



Next Generation Haptic Solution

SUIT UP AND FEEL EVERY MOMENT

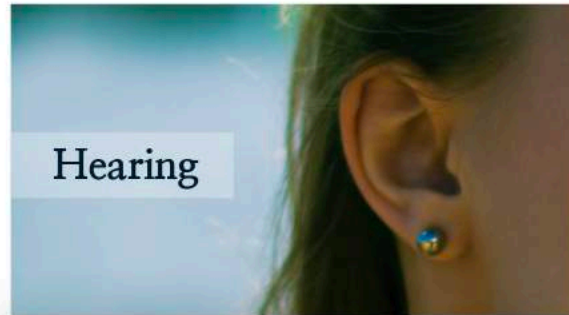
BEYOND IMAGINATION



www.bhaptics.com

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Audio-visual displays are very common and developed tremendously.
bHaptics is now **bringing haptics to everyone's lives** to further enhance the user experience.



Radio



Earphone



Surround Speaker



3D Audio



TV



Projector



3D Glasses



VR/AR
HMD



X1 Haptic Bootsuit from the movie “Ready Player One” well illustrates how bHaptics is bringing VR closer to the reality with haptic display.



bHaptics developed a wireless full body haptic suit called “Tactsuit”.
Tactsuit is the most selling and most affordable haptic suit in the world until now.



TACTSUIT

- 70+ 70+ actuators for most elaborate stimulation
- Wireless Bluetooth connection
- Non-perceivable latency
- 12+hours battery life
- Individually operative
- One-size-fits-all
- Easy to wear

Application of haptic suit is not limited to the gaming but many other business segments for their immersion, realism and accuracy to **improve user experience dramatically.**

Gaming

PC 

Console 


VR / AR 



Medical

 Rehabilitation

 Sensory Substitution

 Psychotherapy



Entertainment

VR LBE
(Location Based Entertainment) 

Theater & Concert 

VR Social Networking 



B2B Solution

 VR Training

 Military Simulation

 Teleoperation



Tactsuit has been widely used by top-selling global LBE (Location based entertainment) franchises. It is well known for its ability to create unique and most realistic user experiences.

 HOLOGATE



Hologate (US/EU)
(VR turnkey solution for 4 Players)

 SANDBOX^{VR}



Sandbox VR (US/Asia)
(VR Arcade Franchise)

 VR+ ZONE



VR Plus
by Goodgames (China)
(VR Arcade Franchise)

Tactsuit overwhelms its competitors in every aspect especially in terms of its ability to create **most elaborate haptic feedback** (i.e. # of stimulation points), **ease of integration** and **latency free wireless operation** etc.

					
	 (\$149) (\$249) (\$249) (\$249)	 \$499	 \$349	 \$799	 \$1,500 - \$2,750 (Still under development)
Haptic feedback area	Full-body	Upper Body (Back)	Upper Body (Torso)	Full-body	
Number of Haptic Motoes	40+(30)	2	6	64	
Wireless/Wired	Wireless	Wire/Wireless(40~100ms)	Wired	Wireless	
Convenience in wearing	+++	+++	+++	---	
Battery Life	12+ hours	3+ hours	8+ hours	20+ hours	
Integration method	Editing Tool / Audio signal based / Visual Scripting / Coding	Audio signal based	Audio signal based	Coding	

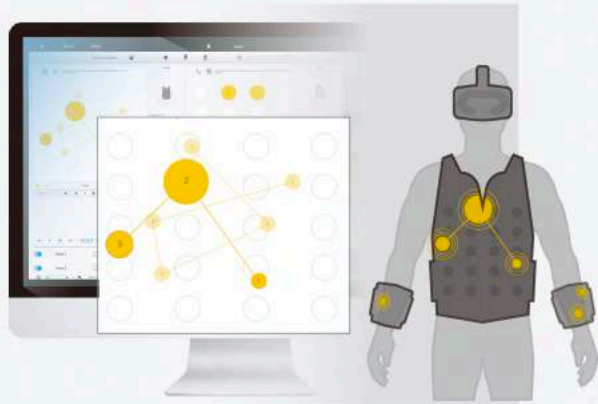
Electrical Stimulation

Have to take off clothes to feel

From the beginning, we chose **“easy integration with content”**
as a more important goal than device development.

