CLAIMS

What is claimed is:

1. An exterior wall maintenance apparatus comprising:

a suspension means; and

a suspended platform, where the suspended platform is physically coupled with the suspension means and the suspension means moves the suspended platform vertically and horizontally in parallel to an exterior wall of highrise buildings;

wherein the suspended platform comprises a base, a two-axes track, a multi-axes robotic arm, an image capturing means, an exterior wall tooling attachment, a pair of locators, and a platform controller;

wherein the base is physically coupled with the suspension means, and provides physical support for mounted components;

wherein the two-axes track is mounted on the base, and comprises a pair of tracks in one axis so that the pair of tracks enable the multi-axes robotic arm to move away from or close to the exterior wall, and a parallel track in another axis being mounted on the pair of tracks so that the parallel track enables the multi-axes robotic arm to move side-by-side in parallel to the exterior wall;

wherein the multi-axes robotic arm is flexible acted as human arm that can reach any surface in any angle and acted according to the profile of the surface to perform any maintenance operations;

wherein the exterior wall tooling attachment is attached to a distal end of the robotic arm;

wherein the image capturing means is mounted at the distal end of the multi-axes robotic arm but behind the exterior wall tooling attachment to capture the images of the exterior wall and sends the captured images to the platform controller;

wherein the pair of locators are equipped at both longitudinal ends of the base for dual functions, preventing the suspension platform from damaging the exterior wall and anchoring the suspension platform when the suspended platform is in position to perform the maintenance work; and

wherein the platform controller is a computer programmable processor that can collect information from the image capturing means and a ground operator, and send instructions to the robotic arm, the exterior wall tooling attachment and the pair of locators so as to perform the maintenance work on the determined position.

2. The exterior wall maintenance apparatus of claim 1, wherein the suspension means is a gondola.

3. The exterior wall maintenance apparatus of claim 1, wherein the image capturing means is a camera.

4. The exterior wall maintenance apparatus of claim 1, wherein the exterior wall tooling attachment is a brush that is in contact with the surface.

5. The exterior wall maintenance apparatus of claim 1, wherein the multi-axes robotic arm is a six-axes robotic arm.