The World Radiosport Team Championships—1996

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Any competitive endeavour is inherently unfair to some extent. Remember the controversy surrounding the government-sponsored East-bloc "amateur" athletes of the 1980s? Is it really feasible for a talented youngster to beat a multi-millionaire in yacht racing? I guess it comes as no surprise, then, that amateur radio contesting is no different.

The CQ World Wide DX Contest is amateur radio's premier contest. It is based on a multiplier system, where the total QSO points are multiplied by the sum of zones and countries on each band. QSO points are based on continental divisions; you get lots of points for working stations outside your own continent.

It's immediately obvious that anyone in one of the world's major population centres (North America, Europe or Japan) stands virtually no chance of winning, because of the QSO point disadvantage. Also, anyone that's too far from Europe's concentration of countries is at a multiplier disadvantage. The contest is virtually always won from north Africa or the north coast of South America, or from the islands off those two coasts.

Our own location is at a tremendous disadvantage. We are in direct competition with stations in Morocco, the Canary Islands and Madeira. In Ceuta, a Spanish enclave in Morocco, you can literally see Europe on a clear day, yet EA9 stations there get exactly the same credit for European contacts that we do, from 8000 km away!

During 1990, a group of contesters in the northwestern USA decided to address this problem, and to run a contest that would level the playing field. These were the days of Glasnost and Perestroika, and the Goodwill Games were being held in Seattle. The Games would see Americans and citizens of the former USSR acting like one big happy family; what better opportunity to introduce the new contest?

WRTC '90 was a tremendous success. Twenty two teams from all over the world competed for honours, using identical radios supplied by Icom. The champions were John Dorr K1AR and Doug Grant K1DG. Although the playing field was not perfectly level, as could be expected when using existing stations in a limited area, certainly most of the major variables were eliminated.

The dream was born to make WRTC a regular happening on the contest calendar. There was a false start four years later, when a group of East Coast amateurs planned a similar contest. The momentum was not maintained, and WRTC '94 never happened. Instead, a group of Northern California amateurs started working towards making it happen in July 1996.

The Teams

The second WRTC was planned to be considerably bigger than the first. Fifty-two teams would be invited. The countries to be invited would be based on the number of participants in the major contests of the previous year—the *CQ World Wide* and *ARRL DX* Contests. For each block of fifty logs submitted in these contests, a team would be invited from that country. On this basis, ten teams

were invited from the USA, and four from Japan. Canada, Germany, Italy, Poland, Russia and Spain featured two teams each, while Argentina, Australia, Belgium, Brazil, Bulgaria, the Czech Republic, Finland, France, Hungary, Lithuania, Slovenia, Sweden, the UK, the Ukraine and Yugoslavia were allowed one team each. Contest clubs within the big countries were asked to nominate team leaders. In the other countries, individuals were nominated to act as selectors.

In addition, ten slots were allowed for deserving individuals who did not qualify under the country selections, and the defending champions were invited back as an additional team. Participants from Croatia, Germany, Italy, Kazakhstan, Russia, Slovenia and South Africa and three more teams from the USA took part as wildcard teams.

Each selected team leader had to nominate his own team partner, from his own continent.

The judges

The panel of judges included many of the greatest names in contesting. They themselves would have been worthy participants, but decided instead to allow the younger tigers to do the operating, and to contribute their skills to ensuring the most equitable possible outcome. Heading the panel of judges was Lew Gordon K4VX, owner of a famous multi-operator contest station and the man who gave several participants their start in contesting. Others included AI6V, G3SXW, I2UIY, JA7RHJ, K3ZO, K4XU, K5RC, K6NA, N2AA, N6AA, N6ZZ, OH2BH, OH2MM, OK2FD, PY5EG, S5ØA, UA9BA, WØUN and W7RM. A further 36 referees were appointed to ensure that every team would be subject to the full-time scrutiny of at least one experienced contester.

Competition rules

The competition was timed to coincide with the annual IARU HF Radiosport Championship. Instead of the full contest period, WRTC participants would only compete for 18 hours. Also, to eliminate station variability to the greatest possible extent, the 80 m band was eliminated from the competition. The scoring system was also adjusted to present more interesting strategy decisions.

