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December 2022

## ADVANCE MEDIA TO AVOID CRASHES DUE TO INOPERABILITY WITH MEDIA LOADED

HP INC

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### Recommended Citation

INC, HP, "ADVANCE MEDIA TO AVOID CRASHES DUE TO INOPERABILITY WITH MEDIA LOADED", Technical Disclosure Commons, (December 26, 2022)  
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## ***Advance media to avoid crashes due to inoperability with media loaded.***

### **Abstract**

A workflow to reduce the crashes induced because of leaving the media loaded in the printer for a long time.

### **Problem Solved**

Latex ink printers have a wider media versatility compared with the competitors. However, the usage of Heating Element to dry and fix the ink has been always a hurdle for the media to complete the media path free of scratches or crashes. Some materials have been typically printed with the media already outside the heating element to avoid crashes against the media deformed by the heat, creating a lot of media waste. Thus, the media versatility of Latex Technology over its competitors (Solvent and UV printers), it has not always seen as a real advantage and some of the customers has ended up moving part of their production to other printing technologies.

HP has done a big effort to revert this situation and in the last Latex heating architectures the media waste has been a pillar of its design. However, external factors such as the media shape before printing reduces the success statistics when printing from pinches and can be discouraging for the customer despite all the improvements done in the design.

With this invention we eliminate one of the main remaining sources of crashes/marks on plot while printing from pinches: If the customer leaves the media loaded in the printer, it gets deformed and copies the media path (especially if it has heated in a prior printing operation). When printing again, this deformation is too big to be addressed by the vacuum or too big to pass through the entire heating element and media defects can appear.

### **Prior Solutions**

In all the previous Latex programs there has been a recommendation in the user guide saying that the media needs to be unloaded if not used to avoid crashes and marks on plot when printing.

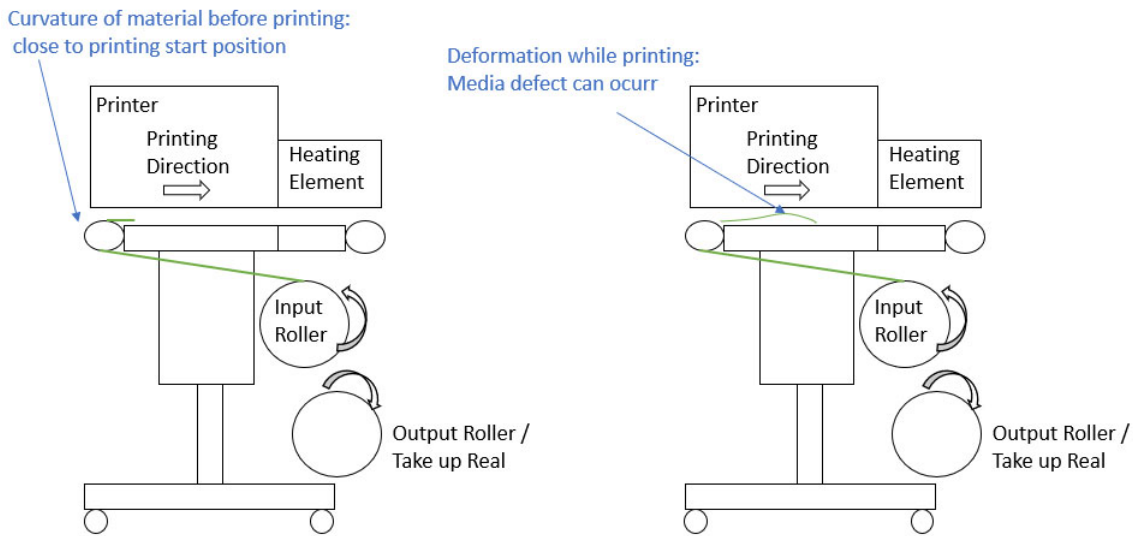
After research done with customers, we have seen that they do not follow this recommendation. Inevitably a percentage of the crashes & media defects that we are having in the field is because of this.

Some other ideas have been studied such as automatically unloading the material after a certain time. They have not been well perceived by our customers, and they have said that they would disable this option if it would be available in the new printer.

## Description

The described invention is the addition of a workflow that consists of advancing the material when it is loaded in the printer for more than 30 minutes without any activity by the user. When a new activity is perceived by the printer, the media comes back to its original position and is then ready to print next job. This movement is done because the media tends to copy the media path geometry. If we have the curvature of the media close to the printing position, the probability of errors is higher than if the curvature is far away from it.

When the deformed area is far from the leading edge, the weight of the material, having the vacuum area fully covered and together with the longer printing time make that the curvature does not affect anymore the printing. The *sketch 1* shows the problem that we have currently in our printers. The *sketch 2* shows the workflow proposed in the invention.

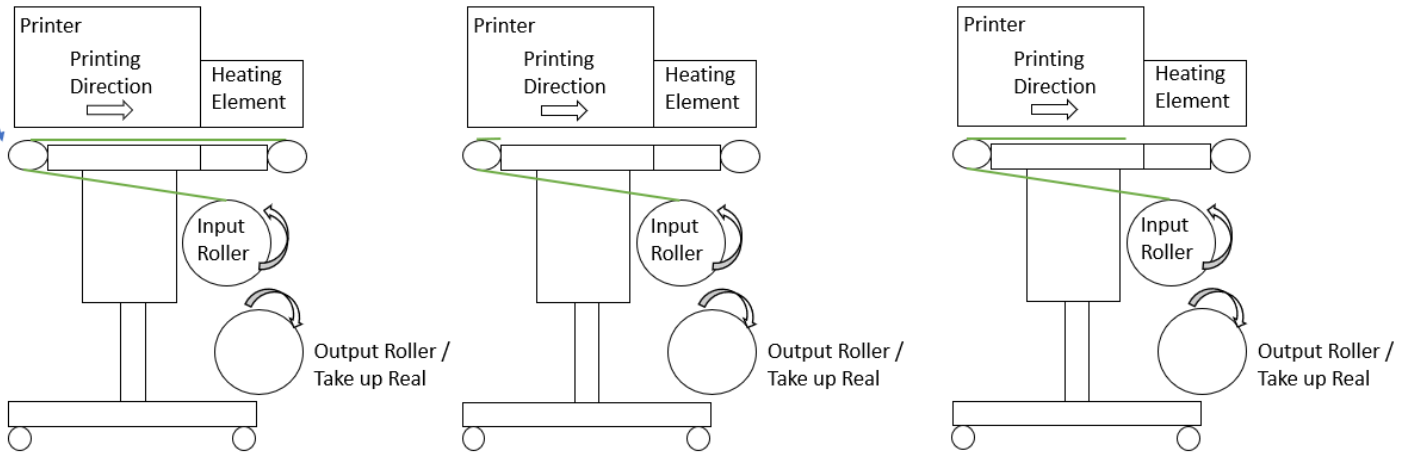


Sketch 1: current situation while printing from pinches

Advance the material after printer inactivity  
 Curvature of material before printing:  
 far from printing start position

Rewind the material to start printing

No deformation while printing



Sketch 2: Proposed workflow of the invention

### Advantages

This invention has the following advantages:

- Increases the success rate of the print from pinches, reducing media waste
- Reduces crashes and its consequent damage of Printheads. This reduces the costs for our customers but also avoids IQ defects of printing with PH's that are not in good shape.
- Reduces frustration related to printing errors
- Reduces the user interaction with the printer by not relying to our "best practices" recommendations.

***Disclosed by Albert Franco, Ezequiel Rufes, David Melero, Marc Muntada, HP Inc.***