SW support for haptic is a huge technical advantage we have compared to competitors.

bHaptics Designer



Web-based intuitive
haptic pattern editor

Plug-in for 3D contents creation engine



HEAD
BODY
ARM
BULLET
SWORD

Automatic
Collision
Classification

Automatic
Haptic
Generation

Visual scripting-based Plug-in which allows
application of haptic feedback without modification
to the existing source code for 3D games and
contents creation engine.

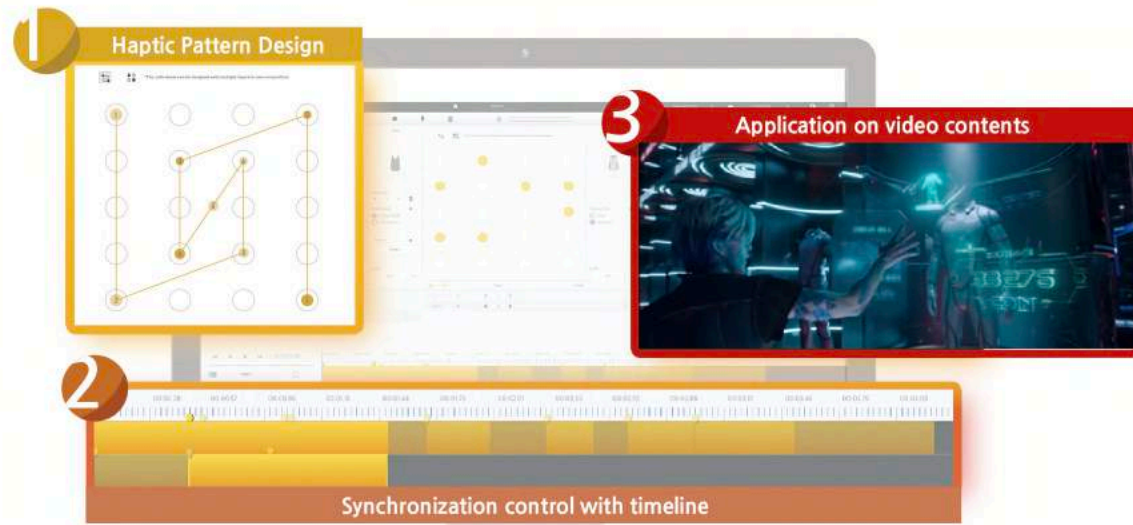
Audio-to-Haptic conversion algorithm



Algorithm for real-time analysis of sound
allows automatic conversion
from audio-to-haptic pattern

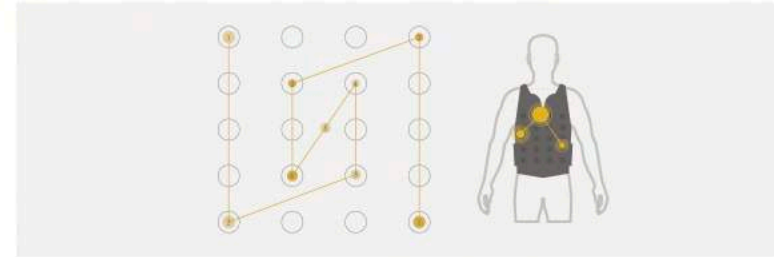


is an authoring tool that allows anyone to easily create and share complex haptic patterns, and apply them to various content, just like applying subtitles to the movie.

