ICS 35.240
CCS L 81

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 44247-2024

Information technology - Augmented reality - Software component interface

信息技术 增强现实软件构件接口

Issued on: July 24, 2024 **Implemented on: February 1, 2025**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Table of Contents

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1.Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed and coordinated by the National Technical Committee for Information Technology Standardization (SAC/TC28). This document was drafted by: Jiangnan University, China Electronics Technology Standardization Institute, Xi'an University of Technology, Visionstar Information Technology (Shanghai) Co., Ltd. Company, Nanchang Virtual Reality Research Institute Co., Ltd., Xinjiang Silk Road Liuhe Electrical Technology Co., Ltd., Shenzhen Eagle Eye Online Electronic Technology Co., Ltd. Company, Shenzhen Yanqianli Technology Co., Ltd., Guangdong Sanding Industrial Group Co., Ltd., Shenzhen Huafang Information Industry Co., Ltd., Qingruan Innovation Technology Group Co., Ltd., Shandong Zhongwei Century Technology Co., Ltd., Shandong Chengshi Electronic Technology Co., Ltd., Shenzhen Yutai Technology Technology Co., Ltd., Shenzhen Panding Technology Co., Ltd., Henan Urban Construction College, Migu Culture Technology Co., Ltd., Sany Heavy Industry Co., Ltd. Binyuan Guoke (Qinhuangdao) Intelligent Technology Co., Ltd., Shenzhen Fangxuntong Information Technology Co., Ltd., Zhongyi Instech Technology Co., Ltd. Company, Wuxi Autolink Information Technology Co., Ltd., Qingdao University of Technology, Shenzhen JiMuYida Technology Co., Ltd., Weikun Intelligent Technology (Shanghai) Co., Ltd., Hangzhou Fencha Intelligent Technology Co., Ltd., New Dimension (Shenzhen) Cultural Tourism Technology Co., Ltd., Jiangsu Ogeshite Information Technology Co., Ltd. Technology Co., Ltd., Tianjin Boton Electronics Co., Ltd. The main drafters of this document are. Wang Yinghui, Zhao Hongliang, Liang Yanxing, Ning Xiaojuan, Zhang Shaojie, Li Wei, Jiang Shuhong, Song Jian, Xiao Zhensheng, Pan Rong, Geng Yidan, Zeng Jieqi, Yao Rongbin, Zhou Xiang, Li Jiulin, Wang Lei, Zhou Juntai, Liu Quan, Li Junfeng, Qi Zerong, Li Guoqiang, Wei Jichao, He Wei, Yu Xiuna, Wang Le, Qie Yongjun, Li Haibin, Yu Zhonghong, Chen Chengjun, Gang Yong, Dang Jianming, Sun Jianfeng, Zhou Zhiguo, Wu Xiaonv, Wu Jie, Wang Lijun, Guo Hongyan, Zhang Jingxiang. Information technology - Augmented reality software component interface

1 Scope

GB/T 44247-2024 specifies the software component interface for augmented reality in the Chinese standards system. An AR application sits on a stack that has to do several hard things at once, track the camera pose, understand the surfaces and the lighting of the room, recognise images and objects, detect collisions between virtual and real geometry, and it depends entirely on the platform underneath it; an application written for one vendor's runtime does not run on another's. This standard defines a common interface so that it can.

It sets the classification of the interfaces and the call flow, then specifies them class by class: the session class, with the session, configuration and camera interfaces; the frame data class, with the frame image, image, image database and sparse spatial map interfaces; the trackable object class, including face augmentation; the collision detection class; and the environment understanding class. Two normative annexes define the special and enumerated data types. For an AR platform or application developer working to Chinese requirements, this is the interface.

This document specifies the software component interfaces for augmented reality, including session interfaces, frame data interfaces, trackable object interfaces, Collision detection class interface and environment understanding class interface. This document applies to the representation and application of augmented reality software component interfaces.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Component The software system has relatively independent functions, can be clearly identified, the interface is specified by the contract, has obvious dependencies on the context, and can be independently deployed. Deployable assembler software entity. [Source: GB/T 36455-2018, 3.1]

3.2 componentinterface The only channel for software components to communicate and interact with the outside world.

3.3 Augmented reality The environment that uses computer-based modern high-tech means to generate additional information to enhance the real world perceived by users. The generated additional information is superimposed on the real scene in a fusion manner. [Source: GB/T 38247-2019, 2.1.2]

3.4 augmentedrealitysession A message mechanism for managing the operation of various parts in augmented reality.

3.5 augmented face Get facial mesh information and perform image special effects processing.

4 Abbreviations

The following abbreviations apply to this document. AR.Augmented Reality CPU. Central Processing Unit GPU. Graphics Processing Unit HDR. High Dynamic Range