

**SPECIAL REPORT**  
on  
the impact of  
Remote Radio Operations  
on  
DXing and the DXCC program

To: ARRL Program and Services Committee

From: DXAC-prepared and submitted by Bob Allphin, K4UEE, Chairman

Subject: Remote Operations

Date: May 13, 2008

To the Members of the PSC:

On January 2, 2008, the DXAC was tasked with the following assignment:

*The concept of operating HF Amateur Radio stations remotely is now reality. The Programs and Services Committee asks the DX Advisory Committee to consider the following scenarios, and to respond with comments to each one, with respect to (1) What is/would be the impact on DXing and DXCC; and (2) Is the scenario desirable or undesirable as an activity within Amateur Radio? Analysis of other scenarios is also welcome.*

On January 7, 2008, I held a conference call with Dave Patton, NN1N and Cliff Ahrens, K0CA to discuss the DXAC assignment and clarify the specific questions and scenarios being considered as well as other related issues. On January 10, 2008, the DXAC was notified of the assignment using the DXAC email reflector. All members of the Committee received a copy of the original assignment and a list of discussion questions I had prepared. My objective was to use general discussion questions to flesh out the various issues involved in the overall concept of remote station operations. The strategy being that after general discussions, the individual scenarios given us in the assignment would be clearer and easier to respond to.

Throughout the two and half month's of discussion via the DXAC email reflector, all the Committee members participated, although some members devoted more time and thought to the assignment than others. Approximately half of the Committee polled DX clubs and individual Dxers in an effort to gain additional insights and perspectives about remote radio operations. The results of these discussions with DXers in their respective

Divisions helped shape the opinions and recommendations of many of the individual Committee members.

The discussions culminated in a conference call on April 2, 2008 in which all members of the DXAC participated. We discussed the individual scenarios in the original assignment and came to a consensus on each. I have prepared these responses taking into account the Committees discussions and they have been reviewed by members of the Committee. I believe they represent a fair and accurate consensus of the DXAC members.

Listed below are the scenarios included in the assignment that we have been asked to comment on and our considered answers.

### **Remote Operating Scenarios “Already Happening”**

*(1) “Clubs” have remote sites set up. “Members” pay dues and use the Internet and Skype to operate stations around the world. Even though users are supposed to sign portable as appropriate, they often do not.*

DISCUSSION. There appear to be two types of “clubs”. One example is a remote station set up by an individual and where other individuals are allowed to access that station remotely. Often the other individuals are asked to pay for access and these “dues” go toward the maintenance and improvements of the station. This could be considered a “club” where the members of the club are the individuals who have access to the station. The other situation is where an established amateur radio club builds a remote operating site for the use and benefit of the club members. The DXAC believes that there is little practical distinction between the two types of “clubs” but is philosophically opposed to any arrangement that is “for profit”.

The DXAC is comfortable with the concept of “clubs” that allow individuals access to a remote station for the purpose of making QSOs, including DX QSOs, but not necessarily DX QSOs for DXCC credit. In all cases, the individuals must be properly licensed to operate in the frequency bands being used and in the country where the remote station is based. In other words, a US licensed amateur operating a US based remote station as compared to a US licensed amateur operating a remote station in another country or vice versa. In this second case, the operator must be licensed and follow all the rules and regulations of the country in which the remote station is located. An example was recently reported in the “How’s DX” column in the May 2008 issue of QST. In this situation, some European operators using a remote station on the US west coast, managed QSOs with FO/OH1RX on 160 and 80 meters. This activity raises several questions. Were the European operators properly licensed to transmit from a US-based station? Are these operators entitled to DXCC credit for those QSOs? Would DXCC credit be fair to others who were unable to make QSOs on those bands using their home stations?

If the operators were not properly licensed in the US where the transmitting station was located, then those contacts were illegal. On the other hand, if the transmitting location and the operator were located in countries that were signatories of the CEPT agreement or the IARP agreement...maybe they are technically legal. However, notwithstanding the legality question, the DXAC believes that those contacts should not be credited for DXCC purposes because they do not meet the fairness objectives of the DXCC program. The problem is that current DXCC rules do not address this kind of situation and no guidance is given as to what is fair and acceptable and what is not.

CONCLUSION. The DXAC believes the impact of remote operations on DXing and Amateur radio in general is favorable and should be allowed to follow the path dictated by innovation and technology. This activity is truly in the same pioneering and technological spirit on which amateur radio began in the early days and has prospered since. However, contacts made using remote stations that provide one DXCC participant an advantage over another DXCC participant do not meet the fairness objectives of the ARRL DXCC program, in our view. The majority of the members of the Committee believe that this advantage, deemed a “propagation advantage”, is the basic problem with remote operations as far as the DXCC program is concerned.

