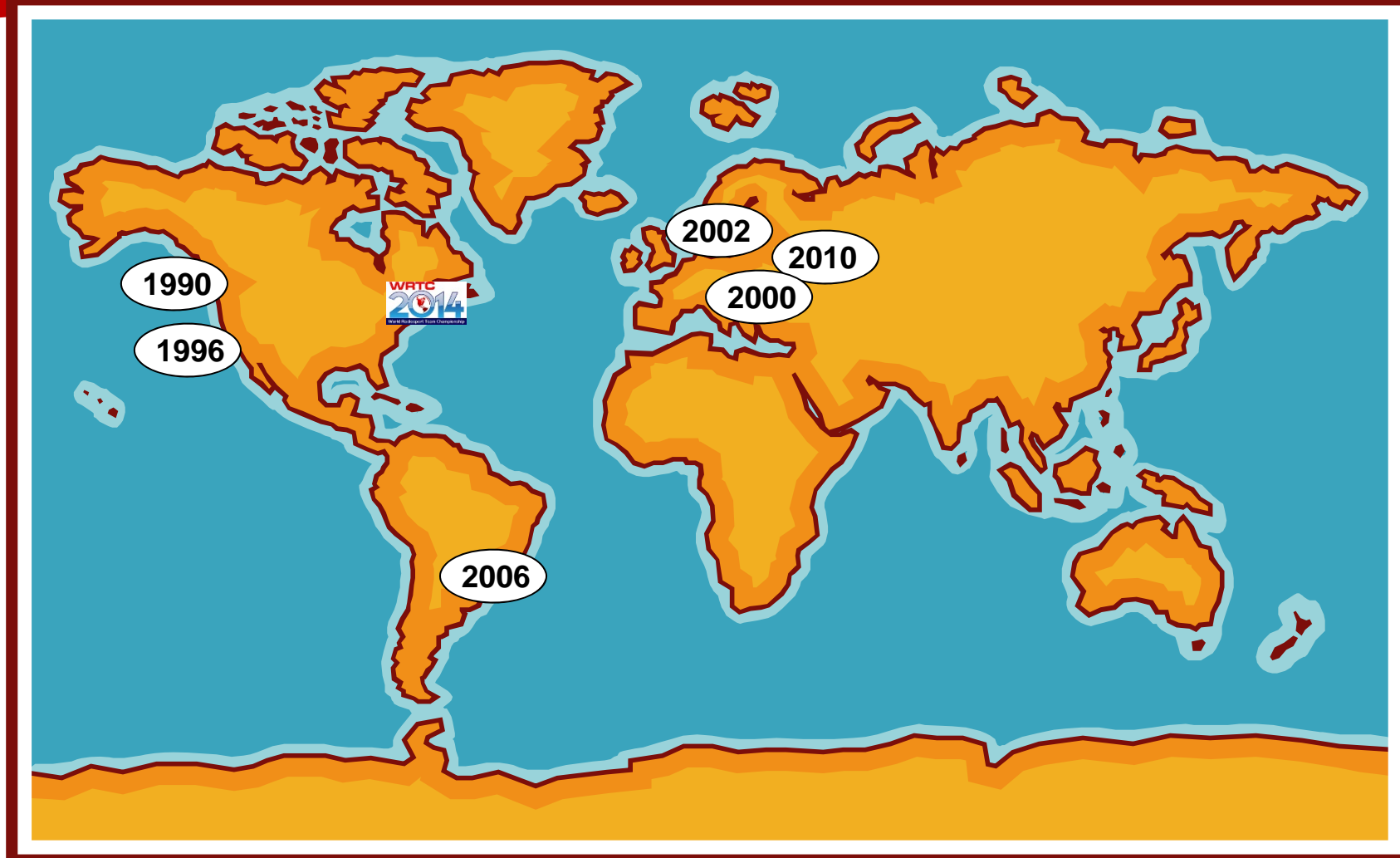


FIFA WORLD CUP
Brasil



WRTCs
for
non-Hams

WRTC Locations



WRTC2014 Organizers



ADVISORY COUNCIL
W1UF, K3LR, NR5M, K9CT

Goals for WRTC2014



- Hold a fair competition
- Promote international goodwill among participants
- Promote ham radio to the public in the region and beyond

Team Selection: 59 Teams



- 51 Team Leaders will be selected on scores
 - All continents, (all USA call areas; 2 for W4, W6)
 - May select Team Member from anywhere
 - Added NAQP, some regional contests to qualifiers
- 8 Special Teams
 - WRTC2010 Champions (RW1AC, RA1AIP)
 - 1 Youth Team (under age 25)
 - 4 Sponsored Teams (one already claimed)
 - 2 Wild-card teams (WRTC2014 Committee selection)

The Qualifying Period is OVER



- 55 Qualifying Events since CQWW 2010
- Selection is based on published scores
- Full transparency
- Last scores will be ARRL DX SSB 2013

Unofficial Current Team

Leaders (www.wrtc-rank.com, SQ2GXO)



- NA#1 K1LZ
 - NA#2 W2RE
 - NA#3 LZ4AX
 - NA#4E N4AF
 - NA#4W K1TQ (AD4Z)
 - NA#5 N5DX
 - NA#6 N6MJ, K6AM
 - NA#7 K7RL
 - NA#8 K8GL
 - NA#9 W9RE
 - NA#10 KU1CW