Each team would be assigned an existing station in the San Francisco Bay area, all within 60 km of one another. Stations were chosen to be as close to parity as possible. The requirements were a tribander between forty and sixty feet (13 and 19 m), and a dipole for the 40 m band. Teams had to supply their own radios. Up to 100 W of output power would be allowed, with only one transmitter and two receivers. Bandpass filters would be allowed to enable the second operator to listen on other bands while the first operator transmitted.

Each team was also assigned a referee or judge for the duration of the contest. The referees and judges were responsible for monitoring the contest stations throughout the event, to ensure that rules would be complied with to the letter. Each station also had to record the receiver's output continuously on a supplied VCR. Using VCRs would ensure relatively few tape changes, as well as automatic time stamps on the recordings.

The FCC made available a set of 52 special callsigns for the event. Callsigns were only three characters long: K6A to K6Z and W6A to W6Z. To increase activity, a large number of regional awards were offered for people contacting the special callsigns. To my knowledge, this was the first time that 1x1 callsigns were authorised by the FCC. Because the callsigns were so easy to recognise, anyone could easily spend the day chasing the various WRTC stations around the bands.

As each station could be contacted on two modes (Telegraphy and Telephony) on each of four bands, it would have been possible to make a maximum of 416 contacts with WRTC stations.

To eliminate the advantage that members of major contest clubs might enjoy due to unique contacts with their club members, operators were not allowed to identify themselves in any way. Callsigns were only disclosed at the commencement of the contest, and no names could be mentioned for the duration. Even the occasional "Hi, Bob!" from another station could not be acknowledged.

Once the contest was over, the committee would work non-stop to prepare the result. Each log would be carefully scrutinised, using a central database compiled from all the competing logs and a large number of outside logs received through the Internet.

Two exhibition stations also participated. The stations used the callsigns AH3C and AH3D, and were manned by Latvian and Chinese teams.

Getting together

Like all teams, our team consisted of two members. I chose Jan van Niekerk ZS6NW as my team partner. Jan is presently on an assignment in the US, and had a relatively short distance to travel. His home became our base for the week before the contest, while we prepared our paperwork, acquainted ourselves with the propagation and brushed up on our Morse code skills. We had been negotiating with Yaesu for a pair of radios for some months, and Jan finally managed to finalise an affordable deal the week of my arrival.

Getting on the air required some fancy footwork. I hold a US Extra licence, but Jan did not yet have a radio station up and running at his house. We obtained a Butternut vertical by mail order, got the radios together and set up shop on the dining room table. Fortunately, Jan's wife was in South Africa on a short vacation. She probably doesn't even realise how well her timing worked out!

The dining room was a sight to behold—a pair of FT1000MPs, an assortment of textbooks, tools and materials for building front-end protection systems and antennas, and my flying manuals for an aviation exam I had to take, nicely complemented by all the associated packaging material!

We felt somewhat overwhelmed on arrival at Motel 6 Belmont, our home for the week. I'm sure most of the judges, referees and competitors must have felt the same. Name tags identified unfamiliar faces as contesting celebrities. The experience of meeting dozens of long-time contesting peers face-to-face for the first time is hard to describe, and it took a few days for everything to fully sink in. In addition to the expected faces, a number of visitors had also chosen this week to get together and meet some friends, even though they were not on the roster of officials and participants.

Much time was spent discussing WRTC strategy and contesting in general, exchanging lies about past contests and sharing dreams about future ones. We also had several organised outings, including a tour of San Francisco, a tour of Silicon Valley, and a tour of the Napa Valley wine estates. Each evening was concluded with a hospitality suite, hosted by various contest clubs and national teams. Most of the national teams were offering copious quantities of various clear liquids distilled from a variety of vegetable matter. All the liquids had one thing in common, though—all of them made the tales grow taller and the dreams more ambitious. The committee even offered exams for those intending to get US licenses. Several dozen of the contestants made use of the opportunity,

including Jan. He went from no license to Extra Class in two exam sessions, and now holds the callsign KJ7ZE. He's hoping to soon change it to something more recognisable[1].

Friday was also spent briefing the participants on the main reason for the get-together: the contest on Saturday. Rules were clarified, software problems were ironed out and contestants that did not already have US licenses were given reciprocal permits for the duration. The station assignments were also completed, using a random draw.

