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## Silicon Studio's "Enlighten" global illumination adopted by "NieR Replicant ver.1.22474487139..." from Square Enix

Tokyo, Japan, (Apr. 22, 2021) – Silicon Studio Corporation; middleware and technology developer, focusing on entertainment, gaming, automotive, video, architecture and other industries, is pleased to announce that the "NieR Replicant ver.1.22474487139...", developed and sold by Square Enix Co., Ltd. and Toylogic Inc., will utilize Enlighten global illumination.





"NieR Replicant ver.1.22474487139..." is the action RPG that was launched for PlayStation®4, Xbox One, and PC (Steam) on April 22, 2021. This is an updated version of NieR Replicant, previously only released in Japan, and is the one-of-a-kind prequel to the critically-acclaimed masterpiece NieR:Automata.

"Enlighten" is a middleware to process global illumination (GI) in real time and is implemented in NieR Replicant ver.1.22474487139... as well as NieR:Automata. Global Illumination is an algorithm that calculates the lights which are reflected or absorbed by materials or objects within scenes in order to include both indirect and direct lights for accurate simulation.

"NieR:Automata", which also implemented Enlighten, is one of the most popular video games in the world and is enthusiastically played by various types of users. "Enlighten"'s global Illumination technology largely contributes to unique atmosphere and color of the ingenious world to create more attractive and beautiful graphics.

Official comment from Toylogic Inc.

We chose "Enlighten" as our GI system for further enhanced visual expression, which successfully brought us a marked improvement in background visuals for "NieR Replicant ver.1.22474487139...". Based on the GI information generated within "Enlighten", our creators produced the special materials which can naturally blend into backgrounds. We now have a tool for a wider range of expression. We hope players enjoy the "NieR Replicant" world which has been beautifully updated thanks to its lighting techniques!

Lead library programmer, Toylogic, Inc.



With modern technologies, we focused on its lighting and atmosphere in order to revive backgrounds of the original story which was released more than ten years ago when we developed NieR Replicant ver.1.22474487139... "Enlighten" allows us to change lights in real time and finely tune global Illumination. Thanks to its flexible and quick trial and error system, we were able to accurately find out what we were expected and what to be modified before we provided higher quality expression. Explorer the innovated world and feel the "light" with your NieRs.

Background art director, Toylogic, Inc.

## "NieR Replicant ver.1.22474487139..." Screenshots



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Title	NieR Replicant ver.1.22474487139
Platform	PlayStation®4, Xbox One, Steam®
Developer	Toylogic Inc.
Publisher	SQUARE ENIX
Genre	Action RPG
Release Date	April 23rd, 2021
Copyright	©2010, 2021 SQUARE ENIX CO., LTD. All Rights Reserved. Developed by Toylogic Inc.
Website	https://nier.square-enix-games.com/en-us/

## **About Enlighten**

"Enlighten" is a high quality real-time global illumination (indirect light expression) technology used for the game, movie, real estate and product visualization industries. The technology can efficiently calculate a large amount of mathematical processes which are an important task in real-time global illumination to generate and maintain beautiful high-quality images through the usage of light maps, spherical harmonic probes, and reflection captures.

https://www.siliconstudio.co.jp/middleware/enlighten/en/

Enlighten for Unreal 4 is available for the following platforms:

Nintendo Switch™, PlayStation®4, PlayStation®5, Xbox One, Xbox Series, Stadia™, Microsoft Windows

Enlighten SDK is available for the following platforms:

Nintendo Switch™, PlayStation®4, PlayStation®5, Xbox One, Xbox Series, Stadia™, Microsoft Windows, Android™, iOS

\*Enlighten also supports VR development

## **About Silicon Studio Corporation**

Silicon Studio, a Japan-based game engine and middleware company, develops and provides advanced technologies such as "YEBIS" post effects, "Enlighten" real-time global illumination, and "Mizuchi" real-time rendering to major game and entertainment production studios worldwide. These technologies have helped to bring high quality graphics to a large number of successful AAA titles.

https://www.siliconstudio.co.jp/en/

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