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| **Reported by (Name):** | **Geoffrey S. Ibbott** |
| **Organization:**  | **Working Group 1, Subcommittee 62C, International Electrotechnical Commission** |
| **Position Title:** | **Convenor** |
| **Activity:** | **Working Group 1 meeting** |
| **Meeting Dates:** | **April 17-21, 2017** |
| **Meeting Location:** | **Varian Headquarters, Palo Alto, CA** |
| **Payment $:** | **Expense report submitted to one of the other sponsoring organizations** |
| **Reasons for Attending or not Attending** | **Convenor (chair) of Working Group, and Technical Advisor of US National Committee to the IEC** |
| **Issues from Previous Meetings or Year:** | **Please see report** |
| **General Description of Activities of the Organization and/or Meeting:** | **Please see report** |
| **Issues for AAPM:** | **Please see report** |
| **Budget Request ($):** | **See WGIEC budget request** |

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**INTERNATIONAL ELECTROTECHNICAL COMMISSION**

**Minutes from the meeting of**

**Working Group 1 “Radiotherapy systems for planning, delivery, and information management”**

as well as its **Project Team PT 62926 “Medical electrical equipment - Guidelines for safe integration and operation of adaptive external-beam radiotherapy system for intra-fractionally moving target volumes”**

and its **Linac Group IEC 60601-2-1 Ed4.0**

**Held April 17th to 21st, 2017 in Palo Alto, California**

**Meeting venue:**

Varian main headquarters

3100 Hansen Way, Palo Alto

California 94304

## Meeting Report

1. Welcome and housekeeping
The meeting was convened at 9:00 am with eighteen members in attendance. Four additional members joined later in the week. The group agreed on the agenda and structure of the meeting days. The group approved the Frankfurt meeting minutes and then heard a brief report from the Convenor. Due to the Easter holiday, the Secretary was not able to attend this meeting.

The following agenda items were discussed throughout the course of the week, although not necessarily in the order shown here.

1. Program of work for the Working Group.

The following is believed to be the WG1 program of work, in approximate order of priority for development (subject to review by the Secretariat):

1. IEC 62667: Registered as FDIS 2017-04, circulation for vote by 2017-07.
2. IEC 62926: CD reviewed at meeting, PT will prepare a WGD for review this summer or fall (see below).
3. 60601-2-1 Ed4: CD reviewed at meeting, Cohen will prepare a CDV for review this fall. Unlikely that comments and votes could be reviewed before 2017-04 (see below).
4. IEC 62083: 660/Q approved, Jakob to prepare early WGD for review at a project team meeting this summer (see below).
5. IEC 61217: WG1 approved draft NWIP, Ibbott to prepare Q for distribution ASAP with possible discussion at a project team meeting this summer (see below).
6. TR 6XXXX: Cohen to create a draft new TR containing the summary of error messages, from RO-SSI (currently Annex AF in 60601-2-1 4th Ed). The Annex will be preserved in the 4th Ed until a TR is published, and will be removed when a future amendment is prepared. WG1 considered this a high priority so that the TR could be referred to by other standards currently in development (including the 4th Ed.) Secretariat to be consulted to determine if a Q is proper next step.
7. 60601-2-68 Amd 1: the WG considers that an amendment is required to correct gaps and problems in the X-IGRT standard. To prepare Q ASAP.
8. IEC 62274: Sethi had circulated draft NWIP. He will prepare a Q for distribution.
9. TR 6XXXX: We plan to propose an IGRT performance standard. We believe that other groups are considering this also.
10. IEC 60976/977: We will consider a revision per 4th Ed of -2-1. This is a lower priority than the projects listed above, and will require substantial completion of the 4th Ed.
11. 60601-2-68-2: We will consider an expansion for MR-IGRT, and possibly other standards in this “family” for other imaging methods. This would make the current X-IGRT standard 60601-2-68-1.
12. 60601-2-29 Ed2: Stability date is 2020. Will consider a revision or expansion for CT sim and MR sim. Will need to consider if these would be incorporated into existing 62B standards or require new 62C standards
13. IEC 62926, Ed. 1.0

Much of two days was spent on reviewing comments received on 62C/683A/CD. Many comments were received and it was apparent that a major rewrite of the draft would be required. Extensive discussion was held on a number of topics including the proposed Process Map (“fishbone diagram”), the definitions and use of terms such as “tracking” and “adaptation”, and the differences between “functions” and “models”. Changes will be required to many of the figures, and to the Annexes. The compilation of comments, 62C/683A/CC will be amended with the project leader’s responses and submitted to the Secretariat for registering with CO. Because a large revision is required, a working group draft will be prepared for review at a meeting either in the summer or the fall of 2017.

1. IEC 60601-2-1, Ed. 4.0,

Most of two days was spent reviewing the comments received on 62C/677/CD. While there were a large number of comments, many were addressed relatively easily. However, there were a number of contentious issues, including several that required overnight “homework” to develop revised wording. Many revisions will be required, and there are problems with some of the figures that may be difficult to address as the original figures cannot be located. The project leader will incorporate the changes and prepare a CDV but it seems unlikely that a CDV could be prepared, distributed, and comments/votes received in time for a WG1 meeting in November.

1. Revision of IEC 62083, Ed. 2.0 (62C/684/RQ)

Jakob and Sethi had distributed a draft new work item to prepare a new edition of the treatment planning standard. The proposed NWIP was discussed at length and a list of experts to participate in the development was assembled. Each TPS manufacturer is represented and a number of clinical physicists will participate. A WG draft will be prepared for discussion at a project team meeting in the summer of 2017.

1. Proposal for a revision of IEC 61217, Ed. 2.

The US committee had prepared an early draft of a new work item proposal to revise IEC 61217. A revision is required to reflect that some RT equipment does not have an isocenter, and some does not have a traditional gantry. Other issues with Ed2 are that as written, the standard does not clearly enough address the movements of 6DoF couch tops or robotic couches. This has led to discrepancies in reported couch top position at a clinical location. The WG agreed that the draft NWIP could be circulated with a questionnaire to determine NC support and to request nomination of experts.

1. ISO standard on Gammaknife

No further information had been received since the discussion at the SC and TC meetings in Frankfurt. Cohen will follow up to determine if a response has been received from ISO.

1. Sweden proposal on source security

This was discussed at the WG1, SC and TC meetings in Frankfurt. It had been agreed that WG1 would ensure that future amendments, new editions and new standards addressing radioactive sources would contain provisions addressing source security, to the extent possible. The WG pointed out that more extensive actions along the lines proposed by the Swedish NC would require the involvement of the TC and other organisations such as ISO and the IAEA. The TC had recommended that a formal proposal be made by the Swedish NC. Ibbott will follow up with Bischof to determine how such a proposal should be submitted.

1. Next meetings of WG 1 and project teams
2. August 14-18 (or possibly one of the following two weeks): Meeting of the project team for IEC 62083. To be followed by meeting of either project team for IEC 62926 (if a WG draft can be ready in time) or a meeting of the project team for IEC 61217. To be held at BSI in Chiswick, UK. Attendees must inform Sethi in advance to be admitted into the building.
3. November 6-10 (or possibly the following week): WG1 meeting in Erlangen, DE
4. April 9-20. Meeting of TC 62, its subcommittees and working groups. WG 1 likely to meet April 16-18.

Geoffrey Ibbott

Convenor IEC 62C/WG 1