News Release

RESONAC

Resonac Holdings Corporation
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Resonac Develops an Original Generative AI, "Chat Resonac," That Utilizes Accumulated In-house Materials Including Handwritten Documents

－Aiming to mediate between different generations and sections by utilizing generative AI－

Resonac Corporation (President: Hidehito Takahashi, hereinafter "Resonac") has developed an in-house generative AI system named "Chat Resonac" which can interactively utilize accumulated data and documents of former Showa Denko K.K. and former Hitachi Chemical Company, Ltd. (hereinafter "materials"). Chat Resonac enables all users to access materials known only to the elder generation but unknown to and unused by the younger generation. Thus, Chat Resonac makes it possible for the employees of the Resonac Group to realize smooth handing down of knowledge and know-how from the elder generation to the current and future generations. In addition, Chat Resonac enables users to access technical information accumulated in each department beyond departmental walls in an interactive manner. Therefore, it can help engineers in developing new semiconductor materials by fusing technologies of former Showa Denko and former Hitachi Chemical.

Each of former Showa Denko and former Hitachi Chemical, which were predecessors of Resonac Holdings Corporation and Resonac Corporation, had a history of about 100 years and had accumulated more than fifty thousand materials concerning development and manufacturing of materials throughout its history. Veteran employees can search files of paper and databases for necessary materials and utilize them. However, there are many cases in which young employees cannot access necessary materials because they don't know existence of those materials. Moreover, there is a risk that those materials are not being put to use after veteran employees' retirement.

Aiming to decrease such risk, Resonac developed a generative AI system, "Chat Resonac," which enables users to utilize in-house materials interactively. Chat Resonac application program loads files of in-house materials into data storage server free from information leakage to outside of the company, and receives data and feedback about generated answers from veteran employees, thereby improving the accuracy of generated answers. When the system reads handwritten documents and digitalizes them with optical character reader (OCR), the system corrects omissions and errors by utilizing generative AI technologies. The system can also utilize data stocked on digital laboratory notebooks, which have already been put to practical use in the company.

Chat Resonac not only mediates between different generations but also enables each employee to communicate and utilize information beyond walls between departments to which each employee belongs or formerly belonged. Each employee can search the database of Chat Resonac for necessary information including knowledge about composition of materials and data on analysis results, and contact and communicate with other employees who have such information.

Mr. Soichiro Takeshita, who is an engineer belonging to Materials Analysis Center, Institute for Polymer Technology, talks his expectation about active use of Chat Resonac and his vision of the future: "I am absolutely confident that Chat Resonac will help the company to strengthen its technology development capability by enabling employees to share and utilize

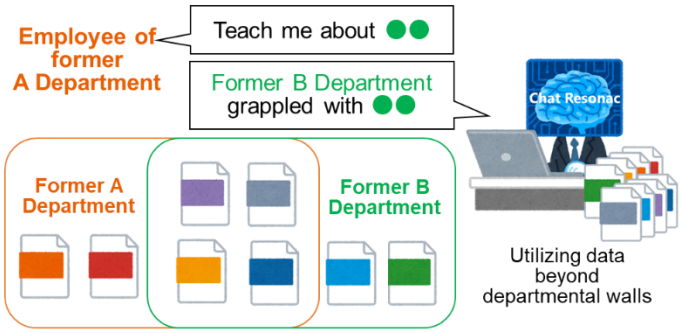
personal knowledge and know-how accumulated through past experiences."

Resonac has been developing two types of Chat Resonac application programs, namely general-purpose Chat Resonac and specialized Chat Resonac. The former handles information which may be shared among all employees, while the latter handles information which may be shared among employees belonging to specified departments, and there are more than 20 application programs under development as specialized Chat Resonac. In addition, Resonac plans to apply AI-based Chat Resonac to various fields such as support tools for document creation, business efficiency improvement, and career development. Mr. Yoshinari Okuno, General Manager of Research Center for Computational Science and Informatics, said "We have entered a new era in which human beings can challenge more difficult issues while entrusting jobs which can be handled by AI-based systems to AI-based systems." Resonac will accelerate such a reform.

By utilizing computational science and informatics, Resonac will continue striving to shorten development periods of materials including semiconductor materials which require speedy development.

◆**Mediates different generations**

◆**Mediates different sections**



[About the Resonac Group]
The Resonac Group is a group of chemical companies that produces and sells products related to semiconductor and electronic materials, mobility, innovation enabling materials, chemicals, etc. The Group has a wide variety of materials and advanced material technologies applicable to midstream to downstream of supply chains of various products. In January 2023, the Showa Denko Group and the Showa Denko Materials Group (former Hitachi Chemical Group) merged into the Resonac Group and made a start as a new corporate group. The new trade name "RESONAC" was created as a combination of two English words, namely, the word of "RESONATE" and "C" as the first letter of CHEMISTRY. As a "co-creative chemical company," Resonac aims to continue growing and enhance its corporate value through co-creation. The Group recorded net sales of about 1,400 billion yen in 2022, and its overseas sales accounted for 56% of net sales. The Group has deployed production/sales bases in 22 countries and regions, and continues operating its business globally (as of January 2023).

For detail, please refer to our Website.
Resonac Holdings Corporation: https://www.resonac.com/

For further information, contact:
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Resonac Holdings Corporation