*(2) A station owner builds a remote station on the opposite side of his country and uses it in tandem with his home station. He only uses the remote site to receive.*

DISCUSSION. This is an interesting scenario. It is likely that a remote receive-only station would be beneficial in situations where the home station has a receiving limitation or impediment of some kind. The home station location may be located in a noisy area that impacts QSOs or a subdivision or condo complex that limits antennas. A remote receiving site could be particularly beneficial for use on the low bands where noise and weak signals are common. However, because making a two-way contact involves hearing as well as being heard, the situation is somewhat different than a remote station being used for both receiving and transmitting. In other words, to make the QSO, the home station (the transmit site) would have to have propagation to complete the QSO. As previously mentioned the DXAC believes that remote stations should not provide the operator a “propagation advantage” if the QSO is going to be claimed for credit under the DXCC program.

CONCLUSION. The DXAC believes that a receive-only remote station has many practical advantages particularly for low band operators and operators where their home location is a receiving impaired. Overall, these receive-only sites can have a positive impact on amateur radio and Dxing. However, the impact on the DXCC program requires more thought and study. Although a DX QSO claimed for DXCC credit in this instance, did not result from a propagational advantage, still some limitations might be advisable.

*(3) A station owner builds a remote receive site on the opposite side of his state and uses it in tandem with his home station. He only uses the remote receive site to receive. He has significant local noise at his home station.*

DISCUSSION/CONCLUSION. The reasoning is the same as for scenario (2). In other words, a propagational advantage has not been achieved as any QSOs made required the home station (transmit) to have propagation. For DXCC purposes, no unfair advantage has been achieved. However, more study is recommended.

*(4) A station owner lives in downtown Anywhere in a 33<sup>rd</sup> floor condo. His station is located on his 40 acres of farmland in Wisconsin and he has full, transceive remote-control capabilities. He owns both properties.*

DISCUSSION. The majority of the DXAC believe that if QSOs made from the remote station, regardless of ownership, are claimed for credit under the DXCC rules as currently written, and the remote station provided the operator a propagational advantage then the QSO credit should not be allowed. So, the question is, what constitutes a propagational advantage? Obviously, the answer will vary by time of day, time of year, the sunspot cycle, the frequency in use and the mode of operation. But it appears that the best solution is to set a distance limitation. That is, a limit on the distance between the home station and the remote station, so that the remote station is not likely to be so far away from the home location that it would experience different propagation conditions. A distance limitation has precedence in the ARRL rules for the WAS and VUCC programs.

CONCLUSION. The DXAC doesn't want to limit the use of remote operating sites and in fact, believes that they will be important to our future as a technologically advanced, innovative hobby. Many amateurs will be able to make QSOs and enjoy the hobby, where currently they have limitations at their home location that inhibit their enjoyment of amateur radio. Our objective is to simply maintain the level of fairness in the DXCC program which, after all, is the reason behind most of the DXCC rules

*(5) A station owner lives in downtown Anywhere in a 33<sup>rd</sup> floor condo. He helped pay for the equipment and antennas on a friend's property in rural Maine. They share the station, and the "Anywhereian" has full transceive remote control.*

DISCUSSION. If a distance limitation were to be adopted, the answer to this scenario and the previous scenario would be simple. If the distance between the home location and the remote station exceeds the specified distance limitation, then DX QSOs made using the remote station would not count for DXCC purposes. Again, the ownership of the station is not a factor only it's distance from the operator's home location.

CONCLUSION. Since, there was likely no station or a severely limited station on the 33<sup>rd</sup> floor of this condo, a remote station is a logical solution for this amateur to enjoy the hobby. For these reasons, we feel the impact on amateur radio and Dxing in general is favorable.

*(6) A station owner has friends scattered around the world, and he has permission to use their stations remotely, and he just uses his own call and works what he wants.*

DISCUSSION. The DXAC believes that there are some potential regulatory problems associated with this scenario. We believe that an operator of a remote station must conduct their operation within the rules and regulations pertaining to amateur radio in the country in which they are licensed. In the case of an operator licensed in one country operating a remote station in another country, we believe that the operator would be subject to the rules, regulations and licensing requirements of both countries. If the countries involved are both signatories of either CEPT or IARP, then the licensing, rules and regulations are likely to be the same or at least similar in each country. However, we believe that a legal opinion should be sought on this issue.

In this scenario above, the operator under current DXCC rules, must make all contacts with other DXCC “entities” from within the borders of their home country. Contacts made from remote stations located in other countries would not count towards the participant’s DXCC award. Interestingly, if the remote station was located in another country, and the operator was properly licensed in that country, and the remote station was not outside the distance limitation from the home QTH, the operator could earn another DXCC award from the remote station. Similarly, an operator could earn a new DXCC award from a remote station within his home country if the remote station was outside the distance limitation.

Let’s address the situation of a station that makes a QSO with a remote station that is being operated from another country or operated from within the same country but outside of the distance limitation! That station may believe that he has a valid QSO with a new country and apply for DXCC credit for that QSO. In our view, if the QSO is not valid for DXCC purposes for the operator of the remote station, it should not be valid for the station contacted either.

CONCLUSION. This scenario has complicated considerations, not the least of which is the question of the legality of an operator licensed in one country transmitting from a remote station in another country where the operator is not licensed. That said, if the operator is properly licensed and is operating the remote station in accordance with the existing rules and regulation of that country, then go for it...just don’t apply for DXCC credit for those QSOs!

