

July/August 2013

dental**lab**products

INNOVATIONS ADVANCING PRODUCTIVITY, PROFICIENCY, AND PROFITABILITY

Vol. 38 No. 07

dlpmagazine.com

INDUSTRY MATTERS

The inside scoop on dental lab innovation, told by the people driving it. Don't miss the 2013 Corporate Profiles!

THE BUSINESS OF IMPLANT DENTISTRY

In Part III of this year's implant coverage, we look at the dollars and cents of integrating implants—what will it cost you to get started and what is a reasonable return?

AN ALL-CERAMIC SOLUTION TO ANTERIOR RESTORATIONS

Davide Bigerna demonstrates the power of VITA's VM 9.

REAL-TIME ROI

Jennifer Crane of Pizzi Dental Studio shares how Kerr's Ultra-Waxer 2 has helped her become better at her job.

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VIDEO TECHNIQUES

The best step-by-step pieces from DLP are now available online. Check them out today!



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NEW GC FUJIROCK Bulk
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CeltraDuo Blocks
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JENSEN DENTAL
InSync FC System
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c Titanium Spectral-Coloring Anodizer

With the Titanium Spectral-Colouring Anodizer, labs can colorize metal bases and screws, allowing technicians to avoid the grayish shadowing that regularly occurs in silver implant screws, zirconia bridges on titan bars and individual zirconia abutments. Simple to handle, the resulting colored oxide layer reportedly increases the osseointegration and biocompatibility of titanium.

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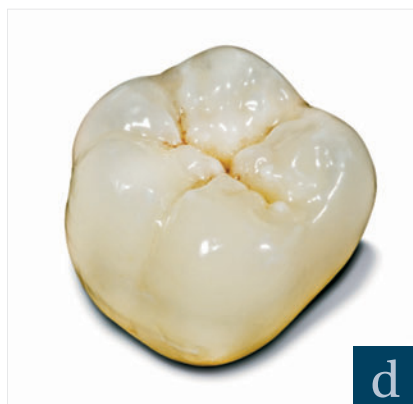
d InSync FC

The InSync FC system offers an efficient and reliable method for shading, staining and glazing all full-contour, layered and pressed restorations. The system includes 15 fluorescent paste stains that are said to be easy to apply in a smooth even layer, fire true to application shade and deliver esthetically desirable results simply and predictably, every time. The simple, one-coat application eliminates puddling and streaking, so technicians can create clear, high luster results after just one firing.

Jensen Dental

800-243-2000 | jensendental.com

CIRCLE RS NO. 5



COVER PRODUCTS are chosen because of their innovation or perceived impact on productivity and bench artistry.

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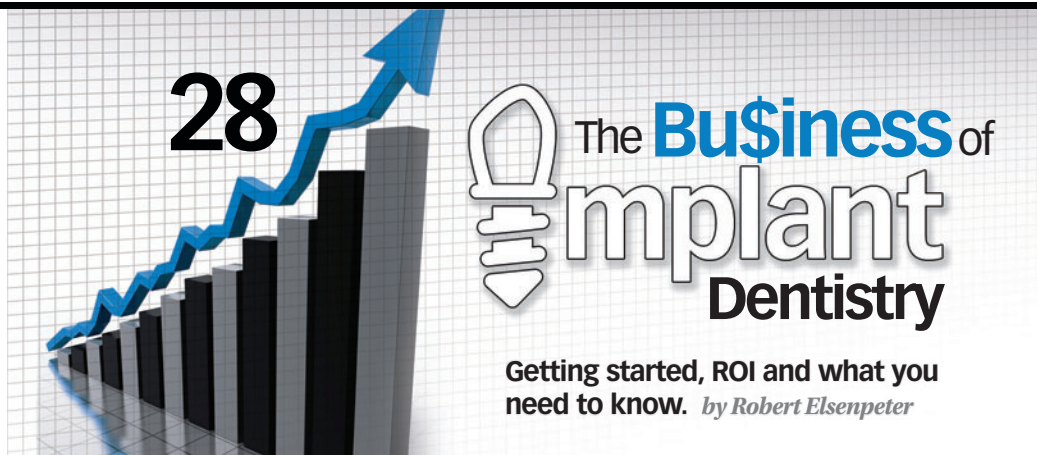
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Nobel Biocare Global Symposium Recap

PLUS: VIDEO INTERVIEW ON NOBELCONNECT

The DLP editors discuss what was unveiled at the Nobel Biocare Global Symposium, held in mid-June in New York City. Check out important information on a new digital workflow, the NobelProcera 2G and the Foundation for Oral Rehabilitation.