 - NA#11 VY2ZM
 - NA#12 VE7CC
 - NA#13 NP4Z
- EU#1 CT1ILT, F8DBF, MØCFW, GØCKV, F4DXW
 - EU#2 LX2A, IK2NCJ, DJ5MW, IK1HJS, DL1QQ
 - EU#3 ES5TV, OH2UA, ES2RR, LY9A
 - EU#4 OE3DIA, OM2VL, OM3BH, OE2VEL, S5ØA
 - EU#5 E77DX, 4O3A, UU4JMG, YT6W, URØMC
 - EU#6 RL3FT, RX3APM, UA3DPX
- AS#1 R9DX
 - AS#2 RC9O
 - AS#3 5B4WN
 - AS#4 BA4ALC
 - AS#5 JH4UYB
- SA#1 PY2YU
 - SA#2 CX6VM

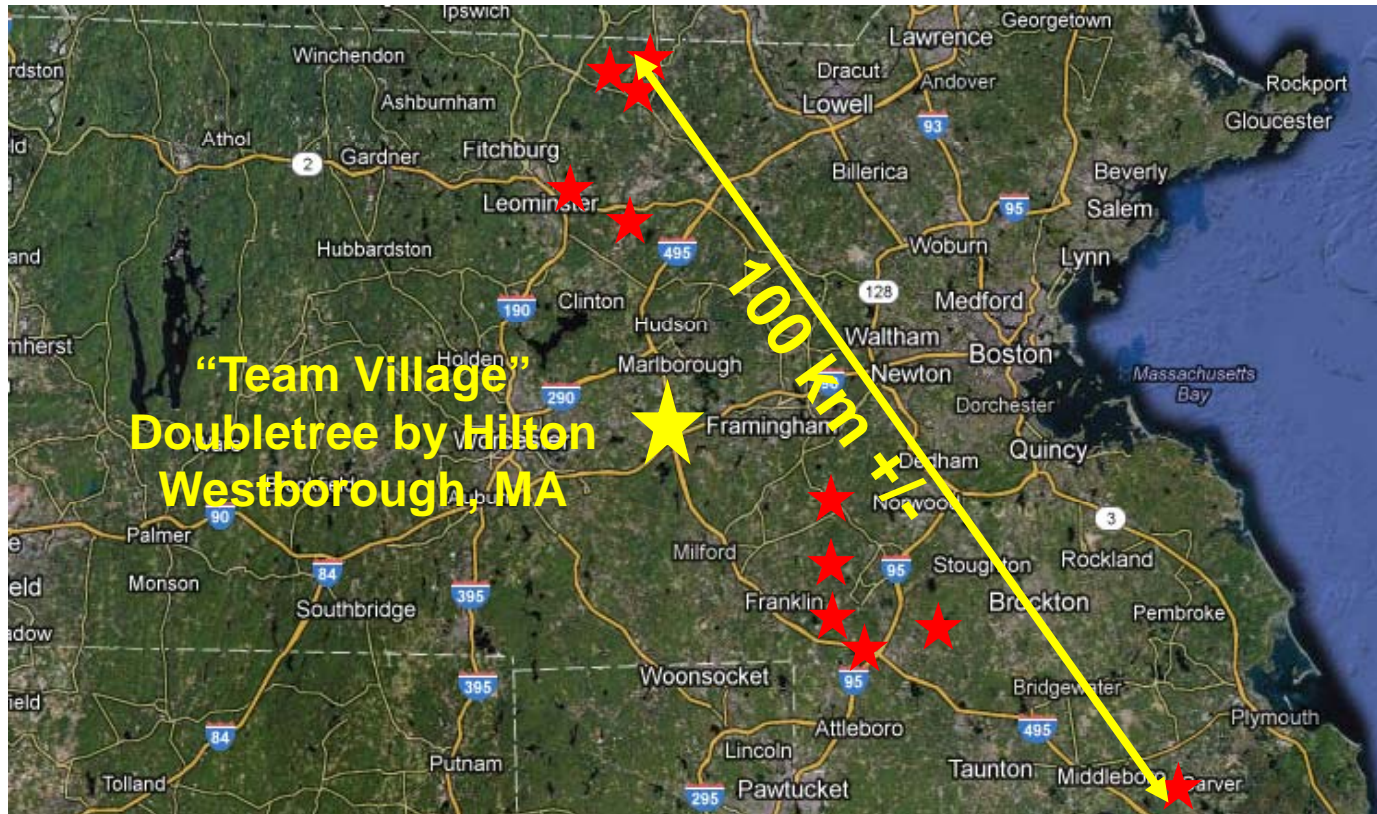
 - AF KF5EYY/3V8SS
 - OC KH6ND

Station Setups



- Two operators, two transmitters, no interlock
 - Prevents world's best operators from sounding like lids
 - Allows more QSOs
- WRTC2014 Supplies:
 - Triband yagi & inverted Vees for 80 & 40M at 13m
 - Rotator
 - Generator power (2 kW)
 - Tent, tables, chairs
- Teams bring radios, computers, filters

Current WRTC2014 Sites



All sites are in Massachusetts – are they equal?