On Friday night, we all went to our assigned stations to get everything ready for the early start on Saturday morning. Our station was KV6S, belonging to Jim Moyer. The antennas were a Cushcraft A3S at 40' (approximately 13 m), and a dipole for 40 m. Given that some teams were sporting big tribanders (such as the TH7DX) at up to 60’ (18 m), we had some trepidation, but at least the basic were there. Dale Green VE7SV would be our referee, and would monitor everything closely for the entire 18 hours. As a veteran contester and DXpeditioner (look for him on the cover of Martti Laine's book), Dale's credentials are impeccable. We were transported by Andy Ponzini VE7AHA, who'd come down from Vancouver with Dale and was planning to spend the weekend trying to work as many WRTC stations as possible with a dipole strung from a tree in a public park!

Jim and his wife Fran were extremely gracious hosts. Dale and Andy are also very pleasant individuals, and the six of us spent much more time chatting than we should have! Hopefully we've sparked a desire in them to visit our country some time.

Just before the 05:00 start, Dale informed us that our callsign for the contest would be W6O. Although it was rather long on CW, at least it would not easily be misunderstood.

I would operate the primary radio, and Jan would be responsible for multiplier spotting, logistics support and propagation planning. Jan had prepared a pile of papers that were shuffled all weekend, allowing us to see probable openings and to make sure we did not miss any major multiplier opportunities. The plan was to mainly work US stations, but to concentrate on rare multipliers where there were useful openings to distant destinations. Europe would be especially critical, with a long trans-polar path separating us from the multitude of multipliers available there. My major problem was that I'd contracted a severe cold the previous day, and apart from a very stuffy head, my voice also sounded like Darth Vader's. I spent some time playing with the microphone controls, and it appeared that my hoarse whisper was at least not impossible to understand.

The first three hours of the contest produced around 500 contacts, much to Jim's astonishment. He certainly looked at his own station with new eyes! A combination of the competitive rush of adrenalin and lots of interest in our short callsign produced runs far beyond anything we'd envisaged.

Despite running just 100 W, we had some problems with interference to the computer. We did not identify the problems while setting up (possibly because we did not transmit on all the possible frequencies), and Jan had to do some fancy footwork in the first few hours to get everything cleared up. We also had a spell of about two hours, during which the noise from a nearby power line (only about 5 m from the antenna) wiped out the bands. The noise blanker helped, but made all the signals sound raspy and distorted.

[1] Jan is now N3NW.

Americans were after us like a swarm of bees, and it was certainly not too difficult to make lots of contacts. What would be decisive, though, was to balance the large number of contacts with a reasonable number of multipliers. We occasionally interrupted the quick runs to look around, especially when Jan's predictions showed openings to the Pacific, Europe and South America.

Jan heard ZS6CAX on 7 MHz in our early afternoon, but at the time I was engaged in a very productive run on 28 MHz. By the time my run dried up and we moved to 40, Koji had disappeared. Only two African stations (EA8ZS and ZD8DEZ) were worked, neither of them on the continent. Only a few European stations were worked on 14 MHz, but these included a nice assortment of multipliers.

We ended up with around 2100 contacts and 137 multipliers. Not earth-shattering, but not too shabby for 18 hours with a low tribander and 100 W output.

Logs were processed throughout most of Sunday, to get the results ready for the awards banquet on Sunday night. Several judges worked through the night, and every contact in every log was checked against a central database. When the database indicated that a contact was suspect, it was investigated manually. As each team's receiver output was tape recorded for the entire 18 hour period, it was possible to check suspected errors carefully.

In the event, most of the stations ended up with similar totals. Our result landed us in the middle of the pack, with a score of 461 553 points. We were credited with 1276 CW and 817 Phone contacts, 137 multipliers and a unique rate of 1,7%. Given our modest station, we were pleased.

Incidentally, the unique rate is a measure of the number of callsigns in our log that did not appear in any other logs. These may be legitimate (like the KH6 station that I engaged in a chat and who obviously didn't talk to anyone else), or may be the product of logging errors. For this reason, the unique rate is often used as an indication of logging accuracy. Unique rates for the participants varied from 0,4% to 5,0%, all good by international standards.