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3 most-read articles online

01 Nobel Biocare unveils new products, workflow system [VIDEO]

Looking at the new products and services unveiled in New York.

02 Top Denture Tooth Options

A round-up of the industry's best options.

03 Jensen Dental wants to improve your restorations

A look at the new InSync FC Stain and Glaze system.

CLICKS AND PICKS

What lab owners and technicians were searching for and savoring in July @ dipmagazine.com

Vol. 38, No. 7 **Dental Lab Products** (Print ISSN# 0146-9738, Digital ISSN# 2150-6353) is published monthly except July/August issue combined by Advanstar Communications, Inc., 131 W. First St., Duluth, MN 55802-2065. Available on a controlled/complimentary basis to qualified U.S. dental laboratory owners and managers. For other professionals and/or countries, one-year subscription rates are \$41 in the U.S. & Possessions; \$51 in Canada and Mexico; \$120 all other countries, including air-expedited service. Single copies \$7 in the U.S.; all other countries \$10. Include \$6 per copy for U.S. postage and handling. All payment is due in advance in U.S. dollars. Periodicals postage paid at Duluth, MN 55806 and additional mailing offices. POSTMASTER: Please send address changes to Dental Lab Products, P.O. Box 6076, Duluth, MN 55806-6076. Canadian G.S.T. number: R-124213133RT001. PUBLICATIONS MAIL AGREEMENT NO. 40612608, Return Undeliverable Canadian Addresses to: IMEX Global Solutions, P. O. Box 25542, London, ON N6C 6B2, CANADA. Printed in the U.S.A. Subscription inquiries/address changes: toll-free (888) 527-7008, or dial direct (218) 723-9477.

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RYAN HAMM
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What we really mean by "support"

One of the key parts of that mission statement to the left

is the word "support." As in, "we support laboratory decision-makers." That's what this issue is all about.

We know a lot of you have begun to integrate a digital workflow into your labs, though at varying degrees of investment. But we know that *all* of you, regardless of your level of digital expertise, are as eager as we are to figure out how best to tap into these powerful new tools. That's why we're debuting a brand-new column curated by the fine folks at core3dcentres. The column will be featured every other issue, and will focus on the best ways to integrate a digital workflow into your daily lab work—no matter where you are on the spectrum of technological engagement. We hope these columns will become a resource to you as we reveal best practices and the innovations you need to know about to make your lab as good as it can be.

A dedication to supporting you is also behind our lead feature story this month, "The Business of Implant Dentistry." Implants are becoming a bigger and bigger piece of lab work, and we wanted to explore what that means for labs of all sizes. How can you jump into this exploding market the right way? What can you expect in terms of ROI? What are some ways you can avoid some of the common pitfalls associated with entering the implants market?

These are the kinds of questions that drove our cover story, and so we spoke to a handful of experts across the country who have real-world experience doing implant work. We want to provide a way forward for any lab to feel comfortable taking on the exciting work of implants.

So we hope you find these articles useful—expect even more of them in the coming months. As always, I'd love to hear from you. Tell me how I can better support you, and how DLP can truly come alongside you and your laboratory. **lab**

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Top 4

REASONS TO STORE IN THE CLOUD>>



01 Access from anywhere—even home!

Our (Evident) customers rave about the ease of access. A typical response is “you mean I can work from home?” It’s the access from anywhere that grabs the attention of dental lab owners and their administration and sales staff.

02 Instant support

The best unnoticed feature for cloud storage is the ability for Evident support staff to look at the same screen as the person in the lab. From support to training, cloud-based software means that Evident staff members can provide the best customer support in the industry. Problems are solved faster and lab staff trained more effectively. The days of the dental lab software support staff sitting at a desk with a help manual are numbered.

03 Elimination of risk

Lab owners at trade shows are showing more and more enthusiasm for the safety of running their laboratory in the cloud. Running your laboratory in the cloud means peace of mind. Anything could happen to the lab: fire, theft and natural disasters. How can a lab possibly account for this level of risk management? A dental laboratory can be literally destroyed. If you have the equipment or even the connection with another lab, you can continue to run your business if the lab uses cloud-based dental lab software.