July 2012 Site Testing

- Evaluate sites for:
 - Equal RF Performance
 - Accessibility
 - Line Noise
- Train Volunteers
 - Tower-raising system
 - Logistics
- Let site owners see us in action



13 Identical Stations installed in one day

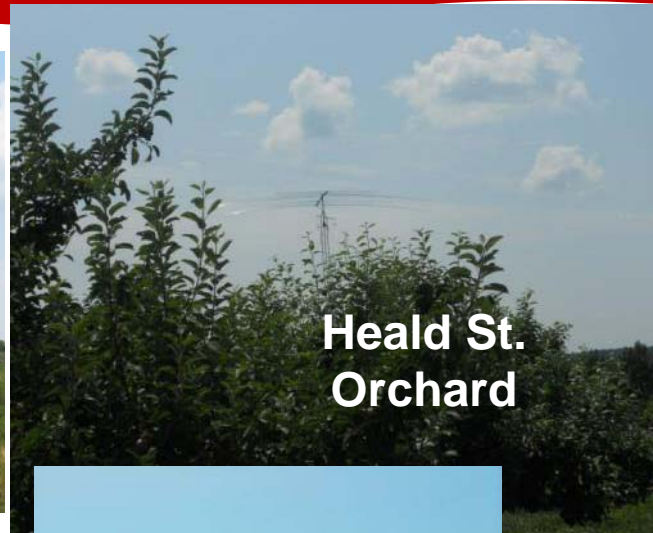


Two sites had multiple stations

**Standish
Forest 1**



**Heald St.
Orchard**



Devens 1



**Standish
Forest 2**



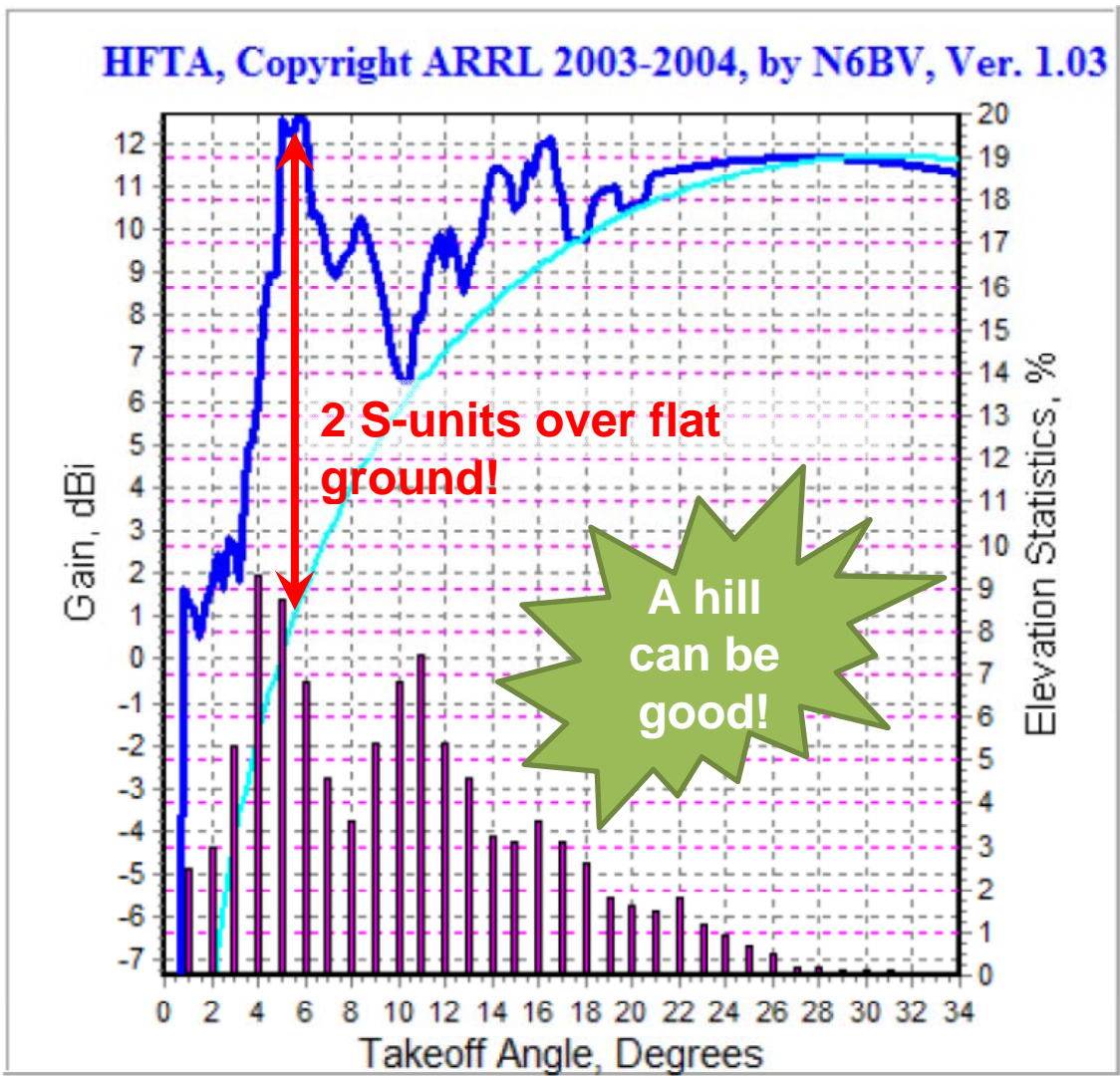
**Sholan
Farm**



Devens 2



Morse Apple Orchard – 20m to Europe



Freq. = 14.1 MHz
Max. Gain: 12.7 dBi

MORSE B - 45.00.PP
9.1 m
3-Ele.
Fig. of Merit: 9.7

+3.3 dB weighted gain over flat ground

FLAT.PRO
9.1 m
3-Ele.
Fig. of Merit: 6.4

Elev. Statistic
W1-MA-EU.PRN

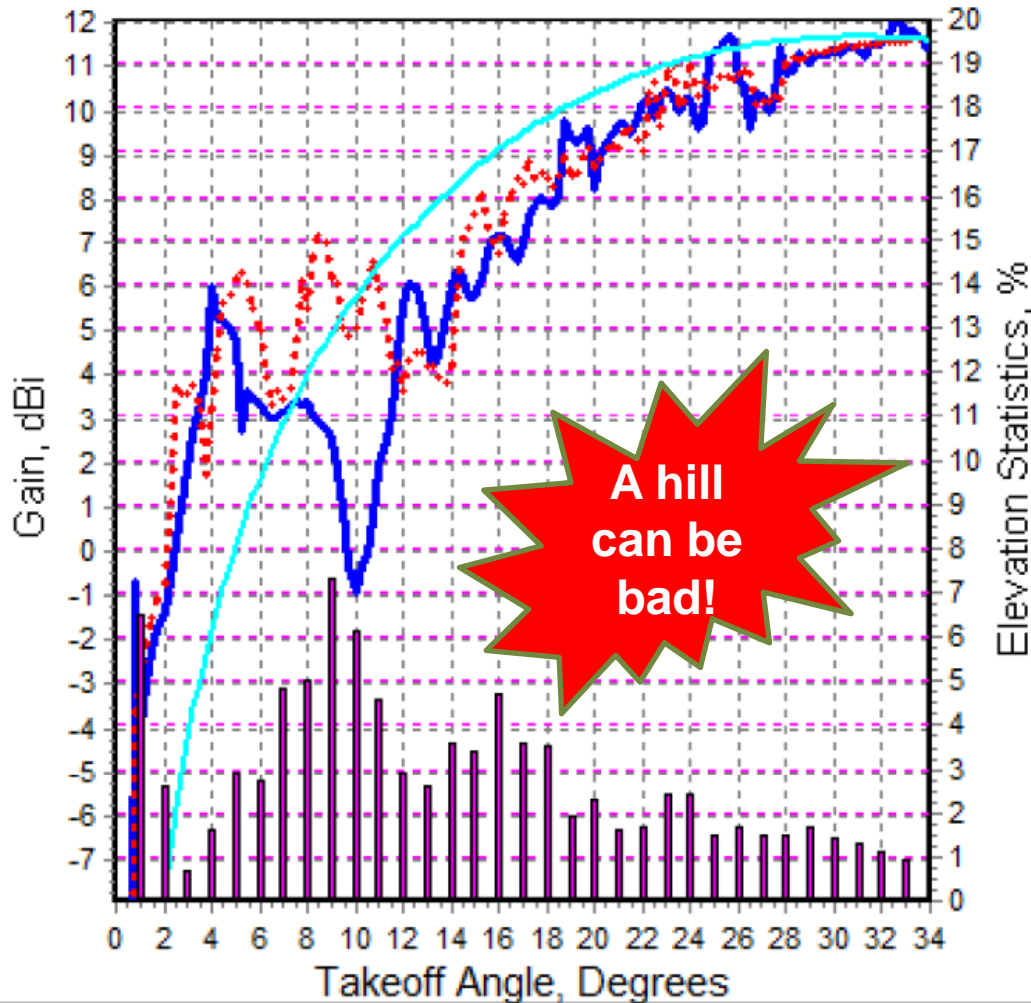
Print Out File

Close

Morse Apple Orchard – 20m to the US



HFTA, Copyright ARRL 2003-2004, by N6BV, Ver. 1.03



Freq. = 14.1 MHz
Max. Gain: 12.1 dBi

MORSE B - 270.00.P
9.1 m
3-Ele.
Fig. of Merit: 6.9

MORSE B - 210.00.P
9.1 m dots
3-Ele.
Fig. of Merit: 7.4

-1.1 dB weighted gain over flat ground

FLAT.PRO
9.1 m
3-Ele.
Fig. of Merit: 8

Elev. Statistic
W1-MA-US.PRN

Print Out File
Close

How well does HFTA match reality?



- How do we get real-world data on signal strength in target regions?
- Obvious (but wrong) answer: Reverse Beacon Network (RBN)
- What is wrong with RBN?
 - QSB mostly
 - 10-minute sampling period too coarse

Signal Reports from SDRs



- **Skimmer Server** Software by VE3NEA
 - Standard version: spots once every 10 min. (max) for stationary CQer
 - Not good enough for WRTC station comparison
 - Custom (private) “WRTC” version spots *every time heard*, CQing or not
- Six volunteers recruited by N6TV to run custom WRTC Skimmer software:
 - DL2CC, EA4TX, KM3T, N4ZR, N6WIN, W3OA

