SprintRay Pro Desktop 3D Printer Helps Clinicians Streamline Patient Care

racticing out of the remote town of Sonora, California—about 2 hours east of San Francisco—Michael Scherer, DMD, MS, sees lots of patients who travel a considerable distance to his office. Because many of his patients are older it is important for him to expedite the clinical flow. "I need to be able to minimize issues like missing margins on crown preps, storing stone models for patient cases, and problems associated with separating the alginate from the stone models," he comments.

Scherer, who practices alongside his wife, an orthodontist, in what he calls a "collaborative interdisciplinary style," fully utilizes digital dentistry to streamline the office's workflow. "Intraoral scanning, combined with 3D printing technology, is among the most significant developments in clinical practice since the introduction of implants," states Scherer, a board-certified prosthodontist who serves as a clinical professor at Loma Linda University and clinical

instructor at University of Nevada School of Dental Medicine. "Believe it or not, 3D printing has been around since the mid 1980s. But now, it's no longer just in a lab, university, or some industrial complex. It's accessible to clinicians in desktop applications at a reasonable price with practical usability, and it's taking off," he exclaims.

While Scherer utilizes a number of 3D printers in his practice, he is particularly impressed with the SprintRay Pro. "I've always liked the technology SprintRay uses, which is a DLP (digital light processing) projector-style 3D printing process," he says. Unlike laser stereolithography systems, he explains, DLP uses a light source from a projector to cure the resin, which he claims is a highly accurate and "much faster" method. "Additionally, the DLP type of engine is easy to use, provides long-term reliability, and produces a consistent result."

Scherer considers SprintRay a forwardthinking company that is solidly focused on dentistry. "Many 3D printer companies are involved in dentistry, but it's not their top interest. SprintRay puts dentistry number one, which is evident in the SprintRay Pro." He also points out that the company's RayWare software allows dentists to import patient files directly from a STL file and then build a dental model base with one click. "I don't know of any other 3D printing software that will do that," he says.

To accompany the SprintRay Pro 3D Printer, which comes preassembled, Sprint-Ray offers the Pro Cure, which performs a final cure for models, parts, surgical guides, and occlusal guards. This step optimizes mechanical properties and ensures biocompatibility. The sizable curing box, Scherer notes, can accommodate nearly 30 models at once and takes only a few minutes to UV cure most prints.

Patients' reactions to the 3D printing are "priceless," Scherer says. "Patients can have customized, personalized same-day teeth replacements and move on with their lives. They don't need to wait weeks for the work to be done at the laboratory," he raves. "We can even print models for clear aligners that are ready within a few hours."

Scherer foresees 3D printing accelerating quickly. "The materials are getting better, more reliable, and stronger," he observes. SprintRay, he says, has announced a series of new biocompatible resins, including splint and denture resins. SprintRay users also have the option of using popular biocompatible resins from other manufacturers.

"I see 3D printers, like the SprintRay Pro, as a necessary part of the dental office, like a dental chair or sterilizer," Scherer says. "It's very exciting having a 3D printer in my practice, for both myself and my patients. It's also been a great way to grow my business."



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