



NCDXF newsletter

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Winter 2016

TX3X – Chesterfield Islands

Gene Spinelli, K5GS

APPROXIMATELY 870 KILOMETERS northwest of Noumea, New Caledonia, lies the French archipelago known as the Chesterfield Islands (aka Chesterfield Reefs), uninhabited atolls in the Coral Sea. These 11 coral islets of elongated reefs enclose a deep, semi-sheltered lagoon. The west and northwest reefs are known as the Chesterfield Reefs, and those on the east and north are the Bampton Reefs. In addition, there are numerous cays amongst the reefs, including Loop Islet, Renard Cay, Skeleton Cay, Bennett Island, Passage Islet, Long Island, the Avon Isles, the Anchorage Islets and Bampton Island.

TX3X operated from the Anchorage Inlets, on the area called Les Trois Ilots du Mouillage (the three anchorage islands), which are less than two meters above sea level at high tide. The surface is composed of crushed coral and pumice to a depth of over 36 inches and is home to thousands of nesting seabirds with an active population of hermit crabs and sea turtles.

As seen during previous DXpeditions to the Coral Sea, the beauty of the white sand against the blue water and submerged coral is stunning and the sun's reflection off the water and coral produced the most beautiful colors in the spectrum.

Surrounding the island were submerged coral heads, which made navigation hazardous and required us to anchor about 500 meters offshore and use a Zodiac to travel back and forth from the boat.



The team (from left): Ross, K6GFJ; Walt, N6XG; David, N6HD; Gene, K5GS; Les, W2LK; Kevin, K6TD; Tom, ND2T; Steve, W1SRD; Pista, HA5AO; Arnie, N6HC; Alan, AD6E, and Mike, WA6O.

Why Chesterfield Reef?

The idea to activate Chesterfield surfaced after the VK9MT project. Pista (Istvan Gaspar), HA5AO; Les Kalmus, W2LK and myself, Gene Spinelli, K5GS, met in Friedrichshafen, Germany, to discuss several alternatives. At the time Chesterfield was No. 24 on Club Log, but we knew it would move up the list after the Navassa DXpedition (February 2015).

We contacted Rémi Touzard, FK8CP, and Sam Torope, FK8DD, and asked for their assistance with landing formalities and radio licensing. We also contacted the ARRL to verify its

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From the President's desk

WARM UP YOUR RIGS! ADJUST YOUR antennas! Clear your calendars! We are enjoying a grand season for DXers. We are in a six-month period when NCDXF-supported DXpeditions will be on the air from five of the Top 10 most wanted DXCC entities. KH5 Palmyra Atoll (#9 most wanted on ClubLog), VP8S South Sandwich (#3) and VP8G South Georgia (#8) are already in the log. VKØH Heard Island (#5) and FT/J Juan de Nova (#6) will be next. It's a cornucopia.



Believe me when I tell you that "If was easy, it wouldn't be rare." These expeditions have been years in the making. Each has had to overcome problems of access, logistics, transportation, finance, staffing and equipping. Each still has problems of landing, environment, operation, propagation, logging, safety and Murphy to address before you get into the log. My advice: be very nice to these teams who are going to the ends of the Earth to activate rare entities for your enjoyment. Send them a direct contribution and some encouraging words before they go. Be nothing but civil in the pileups. Don't repeat your callsign if they have it correct. Don't dupe them (one US lid is in the TX3X log 32 times). Be constructive in communication with the pilots and on the spotting network. Thank them on the air for your ATNO.

This season of grand DX is brought to you by DXpedition organizers, DXpeditioners and NCDXF, whose mission is to provide necessary financial support for well-organized DXpeditions to the rarest, most difficult, most expensive DXCC entities. How are we doing?

In this newsletter you can read pieces about

- NCDXF support to training a high school contest club which then went on to make DXCC during the recent CQWW SSB contest,
- Version 2 of the NCDXF/IARU International Beacon Project, already QRV, and which promises to restore the full constellation of HF beacons to operation, and
- The NCDXF Cycle 25 Fund, to ensure that DXers can enjoy grand seasons of DX during the next solar cycle 11 years from now.