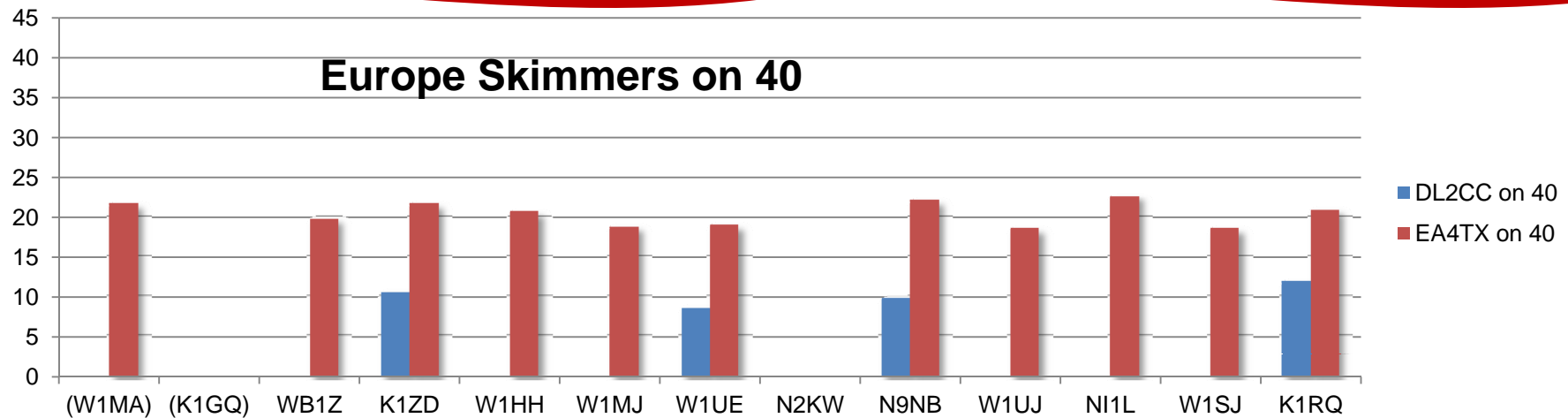
Many spots collected



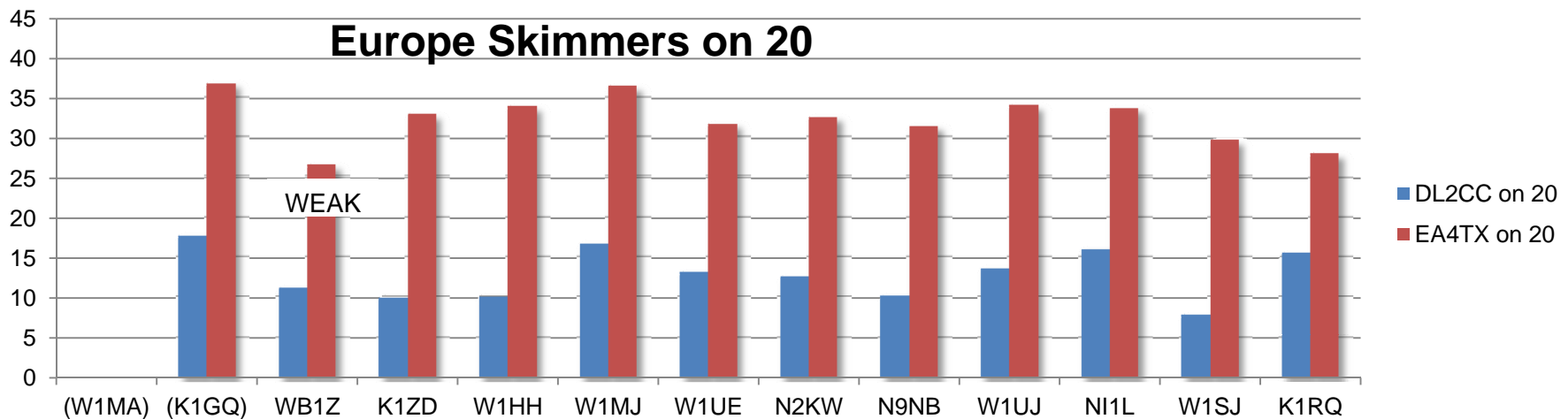
- The six private skimmers spotted the WRTC test stations 156,905 times during IARU contest
 - 6,538 spots/hr 109 spots/min
- They logged 21,690 spots during the twelve special 10 minute periods
 - 10,845 spots/hr 180 spots/min
- Each spot includes a S/N ratio, in dB

So how well did the data agree with the HFTA models?

