Dear Subscriber,
Welcome!

This is the first issue of NewDeli project newsletter which will keep you updated every 3 months about relevant results, achievements and events related to this challenging project funded by the European Commission within Factory of the Future program, FP7.

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NewDeli project started on September 2015, it will last 18 months till February 2017

Overview

NewDeli’s aim is to assess a new ultra-short pulse fiber delivery systems candidate to be the enabling factor for a new generation of AM and subtracting machines.

NewDeli Applications

NewDeli’s solutions will be specifically conceived for industrial sectors that suffer extremely high manufacturing costs because of part complexity, low volumes request and pricey raw materials: med-tech, automotive and aerospace. The functional requirements of each product will allow identifying the specifications and the reference use cases that will be tested during the validation phase of the cable.

The combination of additive and subtractive laser manufacturing is the key enabling feature that will bring to the next generation of material processing machines, increasing both quality and production efficiency. In this scenario, the consortium is working to develop effective processing technologies for tailoring the surface quality properties of AM parts by laser ablation and micro-structuring.
**Framework**

NewDeli’s market target is to propose a solution that will permit the integration of ultrafast lasers in machinery normally employed in various industrial sectors, such as laser cutting, additive manufacturing and laser machining. OPI is developing an innovative Kagome-based Hollow-Core Photonics Crystal Fiber (HC-PCF) that allows ultra-short pulsed beam delivery that can be mounted on an anthropomorphic robot.

**Impact on the engineering and manufacturing market**

NewDeli’s solution is an enabler for a new generation of AM machines, combining together additive and subtractive tasks. This combination in the same environment is expected to be the winning aspect for the future market in engineering and manufacturing sector. For what concern engineering, aerospace and med-tech sector are requiring more and more complex and customized product that will need a complete redesign of the parts that are unfeasible with any other technology and also not convenient by conventional additive processes. Concerning manufacturing, the possibility to have in one only equipment the capability to produce a wide range of different and complex products will satisfy the demand of all those manufacturers of small series and one-of-a-kind parts offering unprecedented flexibility with enhanced productivity and therefore profitability of the investment.

**Specific contribution to the APPOLO hub**

NewDeli’s contribution to APPOLO is to offer a cutting-edge technology and an innovative solution, which can not be find yet in the consortium, that targets the additive manufacturing world with the aim to bring its contribution to the network and to push the attractiveness of the APPOLO members towards new markets.