

The Technical Framework and Application of Cloud Exhibition

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ABSTRACT

Cloud exhibition is a typical presentation of intelligent exhibitions. Its technical framework includes live marketing, 3D display, instant messaging, intelligent translation, video conference, cloud signing, etc. Cloud exhibition is based on webcast and combined with various exhibition application scenarios to form a variety of operating modes, including webcast+conference, webcast+supply docking, webcast+ exhibition venues, etc. With the development of modern technology, the interactive, consumerized, and virtual-real integration characteristics of cloud exhibitions have inserted the wings of technology for traditional offline exhibitions, which can expand the influence of traditional exhibitions and maximize the benefit of all participants.

Keywords: *Cloud exhibition, technology construction, webcast, intelligent exhibition*

1. PREAMBLE

Under the influence of the epidemic, most offline exhibitions have been cancelled or postponed, and online cloud exhibitions have become a new way for exhibition development. Based on Internet technology and ideas, cloud exhibition is a brand-new exhibition operation mode which includes exhibition organization and planning, enterprise participation and audience participation. The essence of the cloud exhibition is that it is based on the Internet, and through cloud computing, big data, mobile Internet technology, etc., various entities in the exhibition industry chain will be connected to each other on the Internet, so as to build a digital information integrated display space, and then form a full range three-dimensional new exhibition and service model.

"From auxiliary digitization to full digitization" can be said to be the most intuitive description of the shift in the status of online cloud exhibitions in 2020. For example, in the past ten years, the Canton Fair has adopted cloud technology, digital technology, and network technology to increase "digital" participation methods, thereby realizing "expansion of exhibition scenes", but the operation mode of the Canton Fair is still mainly offline, and online auxiliary. With the impact of the 2020 epidemic and the comprehensive digital development of the exhibition, the 127th Canton Fair was held in a purely online mode for the first time, providing new possibilities for the development of the cloud exhibition.

2. THE TECHNICAL FRAMEWORK OF THE CLOUD EXHIBITION

The technical framework of cloud exhibition includes live marketing, 3D display, instant messaging, intelligent

translation, video conference, cloud signing, etc. These are the core technologies that support the rapid development of cloud exhibition.

2.1. Live Marketing

Live marketing is an online sales model that has emerged with the popularity of live video streaming in the mobile Internet era. In this mode, live broadcasters (maybe the merchants or their employers) optimize brand trust by trying products and sharing experiences on the live broadcast platform to attract more buyers' attention, forming a "fan efficiency", and then encourage consumers to click to buy products and achieve the ultimate marketing goal. [1]

To meet the needs of cloud exhibition development, the outstanding feature of live marketing is that in this mode, buyers are no longer isolated from each other, but are placed in a situation where others are virtually present. Participants can see a lot of information while watching the live broadcast. For example, the total number of viewers, the purchase of the audience and the lottery, the interactive speech of the audience, the name of the new audience, and the likes of the audience. Such information can enhance the audience's sense of presence and improve their decision-making environment, so as to realize the transformation of cloud exhibition from offline "face to face" to online "screen to screen".

2.2. 3D Display

3D display is a new way of Internet product display. Its main principle is to use a camera to take a 360-degree shot of the product, and then synthesize it through image splicing technology to create a flash or gif dynamic effect,

so that online viewers can interact with the product, so as to display products more comprehensively and intuitively. The technical features and advantages of 3D display are: firstly, 3D display enables products to be displayed in multiple angles and details at 360 degrees, which can highlight the characteristics of the product more than the usual product static image display, and deepen the audience's impression of the product. Secondly, it relies on flash or html5 to be interactive. Consumers can use the mouse to drag left and right and zoom in to watch different angles and details, which effectively improves the online experience of users. [2]The third is that compared to the traditional offline physical product display, it can make use of the cross-regional advantages of the Internet, so that every consumer can experience the product truthfully, and enhance consumers' desire to buy.

2.3. Instant Messaging

Instant messaging is a point-to-point communication software based on a communication network protocol. Initially, instant messaging was just a simple chat tool. It has been able to transmit data such as voice, picture, video, text, etc., and has gradually developed into an office software that integrates multiple functions such as emails, blogs, and games. Instant messaging tools have the characteristics of immediacy, virtuality, focus, and individuality, and can meet the needs of people of different cultural levels and sizes.

