

# Fujitsu develops industry's first system for recycling CDs and DVDs into notebook PCs

August 17 2012

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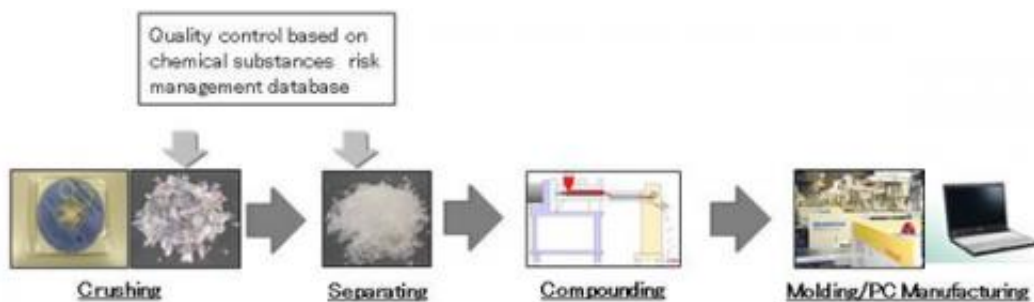
LIFEBOOK P772/E notebook PC for enterprise customers.

Fujitsu Limited and Fujitsu Laboratories Limited today announced the development of the PC industry's first recycling system that collects used CDs and DVDs at Fujitsu Group recycling centers and reuses the plastic in the bodies of notebook PCs. Fujitsu began using this recycled plastic for part of the front panel of its LIFEBOOK P772/E notebook PC for enterprise customers, a model in its summer 2012 lineup.

To avoid the risk of contaminants being mixed into the [recycled plastic](#), the new [recycling system](#) performs quality control based on a chemical substances risk management database developed by Fujitsu Laboratories, thereby ensuring that notebook PCs and other ICT devices comply with

legal requirements for [chemical components](#). Compared to conventional notebook PC manufacturing processes, this system is expected to reduce the amount of newly produced plastic used by 10 tons per year while cutting [CO2 emissions](#) by approximately 15%.

Going forward, Fujitsu plans to expand the use of this system to other notebook PCs and products as a way to reduce its environmental footprint and resource consumption. The Fujitsu Group is proud to promote the recycling of end-of-life ICT products in Japan and around the world to help create a recycling-minded society.



Recycling system workflow.

At the company's five recycling centers across Japan, Fujitsu collects, disassembles, sorts, and recycles personal computers and other products. However, reusing the recovered plastic in new computer units had posed a number of challenges. Firstly, when different types of plastic are involved, a uniform mixture is impossible to achieve even by melting the plastic with heat. As a result, it is necessary to collect only a single type of plastic to ensure the desired [material properties](#). Even so, in a given plastic, there may be differences in ingredients, visual defects, or impurities that make it difficult to achieve the same molding characteristics, colors, strength and other properties as conventional

plastics. Furthermore, compliance with the RoHS directive and REACH regulations regarding the safety of chemicals in ICT products has made it challenging to control the quality of recycled plastics, and until now it has been impossible to reuse recovered plastic in a computer bodies.

With this in mind, Fujitsu turned its attention to CDs and DVDs, which are often included with PCs and are available in predictable quantities. These optical discs are made from polycarbonate, a type of plastic suitable for use in the bodies of notebook PCs. Moreover, they do not include any contaminants, such as flame retardants, so they were deemed to be a suitable material for recycling.



Part made from recycled plastic.

As part of its quality control process, Fujitsu has long followed the practices of designing products to be easily disassembled and labeling the types of plastic used in its products to enable easy identification. In addition, the company employs Fujitsu Laboratories risk management database of the [chemical substances](#) included in plastic materials to verify whether or not the collected CD and DVD fragments contain

harmful substances. The company also checks to ensure safety and to confirm that the optical discs have the material properties required for use in Fujitsu's notebook PCs.

Through collaboration with [plastic](#) washing and processing company PANAC Industries, Inc. and Idemitsu Kosan Co., Ltd., a manufacturer of resin compounds, Fujitsu has been able to improve the quality and manage the safety of its recycled plastics. This, in turn, has enabled Fujitsu to develop the PC industry's first system for recycling end-of-life products collected at its own recycling centers, thereby making it possible to reuse the recovered plastics in the bodies of PCs.

Going forward, Fujitsu plans to expand the use of this system to support a wider variety of recycled materials in addition to CDs and DVDs and to employ these plastics in other products. Fujitsu will strive to reduce its [environmental footprint](#) and resource consumption.

Provided by Fujitsu

Citation: Fujitsu develops industry's first system for recycling CDs and DVDs into notebook PCs (2012, August 17) retrieved 26 April 2024 from <https://phys.org/news/2012-08-fujitsu-industry-recycling-cds-dvds.html>

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