Your continuing support makes a difference to the Foundation, and thus to DXing, and thus to our wonderful hobby. I appreciate it.

See you in the pileups, for sure.

Tom ND2T

CONTRIBUTIONS NCDXF relies heavily upon the generosity of its contributors to fund various projects. We ask you to consider making an annual contribution of US\$50 or its equivalent in foreign currency. However, we do not wish to exclude anyone from the **FOUNDATION** for financial reasons. If \$50 is not within your budget, then please give what other amount you can. Naturally, we welcome contributions in excess of \$50! **NCDXF** is an organization described in Section 501(c)(3) of the Internal Revenue Code and all contributions are tax-deductible to the extent permitted by law for U.S. taxpayers. Send your contribution to: **NCDXF**, P.O. Box 2012, Cupertino, CA 95015-2012, USA. You may also contribute and order supplies online via our secure server, visit www.ncdxf.org/donate.



First sighting of Chesterfield.

requirements for landing permits/permission documentation.

Rémi, FK8CP, contacted the radio licensing agency in Noumea and helped with the process to get the TX3X call sign and each operator submitted a copy of his Amateur Radio license and passport. The TX3X license was granted and valid from 30 September to 14 October 2015.

The team

We formed a team consisting of Pista, HA5AO; Les, W2LK; Arnie Shatz, N6HC; Tom Berson, ND2T; Ross Forbes, K6GFJ; David Greenhut, N6HD; Steve Dyer, W1SRD; Mike Shapiro, WA6O; Walt Wilson, N6XG; Kevin Rowett, K6TD; Alan Maenchen, AD6E, and myself.

Many of the team members knew one another and others met for the first time at the April 2015 International DX Convention in Visalia, CA. Over the course of the project, team members worked well together and helped one another as needed. Their prior DXpedition experience and creativity was evident and since all but one person on the team had DXpedition experience, the decisions came easily.

At their own expense, team members were required to have emergency evacuation and medical insurance. Each member provided his medical history to team doctor Arnie, N6HC, summarizing any serious medical conditions, medications and emergency contact information.

Physical limitations could preclude a person from joining the team. Embarking and disembarking the Zodiac, climbing into a bunk or even

using the boat's head can be a physically challenging task in rough seas; each team member had to be self-sufficient.

Since all of the team members were in the at-risk age group for cardiac arrest, we thought it prudent to purchase a portable Automated External Defibrillator (AED) to add to the medical supply kit.

The boat

The 82-foot expedition sailing yacht *Evohe* from Dunedin, New Zealand, was previously used for the Campbell Island and Mellish Reef DXpeditions, so we contacted owner/skipper Steve Kafka and asked if he would be interested in a new project. With a top speed of 10 knots, it would take three days to reach Chesterfield from Noumea, New Caledonia.

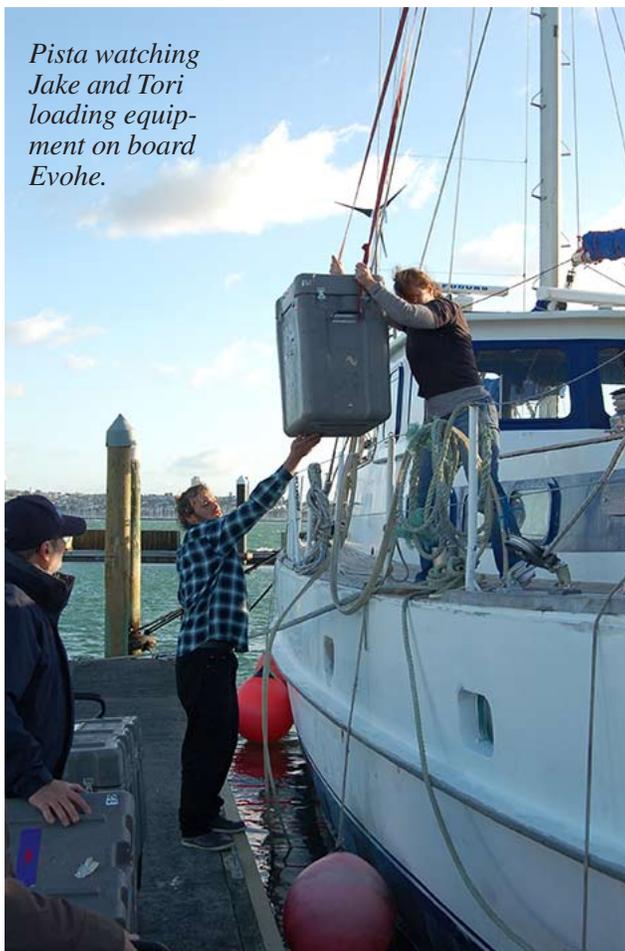
Evohe is a no frills vessel licensed to carry 12 passengers and up to eight crew members. Being a "working boat" meant there were few, if any, creature comforts on board.

