

VR Navigation tools and software

MODULE 2 - Unit 3- Master class



NAVIGATION TOOLS

VR enables users to move around and explore the virtual environment.

Different ways of design navigation in VR:

- Watching football match while sitting: not need to move that much
- Playing a sport: users use their body as naturally within a small area
- Other cases: being able to explore a larger space than the physical space they're actually in.



NAVIGATION TOOLS

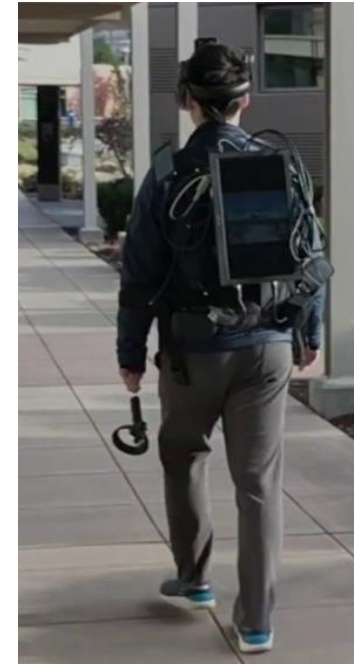
- The user's ability to navigate in VR is also restricted by the VR system they're using. High-end VR is supported by a desktop or laptop.
 - It usually comes with position tracking of the headset.
 - This allows the users to explore the environment in a natural way as the graphics in the virtual world will just update according to the physical position detected by the tracking system.



NAVIGATION TOOLS

VR supports different navigation tools.

1. **High-end VR** with precision tracking supports **Physical navigation** where the user's physical motion is used to transport a user through the virtual world.



NAVIGATION TOOLS

2. Virtual navigation.

With most **mobile VR system** where **the precision tracking is not supported**, we're physically kind of stuck in a fixed point in the virtual world.

The most common way of doing this is to borrow what we do when playing games on the 2D screen. Where we normally navigate the environment using a patch pad or a joystick.



NAVIGATION TOOLS

3. Teleportation

Another way to travel in VR is a method called teleporting.

- Users can travel from one place to another by looking at the new place selecting it and the next moment they're in a new position.
- The new place users wish to travel to is often called the target location.
- In some applications, several target locations are predefined and users can either look at a target or point at one with the controller to indicate which one they wish to travel to.

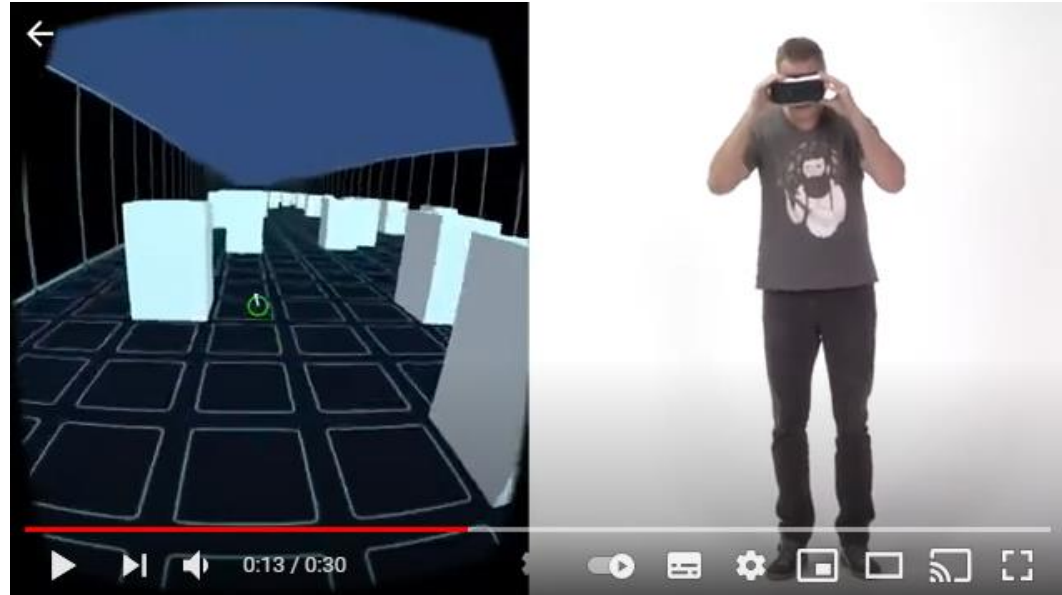




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Handsfree Omnidirectional VR Navigation using Head Tilt