04 Cost reduction

Storing data in the cloud means you don’t have physical storage—so you’ll save money by avoiding the need for servers, paid upgrades and expensive back-up systems. Plus, you’ll find your IT staffing and hardware costs are much lower. ●

This list was compiled with help from Evident. Learn more at Evidentlabs.com.

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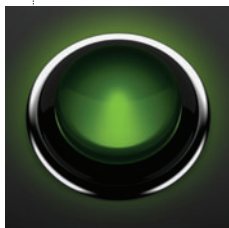
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Industry Matters

Over the past several years we've seen a contraction in the total number of dental labs operating in the U.S. A decline in the total number of dental lab professionals, however, in no way lessens the vital role today's technician plays in facilitating beautiful, reliable restorative options for the dentist and his or her patients.

To that end, the companies that support the dental lab industry have continued to push forward with innovation. Whether it is a dynamic new material or another tool to use in the digital workflow, the manu-

facturing community is constantly looking to break new ground and help you deliver better dentistry.

Our goal in this issue is to provide these companies with the opportunity to show you what they have to offer and explain how their products and services can make a difference in your lab. Of course, there is only so much we can cover on the printed page, so visit dlpmagazine.com for additional interview questions with many of the companies featured here.

Read on, log on and then tell us what you think.

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Sept. 26 - St. Paul, MN

We've built the Amann Girrbach name on a combined 100-year legacy of commitment to dental technicians pursuing accuracy and aesthetic excellence. Our Ceramill system is the embodiment of this legacy, delivering unsurpassed precision and backing it up with a CAD/CAM philosophy that responds to the unique challenges of today's dental laboratories.

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A look at

Amann Girrbach America



**Albert Garza, Vice President,
Amann Girrbach America**

Q: What is driving the demand for labs to bring CAD/CAM in-house?

AG: Simple economics. Labs need to stay competitive. While outsourcing may allow them to offer a variety of services and materials, it comes at a cost—loss of profits and control. The lab can't guarantee when products will be returned to them or their clients. So owning a CAD/CAM system, whether it's just scanning and designing or a full system, will allow the lab to take back control improving quality, service and profitability.

Q: How does Amann Girrbach's Ceramill system stand out among the competitors?

AG: CAD/CAM is all about precision. Amann Girrbach has been and always will be dedicated to precision in laboratory technology—exclusively lab technology. But we take our commitment to support the laboratory a step further. Our customers are more than customers, they are our partners. And we are dedicated to helping our laboratory partners achieve success. Not only do we provide a CAD/CAM system that functions seamlessly with our Ceramill products, including the model management products, but we've created an open system that functions with competitive systems and chairside intraoral scanning systems. Ceramill is also modular so labs can easily expand to meet customers' growing demands. Our direct approach means we can provide education and training, available at our new U.S. Headquarters training

facility or onsite at individual labs. We also provide a variety of CE courses and the materials that will help our lab partners grow their business.

Q: What production and service benefits can labs expect to see in return for investing in the Ceramill system?

AG: Business Growth. Labs will find that even less skilled technicians will be more productive, so they can expand their duties. Reducing turnaround times by eliminating outsource shipping and extra finishing

work, improving quality, maintaining—or even exceeding—customers' expectations, translate to improved customer service and growth. Expanded capabilities also can provide significant growth. I know laboratories that have seen a change in caseload type from 20 percent ceramic to 90 percent zirconia, providing even greater profitability. Finally, by doing everything in-house, labs will retain control of production processes to provide a higher level of artistry. **lab**



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FEATURED BRANDS



Model Management Tools

Amann Girrbach's model management products are at the very core of their legacy of innovation, precision and dedication to the needs and challenges facing dental technicians. Today, these model management tools are used in conjunction with the Ceramill CAD/CAM system, providing the foundation for a precise and trouble-free restoration. By accurately recording and transferring patient data, and then carefully controlling the fabrication process, Amann Girrbach's model management tools help minimize or eliminate chairside grinding, remakes, and other corrective actions. The result is an increased efficiency and profitability for the laboratory and an improved patient experience. Amann Girrbach's model management products include the Artex® System—Artex® Facebow, Artex® Articulator and the Ceramill Artex® that serves as a bridge between the manual and digital workspaces—plus the Giroform® System, Smartbox X2 and the Smartmix X2.



Ceramill Map400

The Map400 is a fully automatic, compact, open architecture digital scanner with highly sensitive, accurate (<20 µm) 3D sensors; a wide angle measuring field for the largest restorations; and just two axes to reduce scan times of full arches and articulated casts.