The skipper had a crew of four New Zealanders — Ray, Allison, Tori (ZL1TOR) and Jake — two of whom had previous DXpedition experience. We selected Noumea as our departure point to minimize the number of days at sea.

Planning stages

Regularly scheduled Skype and Web-Ex conference calls were conducted to plan every aspect of the project. Budgets were established, responsibilities assigned, fund raising began and soon various documents began to take shape. We contacted equipment manufacturers and dealers for support.

Elecraft supplied six complete stations (K3 transceivers, KPA-500 amplifiers and P3 scopes); DX Engineering donated thousands of dollars



*Pista watching Jake and Tori loading equipment on board *Evohe*.*

of coax, accessories, masts and power supplies; Expert Linears America, LLC, loaned us the new SPE 1.3kw amp; Tom Schiller, N6BT, supplied six vertical antennas, while SteppIR and foldingantennas.com sponsored the beam antennas. Other suppliers of critical equipment included Arlan Communications (Radiosport headsets), MicroHam (interface units), GMØOBX (custom interface cables), InnovAntennas (high power filters), Spiderbeam (accessories), Array Solutions (SAL antenna) and Northern California DX Foundation (low power filters). The US-sourced equipment was consolidated in San Jose, CA, at the home of Ross Forbes, K6GFJ.

Supplies and consumables were sourced in New Zealand, where we would consolidate with the US shipment. Heavy items such as tents, generators, the electrical grid, fuel drums and miscellaneous items were purchased in New Zealand and stored at Precision Autowerk, Auckland.

New Zealand

Shopping lists and store names were provided to the advance team comprised of Pista, HA5AO; Ross, K6GFJ, and myself, augmented by local volunteers Roly Runciman, ZL1BQD, his wife, Gail, ZL1FV, and Brett Sommerville.

We chose Auckland as the consolidation point for several reasons, the most important being economics. We had access to storage facilities, trucks and a loaner car at no cost and it was less expensive to ship the equipment to New Zealand.

We began loading the boat on the afternoon of 12 September, transporting everything to the dock, which was 30 minutes from the storage site. After our gear was loaded, the skipper took on an initial supply of fresh fruits and vegetables, meats and dry stores and by the end of the day on 15 September we were ready to sail.

After fueling and clearing Customs and Immigration two days later, Evohe set sail for Noumea with Pista, HA5AO, on board for the 7-day journey.



Our transportation, Evohe, from Dunedin, New Zealand.

Noumea arrival

The rest of the team began arriving at Noumea on 25 September, most flying in via Auckland, where several of us met at the airport.

Having never been to New Caledonia I didn't know what to expect. The mountainous island is one of the largest in the South Pacific, with a population near 209,000. The predominant language is French, yet most everyone we encountered spoke some English. The modern city had many shops and a well-engineered road infrastructure and because we arrived on a holiday weekend, almost all businesses were closed which made it easy to navigate the virtually deserted streets. There was a restaurant next to the hotel and another at the marina, both of which had an ample supply of beer and food. There was also a McDonald's near the marina.

Setting sail and setting up

On 28 September we set sail for the 3-day passage to Chesterfield and although the winds were in our favor, we used the boat's engines for the journey. The skipper planned our arrival at Chesterfield for the morning of 1 October when the sun would be positioned

so he could see and navigate around the submerged coral heads.