Europe 40/20M Skimmer data

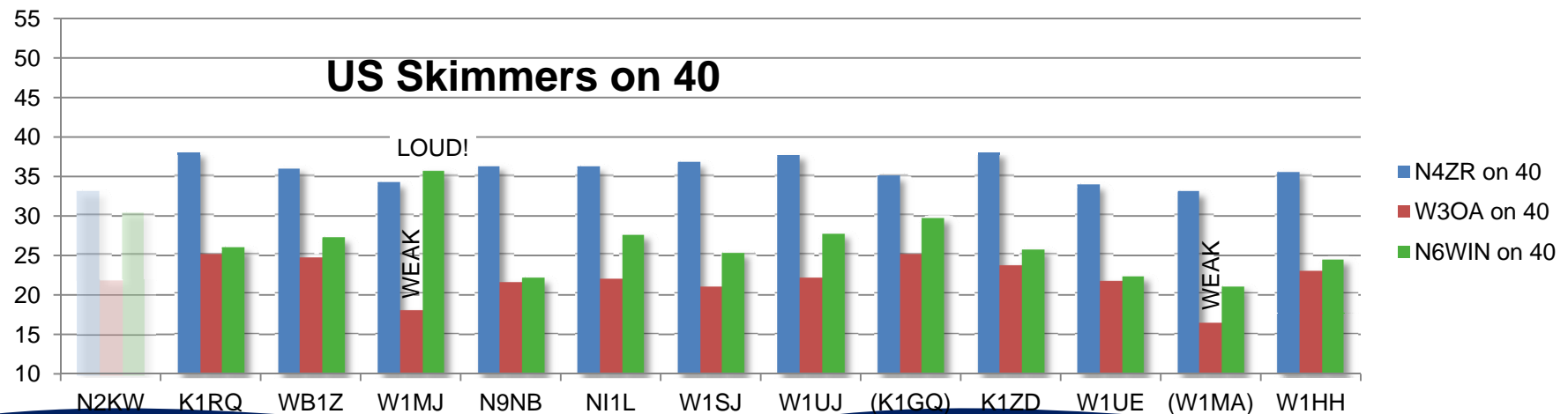
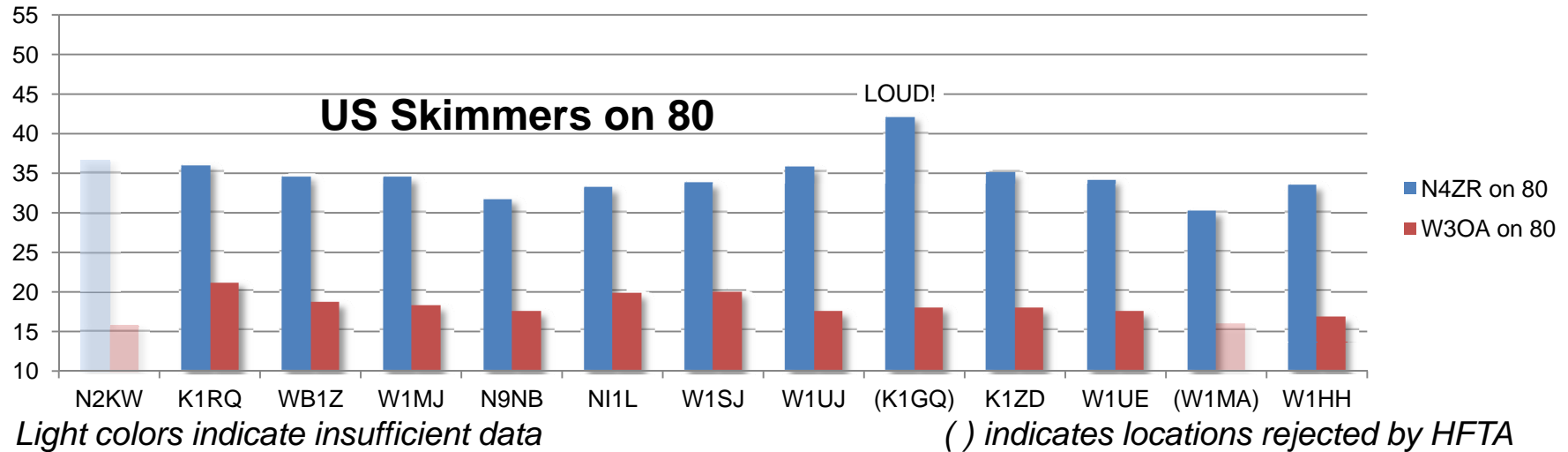