Ceramill Motion 2

The Ceramill Motion 2 is a compact, upgradable, hybrid dental CNC machine combining five-axis simultaneous milling and grinding technology in wet or dry modes for material appropriate processing. The Motion 2 allows dental laboratories of all sizes to fabricate exceptionally precise esthetic restorations in-house.



Ceramill Mind Software

The Ceramill Mind CAD software is the brain of the Ceramill System. The system software provides time-saving, intuitive processes, and features an open architecture platform that allows labs to work with other existing open hardware or software.



Ceramill Materials

The power of the Ceramill CAD/CAM system is enhanced by its ability to process advanced restorative materials including Amann Girrbach's proprietary Zolid, a stable, non-veneered translucent zirconia; Sintron®, a soft chrome cobalt; PMMA; wax; and glass ceramics plus VITABLOCS® Mark II and TriLux® forte from VITA Zahnfabrik H. Rauter GmbH & Co and lithium disilicate such as IPS e.max® from Ivoclar Vivadent Inc.

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Kerr's New Dental Laboratory Product Website features detailed product information, educational videos and product promotions.

A look at Kerr

FEATURED BRANDS



Construct

Construct reinforcing braid is the ideal “building block” for the most demanding restorations. Construct has a patented weave designed for more complete resin wetting, delivering superior strength and toughness. Construct is made from a polyethylene fiber that is cold gas treated and impregnated with silane and resin, which allows for easier handling. Construct resin comes in three shades: a neutral and two opaque shades designed to eliminate “shine through” of the braid. Three braid widths provide greater flexibility to fit each individual case. Construct indications:

- Single-tooth stress-bearing restorations
- Provisional composite and acrylic crowns and bridges
- Reinforcement for composite crowns and bridges
- Periodontal splints
- Orthodontic retainers
- Denture repair



Flexible Clearance Tabs

Kerr’s Flex Tab system is designed to make direct intraoral measurements of occlusal and interproximal tooth preparation clearances. The dentist places individual Flex Tabs between the prepared tooth and its opposing occlusal surface to ensure sufficient clearance for the laboratory to develop a perfect restoration. Flex Tabs are packed individually to be disposed of after use.



Ultra-Waxer 2

The ultimate electronic waxer just got better, with dual spatulas for increased productivity, a tip holder for convenience and organization, and easy-to-use menu functions, such as programmable presets and quick heat function. Features include:

- Comfortable, color-coded cushion grip tips
- 10 optional application specific tips available
- Four programmable temperature presets
- Quick heating of tips
- Dual pens for simultaneous use
- Adjustable auto-off feature
- Dual voltage
- Temperature range: 97°F to 500°F (36°C to 260°C)
- Ships with two tips (Small PKT # 35167, Large PKT # 35168)



Die Spacers

Manufactured to exacting tolerances, Kerr’s line of die spacers, sealers and hardeners combine advanced chemistry with precision to provide a consistently uniform coating with every application. Their uniform film thickness mirrors every detail, angle and convolution of the preparation and controls relief and color, further enhancing results. The products also resist pressurized steam, scratching and chipping and are available in four micro thicknesses (0-20 microns), two sizes (0.5 oz and 3.38 oz), and two set times (Classic—40-50 seconds, Quick Set—30 seconds).



Premise Indirect

The result of science from the success of Herculite XRV, belleGlass NG and Premise. Premise Indirect closely matches natural dentition in wear characteristics, as well as an opalescent appearance that virtually replicates natural enamel like no other restorative material. Premise Indirect demonstrates a proven history with 13 years of positive clinical studies and field data, and tens of thousands of successful restorations placed since 1996.

Premise Indirect uses a trimodal curing system (light, heat and pressure) achieving a material conversion of more than 98 percent, as compared to 60-70 percent achieved with light-cure-only materials.

The combination of large prepolymerized filler (PPF) particles, 0.4 micron structural filler and small silica nanoparticles allows for higher filler loading, improved physical properties, optimal handling, higher surface gloss and reduced polymerization shrinkage.

Premise Indirect is available in two system configurations (Intro System supporting seven common shades, and the Master System supporting the full range of 18 shades). Both systems include: composite cabinet, curing unit, mixing palette, curing light, refills, instruments, accessories and comprehensive instructions.

