

News

March 28, 2018

CYBERDYNE,INC.  
Sumitomo Corporation

Cyberdyne and Sumitomo Corporation announces jointly promoting automation and streamlining of the cleaning in the office building.

~ Next generation Cleaning Robot CL02 will be implemented in the office buildings owned by Sumitomo Corporation Group Companies~

CYBERDYNE,INC. [Tsukuba, Ibaraki, President and CEO: Yoshiyuki Sankai (hereinafter, “Cyberdyne”)] and Sumitomo Corporation [Chuou-ku, Tokyo, Representative Director President and CEO: Kuniharu Nakamura] agreed to work together to automate and streamline office building cleaning and signed the memorandum of understanding on March 26, 2018. Sumitomo Corporation plans to implement the next generation Cleaning Robot CL02 that was developed by Cyberdyne to office buildings owned by SUMISHO BUILDING MANAGEMENT CO., LTD. and S.C. BUILDING SERVICE CO., LTD., which are both 100% subsidiary companies of Sumitomo Corporation (hereinafter collectively referred to as “Sumitomo Corporation Group Companies”).

#### Background and purpose

In 2001, Sumitomo Corporation succeeded in commercial application of a cleaning robot system and installed it for Harumi Triton Square, Tokyo, where its headquarters are located. This robot system is still in use today. However, the robot faced several challenges such as

- the robot recognized its position according to a few magnetic tapes that were built in the carpet floors and distance it travelled
- the robot could only clean the routes that was preprogrammed, limiting its range of cleaning to the common area

This cleaning robot system was passed down to Cyberdyne in 2013. Cyberdyne worked on development of a new cleaning robot that could move without magnetic tapes or similar guide systems that require installation on building floors. As CL02 free from those guide systems is capable of setting its cleaning areas autonomously or under the minimum guidance of the operator, it could now clean the specific areas in addition to the common areas of the office buildings.

## Schedule

Cyberdyne and Sumitomo Corporation will work together to implement CL02 to office buildings in Tokyo, Osaka and Nagoya that are owned by the Sumitomo Corporation Group Companies. They will also work together on further verification towards improvement of cleaning efficiency, such as making CL02 riding on and off the elevators autonomously. While lack of manpower due to aging society is becoming a primary concern on cleaning sites, Cyberdyne and its Cleaning Robot CL02 propose a new way of cleaning where the operator could interactively work side by side with the robot. CL02 will maximize the cleaning efficiency of each operator, enabling him/her to constantly conduct high quality cleaning with minimum number of staff members.



## <About Cleaning Robot CL02>

While lack of manpower due to aging society is becoming a primary concern on cleaning sites, Cyberdyne and its Cleaning Robot CL02 propose a new way of cleaning where cleaners could interactively work side by side with robots. CL02 is an autonomous cleaning robot that requires no guidance of wires or magnetic tape. CL02 scans the building form and records the cleaning route taught by the operator. It could also utilize “automatic cleaning path generation” function, which allows CL02 to determine the cleaning routes on its own without intervention of the operator.

Compared to its previous model, CL02 is faster and capable of covering wider areas. It could also identify objects in its pathways through 3D cameras and generate a map that analyzes the volume and location of dusts found. CL02 is easy to use and the operators in site can easily change the robots cleaning routes. CL02 will maximize the cleaning efficiency of each cleaner, enabling him or her to constantly conduct high quality cleaning with minimum number of staff members. Cyberdyne hopes to utilize CL02 in commercial buildings, airports and various other large facilities.

#### <About Cyberdyne>




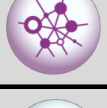


Since its establishment as a venture company from the University of Tsukuba in 2004, Cyberdyne has promoted the comprehensive development of various Cybernic Systems (Cybernic devices, Cybernic interfaces, etc.) that utilize Cybernic Technology from research and development to social implementation, aiming to tackle the various issues facing society. The company has developed business in the fields of medicine, welfare and daily living (including the work environment), and its main product, Robot Suit HAL®, is widely distributed not only in the medical and welfare fields but also in care support and labor support fields. In addition, new products such as Transportation Robot and Cleaning Robot equipped with artificial intelligence and environment recognition functions, HAL Lumbar Type for reduction of the load and stress on the lower back, smaller-sized HAL (Single-Joint Type), Vital Sensor for arteriosclerosis and arrhythmia measurements are continuously developed. For more details, please refer to the following website: [www.cyberdyne.jp/eng/](http://www.cyberdyne.jp/eng/).

#### <About Sumitomo Corporation>

Sumitomo Corporation (“SC”) is a leading Fortune 500 global trading and business investment company with 107 locations in 65 countries and 22 locations in Japan. The entire SC Group consists of more than 800 companies and 70,000 personnel. SC conducts commodity transactions in all industries utilizing worldwide networks, provides related customers with various financing, serves as an organizer and a coordinator for various projects, and invests in companies to promote greater growth potential. SC’s core business areas include Metal Products, Transportation and Construction Systems, Environment and Infrastructure, Media, Network, Lifestyle Related Goods and Services, Mineral Resources, Energy, and Chemical and Electronics.

## ■Sumitomo Corporation's Material Issues

Sumitomo Corporation Group positions “Six Material Issues to Achieve Sustainable Growth with Society” as an important factor in developing business strategies and in the decision-making process for individual businesses. Going forward, we will pursue sustainable growth by resolving these issues through our business activities. This project especially contributes to “Contributing to the Development of Local Communities and Industries” and “Establishing a Foundation for Comfortable and Enriching Lifestyles”.

Six Material Issues	
	<b>Achieving Harmony with the Global Environment</b> To realize recycling-oriented society and mitigate climate change, we are working to establish frameworks for the efficient use of resources and stable supply of renewable energy. In doing so, we will achieve growth in harmony with the global environment.
	<b>Contributing to the Development of Local Communities and Industries</b> We steadily procure and provide goods and services to meet the needs of people in various countries and regions and contribute to developing industrial platforms. Through these means, we will create a virtuous cycle in which we can grow and develop together with local communities.
	<b>Establishing a Foundation for Comfortable and Enriching Lifestyles</b> We strive to realize more convenient and comfortable lifestyles by providing goods and services for daily use while also responding to needs for high-quality lifestyles in order to support the physical and mental health of people around the world.
	<b>Providing Diverse “Accessibility”</b> We provide diverse accessibility to open up the possibility of creating new value. To this end, we will improve mobility for safe and efficient flow of people and goods, and expand the network connecting information and finance.
	<b>Developing Human Resources and Promoting Diversity</b> In order to create new value and innovation by allowing our diverse personnel to fully exercise their abilities in a variety of fields, we will promote the development and empowerment of human resources, which represent our most important management resources.
	<b>Enhancing Governance</b> We will enhance our ability to draft and implement strategies for achieving sustainable growth and to provide appropriate supervision of these strategies, all while maintaining transparency. In this manner, we will improve management efficiency and maintain sound management.