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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, Chair, US TAG |
| Activity: | Meeting of Project Team for 4th Ed of Linac Standard |
| Meeting Dates: | August 27-29, 2014 |
| Meeting Location: | London, England |
| Payment $: | Reimbursement for expenses |
| Reasons for Attending or not Attending | Attended as Convenor of Working Group 1 and Chair of subcommittee 62C |
| Issues from Previous Meetings or Year: | See report |
| General Description of Activities of the Organization and/or Meeting: | See report |
| Issues for AAPM: | See report |
| Budget Request ($): | See budget request |



INTERNATIONAL ELECTROTECHNICAL COMMISSION

TECHNICAL COMMITTEE TC 62: Electrical equipment in medical practice

SUBCOMMITTEE SC 62C: Equipment for radiotherapy, nuclear medicine and radiation dosimetry

WORKING GROUP WG 1: Beam teletherapy and particle accelerators

**PROJECT TEAM on 4th edition of linac standard: Requirements of safety of linear accelerators**

Place: British Standards Institute,  
Chiswick High Street, Gunnersbury,  
London, England

**Date: August 27-29, 2014**

Notes from the meeting in London

ATTENDANCE

Geoffrey Ibbott, US, Convenor, Thomas Jakob, CH; Wolfgang Lehmann, DE; Mitsuhiro Yoshida, JP; Yuichi Hirata, JP; Inger-Lena Lamm, SE; Andrew Devaney, UK; Abdul Sayeed, UK; Hans Sethi, UK; Adrian Smith, UK; Alan Cohen, US; Stephen Coon, US; Thomas Dwyer, US; Paco Hernandez, US; Anuj Purwar, US;

Begin: 09:00, 2014-08-27 End: 12:00, 2014-08-29

Project Team IEC 60601-2-1 4th edition  
For efficiency, the project team divided into two sub groups. The first investigated safety requirements for beam control, specifically as used for gating. The second investigated safety requirements for multileaf collimators.  
  
The first group spent the first two days writing clauses to define machine performance factors relative to gating. This required defining terms to describe the latency of beam control, and the ramping up and down of the dose rate. Participants were asked to consider the clinical relevance and radiobiological basis of our limits of 0.25 Gy delivered during ramp up and ramp down, etc.  
  
The second group spent the first two days reviewing existing clauses and writing new clauses regarding uses of multileaf collimators. This work also required reviewing definitions for terms such as stereotactic frame of reference, stereotactic radiotherapy, etc. Extensive discussion was held over the requirements for leakage through MLC and jaws (201.10...). All participants were asked to consider the requirements and the clinical relevance. For example, this clause allows 5% leakage through the area of an MLC not protected by a backup jaw, but a stereotactic cone can't have more than 0.5% leakage. The 5% limit is historical and stems from early days when the MLC was used as a replacement for cerrobend blocks. Suggestions were requested for revision of the figures to clearly illustrate potential designs of linac head and collimator. These suggestions should be submitted by the end of September. We will also ask Steve Lillicrap to review. In addition, Geoff was asked to propose a definition for adaptive radiotherapy. How is this different from MLC-based tracking? What is meant by tracking? Geoff was also asked to investigate QA procedures and need for information to the user (site tests?) to guide ATP and ultimately QA. (See I-L L notes from March meeting).

Comment from the Japanese: 201.7.9.2.5 warning and safety notices. See ILL draft. Question about meaning of equipment description clause, and use of a prediction model to compensate for latency. Explained that only applied if capability was included. Noted risk that compensation could be addressed by two devices and thus over compensated.

AOB   
Discussion was held over arrangements for the next meeting in New Orleans (see below). We have two rooms reserved, but we have potentially more than two subgroups to conduct work (PT 62926, 4th ed MLC, 4th ed gating, light ion performance, etc.) Asked everyone to register for WG1 meeting and we'll sort out later.

Date and place of the next meeting   
The next SC62C/WG1 meeting is scheduled in conjunction with the SC62C plenary meeting in November In New Orleans, LA.

PT62926 is proposing a meeting at Hokkaido University in Sapporo Japan Feb 2-4 2015.

Respectfully Submitted,

Geoffrey Ibbott

Convenor