

# Parts for the 4<sup>th</sup> industrial revolution

They are called Computer Aided 3D Parts or CA3 parts for short. Their Mission is to be able to access all standardized parts by computer or phone and it sent to a 3D printer or service on demand.

A Ca3....

- is a catalog of a product line and a process for making 3D STL print files
- creates the 3D data points at **any resolution** for the purpose of using all current and future 3D fabrication; to not become obsolete.
- mathematical build process of STL files faster then they can be copied. They will be erased when not needed and recreated when needed.
- will be able to fine tune the output with adjustable metrics normal to a catalog. Bolts will adjust shank and thread lengths in microns. The resolution can be changed if it makes a better print.
- will manage thousands of parts in multiple catalogs with minimum computer resources.
- future will build parts in the 3D fabrication devices on demand without an external computer.
- is an evolutionary step the will reduce operational costs of small businesses and individuals. It will be access millions of parts on demand with out the cost of inventory, purchasing, shipping, receiving and payment. If mistakes are made, fine tune it and make another one.

## The first catalogs:

All Unified National Threads (UN, UNC, UNF, UNR, Metric) fasteners. These will expand into all drives and heads. There is square Conccetric thread

The next catalog will be gas and fluid connectors with the choice of traditional or wave threads. These have the choice of Z engineering tools (patent pending). The first Z-ridge was in a cap attached to 3/4" copper pipe nipple whose first test was to hold 30 psi for 24 hours. The Z-seat will have mating surfaces on the male and female designed to hold higher pressures relative to material capacity. These will be applied to pneumatic, hydraulic and plumbing parts.

The third catalog will have most gears. The forth, sprockets and chains. Other hardware will be added in where they apply such as washers with fasteners, or have separate catalogs created.