() indicates locations rejected by HFTA

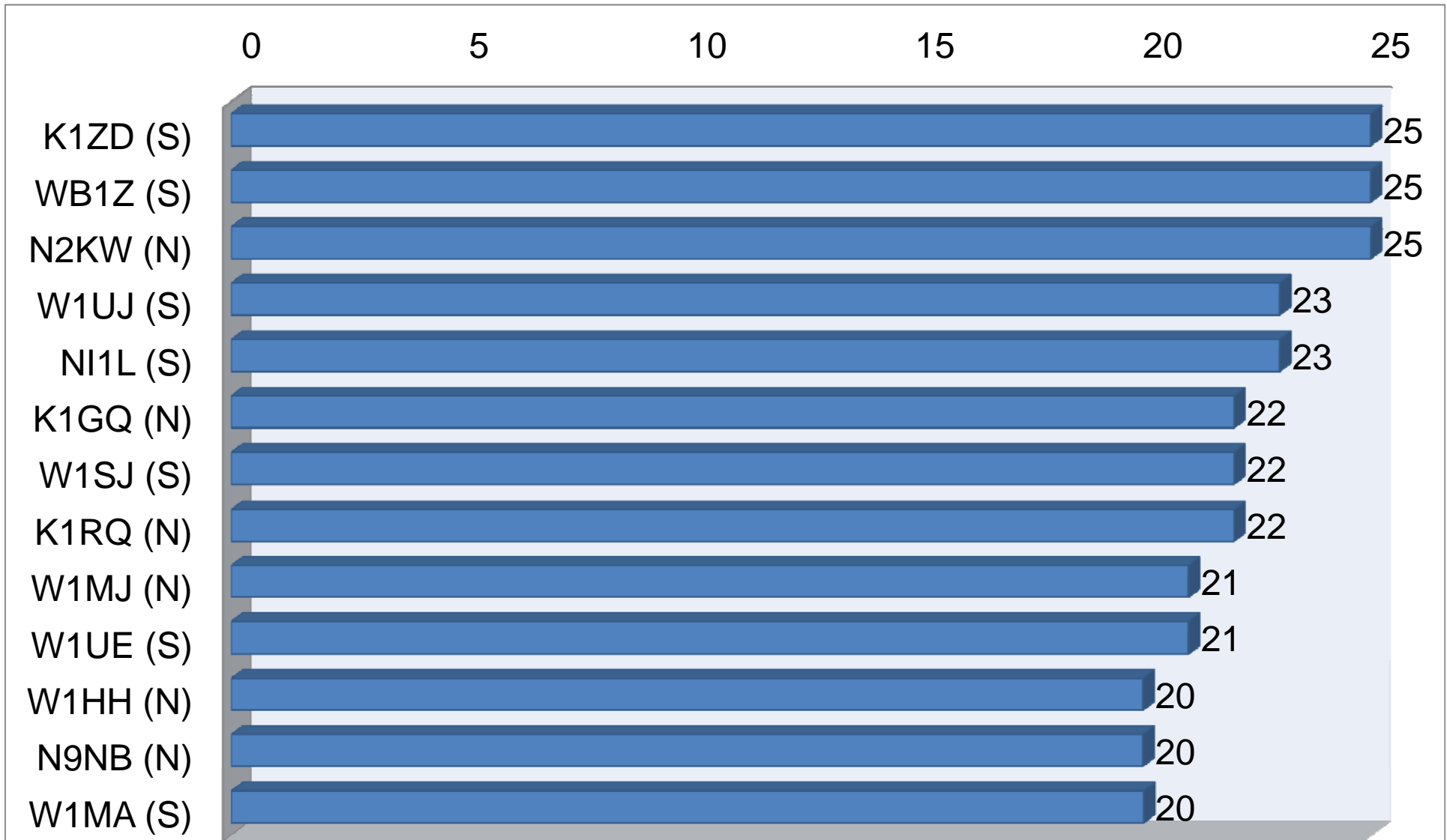


US Skimmer data 80/40M

N4ZR – West Virginia
W3OA – North Carolina
N6WIN – LA, California



**Little Variation in Median S/N Ratio (dB)
10-minute periods only (combined)
All Bands (combined), All Private Skimmers**



Results of July 2012 Test



- No stations had line noise problems
- All were able to work EU HQ stations easily on 80M, could run EU stations on 40M (even SSB)
- RBN data being analyzed and compared to HFTA models – excellent agreement so far
- One site was 10dB louder to Europe, 10dB weaker to W6 in both HTFA and RBN testing; will not be used in 2014

Recent news, coming events



- February 2013: Judging Committee announced
 - (K1ZZ, G3XTT, EY8MM, K1TO, N6AA)
- March 2013: HQ hotel/ Team Village selected
 - Doubletree by Hilton, Westborough, MA
 - Many nearby hotels for overflow
- ***April 2013: Referee Applications open***
- June 2013: Training session for volunteers
- July 2013: 30-station test

Referee Qualifications



- High level of integrity
- Proficient in both CW and SSB
 - SO2R experience desirable
- Able to stay awake for full contest period
- Proficient in English
 - All committee business will be conducted in English
 - Other language skills helpful
- Able to travel to W1

June 1, 2013 Training Session for Volunteers



- **~150 Volunteers Assembled for Training**
- **Assembled two complete stations in 2 hours**
- **Meeting (and storage) space provided by K1LZ**
- **Ben & Jerry's Ice Cream provided by KE1J**

July 2013: Station Test #2



- 30 Stations
- More testing for “level playing field”
- More multi-station sites
- Awards for most QSOs with test stations

Another milestone in 2014

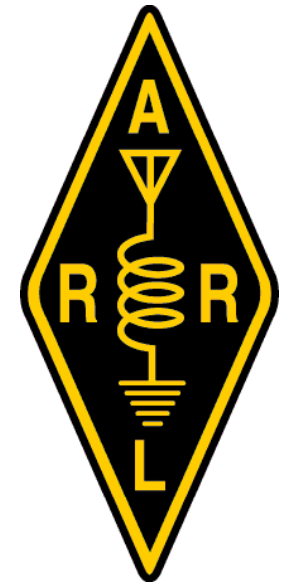


- 100th anniversary of founding of ARRL
- Day trip to ARRL planned
- ARRL Centennial National Convention in Hartford one week after WRTC2014



*A special VIP tour package
Is available to major donors
to both ARRL and WRTC2014*

Contact K1DG for details



VIP Donor Benefits



- Room and board for WRTC and ARRL Convention
- “All-access pass”
 - All tours, all banquets, visit to judging room
- Opportunity to operate in IARU Contest
 - Large W1 Multi-multi or “spare” WRTC2014 field station
- Private receptions at WRTC2014 and ARRL HQ

Some Possible Tours



Day trip to ARRL Headquarters

Boston city tour

**with Fenway Park or Harbor
Cruise**

**Shopping trip to HRO, Salem,
NH**

**Shopping trip to LL Bean,
Freeport, ME**

**Radio History Tour:
Marconi Site / Chatham Marconi
& Maritime Center**

**Cape Cod National Seashore...
Marconi Center ...Fessenden
Marshfield site**

**Deep-sea fishing or whale-
watching**

American History

Concord/Lexington

American Revolution Sites

Tentative Schedule



	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
July	6	7	8	9	10	11	12
Morning	Early arrival	Early arrival	Early arrival Airport pickups provided	Last Arrival day Airport pickups provided Tours/free time	Competitor meeting 8-9 AM Tours/free time	Location draw 9 AM Teams, refs go to sites	Contest begins 8 AM
Afternoon				Tours/free time	Tours/free time	Visitors may take tours	
Evening				Welcome party/BBQ	Opening Ceremony & banquet	Teams stay at or near sites overnight	
July	13	14	15	16	17	18	19
Morning	Contest ends 8 AM Teams return to HQ	Tours/ free time	Departure		CTU HARTFORD	ARRL CONVENTION HARTFORD	
Afternoon	(logchecking begins)		Transport to airports or Hartford provided				
Evening	Free time	Closing Ceremony banquet and awards					