In terms of the operation of the cloud exhibition, instant messaging can provide online communication for exhibition personnel, and can synchronize exhibition data, thereby making communication and transactions more convenient for exhibitors; instant messaging is very important for post-show services, since buyers have a long purchasing cycle after exhibiting, instant messaging tools can communicate and provide related material support for both parties.

2.4. Intelligent Translation

With the continuous integration of artificial intelligence, neural network, and deep learning technology, intelligent translation technology has developed from the original rule-based machine translation to the neural network machine translation relying on cloud technology and big data. Intelligent translation refers to the translation

technology that converts one language into another language through computer and other chip software. Intelligent translation can provide important technical guarantee for the international development of cloud exhibitions. In March 2018, the "TAUS Asia Summit" provided manual simultaneous interpreting and machine simultaneous interpreting, which was the first time in the world to test machine simultaneous interpretation in a real communicative environment. In April of the same year, at the Boao Forum for Asia, live speeches were translated into Chinese and English bilingual subtitles in real time. Participants could review, listen to and record the bilingual content of guest speeches through mobile phone programs.

2.5. Video Conference

Video conference refers to the system equipment for individuals or groups in two or more different places to transmit audio, video, and documents to each other through transmission lines and multimedia equipment to realize instant and interactive communication.

Video conference can solve the problem of communication efficiency in the differentiated environment of cloud exhibitions. The first is that the video conference has the function of remote video, which can conduct remote high-definition meetings and display of physical details. The second is that the video conference meeting time and location are flexible, which can be used for online, offline, and end-cloud collaboration. The third is that video conferencing can improve the quality of online meetings. Video conferencing not only has conference functions, but also more value-added service functions, such as document sharing, multi-person annotation, seamless flow of multi-terminal information services, automatic generation of meeting minutes, etc., helping enterprises to solve the communication barriers of remote meetings, thereby enabling decision-making more efficient. [3]

2.6. Cloud Signing

Cloud signing, also known as online signing, online cloud signing, and Ipad electronic signing, is an electronic signing system that can complete the project signing ceremony online. The specific operations of cloud signing are:

Table 1 Operation process of cloud signing

Serial number	Process
1	Electronic contract-generate a large screen link for the contract
2	Online signing-contract signing through the signing page
3	On-site LED screen synchronization display signing ceremony
4	Cooperate with the live broadcast system to broadcast the signing process of contractors from other places

Cloud signing technology can be used in different signing scenarios of cloud exhibitions, such as brand project cooperation signing ceremony, strategic cooperation signing ceremony, new product launch cooperation signing ceremony, etc. Cloud signing is a way to open up the innovative service economy, which can ensure "non-stop" investment promotion at all levels, "non-closing" services, and "constant" problem-solving. This "cloud signing" process is simple and efficient, which not only reduces the concentration of personnel, but also efficiently promotes investment cooperation.

3. THE OPERATING MODE OF THE CLOUD EXHIBITION

Cloud exhibition is based on webcast and combined with various exhibition application scenarios to form a variety of cloud exhibition operation modes, including webcast+conference, webcast+supply docking, webcast+exhibition venues, etc.

3.1. Webcast + Conference

The 2019 Apsara Conference used webcast to broadcast 110+ conferences at home and abroad, and relied on the cutting-edge live broadcast technology provided by Vhall. In the process of using webcast for offline conferences, the live broadcast of the Apsara Conference uses split-screen processing technology to cut the guest speech video and documents into the left and right parts on the same screen, showing the real effect as on-site in front of the online audience. When the speaker delivers a speech in English, the dual-channel simultaneous interpretation technology greatly improves the experience of the online audience.

3.2. Webcast + Supply docking

The first Alibaba Online Fair hosted by Alibaba International Station was successfully held in June 2020. The original 6,000 Class B live broadcasts were arranged, but more than 8,000 were eventually opened. Specifically, Jinan Huachen Industrial Co., Ltd. strictly designed the live broadcast link and explanation content during the online trade fair in accordance with the customer's offline factory exploration process. In this live broadcast, online viewers have watched more than 3000 times. The live broadcast has brought a lot of visitors to Huachen's platform. Basically, the live broadcast replay will be watched every day, and the visits has increased by 200-300%. Whether during or after the live broadcast, many buyers sent inquiries, and the number was more than 200% higher than before the live broadcast.