Once we arrived, the hard work began in earnest: loading the Zodiac, bringing people and equipment ashore and setting up the camps. The strong wind presented a real challenge erecting tents and antennas; it was our constant companion, blowing at a steady 20 knots and regularly gusting upwards of 35-40 knots, rather than the 15-20 knot tradewinds we expected.

The wind even made riding in the Zodiac an adventure in itself as sea spray showered us as we plied the rough sea. The skipper suggested we get under a tarp to avoid getting too drenched.

The landing area was, for the most part, a narrow sandbar with patches of low growth vegetation consisting of grass and shrubs. Our Mellish Reef experience indicated we needed long tent and guying stakes on Chesterfield. To manage cost and minimize weight we used 90 pieces of 3-foot (1 meter) rebar, 120 3-foot wooden stakes and 100 sandbags each capable of holding 50 pounds (23kg) of sand. Several techniques were used to secure the tents and antennas, including burying a sandbag in a dead-man arrangement



Typical sandbag usage.

and/or augmenting the rebar and wood stakes with a sandbag.

We used five heavy-duty tents to create the SSB camp, the CW camp, the data center/break tent and two sleeping tents. In retrospect, we needed more sleeping tents since we couldn't get back to the boat often enough due to the heavy winds and unsafe sea conditions.

The New Zealand-sourced tents were made of heavy-duty poly canvas with steel frames, and they took a significant beating from the wind and remained standing; they even kept the rain out. Except for not reading the instructions, the biggest tent challenge was the poles that held up the awning; they continually sank in the loose sand. The boat crew helped stabilize the poles and performed daily maintenance on the guys.

Other than the first night when the wind caused some antenna problems, we had no other wind-related antenna problems, although we were unable to erect tall antennas. The area was a narrow sandbar about 30 feet (10 meters) wide, and salt and sand spray was constant, which required daily maintenance of the lower antennas. The two-element rotatable vertical antennas were installed first, giving us 10M-40M capability.

As the days progressed, the wind never subsided and propagation got worse. In spite of the dangerous conditions, we did get the SteppIR beams

derpole up for the 80M vertical, but we jury-rigged a 30-foot antenna mast with a top loading wire in an inverted L configuration. We tried installing the Battle Creek Special, but the winds were too strong. Toward the end of the project, the 80 Meter antenna was reconfigured with a longer piece of wire as a makeshift 160 Meter antenna, which we used on the last night.

After the DXpedition we saw a comment on the Internet that suggested the antennas may not have been the correct distance from the sea. Maybe the poster knew something we didn't? The useable space between high tide marks was only about 30 feet (10 meters).

Due to the unsafe conditions the skipper severely limited our ability to shuttle back and forth to the boat during the day, and not all at night. We created a shift schedule that kept one team on the reef 6 p.m. to 6 a.m.

erected and, on day five, the 80 Meter antenna was raised. Due to the fierce wind, we couldn't get the 18M Spi-



The sandbar at low tide.

Operating time: 10.5 days Avg. ~4,772 Qs per day												50,104 Qs 14,298 Uniques (28.5%) ~2,357 Dupes (4.7%)		25,467 CW (50.8%) 19,502 SSB (38.9%) 5,158 RTTY (10.3%)	
Continent/Band	160M	80M	40M	30M	20M	17M	15M	12M	10M	6M	Total	Total %			
AFRICA	—	5	12	7	43	27	16	3	—	—	113	.23%			
ANTARCTICA	—	—	1	—	—	—	—	—	—	—	1	0%			
ASIA	145	838	1,776	1,423	3,648	3,575	4,777	3,044	3,035	—	22,261	44.41%			
EUROPE	—	579	1,352	914	4,835	1,199	740	443	73	—	10,135	20.22%			
N. AMERICA	47	887	1,901	577	1,944	1,886	4,149	2,314	1,436	—	15,141	30.21%			
OCEANIA	17	139	280	87	516	297	310	105	107	—	1,858	3.71%			
S. AMERICA	—	26	46	24	122	119	184	58	39	—	618	1.23%			
TOTAL	209	2,474	5,368	3,032	11,108	7,103	10,176	5,967	4,690	—	50,127	100%			

Sleeping on the island was very difficult because of the wind and tent noise, but the revised schedule allowed sleep time on the boat at night for half the team. Propagation was such that we didn't see a significant negative impact from this new schedule since the bands were mostly closed.