[VIDEO LINK](#)



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The Infinadeck Omnidirectional Treadmill

[VIDEO LINK](#)



SOFTWARE

- It is used to build immersive, simulated 3D environments
- How? By pulling together all their digital elements using a suite of VR software development tools.



SOFTWARE

- Software development has become a new way to create media and entertainment
- It's used for more than game development.
- Industries are applying VR technology to simulate environments to train people, test products in real time and for educational purposes.



SOFTWARE

- Virtual reality software creates a new world by:
 - Developing objects that exist in a virtual 3D space.
 - Adding in sensory feedback to give a sense of presence — for example, sound.
 - Emerging the user in interactive elements.





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MOST COMMON SOFTWARE DEVELOPMENT KITS (SDK)



VIVEPORT







 **oculus**
from FACEBOOK

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STEAM VR

STEAM VR: <https://store.steampowered.com/app/250820/SteamVR/?l=spanish>

	VEGAS 19 Edit - Steam Edition Producción de vídeo -20% 249,00€ 199,20€
	Home Office Tasker Utilidades, Manipulación del tiempo, Gestión del tiempo, Software -30% 8,79€ 0,55€
	SVFI Utilidades, Diseño e ilustración, Edición fotográfica, Producción de vídeo 15,99€
	Atlas Engine Utilidades, Diseño e ilustración, Desarrollo de juegos, Construcción 29,99€
	Smart Home Design Simuladores, Diseño e ilustración, Animación y diseño, Construcción 6,59€
	TBOT - Twitch Bot Free to Play, Utilidades, Software, Sandbox Free to Play





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STEAM VR - VR HEADSET THAT WORK WITH STEAM

- Valve Index
- Oculus Rift
- Oculus Rift S
- HTC Vive
- HTC Vive Pro
- HTC Vive Cosmos
- Razer OSVR
- Pimax 4K, 5K, 5K Plus, 8K, and 8K Plus
- Dell Visor
- Samsung Odyssey and Odyssey+
- Acer AH101
- HP WMR
- Lenovo Explorer
- HP Reverb
- Varjo VR-1 and VR-2

