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| **Reported by (Name):** | **Geoffrey S. Ibbott, Ph.D.** |
| **Organization:** | **International Electrotechnical Commission** |
| **Position Title:** | **Chairman, Subcommittee 62C; Convenor, Working Group 1; Technical Advisor, USNC; Chair, US TAG** |
| **Activity:** | **Meetings of the WG1 Project Team for the 4th Edition of the Linac Safety Standard** |
| **Meeting Dates:** | **See report** |
| **Meeting Location:** | **See report** |
| **Payment $:** | **N/A** |
| **Reasons for Attending or not Attending** | **Attended as Convenor of Working Group 1 and Chair of Subcommittee 62C** |
| **Issues from Previous Meetings or Year:** | **See report** |
| **General Description of Activities of the Organization and/or Meeting:** | **See report** |
| **Issues for AAPM:** | **See report** |
| **Budget Request ($):** | **See budget request** |



**INTERNATIONAL ELECTROTECHNICAL COMMISSION**

**TECHNICAL COMMITTEE TC 62: Electrical equipment in medical practice**

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

**March 9-11, 2016**

**British Standards Institute**

**London, England**

The meeting was attended (all or part) by 14 working group members representing Germany, Japan, Sweden, Switzerland, the United Kingdom, and the United States.

**Report of progress on IEC 60601-2-1 Ed. 4**

Discussion about 62A and revisions to 60601-1 relevant to linac standard

* There is a short list of ~150 items still needing review. The list will be circulated to NC's for comment and discussion at Frankfurt in October.
* Ongoing discussion in German national committee; some members wanted more risk management stuff removed.
* However, likely that this amendment will be successful, per Norbert.

Discussion of version 21

* Definition of treatment support, patient positioner etc. Should there be a new standard to describe table? Can we find an adequate definition? See also 60601-2-64. Decided to define Patient Positioner = table top + table top support.
* Clause 4.3: What is essential performance? Per Norbert, this distinction triggers additional testing. See current definition. For IGRT standard, we simply didn't identify any essential performance. We will do the same here.
* Clause 201.10.101.3. Leakage. Spent much time discussing the allowable leakage levels and the zone throughout which it should be measured. Also, allowable levels of leakage when in "beam hold" during segmented treatment delivery. Want to base requirements on radiobiological principles.
* Discussed mechanical aspects; what movement is allowable? Change of gantry angle of 3° could lead to shift in beam position of 1 cm, at point 20 cm beyond isocenter.
* Reviewed entire standard and made many edits. Homework was assigned to various members.

Future plans

* Participants were reminded to submit homework promptly.
* New edition of 62083 - treatment planning standard: Manufacturers were asked to suggest contributors. We propose to draft a short outline to NCs to explain plans; will be based on current edition but with expansion based on new knowledge and capabilities. Will ask NCs for suggestions and experts.
* New edition of 61217 - coordinates and scales:

Next meetings

* Beijing. June 20-24, 2016. 1 day for light ion CDV, 2 days for linac new edition, 2 days for 62926.
* Frankfurt. October. Details still to be determined.
* Linac project team may hold next meeting in March 2017

**Status of IEC 62667 and decision to proceed to CDV**

IEC 62667 is the Light Ion Performance Guideline, also known as a performance disclosure document as it requires manufacturers to report specific performance parameters and specifications of their equipment. It is a companion standard to IEC 60601-2-64, the Light Ion Safety Standard. A third CD had been circulated a year ago and the project team had spent several days at the New Orleans meeting and several more days at a special meeting held in Shanghai in January, 2015 going through the comments and responding to each. It was agreed that consensus has been reached on essentially all major issues and that the WG will distribute a CDV. The project leader, Michael Moyers completed final formatting and submitted the draft to the Secretariat. The CDV was distributed in January and comments submitted by National committees will be discussed by the Working Group at its meeting in May 2016.

**IEC 61217, the Coordinates and Scales standard**

In recent months, comments have been received by several of the U.S. members from a medical physicist at a treatment center that uses robotic 6DoF couches. This physicist pointed out that IEC 61217 defines the origin of the patient support table top coordinate system at the point where the Z axis of the fixed system intersects the table top; i.e., directly below the isocenter. The origin is to be specified with the table top fully retracted. Consequently, for a typical patient treatment, the table top is extended and the origin moves along the T system Y axis in the positive direction. If a rotation is applied around the T system X axis (the "pitch" direction), the origin moves along the Z axis. This means that if the patient is positioned with the target volume at isocenter, but then a rotation is applied in the pitch direction to compensate for interfraction patient position changes, the reported value of the table top Z coordinate changes. Similarly, if adjustments are made to the table top pitch angle, and then the table top is moved to predetermined coordinates, the target may not be at the intended location. The U.S. group agreed to prepare a description of the issue and a proposed "Review Report" that could be distributed to National Committees with a questionnaire to determine support for (1) an amendment to address this specific issue and (2) a subsequent new edition to address a number of conditions that have arisen with newer equipment. The goal is to have the Review Report distributed to WG members for comment before it is circulated to National Committees for a six-week voting period prior to the October meeting.

**Other business**

Alan Cohen has been elected Chair of 62C and will take over as chair from Geoff Ibbott in May 2016.

Respectfully Submitted,

Geoffrey S. Ibbott, PhD

Chair, Subcommittee 62C

Convenor, Working Group 1

Technical Advisor, US National Committee