The highest contact total was about 2500, and the highest multiplier around 180. The winners, KRØY and K1TO using the callsign W6X, had the highest multiplier total and the fourth highest contact total. They were followed by K6T (K4BAI and KM9P) and W6R (K6LL and N2IC). North Americans dominated the top scores, with 12 of their 16 teams ending in the top 15! Much speculation was evident on the reason for this phenomenon, with no satisfactory answers yet. The first team from outside the continent was W6Q (9A3A and S53R) in 7th spot. The three stations from the Southern Hemisphere did not do well: W6O (ZS6EZ and ZS6NW) was 31st, W6W (LU6ETB and LU/OHØXX) was 35th and W6Z (VK5GN and VK2AYD) was 46th. It probably doesn't need to be said that W6O was the top African team—it was the only one!

Looking back

We were asked many times before the event what our expectations were. Our answer was always the same: It's not realistic to expect to beat the world's top operators in their own back yard. It might not even be realistic to assume that one would be able to come up to par under radically different conditions.

We would be very close to a large concentration of amateurs; we'd have loud signals readily available to work for many hours per day; we'd have to make use of unfamiliar propagation to find

those elusive openings and maximise the multiplier counts. So, our primary purpose was to go there and ensure that we did not disgrace ourselves. If that could be accomplished, we'd be happy.

Anything beyond that would be a cherry on the cake.

We feel that we achieved our primary objective. With a very basic station and a few blows dealt by Murphy, we managed to notch up a score that was competitive. We managed to predict most of the major openings, and managed to have our beam in the right direction most of the time. We even managed to maintain an above average level of accuracy, something of which we are very proud.

Making it happen

WRTC '96 was a massive undertaking. Selecting and inviting 150 individuals to be competitors and judges is a massive undertaking. Finding 52 local stations with reasonably similar antennas and understanding hosts is a massive undertaking. Arranging accommodation, food and transport for the 200-odd people that attended WRTC is a massive undertaking. Massive undertakings cost lots of money, and require lots of work. A team of volunteers from the Northern California Contest Club made it all happen. The committee included, inter alia, AA6MC, AEØM, AE6Y, AI6V, K3EST, KK6QM, NØBBS, N6IP, VE7NKI, W6OAT, W6QHS and W6RGG.

Apart from the hard work of running the Championships, the committee members also found sponsors to pay for most of the expenses, to the tune of almost $ 50 000. Ham Radio Outlet, Yaesu, Icom, Northern California DX Foundation, the ARRL, CQ Magazine, Shell Oil and WJET-TV from Pennsylvania all made major financial contributions. WJET-TV also prepared video footage of the event, which was screened on CBS stations during our stay.

Apart from the collective expenses, each team had to provide its own transport to get there with enough equipment to assemble a respectable two-radio station. In my case, I can vouch for the fact that flying from South Africa to San Francisco and back with lots of luggage is not cheap.

Major contributors

Several individuals and companies contributed substantially towards our team's expenses, making it possible for us to get there:

- Sam Ford ZS6BRZ of Radio Accessories and Data Modems
- Robin Cardy ZS6BI and Dick Shackleton of Hamrad
- Marc Lurie ZS6HZ of Lieberman Amateur Radio
- Yaesu offered us an affordable deal on a pair of FT1000MP radios
- Alewyn and Erica Burger, my ever-supportive parents
- Our employers, Nanoteq in South Africa and Microchip Technology Inc. in the USA

Supporters

Danny Liebenberg ZS6AW and Norbert Taverner ZS6ANL helped to ensure that all the bits and pieces were on hand. Many individuals called and wrote to express support and to provide encouragement at times when it did not look like we could pull it off.

Thanks everyone!

Looking ahead

Plans are being tossed around for another WRTC in the year 2000. The venue has not been decided, and will primarily be dependent on where enough volunteers can be found to make all the logistics happen. Japan and Europe are distinct possibilities at this stage. Will we be there? Only time will tell.

In the meantime, we're taking the time to reflect, and see what lessons can be learned. The next four years will provide opportunities to learn new tricks, and to ensure that the opportunity will not have to be passed up if it does arrive. But it will be hard back home to work a contest without thinking back to the plentiful supply of loud signals that we had. And each contest will certainly have another dimension, now that we know what most of the big guns at the other end look like!