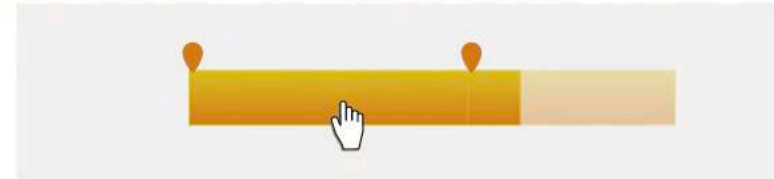


<https://designer.bhaptics.com/>

1 Haptic Pattern Design (Path or Dot)



2 Synchronization control with timeline

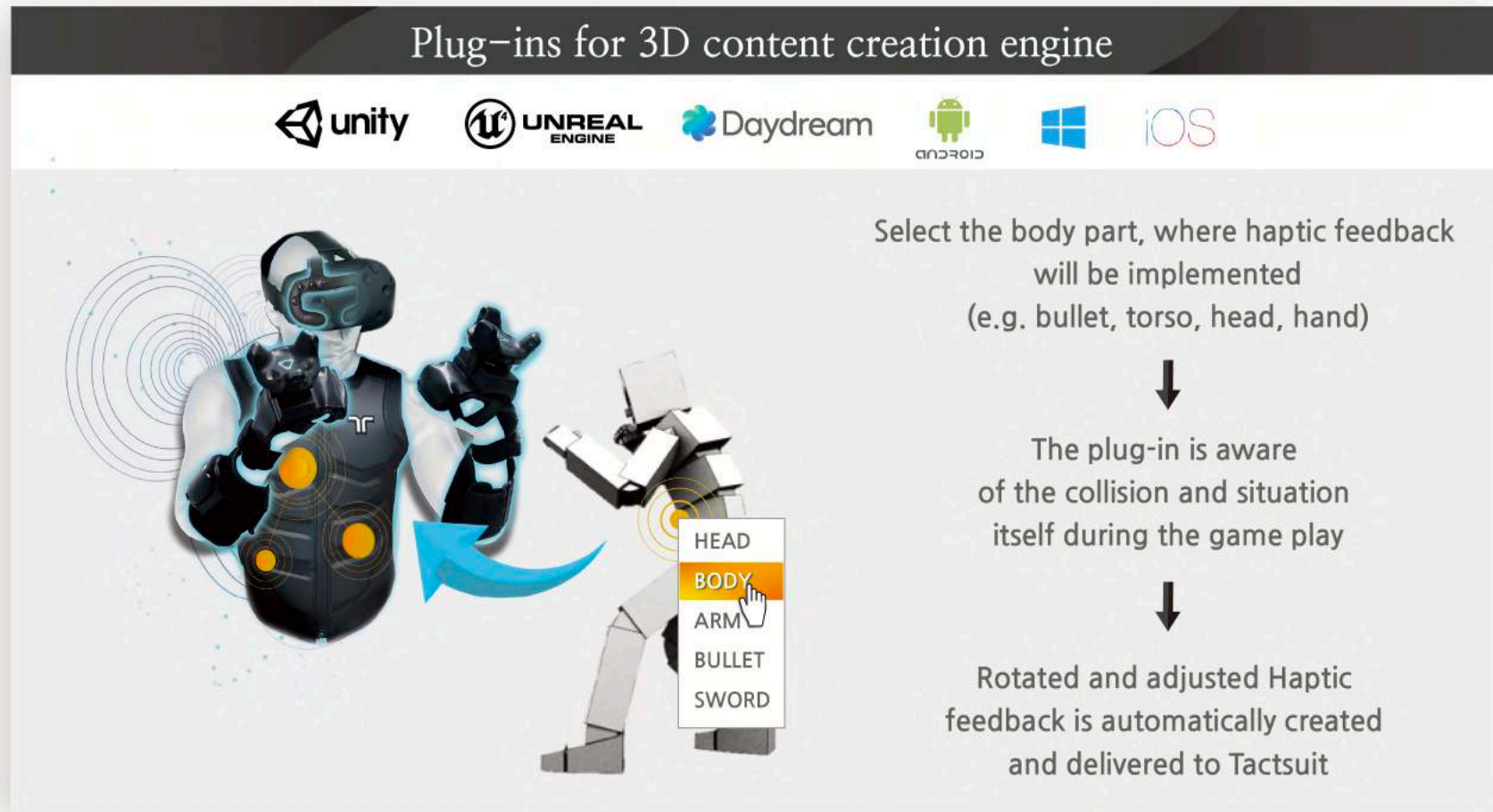


3 Application on video contents



Game developers use our 3D game engine plug-ins to integrate Tactsuit into their content.

Most of integration process can be done via **Visual Scripting**, which requires only a minimum modification of original source code.



