2010 CQWW Xtreme Category Results

This was the second year of the Xtreme category, and we had a small increase in the number of entrants over the 2009 inaugural year of the category. What this category may lack in numbers, it certainly more than offsets by the enthusiasm of the entrants.

SSB

There were five entrants in the SSB Multioperator category: IR2C, IQ8MD, NP2KW, BT4EXPO, and OG5B.

The highest scoring station was IR2C, with 8.3 Million points giving them 100 "score points". They scored 41 out of a possible 100 on the "innovation" scale, for a total Xtreme score of 141.

The IR2C station was split between two sites. The main location (RTX site) was near Milano, while the remote low-band receiving site was near Bologna. The main site included all transmitting antennas (monobanders for 10 through 40, and verticals for 80 and 160). The remote receiving site used four Beverage antennas, switched in sync with the main station receive antennas, and the audio linked back to the main site using a VoIP link.

The IQ8MD station had a lower contest score at 2.7M, but a higher innovation score at 73, for a total of 105 points. Their station used three linked stations, connected via a central server. One station was connected directly to the server at the main location in Cosenza, CS, Italy. The other two stations were linked via microwaves, one at 5 GHz, and one at 2 GHz. The operators, IZ8CCW, IZ8BGY, IZ8IYX, I8IGS, IZ8HXG, IK8LTB, IZ8EPY, and IZ8CGS all connected remotely using various media, including text messaging commands from cellphones, Skype, and Wi-Fi. Logging software was QARTEST, with Hamachi handling the connections

Last year's multiop winner NP2KW had a high innovation score at 68 out of 100 points, but fell short on the contest score, and place third this year. It was an interesting operation, with the station owner, NP2KW operating locally, while EB7DX and IZ2LSC logged into the station and operated during their assigned shifts. There is a video on YouTube showing EB7DX running a good rate from NP2KW while sitting in his radio-less "shack" in Spain.

This is EB7DX running rates of 200 per hour using the NP2KW remote station

BT4EXPO had two separate stations. The first, in Shanghai, was used on 160, 40, 15, and 10, while the other station was Kunshan (50km west of Shanghai),on 80 and 20. Unfortunately, they were unable to link the two stations in real time, lowering their innovation score.

OH5BM and OH5RF decided to enter the Xtreme category in the Single-band 15M, multi-op category. N1MM was used for logging, with EZmaster, EA4TX rotator control, and an IC7700 rig. Skype was used to send the audio between the sites.

Ville, OH5RF, was located 80km away from the station at his home in Lappeenranta-city with fast broadband, while Tapani, OH5BM, was at his summer cottage on Lake Saimaa. His connection was interesting: the first 20m of connection was handled by WiFi and then a WIMAX link 4km over the lake until it got into the normal internet cloud. After frantically debugging the setup at the last minute, their conclusion was "The contest always starts 3 days early".

OH5BM in his lakeside cottage operating 15M SSB remotely as OG5B

The only single-operator SSB entry was also the clear overall winner. Matt, KA1R, developed an SSB version of the CW Skimmer. With a CQWW score of over 1M points, and an innovation score of 81, his Xtreme score of 181 was the highest of all Xtreme entries.

The station included two complete RF/computer SDR systems located about 20 km apart. One was always connected to a 3-element tribander aimed south, and the other was always connected to a 3-element 10M beam aimed northeast. Software-defined radio (SDR) hardware was Ettus Research USRP1 Motherboard with LFRX Daughterboard. Computers used were HP Compaq dc7800 PC, Core 2 Quad Q6700 processor at 2.67 GHz, 2 Gb memory, USB 2.0 connection to USRP1, Ubuntu Linux operating system, GNU Radio software development toolkit, Carnegie Mellon University PocketSphinx speech-recognition toolkit, various custom software written in Python, C, and Perl. The two stations were Internet-linked.

The speech-recognition software was preloaded with 122 callsigns and likely phonetics for the DXpeditions announced on the NG3K list and multioperator stations active in the previous year's contest. The software had no problems finding legitimate SSB signals, but accuracy of the decoding was quite poor, compared to a human operator. Only a handful of callsigns were correctly decoded and turned into pseudo cluster spots for the operator. However, the use of two SDR-based stations and the first-ever use of speech recognition in a contest earned him the Single-Operator Xtreme trophy.

CW

There were 3 single-operator Xtreme entries on CW. S56A had the highest CQWW score and a strong 58

points for innovation, for the highest CW Xtreme score at 158 points. His system, based on an advanced CW detection and robot QSO-making system was overwhelmed by the huge volumes of cluster spots generated by the S50ARX Skimmer. As a result, most of the QSOs were made the old-fashioned way (by a human), but a few dozen were made by the completely-automatic robot Sunday evening.

OH5BM tried to operate once again from his cottage remotely using his OG5B callsign. This operation was less successful than his SSB operation, with hardware failures, software incompatibility and a host of other problems making things difficult. Then at 1800z on Saturday, the remote station switched to SSB mode and locked up on transmit, ending the contest for him.

OK1CDJ used a remotely-controlled IC-706 and 2 rotators 70 km away from his home. Antennas were 5- and 6-element yagis for 15M, and a DLP-15 Log periodic for 40-10m. Used CW skimmers for hunting stations and made all 410 of his qsos in "Search and Pounce" mode.

In the multioperator section, 19-year-old Stefano, IZ3NVR, assembled his Xtreme station using a 10-year-old Pentium 3 PC, and a combination of commercial (Ham Radio Deluxe) and locally-produced software to allow IZ3EBA and IZ3ALW to share his modest 100-watt station (FT-450 with a 10/15/20m vertical and a 40/80m dipole). He successfully demonstrated that an Xtreme station can be constructed using older technology.

We hope to see many of you try the Xtreme category in 2011. Refer to the rules at www.CQWW.com and remember that pre-registration is necessary. Send your notice to Xtreme@cqww.com with your callsign and description of your station. Logs are sent to the usual addresses. Your Cabrillo log file must include the line:

CATEGORY-OVERLAY: Xtreme

Good luck!

2010 CQWW Xtreme Category Trophy Winners

Single-Operator

Matt Power, KA1R
K3TUP Memorial Trophy (K3LR Sponsor)

Multi-Operator

Station IR2C (Operators: IK2JUB IK2PFL IW2HAJ IZ2SLN IZ2ABI IW2MXY IK4VET IZ4HVM IW1GLM)
K3TUP Memorial Trophy (K3LR Sponsor)