

AUTOMATIC CLEANING OF LARGE GLAZED SURFACES The Louvre Pyramid application

Goal :

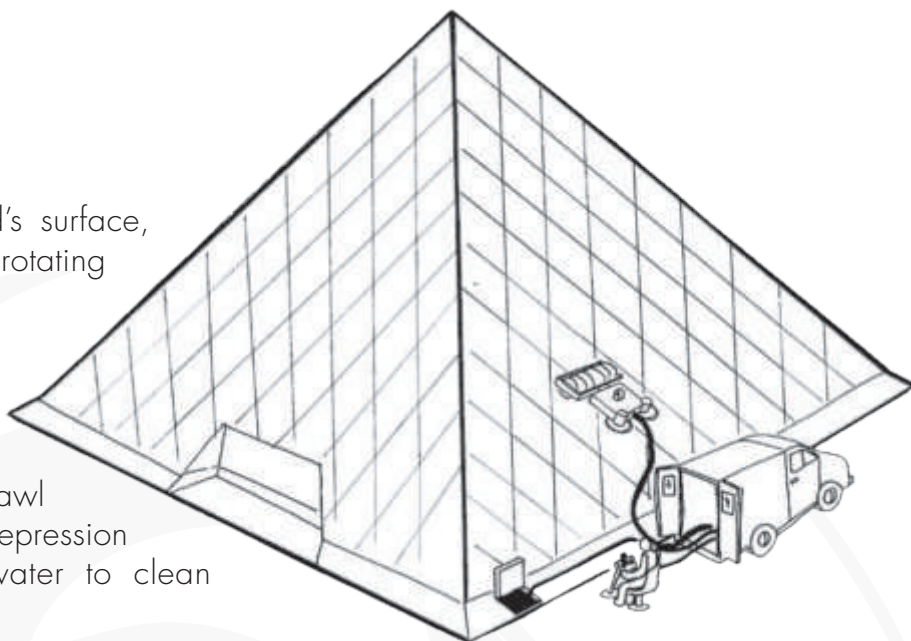
Using an automatic or remote controlled robot to ensure large glazed surfaces cleaning to:

- secure work of operators
- reach inaccessible areas
- reduce costs

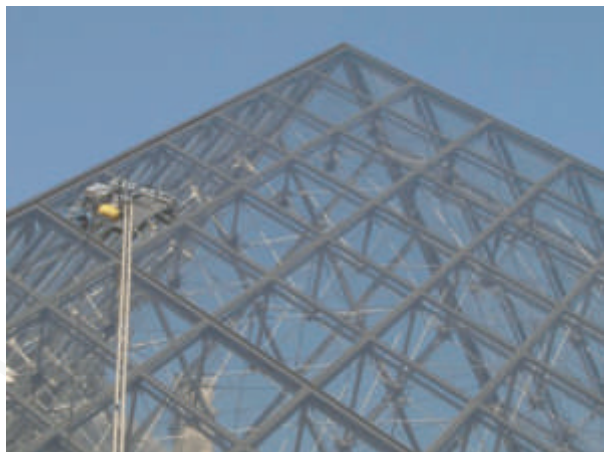
Proceeding :

The overall system is made of two parts:

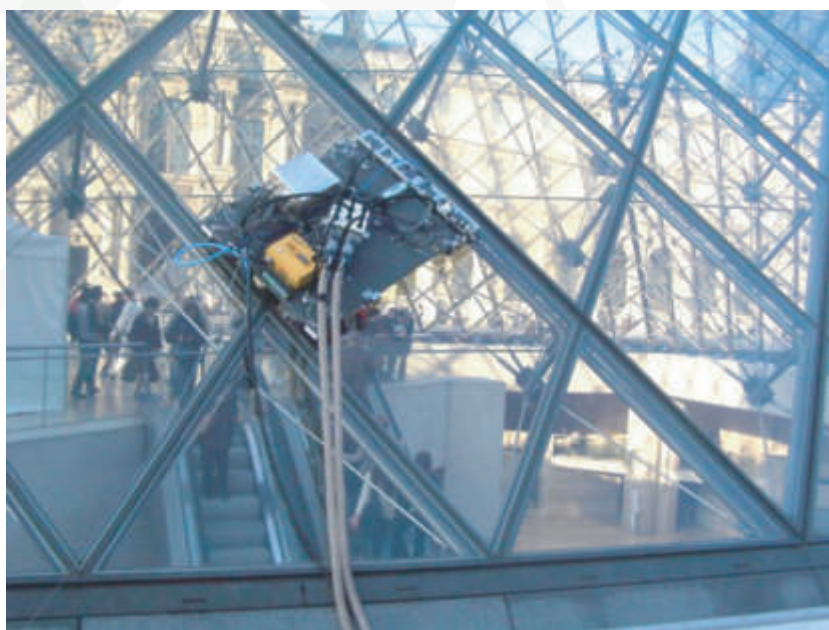
- The platform that crawls on pyramid's surface, with its cleaning device made of a rotating brush and a drying blade
- The energy trolley (connected to a truck where power is generated) that remains on the ground and provides the platform with power to crawl thanks to a set of tracks and cups, air depression to grip the pyramid surface, and water to clean glasses.



The truck that provides the robot with energy.



The robot reaching the top of the Pyramid..



The robot on the monument.

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Robotics
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Technologies :

The RobuGLASS™ robot, developed by ROBOSOFT, is a 4-track platform moving along the external glass surface of the Pyramid. Innovative technical solutions have been implemented to build the robot :

- A suction system keeping the robot stuck on the surface while moving up and down, without any safety cable
- A remote control and autonomous navigation system, using sensors to track the windows lines
- A light chassis, made of carbon fiber
- A redundant control and vacuum system, for safety

These technical solutions allow the robot to progress on slopes (50 for the Pyramid), but also on vertical surfaces.

All the system has been audited by a certification organization, and complies with the European Machinery Directive.

robuGLASS™ datasheet

Works on slopes to 90

Speed while cleaning :

- 25 cm/sec.

Clearing capacity :

- gaps to 2 cm.

Efficiency :

- up to 800 m² cleaned per hour
- rotary brush at 250 rpm.
- 4 liters/h. (water + cleaning product)

Operating modes :

- manual with joystick (remote controlled)
- automatic

Size :

- length x width: 1200x900 mm.
- cleaning width: 900 mm.
- weight : 55 kg.