3.3. Webcast + Exhibition venues

In recent years, in order to meet the development needs of intelligent exhibitions and cities, intelligent venues are the development goals of future venues. Facing the "cloud exhibition era", exhibition venues actively responded, paying attention to the cloud exhibition operation mode of webcast + exhibition venues, and actively empowering the creation of intelligent venues, in order to achieve dual-line integration to boost the development of intelligent exhibitions. [4] At present, Hangzhou International Expo Center is taking the lead in planning the "live room" studio base, which will integrate resources and pay attention to the needs of content exporters, especially the needs of lectures and industry conferences, in order to make "hosts" go on stage with just a bag in the high-quality facilities and equipment environment, showing efficient and professional live broadcast quality.

4. FEATURES OF CLOUD EXHIBITION

The cloud exhibition is based on the development of modern technology. Its features of interaction, consumerization, and integration of virtual and reality have inserted the wings of technology for traditional offline exhibitions, which can well expand the influence of traditional exhibitions and maximize the benefits of all participants.

4.1. Interactive

Interaction is the core feature of information dissemination in social networks. The difference between online cloud exhibitions and offline exhibitions is that online cloud exhibitions are in a social network based on the mobile Internet and using smart interconnection. The core feature of online cloud exhibitions is not mainly the function of interpersonal communication and relationship building in the strong relationship mode, but the content sharing and interest gathering in the weak relationship mode. Therefore, it is necessary to realize that the interactive behavior of online cloud exhibitions is very different from real interpersonal communication in reality. Take the webcast operation mode of the cloud exhibition as an example. The interaction of the webcast is based on the real-time active interaction between the host and the audience, and the audiences themselves. In the webcast, the host and the audience interact, the host can make timely adjustments to the live content based on the online feedback of the audience to meet the needs of them; the communication between the audiences can comment on the content of the host and exchange ideas. This kind of interactive form that emphasizes content sharing and interest-based communication allows participants to gain a sense of experience and satisfaction. [5]

4.2. Consumerization

The goal of the online cloud exhibition is to guide consumption. Since Guy Debord keenly pointed out the consumption meaning of "landscape", "the combination of labor and capital disappeared in the dazzling landscape. In the landscape society, we sell the sizzling sound of grilled steak instead of steak. Image rather than physical objects." The ultimate goal of online cloud exhibitions and offline exhibitions is to guide consumption by giving audiences a scene-oriented experience, while the live marketing of cloud exhibitions is a network presentation instead of the consumerization scene of offline exhibitions. The consumerization of cloud exhibitions is not only reflected in the "business relationship" between the anchor and the audience in live marketing, but also in the content meaning and consumer satisfaction co-created by the participants in the live marketing, which is also the way for cloud exhibitions to increase consumer loyalty and further guide consumption.

4.3. Virtual and real integration

The characteristic of the integration of virtual and reality in the cloud exhibition is manifested in two aspects. First, the cloud exhibition can construct an online virtual environment and give the audience a real and profound feeling in terms of effects. Second, the cloud exhibition lies in the unification of time and the interaction of visual information in the process of exhibiting beyond the spatial distance. The audience can participate in the cloud exhibition at any place within the specified time, which promotes virtual reality and real reality on the same time axis, making the distance between the virtual cloud exhibition and the real reality disappear completely in the sense of time. The integration of virtual and reality in the cloud exhibition can make people's participation scope break through geographical restrictions and make interpersonal online interactions present a distinctive global feature. The presence created by it can drive changes in social cognition and social relations.

5. CONCLUSION

In the development trend of economic diversification, the "cloud exhibition era" is an inevitable choice for the development of intelligent exhibitions to be "more distinctive, higher-level, and more effective". The cloud exhibition will lead and encourage foreign trade companies to increase the learning and application of new marketing methods such as online display and live marketing. In the 5G era, it will bring technical possibilities of more efficient product display, negotiations, new product releases, and information exchange to countries, regions, exhibitors, and buyers, which directly promotes the development of intelligent exhibitions.

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