Student’s Choice – SoundStage VR

* Overview
  + What is it?
    - SoundStage VR is a virtual reality music sandbox built specifically for room-scale VR. Whether you’re a professional DJ creating a new sound, or a hobbyist who wants to rock out on virtual drums, SoundStage gives you a diverse toolset to express yourself.
  + History of the technique/device?
    - Due to the recent discontinuation of this project in favor of a merger with Google VR and the recent shutdown of the official website, there is a lack of official documentation for when development for this project started. After conducting intensive research, it can be concluded that development for SoundStage VR took place as early as June of 2016, with an Early-Access Steam release in July of 2016. The project moved out of active development shortly after the full Steam release in March of 2017. It became open source just this January of 2018.
* Applications
  + Where is it used?
    - SoundStage VR is a room-scale VR application, which means it’s meant for use in the average open room, in a full 360-degree environment.
  + What are best suited applications?
    - SoundStage VR is meant to be used a Virtual Reality Music Creation Sandbox. It has also been known as a Virtual Reality Digital Audio Workstation, or VRDAW, for short. SoundStage VR is excellent for quickly configuring musical control interface setups with an endless number of possibilities. You may use it create music in a workflow otherwise not practical or possible in a non-VR environment, or you can use it to supply an impressive visual aspect to musical performances, such as a livestreamed DJ show—which has been done several times.
* Why
  + Why is it a good use of VR?
    - SSVR is good for quickly configuring musical control interfaces that would be otherwise impractical to configure in a physical environment or in a traditional DAW (Digital Audio Workstation). It takes advantage of the motion-based interactions that come with VR and uses the toolset provided to create customizable interface setups with little physical consequences.
  + Why is it unique?
    - SSVR is unique because it is a VRDAW that uses more traditional methods of music production in a VR environment. This is important because it provides for another way to configure and interact with traditional music production setups.
  + What’s cool about it?
    - SSVR allows users to quickly pull out and arrange scalable control interfaces and adjust them on the fly. A large-scale configuration can be achieved in minutes without having to pull out a real set of musical devices. This saves the user time, space, and money, at the very least. Additionally, it looks cool for performances.
* Pros/Cons
  + Pros
    - This medium of traditional music production is a revolutionary new way for musical producers to interact with familiar control interfaces. They may interact with instruments and controls in a 3-dimensional space as if they were working with the physical alternatives to the devices supplied in the toolset.
    - SSVR takes advantage of the VR environment by allowing users to quickly manipulate special 3-dimensional controls that otherwise common practical physical alternatives
    - It is an excellent tool for streamlined customization of music production setups.
    - It can be used for visually appealing live performances.
  + Cons
    - It is only meant for use with the HTC Vive and the Occulus Rift with their respective touch controls. There is a lack of compatibility with mobile VR devices and other VR hardware.
    - Since SSVR is meant to resemble traditional music production tools, the lack of haptic feedback may be an unfamiliar feeling for new users, as such feedback can be a critical part of interacting with traditional music production tools.
      * This could be fixed with the use of haptic feedback devices; perhaps something similar to the Glove One.
    - Additionally, since SSVR currently only works with the 2-piece touch controllers, You may only have 2 pointing devices at any given time.
      * This could be fixed with the use of technology found within devices such as the Glove One or the Leap Motion.
* Simulator Sickness
  + I have not personally used this; however, there are videos of entire musical performances using SSVR, some exceeding 10 or even 15 minutes. From this, I can draw that it’s practically possible to use the SSVR environment for an extended period of time without serious simulator sickness. I would rate it at a 2, after considering potential issues with complex setups and flashing lights over a long period of time.
* Related Applications
  + TheWave VR
    - Non-Traditional VR Social Music Production Platform and Application
  + AliveInVR
    - VR Music Production Interface for Integration with Ableton Live DAW
  + dearVR
    - 3D VR audio engine for integration with Unity and any DAW
    - More focused on audio engineering
* Other Potential Applications
  + If SSVR could be further developed to incorporate further hardware compatibilities and integration with standard DAWs, along with a toolset that could be mapped to standard control interfaces within a DAW, SSVR could be used as a universal VR Control Interface, allowing for an alternative or augmented workflow for users of standard DAWs.
  + The use of a configurable VR toolset can be (and has been) applied to other forms of digital media production, such as 3D modeling & artwork, video editing, or more advanced audio engineering.
* Conclusion
  + SoundStage VR is a revolutionary tool for music production in that it can simulate traditional music production control interfaces in configurable VR environment that can adapt to the needs of the user with little consequences.

References  
  
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<https://www.theverge.com/platform/amp/2017/4/7/15216720/soundstage-vr-developer-logan-olson-joins-google>

<https://github.com/googlearchive/soundstagevr/commits/master>

<https://twitter.com/soundstagevr/status/750948812168966148>

<https://www.aliveinvr.io/>

<http://dearvr.com/>

Some information was recovered from archived versions of webpages that cannot be linked to.