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For General Release

Information Services International-Dentsu, Ltd.
Hitachi Industry & Control Solutions, Ltd.

ISID and Hitachi Industry & Control Solutions Collaborate on Systems Engineering Business for Embedded Systems Development Companies

Information Services International-Dentsu, Ltd. (“ISID” Head office: Minato-ku, Tokyo; President and CEO: Setsuo Kamai), and Hitachi Industry & Control Solutions, Ltd. (Head Office: Taito-ku, Tokyo; President: Toru Kimura; hereinafter, “Hitachi Industry & Control”), announces today that they have concluded a collaboration agreement to support systems engineering¹ practical application² within embedded systems development companies.

Based on this agreement, the two companies will combine the “iQUAVIS”, a conceptual design³ support system developed and provided by ISID with the embedded systems development consulting and engineering service expertise possessed by Hitachi Industry & Control to jointly provide and construct systems supporting the introduction of systems engineering and practical application within embedded systems development. Both companies will support complicated system development within embedded systems development companies in the automobile, precision machinery, equipment and a wide range of other sectors.

In recent years, product development has become increasingly complex, especially the development of control software and other embedded systems, due to hardware performance enhancements and increasingly sophisticated functional requirements coupled with rapid expansions in scale and complexity. In response, there is a growing movement, mainly in the automobile industry, toward the application of systems engineering effective for the development of large-scale and complex product systems in the embedded systems domain. However, the application of this method of proceeding with design in stages while seeing a picture of the overall system from a wide point of view involves reviews throughout the design process, and since there are few systems engineering tools that engineers in the same area can work with easily, the hurdles involved with introducing this system have become an issue.

Going forward, the advance of autonomous driving, IoT, AI and other technologies is expected to further complicate product development, making the practical application of systems engineering essential for embedded systems development within automobiles and all other product areas. ISID and Hitachi Industry & Control have entered into this collaboration agreement to support the resolution of these issues in the manufacturing industry.

ISID’s “iQUAVIS” is the industry’s first system for visualizing the conceptual design process. It is utilized by more than 100 leading companies in the Japanese manufacturing industry, mainly for mechanical design in the automotive, precision machinery and other sectors. In the last few years in particular, “iQUAVIS” has developed a strong reputation in Japan and overseas as a tool supporting QFD⁴ and MBSE⁵. Hitachi Industry

& Control provides consulting and engineering services that also include MBSE as well as functional safety⁶ mainly in the area of software design utilized in the automobile and other industries, based on expertise gained through embedded systems development throughout the world.

Under this collaboration agreement, these products and services will be combined to support the introduction and practical application of systems engineering within embedded systems development companies and contribute to advances in Japanese manufacturing.

1. Systems engineering: Approaches and measures for engaging in design while gradually refining the relevance and contrasts between elements across multiple disciplines while maintaining a picture of the overall system within the development of large-scale and complicated systems and products.
2. Practical application: Creation of a mechanism users themselves are able to manage.
3. Conceptual design: Process of determining rough design elements by examining implementation methods and the composition and capabilities of major components to realize the functions and performance required for products. Implemented as a preliminary stage of detailed design using CAD and other tools.
4. Quality Function Deployment: Quality management method for smooth communication of market requirements to technical fields. Utilized for product design process quality innovations in a wide range of fields, including manufacturing and service industries around the world, as a methodology for realizing quality assurance at the upstream stage of development by organizing various information into binary tables.
5. Model Based Systems Engineering: Approaches and measures using modeling to engage in systems engineering.
6. Functional safety: Functional ingenuity enabling the maintenance of safety even when products fail. The aim is to reduce adverse impacts on human life and society to within acceptable levels. This is increasingly important in the development of automobiles and medical equipment, areas where software-driven functions are rapidly expanding.

When exporting this product, please carry out all required procedures after confirming all restrictions (for example, Japan's Foreign Exchange and Foreign Trade Law, and American export control laws and regulations).

Information contained in this news release (product specifications, service details, release date, contact, URL and so on) is current as of the date of the press announcement, but may be subject to change without prior notice.