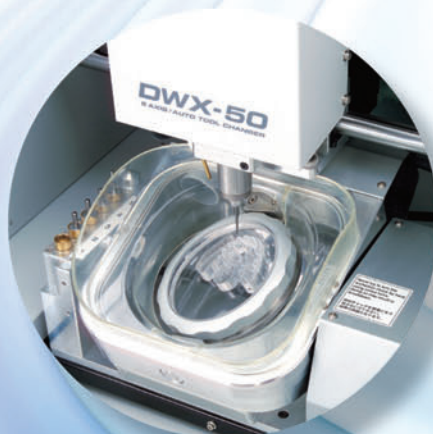
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The Whip Mix Difference

We understand that moving into the digital age is a big step for any size laboratory and that's why you'll want Whip Mix with you every step of the way. A Whip Mix representative will help determine the needs of your lab and will offer the best, most cost effective digital solution to meet those needs.

But our partnership doesn't stop there.

Whip Mix offers customized training for both the 3-Shape Scanner and the Roland Mill. With 4 certified 3-shape trainers, 2 certified Roland Service representatives and 5 CDT's on staff, Whip Mix provides service and technical support that is truly unmatched in the industry.

Call 800.626.5651 to find out how you can partner with Whip Mix as you move into the digital age.

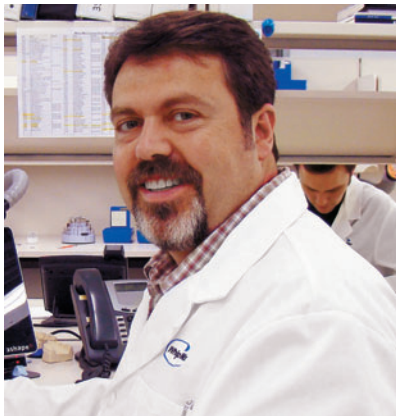


DENTAL TECHNOLOGY SOLUTIONS

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A look at Whip Mix Corp.



Kent Kohli, CDT, Manager of Dental Technology Solutions

Q: Kent, what most excites you about your new role at Whip Mix?

KK: As Manager of Dental Technology Solutions, I oversee the daily milling production and quality control and help customers apply digital technologies to enhance the outcome of their work. I never cease to be amazed at the potential of 3Shape software and Roland Mills—I have personally benefitted by digital technology as a small laboratory owner dating back as far as 1996. I operated a very small, boutique lab focusing on “high-end” esthetic restoration and my daily production was both limited and restrained by the process of fabricating substrates. CAD/CAM afforded me the necessary time to focus on the esthetics and increase my productivity, while ultimately increasing both my production and profitability. I learned to work smarter and not harder and suddenly, I took my “esthetic game” to a much higher level as well! Helping other technicians make this transition excites me most.

Q: In addition to CAD/CAM equipment and materials, what services does Whip Mix provide?

KK: Our Dental Technology Solutions (DTS) team provides milling services to assist labs beginning the transition into the digital realm of dentistry. Our team includes CNC mill operators experienced in CAM programming strategies and CDTs qualified to assist labs with more complex cases as they master their skills. We accept .stl files from any

scanner and use the Roland DWX-50 mills for milling zirconia substructures, full-contour zirconia crowns and wax patterns. Soon we will offer zirconia hybrid abutments and screw-retained hybrid bridges.

Our objective is to help dental labs be successful. For years, Whip Mix has worked with labs to improve their organization and workflow procedures using “Lean Manufacturing” principles. Some standardization must be in place before digital dentistry can be successful. Supporting labs with CAD/CAM technology is the next step to increase their productivity. Our milling services provide a cost-effective way to start the digital journey, requiring only the purchase of a scanner.

With increased unit volume and improved efficiency, labs are able to justify buying their own mills and completing all the work in-house. Typically, when labs reach about six units per day outsourced for milling, they can

financially justify the purchase of an in-house mill. We help labs make that transition, milling difficult cases or test designs as they master their skills.

Q: What support services do you have for CAD/CAM equipment you sell?

KK: We have a complete staff of CDTs trained to assist the lab in its transition. We also have Information Technology support technicians to assist with connectivity and computer interface needs. We provide all the fundamental training as part of a 3Shape scanner or Roland DWX-50 milling unit purchase; additionally, Whip Mix offers advanced design and milling training sessions on more complex case design and workflow. We provide support online via TeamViewer or in-person, if preferred. We also conduct lectures and seminars several times a year at trade meetings and in-house at our facility in Louisville, Ky.

