C & S Productions, L.L.C.

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Thank you for your interest in C & S Productions, L.L.C.

C & S Productions, L.L.C. (henceforth referred to as "C & S Productions") was founded in April of 2012 by two siblings – Christy and Steven Smigin. Originally C & S Productions was a plaster relief company, but as time passed demand for reliefs dwindled and demand for the plastic molds started increasing when people found out that was how the reliefs were made. The plastic molds were designed in 3D CAD software and then printed on a 3D printer. C & S Productions, in 2013, decided to switch gears and focus more on 3D printing and rapid-prototyping, and remained this way until late 2015. By late 2015, Christy decided it was best to switch gears and focus mainly on 3D CAD modeling as 3D printers were becoming increasingly more common and affordable to the average individual.

One of the main features that separates C & S Productions from the competition is its willingness to work with clients on an individual basis. Another unique attribute is the cost. C & S Production charges by hour and is thus able to compete in the 3D CAD modeling industry at a more affordable rate than other 3D CAD modeling companies.

We at C & S Productions hope you will enjoy reading and learning more about our History, Key Terms/Glossary, Biography on our Owners/Founders, and photos of some Sample Products along with an Explanation of Services Provided.

If you have any other questions or wish to get in touch with someone about anything you have read or seen here, feel free to contact me at csmigin@csproductionsllc.com.

Sincerely,

Christy M. Smigin

History

C & S Productions, L.L.C. was founded in April of 2012 by Steven A. Smigin. He encouraged his sister, Christy M. Smigin, to join up with him with the unique proposition to start their own business! The two of them joined up and started a mildly successful business. In its early days, C & S Productions (at that time known as Plaster Designs by C & S, L.L.C.) was a company that specialized in plaster reliefs that were made from molds that were created using a 3D printer. The plaster reliefs is where the company received its name, however, this product line would not last. Clients became more impressed with the process by which the molds were made and less about the reliefs. By late April of 2013 C & S Productions switched focus and decided to offer 3D printing services and that included rapid-prototyping. Near the end of 2015, Christy decided to slowly phase out printing, but not eliminate it, and offer 3D CAD modeling services as well.

Key Terms/Glossary

Some key terms thrown about at C & S Productions, L.L.C. might be a bit confusing to those unfamiliar with 3D printing, plaster reliefs, and 3D CAD modeling. To help clear up any confusion, we have compiled a list of key terms and definitions that you may better understand some of the jargon used on a daily basis and with potential clients, media personnel, or average individuals may encounter while talking with team members at C & S Productions.

STL (or STL File): STL is short for stereo-lithograph or stereolithography. In order for a 3D print to actually be made in the first place it must be saved in an STL format. This format is also the universally accepted file type that 3D printers can read, translate, and eventually print the object in tangible form. All CAD software programs today have a way of producing this file; to save it in this format, though, is different for all of them but it is possible. Lastly, this format is what C & S Productions requires of all clients and potential clients when they request or order a 3D print so no additional conversions are needed.

Bad File: A bad file is an STL file that was saved improperly or formed in such a way that it cannot be read properly by the 3D printer or conversion program and, therefore, cannot be printed. Any number of things can make a bad file. It can be anything from a hole that wasn't properly created to reversed faces of a polygon.

Resolution: The resolution is the finest detail that is able to be printed. C & S Productions offers resolutions in 3 levels: 0.5mm, 0.25mm, and 0.125mm. The drawback to increasing your resolution from 0.5mm (which is the default if none is selected by a client) to either of the other two resolutions also increases the print time; e.g., if a print would take an hour on 0.5mm it will now take 2 hours on 0.25mm or 3 hours on 0.125mm. At C & S Productions the resolution is typically measured in the Z-axis or direction.

Conversion Program: The conversion program is what translates the STL file into a format that only the printer understands. This program can vary from printer to printer and has different extensions for every printer out there. The program will also help C & S Productions determine where the support material will be, how much of the support material and regular filament will be used, and approximately how long it will take to print the file.

Support Material: Sometimes a file would have to be printed in the air, but because of gravity, this is impossible; this is where support material comes in to play. This is material that is used to hold up a portion of the file that is being printed and later can be removed when the print is complete. Support material can either be the same type of material or a totally different one. Some files require more support than others. Sometimes support material is not needed, but it is nice to have so as not to warp the print or have it droop.

Raft: A raft is what the 3D print will sit on while it is being printed. This is what helps it so the print is not sitting directly on the printer's plexiglass print bed and thus not be damaged when removed from the print bed. A print can be printed without a raft, but not recommended as this may cause warping and damage when the print is removed because of the sheer force needed to remove a print from the print bed.

Print (or 3D Print): A print is what C & S Productions calls the STL once it has been converted to the file that the printer understands or is printed.

