

China's First Glasses-Free 3D Achievement Released: Glasses-Free 3D Technology Poised to Enter the 2.0 Era Postprint

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Abstract

The release of China's first naked-eye 3D standard achievements aims to accelerate the standardization process of the nation's 3D industry and address persistent challenges arising from inconsistent standards, including product quality disparities and market price confusion. The formulation and promotion of this standard signify that China has established an independent intellectual property-based technical system standard for naked-eye 3D technology, heralding the birth of new standards that wi...

Full Text

China's First Naked-eye 3D Standard Released: Technology Poised to Enter the 2.0 Era

By Ye Xiufeng

On June 8, 2017, the China 3D Industry Alliance convened a standards release conference in Shanghai, unveiling China's inaugural "Naked-eye 3D System Standard." This historic milestone was witnessed by over 300 distinguished guests from relevant national regulatory authorities, renowned domestic and international experts in 3D/VR/AR fields, industry leaders, investment communities, and media representatives.

The release of China's first naked-eye 3D standard achievements aims to accelerate the standardization process of the nation's 3D industry and address persistent challenges arising from inconsistent standards, including product quality disparities and market price confusion. The formulation and promotion of this standard signify that China has established an independent intellectual property-based technical system standard for naked-eye 3D technology, heralding the birth of new standards that will guide the industry's future development.

With the establishment of this industry standard system and the 3D industry entering a golden period of development, the promotion of naked-eye 3D technology across various application fields will proceed smoothly.

The “China Naked-eye 3D System Standard” was initiated by the China 3D Industry Alliance, with active participation from leading display industry organizations including Kangdexin, Yivision, Hisense, Changhong, Konka, TCL, Shanghai University, and Zhejiang University in the standard working group. The released standard represents the first batch of outcomes selected from proposals developed over two years by the Technical Standards Committee, comprising five documents: *Basic Terminology for Naked-eye 3D Display*, *Applicability Guide for China Naked-eye 3D System Standard*, *Technical Specification for Lenticular Grating in Naked-eye 3D Display*, *Printed Grating Materials for Naked-eye 3D*, and *Static Display Technology Products for Naked-eye 3D*. Fang Yong, head of the China Naked-eye 3D Standard Working Group, stated that the standard will soon be submitted as a draft national industry standard and will be proposed for international standardization.

[Figure 1: see original paper] Fang Yong, Head of the China Naked-eye 3D Standard Working Group, presenting the first-phase standard achievements on behalf of the working group

[Figure 2: see original paper] Tang Bin, Secretary-General of the China 3D Industry Alliance, delivering a keynote speech on “New Value, New Scenarios, New Connections”

The release of the “China Naked-eye 3D System Standard” received active participation from numerous industry-academia-research institutions, including Kangdexin, Wanwei Group, Philips, Super D, IVVI, TCL Group, Sichuan Changhong, Yibin Push 3D Group, Qingdao Hisense, Anhui University of Technology, Shanghai University, Yivision, Sichuan University, Zhejiang University, Shanghai Advanced Research Institute of Chinese Academy of Sciences, Tianlu Optoelectronics, Ningbo Weizhen Display, Zhongke Daheng Group of Chinese Academy of Sciences, Stream TV Networks, and Lansen Technology.

Standards First: Industry Giants Drive Development as 3D Ecosystem Enters Golden Period

According to Tang Bin, Secretary-General of the China 3D Industry Alliance, China’s naked-eye 3D industry has maintained healthy and stable development momentum. In recent years, guided by a “user experience-centric” philosophy and through the joint efforts of industry-academia-research communities, the naked-eye 3D industry has achieved significant progress in technology iteration, product diversity, 3D content development, and application scenarios.

[Figure 3: see original paper] Commendation ceremony for outstanding enterprises and individuals in the first-phase naked-eye 3D system standard development

The conference also inaugurated the second-phase standardization initiative. During the launch ceremony, Tang Bin introduced the “Alliance’s Second-Phase Work Overview”: Given the rapid development of both the 3D and virtual reality (VR) industries, establishing a 3D/VR standard system tailored to China’s national conditions has become necessary. Therefore, upon the proposal of the Technical Standards Committee of the China 3D Industry Alliance, the plan is to organize different levels of technical committees or working groups (TC/SC/WG, etc.) in accordance with domestic and international practices and market demands to formulate technical standards addressing common and fundamental issues in the naked-eye 3D industry. The Alliance will align standardization efforts with user, market, and technology needs, promptly focusing its work on areas that are urgently needed in the market, critical for enterprises, central to the industry, at the forefront of product development, and hot in application. The Alliance is committed to continuous standardization research, formulation, promotion, and implementation while strengthening industry self-discipline. The iterative development of standardization work will strictly follow national standardization guidelines, advancing progressively based on market and industry needs through alliance/association standards, group standards, national standards, international standards, and the establishment of a standard testing and certification system.

[Figure 4: see original paper] Launch ceremony for the second-phase standardization work of the China 3D Industry Alliance (Participants: core contributing units including Yivision, Kangdexin, 3D Alliance, Wanwei Cloud Vision, Push 3D, IVVI Technology, Shanghai University, etc.)

[Figure 5: see original paper] Alliance members delivering keynote speeches

[Figure 6: see original paper] High-profile 3D/VR/AR application seminar

Experts noted that 2017 would be a crucial year for the 3D industry, with expectations for maximizing resource advantages, rapid technology iteration, and accelerated market expansion. During roundtable discussions, industry professionals offered extensive recommendations for industrial development. With increasing attention from domestic and international enterprises toward standardization work and related achievements, the development environment for the 3D industry will mature, promising bright prospects for growth.

Zhang Biao, Executive Vice President of Kangdexin’s 3D Display Business Group and representative of the Alliance’s second-phase standard working group, presented the vision and plan for the second-phase standardization work: First, continue optimizing the top-level organizational structure by linking industry and academia to engage more industry experts in standard formulation; second, establish and refine product standards and application scenario standards to better facilitate implementation among terminal manufacturers; and finally, focus on three core themes: patent pool construction, standard formulation, and standard promotion. Zhang Biao proposed that the Alliance will establish standards for eight application scenarios: digital healthcare,

cultural heritage digitization, education and training, military applications, architectural decoration, public display, commercial advertising, gaming, and new entertainment.

During the conference, consensus emerged among 3D industry professionals: Naked-eye 3D, as an inevitable trend of technological progress, will become the mainstream technology in the emerging display industry. Following its inclusion in the “13th Five-Year Plan” for national strategic emerging industry development, the industry has progressed in a healthy and orderly manner. Relevant data indicates that the global output value of the naked-eye 3D display industry was approximately RMB 3 billion in 2016 and is projected to reach RMB 300 billion by 2021.

At the conference, industry experts including Zhang Yijun, Chairman and President of Shanghai Cloud Vision Technology; Xu Yibo, CTO and Senior Vice President of IVVI Technology (Nanchang); Fang Yong, General Manager of Shanghai Yivision Technology; Jason Yang, Co-founder and CTO of Diejing Digital Technology; and Zhao Bing, Intellectual Property Advisor of Philips (China) Investment, delivered speeches, collectively discussing the future of the naked-eye 3D industry.

Note: Figure translations are in progress. See original paper for figures.

Source: ChinaXiv — Machine translation. Verify with original.