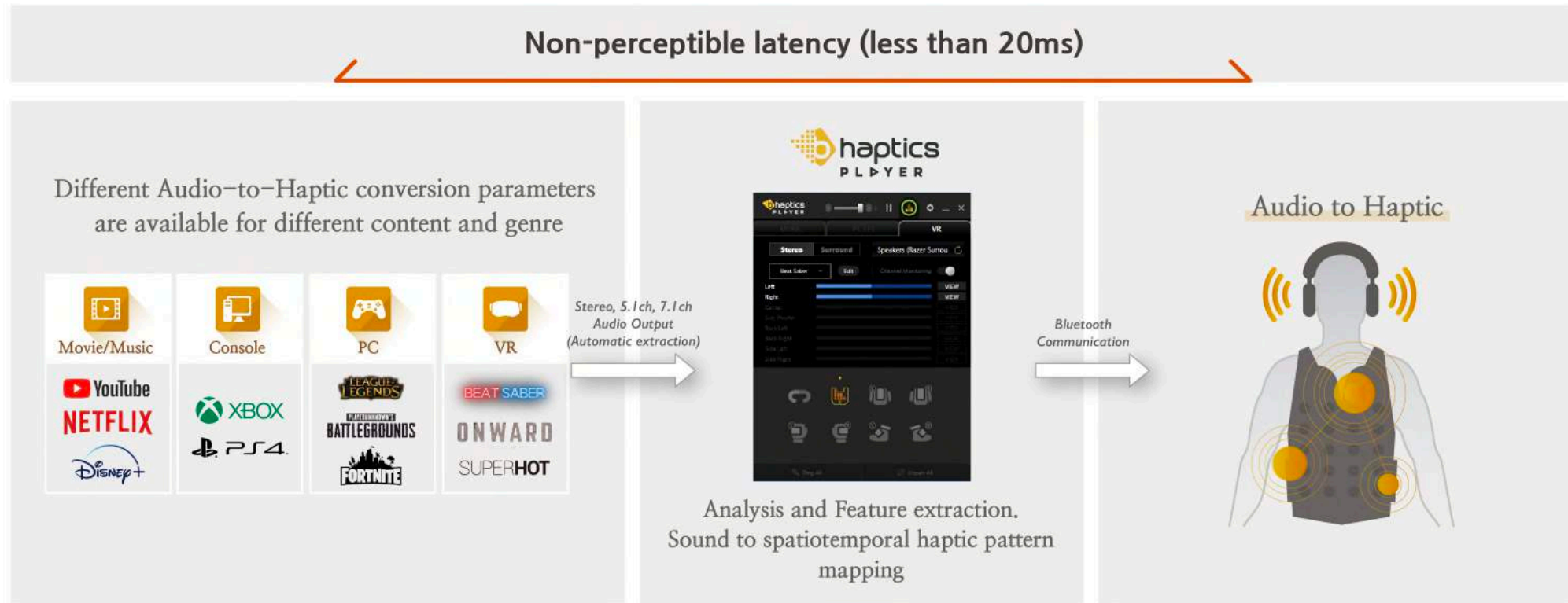
Developer centric SDKs and SW support allowed over 300 developers from 40 countries to use Tactsuit for their content.

In this way, bHaptics created **the greatest values for the users and the biggest barriers for the competitors.**

- Our Partners -



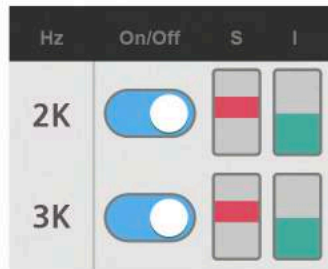
“Audio-to-Haptic” feature, released recently in 2020, automatically analyzes the content’s output sound (stereo/surround) and converts it to haptic feedback in real-time. In this way, users can now feel and detect the direction of enemy’s explosions and gunshots from afar while **playing PC/console games or watching Netflix.**