On the air

Steve Dyer, W1SRD, made the first contact with AK6ZZ on 1 October. Propagation was good with energetic pileups around the globe, but we became increasingly concerned when propagation reports predicted strong geomagnetic disturbances. When propagation deteriorated, the band openings dwindled and as propagation further diminished, atmospheric noise increased and our rates suffered. Over-the-horizon radar wiped out signals on 40 SSB one night.

For the entire operation, the K-index was 4 or higher, with the A-index peaking at 77 on 7 October. Propagation was erratic and unpredictable. We experienced pinpoint (cluster-like) propagation where we could hear a relatively small geographic area extremely well, then suddenly signals disappeared from that area and another area would be heard for a short while. There was no doubt you were hearing us better than we heard you. We received reports that aurora was causing problems in northwestern EU and it was disappointing that we couldn't get on 160 until the last night.

The pilots reported your complaints

that we worked Asia at the expense of other regions. Unfortunately, we were not hearing the other geographic areas but had almost full time propagation to Asia. We listened often for NA, SA, EU, AF and OC and directed the pile-up when we could hear them.

Being so close to JA and hearing them almost all the time was challenging and although we asked JA to standby many times, it wasn't always effective. We tried several different techniques to reduce the continuous calling; some worked and some didn't.

We used seven Lenovo laptops configured with N1MM+ in a networked environment and contrary to the usual Internet rumors, we uploaded the logs on a daily basis, except for one day when we were distracted by more pressing needs. No logs or Qs were lost. We uploaded by day, not by band, as some Internet rumors implied, and we had an unexplained logging problem when over 800 QSOs were incorrectly logged as PSK31 (the log was corrected from the island).

There was a problem with our website on 6 October (GMT date) because our web-hosting firm (inmotionhosting.com) suspended our account due to too many hits even though several weeks before the DXpedition we gave them notice of the expected peaks in usage and offered to pay for additional resources, as required. We called them from the island on the satellite phone and their system administrator made up a nonsense story that our software was the problem. We then called John

Miller, K6MM, and asked him to intervene and within an hour the site was back online, operating normally and meeting the load. There were no software problems.

QRT and rough seas

On the morning of 12 October we went QRT and began the teardown process. Ironically, the wind subsided for a while. We spent about six hours in teardown mode, staging equipment on the beach and ferrying it back to the boat.

The journey back to Noumea was into the wind and very rough. The skipper described the seas as "confused," because though the swells were only about three to five meters, the skipper said the seas were coming at us from different directions. The ride was so rough that team medic Arnie, N6HC, became concerned when several members were unable to keep fluids and food down. After three days at sea, the skipper dropped anchor at Koumac on the far northern tip of New Caledonia.

The forecast indicated continued strong winds and unsettled seas so the skipper gave us the option of continuing by boat to Noumea, or taking a 5-hour bus ride. Arrangements were made by the harbor master to transport the team to a local bus stop a few kilometers away while Arnie, N6HC, remained on board. Evohe arrived the next day with Arnie, who survived the journey.

The Evohe departed Noumea on 19 October, arriving back in Auckland on

27 October where the advance team of Ross, K6GFJ, myself and volunteer Brett Sommerville, plus the Evohe's crew, unloaded the boat and trucked the equipment back to Precision Autowerk.

Daily challenges

The weather and propagation presented the greatest challenges, causing operating plans to be changed. The RadioSport headphones did a good job of minimizing the external noise, but nothing could be done to stop all the tents and operating desks from shaking constantly.

Antenna and tent guys required constant attention, primarily due to the sand base and lack of a solid footing. We had salt contamination issues with the lower antennas, but the elevated SteppIRs had no problem.

On cays like Chesterfield, heat and humidity are also important considerations. We brought ashore over 400 liters of drinking water and 20 pounds (9 kg) of powdered Gatorade to restore electrolytes lost through perspiration. Everyone carried a personal water container and we encouraged everyone to protect themselves from the sun with sunscreen, hats and long-sleeved shirts. The Northern California DX Foundation supplied tropical shirts that were perfect for this protection.