In October 2013, we will again offer our Digital Lab Forum with industry leaders and successful lab owners

to further educate those looking for answers and a road map to making the digital transition easy. More information can be found at WhipMix.com.

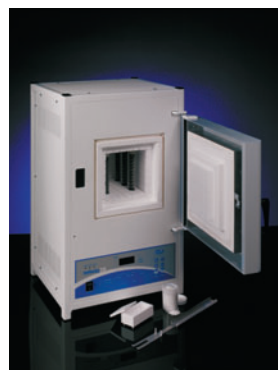
Q: What are the future plans for DTS?

KK: Whip Mix’s future plans include expanding the Dental Technology Solutions product offerings and services to more than a milling center. We will continue to offer the outsource services option to laboratories so they may make a purchase when it makes financial sense to bring the new technologies in-house. We’re committed to using the products we sell so that we can support them from our practical experience. **lab**



Whip Mix Corp.
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FEATURED BRANDS



Infinity ZR Sintering Furnace

The Whip Mix Infinity ZR Sintering Furnace features the latest furnace technology to give many years of dependable service. With 30 programs and four stages, the Infinity ZR has been designed to offer the user flexibility and consistently accurate sintering of zirconia materials. The unit features a working temperature of 1550°C (2822°F) and patented Thermal Web Technology for even and consistent heating.



Vericore® Mill Wax

A clean burnout wax that is suitable for casting or pressing techniques, Vericore Mill Wax is ideal for simple burn-out applications such as singles and small bridges. This wax is simple to trim and add wax when you need to add a margin, cusp tip, contact marginal ridge. The wax trims cleanly and doesn’t soften when being milled. Whip Mix also carries a complete line of zirconia and PMMA discs.



Denar® Split Cast Mounting Plates

Designed to use with the 3Shape scanner and software system, the Denar Split Cast Mounting Plates make it easy to move from Bench Top to Virtual Articulation. The system aids scanning by reducing the height of each cast, and you can mount the case on the bench top articulator as normal using facebow records, arbitrary mounting stands or CR records. Capture the position and cant of the patient’s teeth, then replicate that bench top positioning on the virtual articulator in the software. Create the restoration and equilibrate on the computer. Print and confirm the restoration on your bench top. Available in 10 mm, 15 mm or 20 mm sizes.

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*Scanner
S600 ARTI*



Milling Unit M1



*Titanium
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A look at Zirkonzahn



Klaus Mair, Marketing and Sales Manager for the U.S. and Canada

Q: Zirkonzahn has many technologically innovative products. How do they all fit together into one cohesive system?

KM: Zirkonzahn is based on values like trust, innovation and diligence. Although it might sometimes be easier to outsource parts of our production, the entire range of products—from the highly translucent Prettau® Zirconia to the various milling units—is developed and manufactured in the Zirkonzahn headquarters in the middle of the Alps. This results in a solid knowledge about all our goods and allows us to incessantly improve them. We also have all necessary skills and expertise in-house and are able to find a quick solution in case of any issues or uncertainties. All components are high quality, perfectly harmonized with one another and part of the Zirkonzahn workflow, which is constantly being expanded.

Q: How have you seen your CAD/CAM system benefit dental laboratories?

KM: To guarantee there are ideal machines for laboratories of all sizes, we developed several milling units. From the compactly constructed M1 for “soft” materials to the 5+1 axes simultaneous milling unit M5, there is a device for every lab.

This wide range of devices offers endless combination possibilities—customers can create their personalized CAD/CAM systems according to their needs and wishes.

Q: What makes your suite of products stand out from the competition?

KM: The excellent price/performance ratio of Zirkonzahn CAD/CAM systems is unparalleled. Our worldwide presence and our uncompromising quality approach implicate that all Zirkonzahn products meet international quality standards and guidelines.

Q: What can labs of all sizes and scope expect to see in return for their investment in Zirkonzahn products?

KM: Every laboratory has different demands.