Books, movies about games-turned-sports



- Birding (“Big Year”)
- Monopoly (“Under the Boardwalk”)
- Scrabble (“Word Freak”, “Word Wars”)
- Arcade video games (“King of Kong”)
- Air Hockey (“The Way of the Puck”)

***“What is it like to be a champion
at a sport nobody knows about?”***

(wayofthepuck.com)

Mass Media about Contesting

- “To Win the World”
 - (Documentary about K2GL 1981 CQWW)
- Videos of previous WRTCs
 - Broadcast coverage in Brazil
- “The Battle of the Hams”, Sports Illustrated, June 30, **1958**)

Isn't it about time for some new mass-media coverage of radiosport?

Press coverage

EU Donations make it happen

TIME



Can anyone beat the Russians in 2014?

WRTC2014 Can the Americans make it work?

The Economist

The Team Captains
SO2R x 2 Ops?
Propagation from W1
Exchanges and rates

Radiosport

Who are the world's best ops?



WRTC2014 Funding



- Donations
 - Corporate
 - Clubs
 - Individuals
- Advertising
- Discounts on equipment, supplies

Major Sponsors and Donors



INDEXA



Additional Sponsors



Radio Oasis, LLC

Proud Sponsor and Wire Antenna Maker for WRTC 2014 www.radio-oasis.com



DIRECTIVE SYSTEMS



**GREEN HERON
ENGINEERING**

INRAD
international radio

**Wicked
Designz**



K7NV.COM

Prop Pitch Service

QTH
.COM

Tent Sponsors - Clubs



USA

- Florida Contest Group (5)
- YCCC, PVRC, FRC (4) each
- NCCC (3)
- SMC, CTDXCC MRRC, NCC (2)
- Alabama Contest Group
- CTU Dayton Class of 2012
- Arizona Outlaws Contest Club
- Minnesota Wireless Association
- Pacific Northwest DX Clubs
- South East Contest Club
- Arizona Outlaws Contest Club
- Twin City DXC
- TN Contest Group
- Grand Mesa Contesters of Colorado
- Reisert Family Radio Club
- West Gulf Div Contest/DX Clubs

DX

- Contest Club Ontario
- CTU Italy Class of 2012
- Contest Club Finland
- Grupo DXXE
- **Bavarian Contest Club**
- JA WRTC Veterans
- Fortaleza DX Group (PY)
- Estonian RAU
- WWROF
- SN3R/SP3KEY Contest Club
- D4C Contest Club

All 65 tents are sponsored!

“In Memoriam” Tents



- Ken Adams K5KA
- Phil Goetz N6ZZ
- John R. Beck W4AI/ZD8J
- Bill Fisher W4AN
- Gary Schmidt W5ZL
- Bob White W1CW and Jim White K4OJ
- James L. Lawson W2PV
- Hazard “Buz” Reeves K2GL
- Ed Bissell W3AU
- Paolo Cortese I2UIY
- Larry Amodeo W2AX
- Gene Zimmerman W3ZZ
- FCG Silent Keys
- John Thompson W1BIH/PJ9JT
- Frank Hurlbut KL7FH and Dan Robbins KL7Y
- Stu Santelmann KC1F
- Vic Dubois N4TO
- Johan (Joop) Bok P43JB

WRTC2014 Team Village Sponsorship Program



- A new way to support WRTC2014 and your region's team
 - Over half of the teams are from Europe (27 of 51)
- Team Village will be an exciting place to be
 - Teams, referees, visitors all welcome
- Hotel and meal expenses for Teams and Referees paid by WRTC2014 Committee
- Clubs, societies, individuals can help
 - \$1k (€750) will help cover costs for a team & referee
 - Team Village Sponsors will be recognized for their support

shop.wrtc2014.org



Welcome to the WRTC 2014 Store

Show your support for WRTC 2014 in New England with official apparel and accessories.

Every item you purchase helps provide funding for acquisition of equipment and hosting of the 59 competing teams.

Featured Products

 <p>T-Shirt Long Sleeve WRTC-LST \$25.00</p>	 <p>Polo WRTC-POLO \$30.00</p>	 <p>T-Shirt Short Sleeve WRTC-SST \$20.00</p>
 <p>Sweatshirt WRTC-SW \$40.00</p>	 <p>Cap WRTC-CAP \$15.00</p>	 <p>Donation WRTC-D \$10.00</p>

Top Sellers

1. T-Shirt Short Sleeve - \$20.00
2. Polo - \$30.00
3. Cap - \$15.00
4. T-Shirt Long Sleeve - \$25.00
5. Sweatshirt - \$40.00
6. Mouse Pad - \$8.00
7. Donation - \$10.00

The Thrill of a Lifetime



New friends, old friends for a lifetime



The Olympics of Ham Radio is coming to New England, **USA...**

Thank you for your help
and support for a world
class event!