We did have difficulty sleeping on the island due to the sound of the wind blowing across and through the tents.

We were careful not to disturb ground-nesting birds. Many had eggs in their nests and became agitated if we got too close. Nightly visits by the hermit crabs were always interesting, but other than a few cut fingers, we had no injuries or accidents on the reef. No turtles, birds or eggs were injured during our stay, and the birds were just as interested in us as we were in them, always hovering close to our heads, watching everything we did.

Results

Our goal was to work 80,000 QSOs and concentrate on RTTY. Unfortunately, weather and propagation have a nasty habit of changing the plans. After 10 full operating days, we closed

the log with 50,104 QSOs, which now shows 50,123 with SWL requests.

In general, the DX community cooperated nicely during the pile-ups. However, being so close to JA at times it was a real challenge to get JA to QRX. We appreciated those operators that followed the DX Code of Conduct and wish those who didn't would recognize the problems they cause for themselves and others.

The erratic propagation required you to spend significant time in the chair to work us. We received many emails from people who got in the log with 100 watts and a dipole or vertical and we worked a number of mobile stations. I think those operators knew their limitations and leveraged their skill to find an opening rather than rely on the cluster.

There were two other DXpeditions and a Cuban Special Events station on the air at the same time and we know from emails received afterward that some people who thought they worked TX3X found their call sign in another station's log. Maybe this was caused by incorrectly posted call signs on the cluster or overlapping pile-ups on the narrow bands?

Message in a bottle

How many times have you walked along a sandy beach and found a bottle with a message inside? The first team to arrive saw a few wine bottles on the sand but upon further investigation, it was discovered that one of them contained a message. The note said the bottle was cast into the ocean on 30 March 2014 from the cruise ship Carnival Spirit by a family from Australia traveling from Noumea to Sydney. We sent an email to the family from the island and, later, followed up from Noumea with more details and photos.

Wrap up

While we were disappointed with the weather and propagation conditions, we realize that there are some things we can't control. We very much appreciate the support from the global DX foundations, clubs, individuals and partners who helped make this project a reality. Our corporate sponsors were



Pista, HA5AO, discovers a message in a bottle.

equally important to the project.

The global pilot team led by Ralph Wettle, W4HK; our QSL consultant, Tim Beaumont, MØURX, and our social media guru, Glenn Petri, KE4KY, did a wonderful job. We met many fine people in New Zealand and New Caledonia who assisted us before and after the project.

The highlights of the project included giving ATNOs, putting people on the Honor Roll and Top of the Honor Roll, and supporting the Auckland, New Zealand North Shore Boy and Girl Scouts with our surplus equipment donation.

I'd be remiss by not mentioning the camaraderie, cooperation and friendship of the TX3X team, the global pilots and all those who helped us throughout the project. Please visit our website, www.tx3x.com 

NCDXF CT University Scholarships Reap Big Rewards

NCDXF HAS BEEN AWARDING SCHOLARSHIPS TO COVER TUITION for Contest and DX University sessions for students 25 years of age and younger.

Last year we reported that students of the Bloomington (Indiana) High School South Amateur Radio Club, K9SOU, attended the Dayton CTU. They rode all night on a bus to attend, and rode the bus home the same day. (That was good practical contest endurance training!)

The club operated during the 2015 CQWW SSB Contest and worked all continents and worked 102 countries, enough for the DX Century Club (DXCC) award in one weekend! This is the second contest the club has participated in this contest season and they plan to participate in many future contests. For the past 10 years they have been extremely competitive in the School Club Roundup Contests.

For more details about their club, see their website: <http://w9ear.org/k9sou> and follow them on Twitter @K9SOU

BLOOMINGTON HIGH SCHOOL SOUTH
AMATEUR RADIO CLUB



K9SOU



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K9SOU two-element SteppIR.



K9SOU Bloomington High School South Amateur Radio Club.



"CQ contest, CQ contest, K9SOU."