Especially for smaller laboratories, closed systems don’t make economic sense as they lock them into limited products, materials and applications. With its modular devices, Zirkonzahn can ensure clients always have a constant companion at their disposal that can adapt to one’s wishes and requirements. The milling units are ideal to provide laboratories with increased added value and to reduce the cost of material. We also cultivate direct customer relations and offer many kinds of training oppor-

tunities in educational facilities all around the world—among them free intro courses—as well as technical customer support, even for professional questions. [lab](#)

Zirkonzahn®

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FEATURED BRANDS



Prettau Zirconia

Prettau® Zirconia is used in conjunction with a specialized colouring technique that eliminates the use of veneer ceramics entirely. In this way, aesthetically pleasing full-Zirconia (FZ) restorations such as the “Prettau Bridge” can be realized. Especially in the field of implant dentistry, in cases of limited available space or restorations with tissue flanges, Prettau® Zirconia comes into a world of its own. One of the many advantages is the complete elimination of posterior occlusal chipping because only the labial or buccal surfaces are porcelain veneered; all functional areas are maintained as solid Prettau® Zirconia.



Colour Liquids Prettau Aquarell

After much in-depth research and thorough analysis, we are going to launch the new Colour Liquids Prettau® Aquarell. This series includes 16 colours covering the entire chromatic spectrum. They are water-based and acid-free. For visual aid, these new liquids contain special bio-pigments that assist in realistic shade distribution and colour grading. Individual custom colouring of finer details such as mamelons, cervical or interproximal areas is considerably easier and can be performed with pinpoint precision.



Milling Unit M5

Developed by a dental technician, this Milling Unit M5 features 5+1 axes and 2 milling handpieces. It connects easily to your PC and uses the powerful CAM software and the basic modeling software “Zirkonzahn Modellier.” It also features an LED screen so you’re able to keep track of the progress of your milling by simply glancing at the unit.

Face Hunter Facial Scanner

This is a scanner for photo-realistic 3D digitalization of faces as a working basis for the manufacture of individualized dental prostheses. The Face Hunter provides planning reliability for the dental technician, the dentist and the patient through the manufacture of tooth restorations on the basis of the patient’s physiognomy. It includes intuitive controls, high scanning speed at less than 0.3 seconds per face, and integrates extremely well into the Zirkonzahn workflow.



Titanium Spectral-Colouring Anodizer

For biocompatible, coloured coating of titanium constructions aiming at grey scale value reduction. Various colours are possible!



CAD/CAM abutment

Zimmer® Zfx™ CAD/CAM Abutments are now available in titanium and are fully compatible with the NobelReplace®, Replace Select™ and NobelSpeedy™ Replace™ implant systems from Nobel Biocare. Labs and clinicians can acquire the new Zfx manufactured, Nobel compatible abutments by either fully outsourcing the design to Zimmer Dental's team of technicians, or designing the abutments and final restorations themselves on the Zfx Dental CAD System and transmitting the data electronically to the Zfx milling center for final production.

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CIRCLE RS NO. 13



Hood with high-tech safety features

Designed to reduce air flow disturbances in laminar flow hoods, the **Fuego SCS** features the Safety Control System SCS, an advanced safety technology that constantly analyzes potential hazards and, if necessary, initiates safety measures, such as an interruption of the gas supply. Exceptional passive safety features include a residual heat display that will signal the burner head is still hot to protect the user from burns. The adjustable automatic cut-off system inhibits unintentional ignition when the flame has not been ignited for a long time. The Fuego SCS can be operated with the touch-free DoubleClick IR-Sensor, button or foot pedal.

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CIRCLE RS NO. 14



Custom-configurable space solution

The **ListaWorks™** service provides high-quality, custom-configurable solutions to precisely fit individual dental laboratory customers' unique space requirements. Experts survey current and future storage and workspace needs, then propose solutions that provide the highest density and greatest productivity. The detailed, customized plan for individual workspace and storage needs is guaranteed to maximize efficiency and flexibility while optimizing space and profitability. The process includes 3D layouts of the facility, so customers can visualize how the suggested products will work in their specific space.

Lista International

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CIRCLE RS NO. 15



Book demonstrates e.max results

This high-quality book is designed to exemplify the "natural beauty" of an IPS e.max smile. The **case book** is well suited for a lab technician hoping to convince a doctor, or a doctor hoping to convince a patient, of the esthetic results of e.max restorations. Highlighting a series of before and after images from a variety of e.max patients, the cost is \$6.

Ivoclar Vivadent Inc.

800-533-6825 | ivoclarvivadent.com

CIRCLE RS NO. 16



Multiple surface topography implant

A contemporary hybrid implant, the **3i T3** implant offers three surface topographies intended to deliver esthetic results through tissue preservation. A coarse micron topography provides 10 micron features by way of a resorbable media blasting process using calcium phosphate particles, allowing for blood clot retention along the implant's threaded body. The sub-micron topography option offers a more complex structure with discrete crystalline deposition of calcium phosphate nanoparticles, allowing for greater integration throughout the early healing process.

