AUTOMATIC COMPONENT DISASSEMBLING FOR DISMANTLING AND RECYCLING SYSTEMS.

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RESUMEN

Automatics, Robotics and Computer Vision group from the Physics, Systems Engineering and Signal Theory Department from the University of Alicante has know-how for the development of systems for automatic disassembling of components.

These systems are formed basically of a set of robots working in a cooperative way and helped by an artificial vision system and a trajectory scheduler. The systems allow to remove the different elements that form a product in order to its recycling.

The group is interested in establishing R&D projects with companies that need to adapt this know-how to their specific needs.

VENTAJAS Y ASPECTOS INNOVADORES

Nowadays, there are a lot of assembling robots, but not disassembling ones. The disassembling of components applications are not extended in a commercial level.

The automatic disassembling techniques allow to separate the different elements that conform a product for its recycling, so the disassembling process can be considered as selective, destructive when necessary and not destructive in the rest of situations.

The automatic disassembling allows the online process control and more flexibility and adaptability to the changes that appear during the same process. That is due to the incertitude that exists with regard to the product to disassemble, the maintenance state, the numerous manufacturers that are and their wide range of products.

This technology can be applied per modules depending on the client's needs, that is to say, it is not necessary to use the complete system. This can be useful, for example, as a support for tasks planning, visual inspection, training of workers in manual disassembling, etc.

APLICACIONES DE LA OFERTA

The technology is applicable for:

- Disassembling parts of vehicles.

- Recycling electronic components (PCs, mobiles, household appliances, toys with polluting elements as batteries, etc.)

- In general, all the situations where there is a need to avoid the contact between workers and components or that need robotization to process a high number of elements or to help workers.

The technology is applicable to closed systems in which several components must be disassembled systematically and the original parts do not suffer disproportionate changes.

COLABORACIÓN BUSCADA

- Partner sought: Industries.
- Sector: Any industry that needs to disassemble components for the recycling or dismantling of manufactured components.
- The research group is interested in establishing R&D projects to adapt their know-how to the specific needs of the client.