At the 2014 Annual Meeting, the NCDXF Board authorized a grant for scholarships for young contesters to attend the Contest University at the Dayton Hamvention. Shown in the photo (from left) are Tim Duffy, K3LR, founder of Contest University, and the four "students" who attended in 2015: Teri Grizer, K8MNJ; Thomas Getz; Ryan Cusshall, KD9DAB, and Neil Rapp, WB9VPG.

A new and novel idea for a wedding gift

A wedding invitation arrives in the mail and your first thought is "What do I get as a gift?" This is even more of a puzzle if the about-to-be newlyweds are not in their 20s or even their 30s and they already have all of the silver serving trays and wine glasses anyone could ever need.

Ken Bills, W9KB, found a clever and thoughtful answer. His good friends Karl, N1DL, and Elle, N1ELL, were about to be married and had requested guests not to bring gifts. Ken came up with a novel and great idea: he would make a contribution to NCDXF in the name of the newlyweds. This is the first wedding gift contribution to NCDXF that we can recall being made — but what a great idea!



Newlyweds, Karl and Elle.

NCDXF/IARU International Beacon Project v2 is On The Air

WHAT DO YOU DO WHEN YOU WANT to know about actual propagation, right now, on this band, between your QTH and other places on the face of the Earth? You could tune around, but success depends on somebody transmitting. You could look at the Reverse Beacon Network to see what nearby skimmers have spotted, which might be OK if you have skimmers nearby. And again, it depends on who is calling CQ. Or you could spend a few minutes listening on the NCDXF/IARU International Beacon Project (IBP) frequency. This strategy works in real time, all the time, from anywhere and everywhere. On the beacon frequency you will hear (or not) transmissions from each of up to 18 beacons located in prime DX locations around the world. Beacons transmit one at a time, in a fixed order. Each sends its call in CW, and then long dashes at 100w, 10w, 1w, and 0.1w of power. A beacon listener gets rapid, real-time information on band conditions and openings.

For the past 20 years, Version 1 (IBPv1) beacon controllers (designed by Bob Fabry, N6EK, and powered by the Intel D8748 8-bit microcontroller) have been driving Kenwood TS-50 radios and putting signals into MA5-V vertical antennas around the clock. Timing for this distributed system is disciplined to GPS, but using GPS modules and antennas which are no longer manufactured and which, increasingly, cannot be found even on eBay. Indeed, continuous service, wear and tear, and obsolescence have made the beacon system increasingly difficult to maintain. At press time, four of the 18 beacons are off the air and awaiting repair, which may never come. ALC faults, power supply faults, controller faults, and GPS faults are the common modes of failure.

To remedy these problems, NCDXF started a project to design IBPv2,

identical in function to v1, but using modern GPS components, a modern microprocessor and digital control of a modern radio. A team of volunteers designed, constructed, debugged and installed the first IBPv2 controller, a prototype, at the W6WX beacon site in mid-July. It has been operating there, apparently flawlessly, for about six months and has been interoperating smoothly with the existing IBP

To remedy these problems, NCDXF started a project to design IBPv2, identical in function to v1, but using modern GPS components, a modern microprocessor and digital control of a modern radio.

ecosystem. That ecosystem consists of users in and out of Amateur Radio, programmers who build monitoring software and equipment makers who do the same. You can see a list of monitoring software and hardware on the beacon webpage (www.ncdxf.org/beacon). In particular, IBPv2 works with the widely-used Faros beacon monitoring software. This software is location and timing aware, and gives a report of both signal strength and whether the propagation is short-path or long-path. In general, beacon users cannot tell whether they are listening to a v1 beacon or a v2 beacon, and this is a measure of success.

The IBPv2 team consists of Kevin Rowett, K6TD (leader); Leigh Klotz, WA5ZNU; Stu Phillips, K6TU; Geoff Baehr, N6LXA; Tom Berson, ND2T; Lance Gitter, K6GSF; Alex Shovkopyas, VE3NEA; Peter Jennings, AB6WM (VE3SUN); Steve Lund, K6UM; Steve Merchant, K6AW, and Dave Leeson, W6NL. We owe these people a lot of thanks.

The second (and final prototype) v2 controller will soon go to Maui,

Hawaii. There it will become the KH6RS beacon, replacing Oahu's KH6WO beacon which is off the air. Mahalo to Alan Maenchen, KH6TU, and Tom Worthington, NH6Y, for agreeing to host the KH6RS beacon.

