Amazon Sumerian

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March 2020

1   Introduction

Sumerian is a web-based service that lets a user create 3D, Augmented Reality (AR), and Virtual Reality (VR) applications on any device. Non-technical web developers can build immersive and interactive scenes that run on AR and VR, mobile devices, and web browsers. Sumerian is known to be quite convenient and accessible for amateur and experienced 3D developers due to its ability to design scenes directly from a browser.

As a web-based service, users can create 3D experiences that are accessible through a simple browser URL and are able to run on popular hardware for AR/VR allowing for universal deployment of a 3D experience on Sumerian.

2   Benefits and Key Features of Sumerian

- **Easy to Create** - Sumerian provides ready-to-use templates for the production of faster creations. You can use hundreds of pre-configured and pre-positioned scenes and lights to create 3D scenes in minutes. Sumerian supports two product templates, the configurator template that allows for the customization of the textures of created scenes and the virtual

concierge template that attaches Amazon Sumerian Hosts with voice integration. It also provides availability to import assets from a selection of landscapes, furniture, materials, hosts and more.

- **Uses Machine Editors**- Sumerian is able to use the State Machine editor to build dynamic scenes for user and object interaction, such as camera control, animations, and voice commands. It has a visual drag-and-drop user interface which is easy to use and supports over one hundred actions.

- **Integration** - Sumerian is easily able to integrate with other AWS services using the built-in AWS software development kit for JavaScript to access a full suite of AWS APIs for services such as AWS Lambda and Amazon DynamoDB. It's also able to store and manage all the 3D assets you create or upload in the AWS cloud.

- **Voice commands**- Sumerian has built-in voice and chatbot features with Amazon Polly and Amazon Lex directly in the editor.

- **Browser-based publishing and distribution** - With two clicks, you can distribute your created scenes globally in seconds for customers to access via a simple URL. Augmented reality experiences built with Amazon Sumerian run on Android and iOS mobile devices without requiring app downloads. Virtual reality scenes run on popular hardware such as Oculus, HTC Vive, Google Daydream, and Lenovo Mirage. You can build your scene once and deploy it anywhere.

3 Uses

3D Web

- Bring 2D web apps into 3D. Embed 3D content into your applications to let end customers interact in a new way with a simple click, tap or swipe.

- E-Commerce and Sales- Enable 3D product visualization and customization to help customers learn more about their purchasing decisions.

- Online Education- Create VR and AR applications through the web in online education to guide students through the learning process. Increase learning engagement for students.

Virtual Reality

- Create 3D environments to provide completely immersive experiences for customers.

- Training Simulations- Helps companies create real world simulations to train employees, such as surgeons or hotel staff.

- Visualization of Shares- Visualize the performance of the stock market where users interact directly with 3D hosts

- Travel- Create 360-degree videos to provide an immersive real-world experience to help travelers select their destination or adventure.

Augmented Reality

- Deliver AR experiences that help customers connect with businesses.

- Product Marketing- Use AR to help customers visualize products in their own homes before purchasing them.

- Retail Merchandising- Improve merchandising precision and productivity in physical retail by providing AR planograms and shelf placement instructions. Conduct AR shopper research to improve future merchandising plans.

4   Companies that use Sumerian

Due to the simplicity of Sumerian, many companies use it to create VR, AR, and 3D applications for users to use.

- **Fidelity Labs** - Fidelity used Sumerian to create a VR application where an avatar hosts multi-user conversations in a "virtual chart room" to help a user analyze and observe the performance of the stock market.

- **Electronic Caregiver** - Electronic Caregiver used Sumerian to create a 3D animated, connected caregiver designed to transform a residence into a digital Smart Health Home, providing chronic care management, rehabilitation, aging in place, behavioral health and care coordination for elderly patients. Sumerian helped them create a voice-controlled user interface would feature an animated augmented-reality (AR) character who would guide, prompt, and converse with elderly users.

- **WeatherBug** - WeatherBug used Sumerian to create AR visualization of Air Quality Index (AQI).

5 Other Public Cloud Providers

Other cloud services also provide services to easily create and run browser-based 3D, augmented reality (AR), and virtual reality (VR) applications.

- Azure Spatial Anchors and Azure Remote Rendering - Very similar to Amazon Sumerian, but it offers the ability to create a persistent mixed reality world that exists beyond your device

- GCP Google Daydream - Specializes in VR applications. Features high quality mobile VR, which is ideal for immersive, longer experiences.