

# The application prospect of virtual reality technology in recruitment interview

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**Abstract.** By providing a high-fidelity business scenario, and combining with the traditional interview, Virtual Reality technology is able to build the interview environment which includes virtual interviewers, virtual scenes and avatar of interviewee, so as to enhance the interviewing experience and hiring level. This paper reviews the main disadvantages of the traditional interview, analyses the concepts, and types of Virtual Reality-Based Interview (VRI), and develops new ways to realize online and offline, visualized and ecological recruit.

## 1. Introduction

With the increasing pressure of current employment, the demand for talents in the future will increase greatly, and the communication methods will become more convenient. New recruitment methods will become popular, such as: talent website, online assessment, video interview and so on. Virtual Reality technology can create a variety of realistic environments, providing users with rich sensory stimulation, natural interaction and immersive experience. Combining it with traditional interview methods, constructing the interview environment jointly formed by virtual interviewers, interview scenes and interviewees will greatly improve the interactivity and experience of the interview, and create an innovation-driven upgraded version of talent interview.

## 2. Disadvantages of traditional interview

The traditional interview also known as “speak face-to-face”, is an one-to-one interview between the candidate and the interviewer, who will ask questions based on the content of the resume. The interviewer's level directly determines the reliability and validity of the interview results.

The interview mode presents a tendency of solidification, and interviewees tend to disguise themselves. With the standardization of interview and recruitment, the interview method, interview process and evaluation topic show a solidified trend, and the development and application speed of new question type and new technology lags behind the new market demand. In addition, many job seekers attend training institutions to acquire interview skills, and elaborate disguise their shortcomings. Eventually induce the judges easily to make biased comments.

The interview design lacks context, which affects the quality of interview evaluation. During the interview, characters are usually unable to accurately describe the numerous details of the real scene and provide extremely simulated scene experience. Due to the differences in individual experience, quite a few interviewees lack the sense of situational integration, and their talents and potentials are often not fully displayed. The content conceived by the judges and the scheme conceived by the interviewees may be in different scenarios, which may affect the quality of interview evaluation to some extent.

## 3. Development direction of Interview: VRI

With the development of the Internet and technology, enterprises tend to improve the degree of interview imitation, and make use of technology to simulate the work issue in the virtual scene. Virtual reality is a high-new technology that has been initially applied in recent years. It uses

computers to simulate the real environment and immerses users in the virtual environment through external feelings such as vision, hearing and touch. It has been applied in many fields such as military affairs, education and medicine. Virtual reality technology has the advantages of interactivity, autonomy, existence and multi-perception, which can completely meet the needs of high simulation interview in recruitment from the technical perspective.

### 3.1 Definition

Virtual Reality-Based Interview(VRI)as the name suggests is the Virtual Reality technology combined with the Interview, through the related equipment to create a Virtual environment, presents the stereoscopic 3D graphics, real-time simulation of real working real events may occur in the scene, let the candidates immersive analyze and solve practical problems. In addition to traditional interview competence, it can also evaluate the ability to solve complex tasks, adapt to them and make decisions. In brief, VRI is a virtual interview in which participants interact with various scene elements in the virtual environment in terms of hearing, vision and touch[1]. It is the product of the combination of traditional interview and virtual reality technology, and it has the characteristics of visualization, simulation and dynamics.

### 3.2 Type

#### 3.2.1 Desktop VRI

Using a personal computer to conduct a mock interview. Using the computer's screen as a window to observe the virtual environment. You can communicate and interact in the virtual environment with a keyboard and mouse, without any other devices[2]. By watching video or in the form of "being in" virtual world, the participants react to the work scene provided by the enterprise based on the competency and the job responsibilities of the recruitment post, and the judges evaluate expression according to the judgments and choices made by the participants. The Virtual Edge Institute in Pleasanton, Calif., has set up online Virtual recruiting platforms for its members. In Virtual "booths," recruiters link to online job sites, get resumes from applicants and interact with them in online chat rooms. According to the data results, from 2009 to 2010, the number of its exhibitions increased by 31%, and the growth of its members even reached 40% in 2011[3]. Desktop VRI features relatively simple development, easy operation, and low cost.

#### 3.2.2 Immersive VRI

With the help of head-mounted display, projective virtual reality system and other devices, the participants' perception of vision, hearing and other senses are isolated. A virtual new sensory space is set for them, and a virtual role is endowed. In this type, virtual reality technology devices are used to dynamically monitor the physiological indicators of the participants in real time during the interview process. Through Facial Capture Head Rig, the participants and judges are "mapped" to the online virtual room for face-to-face communication, and the performance of the participants is recorded on video. The judges evaluated and compared the participants through real-time communication or video playback. It is said that Lloyds banking group used headgear displays and other devices to interview candidates in a virtual reality environment in the fall 2017 graduate recruitment and digital IT graduate plan[4]. At present, from the perspective of technology application progress, immersive application is relatively complex and the system equipment price is relatively expensive, so it is difficult to popularize it.