### **Scenarios that are “Going to Happen Someday”**

*Someone installs remotely controlled stations in several places on Earth—probably considered somewhat rare for DXCC, and certainly considered “fun” for contesting and general operating. These places will include sites in places like XV/XW, S79, T8, HC8, where there could be a resident station manager who can maintain and control the station.*

*This same entrepreneur then sells time-shares for access to these stations. Access is provided via landline, satellite, whatever works.*

*Marketing for the time-shares focuses on “the thrill of operating from a rare place without the hassle of going there.” Big pileups, lots of rate, few technical complications, just operate and pay your money.*

*(1) Should QSOs made with these remote stations count for DXCC?*

DISCUSSION/CONCLUSION. Many of the issues involved here have been covered in the previous scenario (6). There are licensing, rule and regulation considerations that would dictate whether this scenario would be legal from a regulatory standpoint. With regard to DXCC credit, if a distance limitation was added to the DXCC rules, and the distance between the remote station and the home station exceeded that limit, then the QSO would not count for either operator’s DXCC credits.

*(2) Is it necessary to require that operations from remote countries only use the receiver located at the remote location? What if the operator listens to a local receiver, or any other receiver, as well as the one located at the remote transmitting site?*

DISCUSSION/CONCLUSION. As mention earlier in response to another scenario, receive –only remote operations require more study. In the example given above, there would be no propagational advantage as any two-way contact would still require the signal from the transmit site to be heard and understood. Remote receiving sites would allow the DX operator to hear a signal from a particular area of the world better than from the transmit site. It might enable weaker signals from smaller stations to be heard and worked...they would be an advantage to the station being worked and not objectionable. Other criteria would dictate whether the QSO counted for DXCC purposes.

SUMMARY. The DXAC respectfully submits this report and hopes that it fully satisfies the assignment given it by the PSC. During our discussions, we focused on possible solutions to the problem of maintaining fairness in the DXCC program. The mileage limitation was a suggestion that garnered almost unanimous support. Distances of between 75 and 500 miles were discussed, but no conclusions were reached or recommendations made. Also, in our deliberations we purposely ignored the feasibility and difficulty of enforcing any changes to the DXCC rules. The DXCC program is today essentially self-policing and uses the honor system. We assumed that any changes to the rules would be viewed the same.

Further, if changes are to be made to the current DXCC rules, we suggest that attention be given to the wording of Section I., rule 7 as it pertains to documentation of an operation from a host government and Section I, rule 8, the definition of “remote control operating points”. Also, section I, rule 9 and it’s definition of “remote operating points”.

For the DXAC....

Bob Allphin, K4UEE  
SE Division Representative and Chairman.

## **Proposal for DXAC Study**

From Programs and Services Committee meeting, December 8, 2007

Subject: Remote Operations

The concept of operating HF Amateur Radio stations remotely is now reality. The Programs and Services Committee asks the DX Advisory Committee to consider the following scenarios, and to respond with comments to each one, with respect to (1) What is/would be the impact on DXing and DXCC; and (2) Is the scenario desirable or undesirable as an activity within Amateur Radio? Analysis of other scenarios is also welcome.

### **Already Happening**

(1) “Clubs” have remote sites set up. “Members” pay dues and use the Internet and Skype to operate stations around the world. Even though users are supposed to sign portable as appropriate, they often do not.

(2) A station owner builds a remote station on the opposite side of his country and uses it in tandem with his home station. He only uses the remote site to receive.

(3) A station owner builds a remote receive site on the opposite side of his state and uses it in tandem with his home station. He only uses the remote receive site to receive. He has significant local noise at his home station.

(4) A station owner lives in downtown Anywhere in a 33<sup>rd</sup> floor condo. His station is located on his 40 acres of farmland in Wisconsin and he has full, transceive remote-control capabilities. He owns both properties.

(5) A station owner lives in downtown Anywhere in a 33<sup>rd</sup> floor condo. He helped pay for the equipment and antennas on a friend’s property in rural Maine. They share the station, and the “Anywhereian” has full transceive remote control.

(6) A station owner has friends scattered around the world, and he has permission to use their stations remotely, and he just uses his own call and works what he wants.

### **Going to Happen Someday**

Someone installs remotely-controlled stations in several places on Earth—probably considered somewhat rare for DXCC, and certainly considered “fun” for contesting and general operating. These places will include sites in places like XV/XW, S79, T8, HC8, where there could be a resident station manager who can maintain and control the station.

This same entrepreneur then sells time shares for access to these stations. Access is provided via landline, satellite, whatever works.

Marketing for the time shares focuses on “the thrill of operating from a rare place without the hassle of going there.” Big pileups, lots of rate, few technical complications, just operate and pay your money.

(1) Should QSOs made with these remote stations count for DXCC?

(2) Is it necessary to require that operations from remote countries *only* use the receiver located at the remote location? What if the operator listens to a local receiver, or any other receiver, as well as the one located at the remote transmitting site?