



Testimony of

Mr. Patrick O'Neill  
CEO and Founder  
olloclip, LLC.

before the

House Committee on Small Business

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Chairman Graves, Ranking Member Velázquez and members of the committee, I am Patrick O'Neill, CEO and founder of olloclip®, the mobile photography company. I invented the olloclip lens, a clip-on lens attachment that takes fisheye, wide-angle and macro photos on the iPhone. I'm very grateful for the opportunity to speak with you regarding our use of 3D printing and how it has helped a small business go from a kitchen start-up three years ago to selling product in every Apple Store worldwide.

I have 25 years of experience in the technology industry. I hold over 30 patents because 3D printing has enabled our innovation at rapid pace. This pace is required for us to be at the forefront of mobile technology as well as keep jobs in America.

As an inventor of computer accessories for more than 25 years, and smartphone accessories for the past 10 years, I've always wanted to develop a product that melded my profession with my love of photography. The iPhone lens idea percolated for years and was inspired by the philosophies of Steve Jobs, founder of Apple, and Colin Chapman, the English founder of Lotus cars, for clean, simple designs.

When the first smartphone cameras came out, I thought wouldn't it be cool to put different lenses on those cameras. The problem was: how do you elegantly mount the lens on the smartphone? I then let that idea percolate for a few years. When the iPhone 4 launched, I felt the camera was great and could benefit from a lens.

### **Designing the olloclip**

In creating the olloclip, I wanted to create a photo lens that would give people the ability to use the iPhone to capture photos artistically, creatively and spontaneously.

Since the start, we employed a "simple and light" design philosophy. At the beginning, when the design studio was my kitchen, we used a local 3D printing company to produce hundreds of prototypes. I would ask myself, "Would Steve Jobs think this product is good enough?". The answer would invariably be "no", and we would keep refining until we felt that the result would meet Steve's demanding standards.

### **Kickstarter**

After a year of development and hundreds of designs later, we launched the olloclip quick-connect, 3-in-1 Photo Lens through Kickstarter, a crowdfunding platform, on June 6, 2011.

olloclip received funding within four weeks from backers in more than 50 countries. We achieved almost 5x of our \$15,000 funding goal, finishing among the top-40 highest funded projects for that time period.

### **Success**

Three years ago, we were a kitchen startup. Since then, we have moved three times to consecutively larger offices — and now employ more than 50 people in Huntington Beach, California, including seven full-time designers, allowing us to make our products in the United States.

Today, olloclip has helped accelerate the transition of the smartphone as the primary camera. By providing mobile photography tools similar to those used for larger DSLR cameras, we have achieved phenomenal success in a short amount of time. olloclip has

created a new category for mobile photography with award-winning products that are fun and easy to use.

olloclip products are now sold in more than 90 countries and growing. The olloclip has attracted a legion of passionate users. and has received awards from WIRED Magazine, Mashable, and the Consumer Electronic Association to name a few.

The ease with which it allows photographers to take creative shots and share them has also had a major impact on social media sites like Instagram, Twitter and Facebook.

This past January, I was also fortunate enough to be named **Entrepreneur of the Year** by Entrepreneur Magazine.

## **olloclip Product Development**

3D printing enabled me to innovate quickly and turn my idea into a commercial product.

Design and 3D printing are still the core of our product development. In just the past six months, we created six new products to enhance our product line of mobile photography tools for Apple devices, thanks to 3D Printing. These include the new 4-in-1 photo lens system, macro 3-in-1 Lens, iPhone 5c 3-in-1 Lens, Telephoto + Circular Polarizing Lens (CPL), the Quick-Flip™ case with Pro-Photo Adapter for iPhone and iPod touch, and the olloclip photo and video app.

olloclip lenses clip on quickly and easily to the iPhone and iPod without any need for adjustment and the device's camera auto focuses normally through the olloclip to instantly capture photos or videos. Choosing the lens — fisheye, wide-angle or macro lens — is as simple as flipping it over.

Every olloclip photo lens is made of high-quality components, including aircraft grade aluminum and precision ground coated glass optics. The design is clean and simple — and the product is half the size and weight of the average car key. An olloclip photo lens fits in a pocket making it a easy-to-use camera accessory.

## **olloclip and 3D Printing**

We have invested more than \$50,000 in 3D printing, not only to prototype our own products, but also to create mock-ups of rumored iPhones so that lenses can be designed quickly each time Apple releases a new version.

We can literally sketch an idea in the morning, model it in the afternoon, pop it in the printer

and have a sample made that evening. Fast turnaround is key for companies in this space.

We finished and validated an iPhone 5 version of the Apple product within days of the handset's announcement. I can't imagine doing this without owning our own 3D printer.

### **The olloclip Process**

The process of developing our products starts here:

1. Brainstorming, concept generation.
2. Sketching of ideas.
3. Modeling chosen concepts in the computer.
4. Printing the concepts on the 3-D printer.
5. Evaluating the prototype for functionality, proportions, aesthetics.
6. Making changes if needed and reprinting.
7. Re-evaluating.
8. If concept is approved and everything looks good, move forward to mass production.

### **3D Printing – Staying Competitive**

The mobile device market changes so quickly. To stay competitive, we use the 3D printer every day to develop new ideas. We've found that it's the best way to innovate quickly and get to market faster. What we can now create in week would have originally took 1 - 2 months for development.

Without 3D printing, the more traditional model of designing and prototyping would take much longer and the process would slow us down considerably. As Apple launches products, we would miss critical launch timing and market opportunities. This could result in a potential loss of millions dollars of lost sales, perhaps even failure.

Small and mid-size companies like ours need the ability to compete on the world stage—especially in rapidly changing, innovation-driven industries like consumer technology.

### **Fending off Counterfeits**

Fending off counterfeiters is one of our challenges. Poorly made, fake counterfeits flood the markets. Thanks to 3D printing, we can keep our computer-aided design files in-house.

### **Future of 3D printing with olloclip**

olloclip is thinking of investing in a new Conex3 printer that is 7x the cost of our current one. The printer will allow us to make more advanced prototypes in different colors, transparencies and material.

As 3D printing evolves, my small business would like to get to the point where we can use it for bridge manufacturing. When we finalize a new design, it takes six to eight weeks to produce the tooling to do the injection mold. It would be nice to use 3D printing to deliver products in that in-between time, so we can get to market faster.

### **Protecting Small Business**

At olloclip, we continue to think differently and are not afraid to try new things, and will only build products if we can innovate. 3D printing allows us to take more risks because it shrinks the opportunity cost. We are able to test and validate new designs within a day or two, rather than a month or two. If they are unsuccessful, we can quickly move on to try something else. Our success has come from our passion and perseverance, our ability to take risks and blaze new trails when it comes to product innovation.

As Congress and others consider policies that will apply to 3D printing, it will be important to ensure entrepreneurs like myself are able to continue using the technology in innovative ways.

I am honored to be here today, and many thanks to Chairman Graves, Ranking Member Velázquez and this committee.