

VIRTUAL TABLETOP GAMES: FEATURES AND CAPABILITIES

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This article explores virtual tabletops (VTTs) as interactive multimedia publications in tabletop role-playing games (TTRPGs). It analyzes how these digital platforms combine automation, interactivity, and immersive technologies to enhance gameplay. The study examines the role of 2D and 3D platforms, customization tools, and world-building mechanisms in shaping the digital game environment. Additionally, it examines VTT engine optimization for better performance and accessibility and their growing impact on the gaming industry.

Tabletop games have existed for centuries, evolving and adapting to new technologies. One of the key aspects of the digital revolution in tabletop role-playing games (TTRPGs) is the introduction of virtual tabletops (VTTs). A virtual tabletop (VTT) is a digital platform designed to replicate the immersive experience of traditional tabletop games, specifically developed for role-playing games (RPGs) involving dice rolling. It serves as an online arena where users can recreate existing games or create their own adventures, facilitating shared gameplay with remote participants. These platforms allow players to connect in real time, overcoming geographical barriers and enabling a richer social experience within the gaming community.

According to Mordor [1], the global surge in the online tabletop gaming market, projected to grow at a significant compound annual growth rate of 6.78%, presents a promising landscape for the gaming business seeking to engage in the evolution of virtual tabletop games (VTTs). As traditional tabletop games undergo a digital renaissance, understanding key market insights and trends becomes crucial for developers aiming to create engaging and successful virtual tabletop games.

The purpose of this study is to explore the features of virtual tabletop role-playing games as a form of interactive multimedia publications.

VTTs simulate the atmosphere of traditional tabletop games and offer core features such as character sheets, interactive maps, and even the use of 3D environments and individual elements for better visualization and immersion. Automation has become a fundamental aspect of the digital transformation of TTRPGs. Modern software enables automatic calculations of character statistics, modifiers, and dice roll results, significantly simplifying gameplay. Moreover, automated calculations ensure fairness and eliminate potential errors [2].

Beyond automation, VTTs also incorporate a variety of customization options, allowing game masters and players to tailor their experience. A crucial aspect is the expanded variations for "game building." Editors provide the ability

to create an interactive game world environment. Visual effects, sound accompaniment, interactive maps, tools for note-taking, and objects that respond to player actions enhance immersion and simplify the storytelling process. Collaborative world-building has also become a reality thanks to digital platforms. Players can add their own elements to the game environment, modify maps and character models, customize game conditions and rules, as the ability to influence the world is one of the most important factors for participants [3].

The choice of platform is crucial in the development of virtual tabletop role-playing games, as it determines the creation of game components. Two major groups can be distinguished: 2D and 3D platforms. 2D platforms, such as Roll20 and Foundry VTT, are web-based (HTML5, JavaScript, WebGL) and operate directly in a browser. Content is typically represented as images (maps, tokens) and text modules. These platforms are widely used due to their accessibility and ease of use, allowing players to quickly set up and run games without requiring extensive hardware capabilities. 3D platforms, such as Tabletop Simulator (Unity) and Sigil (Unreal Engine 5), utilize full-fledged engines to create three-dimensional environments with realistic physics. The development process includes 3D modeling of game objects, importing ready-made assets, and configuring all elements and interactive components. These platforms offer advanced mechanics such as physics-based object manipulation, VR support, and highly detailed environments, making them ideal for players seeking a more immersive experience. To ensure smooth gameplay, VTT engines optimize rendering, reduce system load through caching, and use cloud computing for complex processes, enhancing performance and accessibility.

In conclusion, virtual tabletop role-playing games are a modern trend in digital multimedia publishing that combines classic tabletop mechanics with technological capabilities. The analysis of VTT features revealed key aspects, including automation, interactivity, and the use of 2D and 3D platforms. Further development involves improving visual technologies, increasing the efficiency of engines and expanding tools for the collaborative creation of game worlds.

References:

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