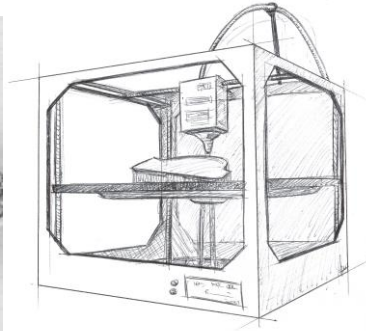
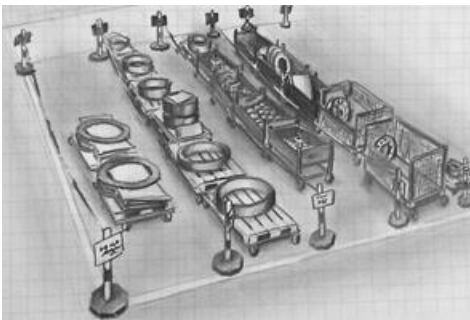


Project, Bachelor or Master Thesis

3D Printing: The Change of Production through the Use of Additive Manufacturing in the Age of Industry 4.0



Bildquelle: Stratasys

Initial situation:

More and more new 3D printing technologies are entering the market. At the same time, existing 3D printing technologies reached a technology readiness level, which qualifies them for series production ending the imposed application limits to prototype production. 3D printing offers possibility to satisfy the rising demand for customization through increased freedom of design as well as a decisive advantage by drastically shorten the process chain from CAD to finished part by making use of digital product data (Industry 4.0), which can be easily distributed via the Internet to any given location.

Given these undeniable advantages, the question arises, why Additive Manufacturing cannot be found significantly more frequent within current production facilities.

Your tasks:

In our team, you help us to answer the question how 3D printing / additive manufacturing can be integrated in today's production facilities with a focus on automotive part production. The aim of the work is to evaluate different degrees of application of AM (e.g. synergistic vs. substituting) for various application cases. Current limitations and mid-term prerequisites for the application of AM to enable a decentralized "One-Click-Production" should be analysed. Here, in addition to economic criteria, the process chain as well as the process specific technical criteria need to be considered and evaluated.

Requirements:

- Motivation and high commitment
- Communication and team skills
- Independent, structured work approach
- Interest in Additive Manufacturing

Offering:

- Extensive supervision
- Clearly circumscribed topic and specific tasks
- Big room for maneuver
- Autonomous realization of an exciting project
- Cooperation in a research topic with a promising future
- Possibility to work with the latest 3D printers and get to know the technology first hand

Have we sparked your interest?

Please send a current excerpt of your grades as well as your curriculum vitae and certificates to the e-mail address below.

Your contact at PEM:

Peter Ayvaz, M.Sc. RWTH
Campus-Boulevard 30
D-52074 Aachen
P.Ayvaz@pem.rwth-aachen.de