

Expiring Patents; HP's Machine; Beachwood, Ohio's MakerGear

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Here is a bulletin providing further validation that the cost of 3D printing will decline.

3D printing's key patents are expiring or soon will expire. These include patents for liquid-based, powder-based, and metal-based 3D printing processes. By way of example, in December 2016 the Fraunhofer Institute's core patent for selective laser melting will expire. Fraunhofer's process for printing in metal teaches a method for producing a shaped body (could be a product prototype, a component, or a replacement part) in accordance with three-dimensional CAD data by depositing successive layers of metal in powder form. The Fraunhofer patent's expiration will likely usher in a new group of manufacturers for selective laser melting machines. The competition will almost certainly drive down the costs for those machines.

Writer Fileman Schoffer remarked in the May 15, 2016 issue of TechCrunch: "While it's still too early to tell how this will affect industries in the long run, the impact could be huge as no other 3D printing process has been able to consistently produce reliable parts that can be used functionally as metal 3D printing has."

On another front, Hewlett-Packard is taking orders for the HP Jet Fusion Printer, HP's first 3D printer. This printer was prominently featured through film and discussion at our April 21, 2016 3D printing conference (held at Cleveland's Ritz-Carlton hotel). Now it is here. It is reputed to be 10 times faster than existing printers and is expected to cut the cost of manufacturing parts in half. Prices will reportedly start at \$130,000 for the 3200 series and approximately \$200,000 for the 4200 series. According to an article in PC World: "The printer will also revolutionize 3D printing in that they will be able to print electronics in the parts they create through the use of conductive materials printed at the voxel level." "HP's printers can produce really high-resolution parts at a cost and speed that blows the competition out of the water," said Joe Kempton, an analyst at Canalys (reported by BBC news). "Its technology really is a huge step forward and a game-changer." Attendees of our April 21st conference may remember that the HP machine is on Dave Pierson's (MAGNET) "Christmas list." Dave better get a big tree.

In the desktop market, Northeast Ohio's own Rick Pollack, founder and CEO of MakerGear, recently met with President Obama and Germany's Angela Merkel to discuss additive manufacturing at Hannover Messe, a trade fair in Germany.

<http://www.marketwired.com/press-release/ohios-makergear-ceo-talks-with-president-obama-chancellor-n>

Congratulations to Rick, who has presented at Benesch's 3D printing conferences and even demonstrated his M2 desktop machine for attendees. It is terrific to see the recognition for him and his company.

3D Printing will impact the way we make almost everything. Because the technology will change our clients' businesses, Benesch has formed a 3D Printing Industry Group, a multidisciplinary team led by core members of the firm's Innovations, Information Technology & Intellectual (3iP) Property Group.

For more general information and to learn more (including by viewing more than 20 Benesch-produced videos on 3D printing), click [here](#).

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