

**REPORT OF THE RF SAFETY COMMITTEE  
TO THE  
ARRL BOARD OF DIRECTORS**

July 2014

The RF Safety Committee participated in the following areas over the past six months:

1. RF Safety Committee Activities.
2. Monitoring recent scientific studies regarding RF Safety.
3. Participation in the scientific RF Safety community.
4. Administrative issues.

1 RF Safety Committee Activities

- 1.1 The Committee mourned the loss of one of its esteemed members, Dr. Arthur “Bill” Guy, W7PO. A professor at the University of Washington for most of his career, Bill was a pioneer in the field of RF Bioeffects. Not only did he perform some of the seminal research in the field, but he was also the professor and mentor for many of the influential scientists and engineers that continue to work on RF safety topics across both industry and academia. Bill was widely recognized as one of the great minds in RF Safety. He served on most of the expert committees and his hand is evident in the two main standards that we continue to follow in formulating RF Safety policy: NCRP 86 and IEEE C95.1. Bill served on the ARRL RF Safety Committee as long as I have been involved with this group, well over 14 years. He was always available to give expert advice. After his retirement from his active role in academia Bill planned to spend most of his time with family, fishing, and with ham radio. Bill often opined on subjects that the RF Safety Committee was debating by making reference to past studies that directly applied to the subject being discussed, often bringing to light answers to questions that had been studied years earlier and forgotten by many of the modern day investigators. Bill's very significant contribution to RF Safety continues to shape the field. His loss will be felt in all aspects of the field for some time to come.

2 Monitoring Scientific Studies

- 2.1 A British cancer research group published a study that concluded that children living near high tension power lines do not have an increased risk to develop leukemia. The Committee noted that the US National Cancer Institute came to the same conclusion in 1997.

- 2.2 A reanalysis of an earlier study was published and claimed to confirm the existence of adverse effects from exposure of people to nearby cellular telephone towers. The conclusions were that a significant number of people report lack of appetite, lack of concentration, irritability, and trouble sleeping. The Committee did not find these reanalyzed results to be particularly compelling. All effects had the same odds ratio (1.5, meaning the odds of the effect occurring for an exposed person was 1.5 times higher than for a non-exposed person; meaningful results typically have odds ratios greater than 2). The study was performed by asking people if they were being affected by the cellular telephone tower and the reanalysis admitted that “participation bias cannot be ruled out.” This means that in a questionnaire-based study such as this the responses are biased to give answers that subjects believe are what the researchers are looking for.
- 2.3 A study reported that cellular telephones may affect the accuracy of glucose meters. Even though this is not an RF Safety question, but rather a potential Electromagnetic Compatibility issue, the members of the RFSC noted that the study did not correctly test the operation of glucose meters and that home glucose meters were never intended to provide the high accuracy results that this study was trying to confirm.
- 2.4 A study from France claimed to have found a link between the use of cellular telephones and brain tumors in a small study of people with and without tumors. The Committee felt that the study was performed very poorly and also noted a comment in the article that may indicate a strong investigator bias: “Over the last 15 years, most investigations have failed to turn up conclusive results either way.” Either these investigators were unaware of other studies published over the past decade or they didn’t want to believe them. In reality there have been several very large epidemiological studies performed that show no increase in brain tumors among cellular telephone users. The Committee also noted that the study did not use a traditional control group to compare with the study group. Instead of studying disease rates between people who use cellular telephones and a similar population that does not (a difficult group to find), the control group consisted of cellular telephone users who do not have brain tumors.

### 3 Participation in the Scientific RF Safety Community

- 3.1 Mr. Hare continues to serve on the ICES (IEEE) SCC-28 RF Safety Standards Committee. He generally shares the voting ballots for changes to the standards with the Committee prior to voting on them.
- 3.2 Dr. Lapin continues to testify about RF safety at zoning board hearings when cellular tower placement is being considered.
- 3.3 Dr. Lapin continues to serve as a member of the IEEE Committee on Man and Radiation, COMAR.

### 4 Administrative Issues

- 4.1 The Committee would like to thank ARRL New England Division Director Tom Frenaye, K1KI, for the many leads to news about RF Safety that he forwards to the Committee for further analysis.

- 4.2 Members of the Committee continue to review articles submitted to QST, looking for potential RF safety issues that should be dealt with prior to publication.
- 4.3 Members of the Committee are participating in the ARRL Centennial QSO Party using a designator of “RF” and handing out 35 points per QSO.
- 4.4 The RF Safety Committee welcomes its new ARRL Board Liaison, Kent Olson, KA0LDG.

Gregory Lapin, Ph.D., P.E., N9GL  
Chair, ARRL RF Safety Committee

**The ARRL RF Safety Committee**

Chair

Gregory D. Lapin, Ph.D., P.E., N9GL  
1206 Somerset Ave  
Deerfield, IL 60015-2819

Committee Members

Robert E. Gold, M.D., W0KIZ  
9197 N. Clydesdale Rd  
Castle Rock, CO 80104-9102

Kai Siwiak, P.E., Ph.D., KE4PT  
10988 NW 14th St  
Coral Springs, FL 33071-8222

Arthur W. (Bill) Guy, Ph.D., W7PO  
18122 60th Place NE  
Kenmore, WA 98028-8901

Bruce Small, M.D., KM2L  
10540 Stoneway  
Clarence, NY 14031-2100

William Kaune, Ph.D., W7IEQ  
160 Cedarview Dr  
Port Townsend, WA 98368-9527

Guy L. (Bud) Tribble, M.D., Ph.D., N6SN  
101 Fallen Leaf Dr  
Hillsborough, CA 94010-6918

James W. Ross, M.D., M.P.H., W4GHL  
4599 Black Rail Ct  
Providence Forge, VA 23140-3733

Emeritus Committee Members

Gerald Griffin, M.D., K6MD  
123 Forest Ave  
Pacific Grove, CA 93950-2619

William Raskoff, M.D., K6SQL  
1769 Escalante Way  
Burlingame, CA 94010-5807

Liaison to the ARRL Board of Directors

Kent Olson, KA0LDG  
148 Ironwood Dr  
Horace, ND 58047-4002

ARRL HQ Staff Liaison

Ed Hare, W1RFI  
ARRL Headquarters  
225 Main St  
Newington, CT 06111-1400

ARRL HQ Administrative Liaison

Lisa Kustosik, KA1UFZ  
ARRL Headquarters  
225 Main St  
Newington, CT 06111-1400