

## P3333.2.5.4

---

**Submitter Email:** [ylm2103@gmail.com](mailto: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/Std Com/3333.2)

**Contact Information for Working Group Chair**

**Name:** Young Lae Moon

**Email Address:** [ylm2103@gmail.com](mailto:ylm2103@gmail.com)

**Phone:** +82-62-220-3147

**Contact Information for Working Group Vice-Chair**

**Name:** Emre Huri

**Email Address:** [emrehuri@gmail.com](mailto:emrehuri@gmail.com)

**Phone:** +90 532 2966078

---

**3.2 Sponsoring Society and Committee:** IEEE Engineering in Medicine and Biology Society/Standards Committee (EMB/Std Com)

**Contact Information for Sponsor Chair**

**Name:** Carole Carey

**Email Address:** [c.carey@ieee.org](mailto:c.carey@ieee.org)

**Phone:** 301-776-9882

**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

**Phone:** 5032083427

**Email:** [directorate.international@din.de](mailto:directorate.international@din.de)

---

#### **8.1 Additional Explanatory Notes:**