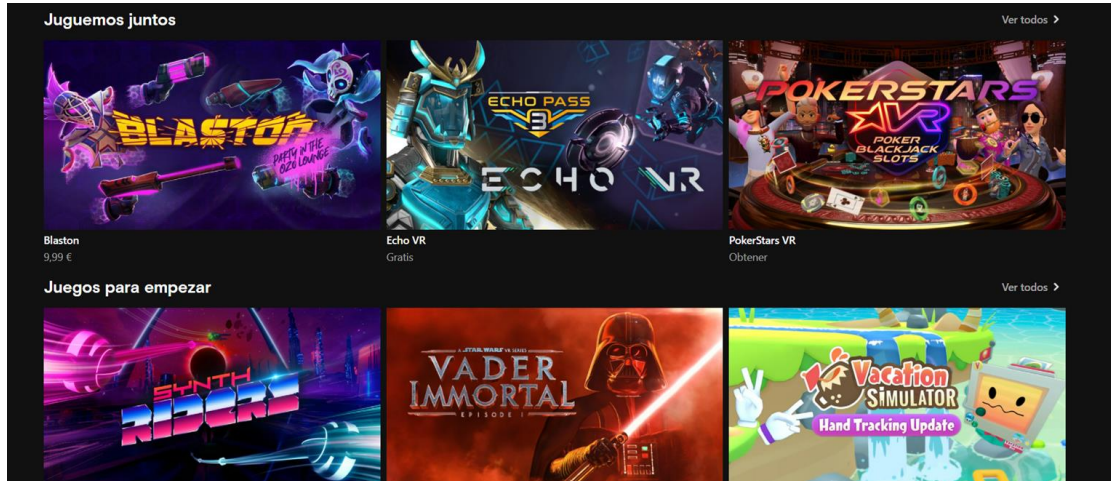


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OCULUS

OCULUS: <https://www.oculus.com/experiences/quest/>



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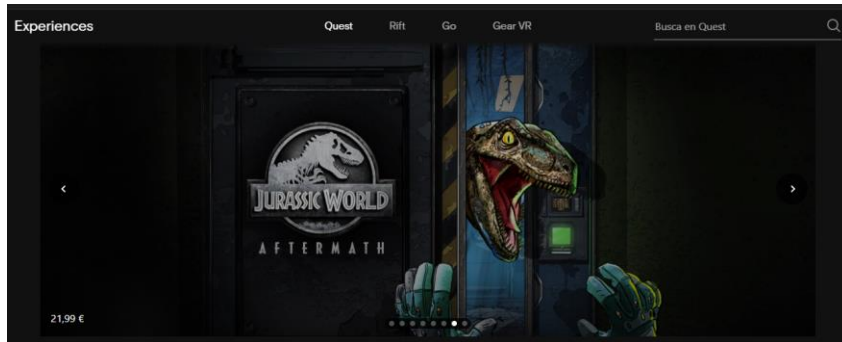
VET reality

OCULUS - VR HEADSET THAT WORK WITH OCULUS

- OCULUS ALL TYPE

oculus

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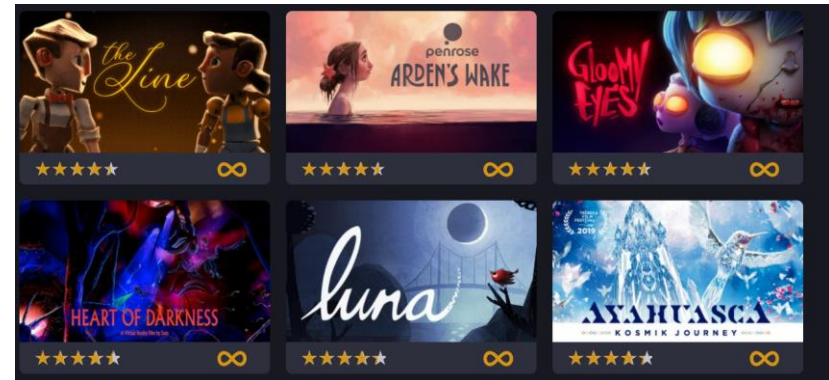
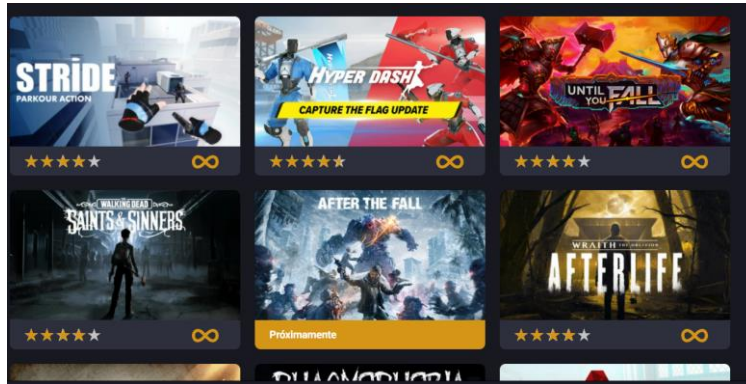
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VIVEPORT

VIVEPORT: <https://www.viveport.com/>



VIVEPORT



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VIVEPORT - VR HEADSET THAT WORK WITH VIVEPORT

- VIVE,
- VIVE Pro,
- VIVE Pro Eye,
- VIVE Cosmos,
- VIVE Cosmos Elite,
- Valve Index,
- Oculus Rift
- Oculus Rift S.



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