PLA (Polyactic Acid): This is one of the two materials that a client can choose from for their file to be printed in. PLA is also biodegradable and the "greener" of the two options.

ABS (Acrylonitrile Butadiene Styrene): The is one of the two materials that a client can choose from for their file to be printed in. Legos are traditionally made from this material.

Breakaway Supports: This is support material that is able to be separated from the print with or without the aid of simple tools e.g., pliers, file, chisel, etc.

Manually Removable Supports (Manual Removable Supports): This is support material that is only able to be separated from the print with the aid of simple tools e.g., pliers, file, chisel, etc.

Filament: This is the material that is heated, melted, extruded, formed, and hardened to create the print. The filament for C & S Productions comes in two types: PLA or ABS. Also C & S Productions uses filament that is 3mm in diameter; also donations of filament to C & S Productions are always welcomed and may decrease your final cost for your print.

Biographies

Christy Smigin

Christy received her B.A. in Corporate Communication at Avila University. After spending some time in corporate America, Christy decided to return to school and pursue an Associates of Applied Science in Animation.

Throughout much of her student career, Christy taught herself many skills that transferred and proved handy in her position of co-owner at C & S Productions. Some of these skills included: html coding, photography, business writing, and 3D modeling.

While working in corporate America, Christy also gained inter-personal skills and phone skills that helped her to grow in knowledge of how to best communicate her thoughts and feelings to others in ways they could also understand and relate.

By late 2011 it became apparent to Christy, there were very few places for her to work and expand her creative side as well as her business side. This is when she partnered up with Steven Smigin, her brother, to form C & S Productions, L.L.C.

Steven Smigin

Steven received his E.E.T. in Electronics (Electrical) Engineering at DeVry University. After a brief stint at an assembly production plant, Steven determined that this was not the way he wanted to spend the rest of his life and dreamt of a better life that included his sister – Christy Smigin!

Most of his personal life (and much of his professional life), Steven gained insight into many useful and interesting skills that eventually became handy in his position of co-owner at C & S Productions. Some of these skills included: troubleshooting, handyman, CAD modeling, and electrical circuitry.

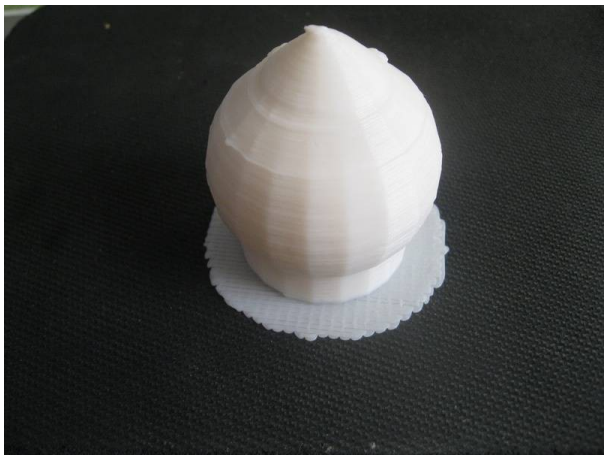
Even though his stay in corporate America was brief, Steven gained some vital skills that have transferred to C & S Productions such as: shipping procedures and quality control. Both of these help to keep products safe while being delivered to the many happy clients and ensure the products are of the best quality possible before leaving the production area.

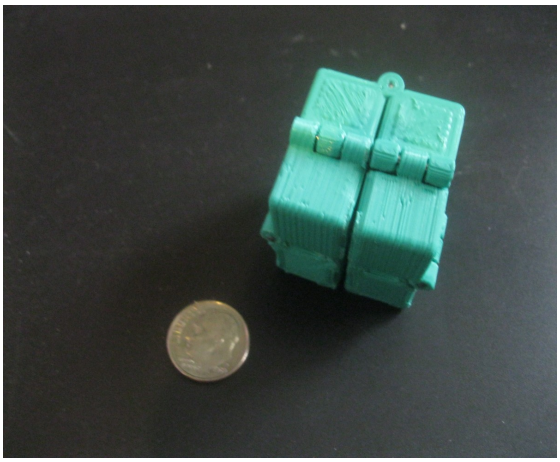
By late 2011 Steven realized there were very few places he could expand his knowledge and no longer be physically or emotionally hurt. This is why he developed the idea of starting his own company and partnered up with Christy, whom he knew would help and support him in his innovative idea, to start C & S Productions, L.L.C.

Sample Products and Explanation of Services Provided

The first product line was **plaster reliefs**. These reliefs were solid white and later painted by clients in anyway that they desired; the latter is seen in the photograph that follows.

After plaster reliefs, **3D printing** was implemented. This had two parts: **rapid-prototyping** or **functionality** and **gifts** or **trinkets**.





The most recent product line is **CAD modeling**. Below are a final rendered scene and an object designed strictly by the computer (defining CAD in its most basic definition).