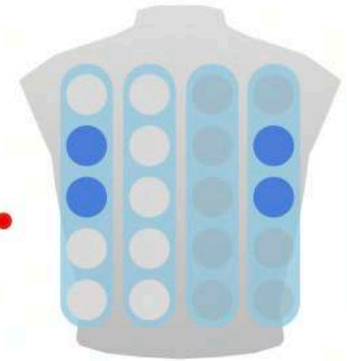
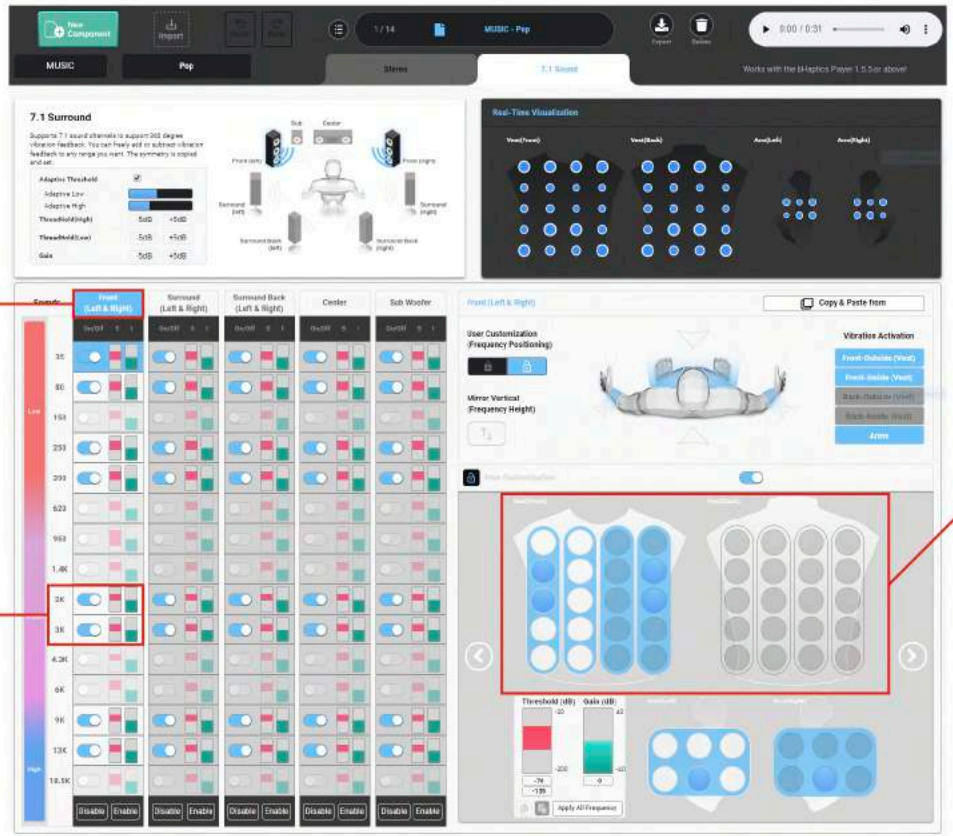
Users can enjoy Audio-to-Haptic with numerous default settings for different content. In addition, with our **intuitive web-based editor**, users also can **customize parameters** such as sound channels, frequency bands, gain/threshold, and haptic mapping onto the vest for optimized experience.

Front
(Left & Right)

Front channel selection
mono ~ 7.1ch



Frequency bands selection
20 ~ 20kHz



Sound mapping to
specific body part(s)

Until 2019, we targeted B2B segments (e.g. Location Based VR Arcade, Training, Research).
From 2020, we are **expanding toward B2C market** with more applications
(i.e. PC Gaming, Music & Movie) other than VR.

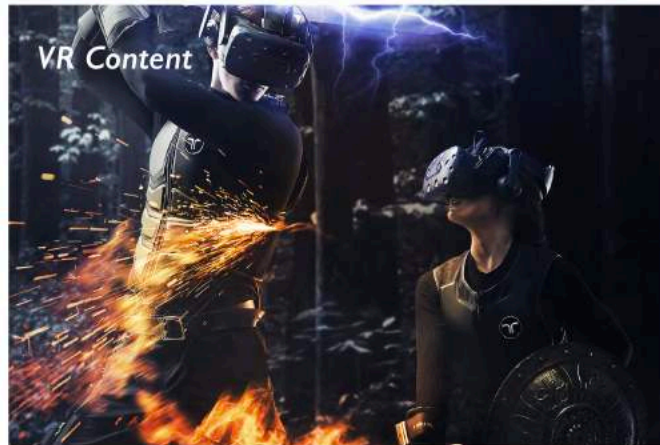
TACTSUIT Applications



PC Gaming

Tactsuit x 7.1 Channel Sound

Tactsuit enhances your situational awareness by providing directional haptic feedback based on 7.1 channel sound output.



VR Content

The last piece to complete VR

You can feel everything you experience in VR game, social VR and VR-based training. From a samurai cut to soft hug, bring VR to life with Tactsuit.



Music and Movie

A new way of enjoying Music, Movies, and More

Turn your room into a private 4D theater or concert hall to feel every action and rhythm/beat.



 **b haptics**
Bring haptics to your life!

