P3333.2.5.4

Submitter Email: ylm2103@gmail.com
Type of Project: New IEEE Standard
PAR Request Date: 26-Jul-2018
PAR Approval Date: 27-Sep-2018
PAR Expiration Date: 31-Dec-2022
Status: PAR for a New IEEE Standard
Project Record: P3333.2.5.4

1.1 Project Number: P3333.2.5.4
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Artificial Joint Implant Design Modeling for Medical 3D Printing

3.1 Working Group: 3D Based Medical Application Working group (EMB/Stds Com/3333.2)
Contact Information for Working Group Chair
   Name: Young Lae Moon
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3.2 Sponsoring Society and Committee: IEEE Engineering in Medicine and Biology Society/Standards Committee (EMB/Stds Com)
Contact Information for Sponsor Chair
   Name: Carole Carey
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Contact Information for Standards Representative
   None

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 03/2021
4.3 Projected Completion Date for Submittal to RevCom
   Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 10/2021

5.1 Approximate number of people expected to be actively involved in the development of this project: 40
5.2 Scope: This standard defines the optimal design elements for medical 3D printing based on the analysis of the technical elements of artificial joint outputs required by the orthopedic surgeon, the patient's affected three-dimensional model data, and artificial joint templates. Standardization includes medical three-dimensional models such as the location, orientation and shape of orthopedic osteotomy, and patient-specific artificial joint model data for 3D printing.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: Development of customized artificial joint implant design standardization to provide optimized model for orthopedic artificial joint implantation patients due to various diseases.

5.5 Need for the Project: Medical 3D Printing has high technological barriers, which do not necessarily exist in other industries. Medical 3D Printer requires high reliability in producing useful and cost-effective products leading to the market and process standardization of 3D solutions to various requirements.

5.6 Stakeholders for the Standard: Medical implant Manufacturers
   3D Printer Manufacturers
   3D Printing filament (material) manufacturers
   Medical Imaging Equipment Manufacturers
   Manufacturer of 3D devices including 3D monitor and 3D display panel
Medical 3D signal processing engine developers
S/W programmers for 3D volume imaging
Medical practitioner
Health care manager
Medical researcher
Medical device developer
Technical expert
3D product manufacturer

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: Yes
   Organization: ISO
   Technical Committee Name: Additive manufacturing
   Technical Committee Number: TC 261
   Contact Name: Mr Lutz Wrede
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8.1 Additional Explanatory Notes: