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| **Reported by (Name):** | **Geoffrey S. Ibbott, Ph.D.** |
| **Organization:** | **International Electrotechnical Commission** |
| **Position Title:** | **Convenor, Working Group 1; Chairman, Subcommittee 62C, Chairman US TAG** |
| **Activity:** | **Semi-annual meeting of US TAG** |
| **Meeting Dates:** | **April 15-19, 2013** |
| **Meeting Location:** | **Shanghai, China** |
| **Payment $:** | **Travel reimbursement** |
| **Reasons for Attending or not Attending** | **Attended to chair meeting of IEC subcommittee 62C and Working Group 1, and to represent SC 62C at meeting of Technical Committee 62** |
| **Issues from Previous Meetings or Year:** | **See report** |
| **General Description of Activities of the Organization and/or Meeting:** | **See report** |
| **Issues for AAPM:** | **See report** |
| **Budget Request ($):** | **See budget request** |

**Meeting Report**

**IEC Subcommittee 62C, Working Group 1**

**Shanghai, China**

**April 19, 2013**

**Introduction**

The AAPM participates in the development of international standards and technical reports for the safety and performance of electrical equipment; specifically, equipment related to the delivery of radiation therapy. This is accomplished though a group called the U.S. Technical Advisory Group (U.S. TAG) consisting of representatives from ASTRO, ACR and AAPM as well as those in industry. This group advises the U.S. National Committee (USNC) of the International Electrotechnical Commission (IEC), a Committee of the American National Standards Institute. Since 1993, Geoffrey Ibbott, Ph.D has been USNC Technical Advisor, chair of the U.S. TAG, and a liaison between the U.S. TAG and the USNC. Since 2006, he has been chair of IEC subcommittee 62C. In 2011, Dr. Ibbott was elected Convenor of Working Group 1.

The IEC develops standards for the design of electrical equipment, and medical electrical equipment specifically is handled by its subcommittee 62C. Working Group 1 of 62C deals with equipment used for radiation therapy. These standards have immediate and far-reaching consequences on the design and operation of radiation therapy equipment. For example, the Working Group has published standards that set acceptable levels of leakage radiation, requirements for dosimetric safety and accuracy, and standards for parameters such as gantry angle conventions.

Dr. Ibbott represents the US radiation oncology community at meetings of IEC Working Group 1, Subcommittee 62C and Technical Committee 62. The membership of these committees is at least 50% manufacturers’ representatives, so maintaining a clinical medical physics presence is critical.

The agendas and brief reports of the meetings are below. Several items of importance to US medical physicists were discussed.

**Meeting Report**

**Working Group 1** met on April 15-17, 2013, and was attended by at least 27 members representing Austria, Belgium, Brazil, China, Germany, Japan, Sweden, Switzerland, the United Kingdom, and the United States. The meeting lasted the full three days, and addressed several major developments.

The agenda consisted of review of comments from National Committees on the following documents:

**CDV of 60601-2-64**, a safety standard for light-ion therapy systems. This standard is modeled after the linear accelerator standard and addresses issues of mechanical, electrical and dosimetry safety. About 270 comments had been received. All technical comments were reviewed and discussed, and decisions made for changes to the standard. The project team will incorporate the changes and prepare a Final Draft International Standard (FDIS) for distribution to National Committees later this spring.

**CD of 62667**, a performance standard for light-ion therapy systems. About 375 comments had been received, and the WG was unable to go through all of them. The project team will meet in June to continue work, and will prepare a new CD for distribution to National Committees, and further review at our next meeting.

**CDV of 60601-2-68**, a safety standard for image-guided radiotherapy systems. About 250 comments had been received when the standard was distributed in late 2012, and the project team had been able to meet and go through them. Consequently, a lot of work had been done and discussion was held on a number of the most contentious issues. Resolution was achieved, and the project team will prepare an FDIS for distribution.

Several standards have been published recently:

**IEC 61217, Coordinates, movements and scales, 2nd Edition.** Published 12/2011.

**IEC 60601-2-11, Safety of gamma beam teletherapy equipment, 3rd Edition.** Published 1/2013

The status of several standards in late stages of progress was reviewed:

**IEC 60601-2-1, 3rd Edition, Amendment 1.** The linac safety standard.This amendment, containing mostly administrative changes, has been approved for publication.

**IEC 60601-2-8, Amendment 1.** The orthovoltage x-ray safety standard. This amendment, containing mostly administrative changes, will soon be submitted for publication.

**IEC 60601-2-17, 3rd Edition.** The HDR safety standard. This edition, containing many technical changes including new requirements for x-ray based brachytherapy systems, will soon be submitted for publication.

Additionally, the WG received proposals for two new work items and an administrative change:

**New edition of the linear accelerator safety standard.** The UK NC recommends that the linac standard be updated to address new requirements for image guidance, motion management, gating, tracking, latency, etc. It must also be brought in line with new requirements for IGRT included in the IGRT standard.

**New project to write a standard addressing control systems.** The Japanese NC believes a new standard is required to address the communication between equipment such as the image guidance system and the linac.

**Proposal for a new WG to handle standards addressing control systems.** The Japanese NC believes that a new WG should be created.

**Subcommittee 62C** met on April 18, 2013. The subcommittee reviewed the work conducted by Working Groups 1, 2 and 3 since the previous meeting in October 2011. The subcommittee also received presentations from the UK and Japanese NCs regarding the proposed new work items.

**Technical Committee 62** met on April 19, 2013. The committee received reports from the four Subcommittees, including SC 62C.

Respectfully submitted,

Geoffrey Ibbott, Convenor, WG 1; Chair, Subcommittee 62C; and Chair, US TAG