#### 3.2.3 Enhanced VRI

This mode combines the real and virtual environments. Participants can see real objects in real life, as well as virtual objects superimposed and suspended in the real world. During the interview, the movable scene and 360-degree rotating 3D space enhance participants' sense of immersion. The participants control related operational questions or virtual objects through their own movements and forces, and conduct in-depth interaction and communication with the interview judges, achieving a state that is both real and unreal. For example, Enhanced VRI can be used to test comprehensive

ability of fighter pilots. The aircraft's head-up display projects instrument readings on the penetration screen in front of the pilot. When an enemy aircraft appears, the pilot does not have to look down at the instrument data, but directly through the screen to see the weapon targeting data, focusing on locking the enemy aircraft or correcting navigation errors [5]. At present, this type of interview requires extremely high level of technology and a large amount of research and development support, which is very difficult to apply in the development practice of enterprise interview.

#### 4. VRI future development and application – Based on existing cases

VRI is the product of the interaction between the emerging technology and the traditional interview. At present, relevant researches and technologies have begun to explore the application of virtual reality technology in the field of recruitment [6]. Due to the high technical requirements of enhanced VRI development and the difficulty in application, this paper does not discuss its application. The following is a preliminary analysis of the development and application of desktop VRI and immersive VRI.

##### 4.1 Desktop VRI

Enterprises can use Desktop VRI to create work situations similar to those in real life, and use dynamic and three-dimensional virtual situation video instead of text description to interview, so as to improve the authenticity and effectiveness of interviews. Take virtual scene video as an example. The development steps are as follows:

**Design video scenario.** Firstly, questionnaire survey and key event interview were conducted to collect and sort out typical work events provided by candidates to understand their respective processing and response. Then, based on the competency of the position, design specific scenarios video and compile interview questions.

**Present the virtual scene.** Desktop VRI uses computer (PS or AI) drawing or hand drawing to present animated characters and describe and define their dynamic behavior in the virtual environment. In the process based on different situational assumptions, character dynamics can be described to convey the real state of the employee in the work situation[5]. In this way, familiar things and details such as working environment, characters, clothes and decorations in real life are presented intact, and the working situation is restored to the greatest extent to generate video files.

**Enter the interview process.** Virtual reality technology is used to render the visual model through the Web browser to present the case of simulating the real working scene in the video. For example, video takes the story of Edward, the marketing manager of a "virtual character" as an example. Video starts with the description of the character's characteristics and the completion of goals, and then plays the work scenes. As video progresses, participants will gradually understand the conflicts and contradictions of work events and recognize different roles in the work scene. In general, there are 3-5 scene fragments, and video pause in each fragment prompts the candidates to make decisions on behalf of Edward. The types of questions include single or multiple choice questions and sequence questions. Each topic is the clue or reason for Edward's next work event, and then move on to the next scene. The candidates were asked to make decisions, each of which had a different impact on the direction of the subsequent story.

**Interview evaluation.** Through real-time interview observation and video playback evaluation, the selection, reaction and expression of the candidates were deeply analyzed and evaluated against the requirements of the organization and the position competency, so as to obtain a comprehensive demonstration of the candidates.

##### 4.2 Immersive VRI

With the help of relevant equipment and application software of virtual reality technology, a new situation of human-computer interaction can be realized, which further expands the perception range of candidates and strengthens the sense of scene existence and experience. Take Development of interactive immersive VRI as an example. This mode is illustrated by virtual reality application

software represented by VR chat. The technology overcomes the lack of immersion that instant messaging apps like Skype and Facetime by providing users with an online visual 'room' where they can map themselves to interact with other users in the 'room' via a headset [7]. In the structured interview, VR chat provides immersive new virtual reality experience. During the interview, participants talk with judges with helmet equipment. During the leaderless group discussion interview, the judges can use VR chat to set up multiple virtual candidates, virtual time-limited tasks and social environments. They can also have group chats with candidates from different places through virtual reality technology to jointly discuss solutions to interview questions.

## 5. Summary

Nowadays, virtual reality technology, as one of the important technologies to change and develop the world in the future, will not only subvert production practices, scientific experiments and information technology, but also provide new tools for promoting the comprehensive development of human cognitive ability. Although virtual reality technology has not been widely used in the field of personnel recruitment, the application prospect of virtual reality technology in the interview should be very optimistic in terms of times and technology development trend. Such technical advantages of high immersion, three-dimensional interaction and audio-visual perception of reality will play a full role in the field of talent recruitment in the future, so as to realize the new mode of online and offline symbiosis of situational, visual and ecological recruitment.

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