Both W6WX and KH6RS use well-travelled but otherwise new Icom IC-7200 radios generously donated to NCDXF for use as beacons by Paul Ewing, N6PSE.

At its board meeting in October, NCDXF allocated \$8,000 for parts to build a full constellation of 20 IBPv2 controllers. After these are built the entire beacon network will transition toward v2, starting with the beacons which are currently off the air.

All beacon hosts are volunteers, and some operate on a shoestring budget. In a few cases NCDXF reimburses beacon hosts for beacon electricity bills and even for national IARU affiliation. The Foundation now views this as an opportunity for Hams to do a good deed. If you or your DX Club would like to sponsor the upgrade and/or operation of a beacon please contact Tom Berson at president@ncdxf.org.

Many more details about the IBP, including frequencies, timings, locations, monitoring software, and monitoring hardware is at www.ncdxf.org/beacon. 



NCDXF announces Cycle 25 Fund & Cycle 25 Society

NCDXF'S MISSION IS TO PROVIDE necessary financial support for well-organized DXpeditions to the rarest, most difficult and most expensive DXCC entities. Current DXpeditions are funded through current annual contributions to NCDXF by individuals and clubs but, looking forward 11 years toward the next sunspot cycle, Cycle 25, NCDXF anticipates that its ability to execute its mission will be endangered by rising DXpedition costs, especially for transportation to southern ocean entities.

To address this problem, NCDXF President Tom Berson, ND2T, has announced the formation of the NCDXF Cycle 25 Fund. The goal of the Cycle 25 Fund is to double NCDXF's endowment through significant estate gifts from current DXers. This will allow NCDXF to continue its mission throughout sunspot Cycle 25 and beyond. "It gives me a warm feeling to know that my estate will help

provide important QSOs for future DXers by providing financial support to future DXpeditioners," Berson said.

NCDXF Director, Craig Thompson, K9CT, has agreed to champion the Cycle 25 Fund, and has established a Cycle 25 Society for those who participate. Thompson said, "The Cycle 25 Society is for honoring those special individuals who commit to estate giving before the next sunspot maximum. When you let us know your plans, we will honor you on our website and send you a special Cycle 25 Society pin as a memento of your thoughtfulness."

Craig Thompson invites DXers interested in the Cycle 25 Society to visit the NCDXF website www.ncdxf.org/pages/estate.html for more information. You can also contact Craig to discuss Cycle 25 Fund funding options, including specific bequests, designation of IRA beneficiaries and purchase of an annuity or life insurance.

DXPEDITION LENDING LIBRARY

NCDXF has a number of VHS/DVD videos and Microsoft® PowerPoint presentations on CD-ROM available for loan to organizations wishing to show them at their meetings.

There is no charge to use the programs in the **FOUNDATION'S** library, but clubs borrowing materials are responsible for postage in both directions. To view the complete listing of programs available for your club's use, visit our website, www.ncdxf.org, and click on "Videos."



Show your support for NCDXF

NCDXF offers several ways for you to show your love for DXing! Impress your friends with a gold lapel pin (\$7), show up at your next hamfest sporting the NCDXF hat (\$12) or don a NCDXF T-shirt (\$15) to set up your Yagi on Field Day. Send out your QSLs with an NCDXF label (roll of 500, \$7). Mail in the attached form or visit www.ncdxf.org to order today.



Contribution & Order Form

YES! I want to contribute to NCDXF!

Contribution \$ _____
YES! I want to show my support for NCDXF. Send me the following supplies (shipping included):

- _____ T-Shirt(s) @ \$15 each \$ _____
- (indicate size M / L / XL / 2XL / 3XL)
- _____ Hats @ \$12 each \$ _____
- _____ Lapel pin @ \$7 each \$ _____
- _____ Roll(s) of labels @ \$7 each \$ _____
- Total contribution & supplies \$ _____

Call sign _____ Name _____

Mailing Address _____

Email _____

Check enclosed or Charge to Visa / MC / AmEx

Card number _____ Exp. _____

Signature _____

Mail to NCDXF, PO Box 2012
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