

# Component Embedding for 3D Printing

Published date: April 12, 2016

## Technology description

The University of Texas at El Paso seeks a partner for licensing a method for embedding metal objects within 3D printed structures to provide additional functionality of the structure.

This invention structurally integrates functional metal objects, such as sensors, with 3D printed structures. Embedding is achieved utilizing an additive manufacturing system with an enhanced range of possible secondary embedding processes. Integrated technologies will fabricate multi-material structures through the integration of multiple integrated manufacturing systems to provide multi-functional products (e.g., consumer wearable electronics, bio-medical devices, defense, space, and energy systems, etc.). Paramount to this concept is the embedding of highly conductive and densely routed traces and surfaces within the 3D printed dielectric structures.



## Application area

Consumer wearable electronics

Biomedical devices

Defense

Space and Energy Systems

3D Printed Electronics

## Advantages

More accurate Z-height embedding

Precise separation between components

Creating a waveguide for antennae, capacitor sensors, ground plates for electronic devices

Reducing oxidation of embedded components

Printing over epoxy, silicon, or polymer-coated material

## Institution

[The University of Texas at El Paso](#)

## Inventors

[Eric MacDonald](#)

[Corey Shemelya](#)

[David Espalin](#)

[Ryan Wicker](#)

## 联系我们



叶先生

电话 : 021-65679356

手机 : 13414935137

邮箱 : yeyingsheng@zf-ym.com