

## P3333.2.2

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**Type of Project:** Modify Existing Approved PAR  
**PAR Request Date:** 19-Dec-2016  
**PAR Approval Date:** 17-Feb-2017  
**PAR Expiration Date:** 31-Dec-2018  
**Status:** Modification to a Previously Approved PAR  
**Root PAR:** P3333.2.2 **Approved on:** 27-Mar-2014  
**Project Record:** P3333.2.2

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**1.1 Project Number:** P3333.2.2  
**1.2 Type of Document:** Standard  
**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard for Three-Dimensional (3D) Medical Visualization

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**3.1 Working Group:** 3D Based Medical Application Working group (EMB/Std Com/3333.2)

**Contact Information for Working Group Chair**

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

**Contact Information for Sponsor Chair**

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**Contact Information for Standards Representative**

None

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**3.3 Joint Sponsor:** IEEE Computer Society/Standards Activities Board (C/SAB)

**Contact Information for Sponsor Chair**

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 12/2017

**4.3 Projected Completion Date for Submittal to RevCom**

**Note:** Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 10/2018

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 40

**5.2 Scope:** This standard focuses on the demands arising when scientific results in the field of 3D medical visualization are applied for the construction of a software system. It is targeted to aid the clinical work of medical professionals.

This standard includes visualization techniques by the automated medical shape detection and reconstruction of three-dimensional (3D) models from two-dimensional medical images. Also it contains texturing of three-dimensional medical data for the intuitive visualization.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** Medical 3D data acquisition devices are increasingly available and able to provide accurate spatial information for the human body. Even though nowadays hardware capabilities and rendering algorithms have improved to the point that 3D visualizations can be rapidly obtained from acquired data, 3D reconstructions are not routinely used in most hospitals. This is because physicians are traditionally trained to gather information from 2D image slices, and because 3D volumetric images displayed on traditional devices are often of questionable value because of ambiguities in their interpretations. Therefore, this standard provides routine visualization techniques for three-dimensional medical images, so that medical images can be visualized from routine process.

**5.5 Need for the Project:** Around the world, existing 2D medical devices produce images with high reliability and are considered as useful and cost-effective products. To lead the market, we need processing standardization 3D solution for various requirements.

**5.6 Stakeholders for the Standard:** Medical practitioner

Health care manager

Medical researcher

Technical expert

3D product manufacturer

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### 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

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**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?:** No

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**8.1 Additional Explanatory Notes:** A modified PAR is submitted to update primary sponsor as IEEE Engineering in Medicine and Biology Society/Standards Committee (EMB/Std Com) and joint sponsor as IEEE Computer Society/Standards Activities Board (C/SAB).