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| **Reported by (Name):** | **Geoffrey S. Ibbott, Ph.D.** |
| **Organization:** | **International Electrotechnical Commission** |
| **Position Title:** | **Chair, US TAG; Technical Advisor to US National Committee; Convenor, 62C Working Group 1** |
| **Activity:** | **Meeting of US TAG** |
| **Meeting Dates:** | **Feb 25-26 2019** |
| **Meeting Location:** | **Alexandria, VA** |
| **Payment $:** | **Reimbursement for 3 members to attend** |
| **Reasons for Attending or not Attending** | **Attended as chair of TAG and convenor of WG 1** |
| **Issues from Previous Meetings or Year:** | **Ongoing…** |
| **General Description of Activities of the Organization and/or Meeting:** | **Purpose was to develop US comments and vote on several documents, and develop positions for US delegation at upcoming meeting of WG 1** |
| **Issues for AAPM:** | **None** |
| **Budget Request ($):** | **Included in WG IEC budget** |

Report of Meeting

US Technical Advisory Group (TAG) to IEC Subcommittee 62C, Working Group 1

Held at AAPM Headquarters, Alexandria, VA

February 25-26. 2019

**In attendance:**

A. Bhullar, P. Biggs\*, A. Cohen, J. Collins, P. Hernandez\*, H. Hsu, G. Ibbott (Chair), M. Moyers\*, M. Noll\*, J. Percy\*, A. Purwar, N. Soni, N. Schupp\*, S. Soman\*, S. Sutlief\*, T. Steinberg\*, M. West\*, R. Wu\*.

(\*Attending by GoToMeeting)

**Purpose of this meeting:**

Preparation of comments and votes on several 62C documents and development of positions for the delegation who will be attending the upcoming meeting of Working Group 1 in March 2019.

**Agenda and discussion:**

1. Introductions

The participants introduced themselves. Of the 18 participants, 9 were clinical physicists, 8 were industry representatives, and one was a representative from the FDA.

1. Explanation of the purpose of the meeting

Ibbott explained that the goal of the meeting was to review several of the standards that have been distributed recently for review, either formally through National Committees, or informally to Working Group members.

1. IEC 62083: Treatment planning system safety  
   This is a new 2nd edition of an existing standard, which is being revised by the WG because TPS systems have changed substantially, as have treatment techniques, since the first edition was published. The team assembled more than 250 detailed comments regarding specific clauses of the draft. The US comments will be submitted through the US National Committee. All NC comments will be discussed at the WG 1 meeting in March, after which a new draft will be prepared. If consensus can be reached on the comments, the next stage will be a CDV – committee draft for voting.
2. IEC 60601-2-1: Linear accelerator safety

Ibbott briefly explained that the document we’re reviewing is a WG draft that has been prepared in an effort to resolve the comments received on a CDV distributed last summer and discussed at the previous WG 1 meeting in October 2018. Even though the CDV was approved, there were a very large number of comments, and Cohen, the project leader, was hesitant to go directly to the next step, which is an FDIS – final draft international standard (the final stage before publication.) Many of the comments had to do with the compliance tests specified by the standard. To introduce the topic, Ibbott briefly explained Type Tests, Site Tests, and the different Grades. Other members contributed to the discussion. Ibbott explained that Site Tests are tests to be done on site, on each piece of equipment, generally as part of acceptance testing. Type Tests, on the other hand, are done by the manufacturer on one representative piece of equipment of each type. Grade C tests are typically quite invasive and often require removal of covers or shielding, and disconnection of circuitry. It had been agreed at our TAG meeting in December that many of the Grade C Site Tests could be performed as Type Tests, provided that a corresponding Grade A Site Test was then specified that would require the manufacturer to disclose and review the results of the test with the customer.

Considerable discussion was held concerning several of the Site Tests that had been proposed to be converted to Type Tests, with some hesitation expressed by several of the clinical members.

Further discussion was held regarding a clause that requires the manufacturer to provide devices to aid in positioning the patient for treatment, such as lasers, light field, optical distance indicator, or imaging system. The TAG had commented on the CDV that an x-ray imaging system should not be the only device available, out of a concern that the patient would be exposed to unnecessary radiation. After much discussion the TAG agreed to propose a wording change that would allow the use of an X-ray based IGRT system provided the workflow required that acquisition of CT images was required before patient treatment.

1. IEC 61217: Coordinates, Movements and Scales

The USNC had proposed a revision (with Ibbott as project leader) to address major changes in treatment equipment and techniques since publication of the 2nd edition. Ibbott had prepared a preliminary draft for review by the Working Group and requested input from the TAG before distributing it. The 3rd edition is proposed to remove the dependence on an isocenter and a conventional gantry to enable its application to equipment without an isocenter such as robotically controlled equipment. It will also address advanced imaging systems including optical surface imaging, MRI and PET. Ibbott asked for comments on a number of issues including the creation of a fixed reference coordinate system based on an equipment reference point (to be identified by the manufacturer), deletion of coordinate systems for several specific components because they can be related to other components, and changes to the hierarchy defining the relationships among the component-specific coordinate systems. He also asked for discussion about a major change in the rules for applying movements and rotations to coordinate systems and points such as the center of a target volume.

1. IEC 63183: Error Codes

The TAG reviewed a DTR – draft technical report (for which Cohen is project leader) that had been distributed for NC review recently. Only one significant comment was received which was to change the title and describe the standard as addressing all types of messages, not only error messages. This change was agreed. Other comments, mostly editorial, were submitted immediately after the meeting. Unless unresolvable concerns are submitted by other NCs, it is expected that this standard will be submitted for publication by the IEC shortly after the March WG 1 meeting.

1. Conclusion of meeting.

Having concluded the business for with the meeting had been convened, the meeting was adjourned.

Respectfully submitted,

Geoffrey S. Ibbott, Ph.D.

Technical Advisor to US National Committee

TAG Chair