Biomet 3i

800-342-5454 | biomet3i.com

CIRCLE RS NO. 17

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MILLING UNIT

M1



App aids in case planning

Available in the Android Market, the **Virtual Facebow** app reportedly provides a simple, effective and affordable method of aiding in the diagnosis and treatment planning of all dental cases. Designed by Dr. Les Kalman, DDS, the app serves as an esthetic tooth guide before treatment and allows users to position the upper maxillary cast in an accurate spatial relationship to anatomical reference points, establishes the lower mandibular cast to the upper with an accurate occlusion, and reinforces the anatomical bearing of tooth, arch and cast positions.

Virtual Facebow

facebook.com/VirtualFacebow

CIRCLE RS NO. 18

Anterior restoration? All-ceramic solution.

A challenging anterior restoration is tackled using VITA's VM 9 all-ceramic.

By Davide Bigerna



Davide Bigerna

The goal of restorative dentistry always has been to create restorations that offer both functionality and esthetics. However, over the last 20 years, expectations in this regard have changed, with issues relating to esthetic and cosmetic "optimization" and the desire for a flawless appearance and perfection increasingly becoming the focus of treatment. As a result, dental surgeons and dental technicians today are faced

with the considerable task of not just restoring the functionality of the patient's dentition, but of also delivering highly esthetic everyday solutions that do not impact on patient health.

The following real-life case study presents important preparatory steps, which, in addition to expert custom veneering, are critical to the success of quality anterior restorations. The goal of dental restoration is not just to replicate the intact natural dentition and provide what we consider to be an attractive restoration, but to take all the functional, mechanical, anatomical and esthetic aspects of the natural prototype into consideration (Fig. 1).



VITA VM 9

VITA VM 9 was specially designed as a high-fusing, fine-structure feldspar ceramic for ZrO₂ substructures partially stabilized with yttrium in the CTE range of approximately 10.5. The CTE is precisely adjusted to zirconium dioxide materials, which guarantees optimum bonding and absolutely reliable results. It features optimal processing characteristics such as optimal stability and minimized shrinkage behavior, as well as optimal milling and polishing properties, especially in situ.

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Fig. 1 The goal of treatment is not just to replicate the natural, intact dentition, but to take all aspects of the natural prototype—functional, mechanical and anatomical—into consideration.



Fig. 2 Initial situation: shape and shade defects of the central incisor and gaps in tooth positioning, particularly in the incisal area.



Fig. 3 Irregular incisal edge contour due in part to enamel defects (tooth No. 22), vertical cracks in the enamel (No. 21, distal), and extremely opaque tooth substance in the middle and upper thirds of the central upper incisor.



Fig. 4 The plaster replica of the wax-up of the upper anterior area as agreed with the patient provided the basis for precasting. The perpendicular grooves provide the practitioner with information for preparation.



Fig. 5 The precast silicone for direct fabrication of the mock-up is filled with VITA VM CC filler-free cold-curing polymer resin.



Fig. 6 The wishes of the patient have been taken into consideration in the design of the temporary and act as a definitive guide for the fabrication of the final ceramic restorations. The temporary already demonstrates the balanced tooth shapes and incisal edge contour.

PRETTAU® NEEDS HEROES



Face Hunter with
Virtual Articulator



Scanner
S600 ARTI



Zirconia Prettau®



Colour Liquids
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Milling Unit M1



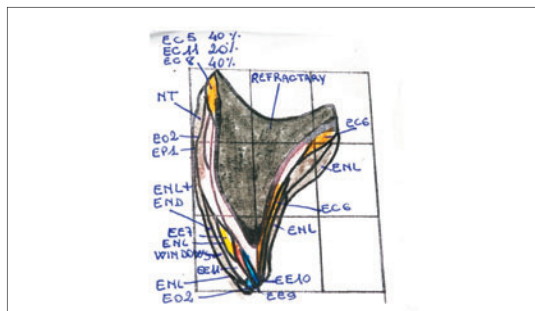
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Fig. 7 The upper anterior teeth prepared for attachment of veneers: the clean cervical preparation ridges are exposed for the impression using retraction cords.



Figs. 8 and 9 The veneer diagrams demonstrate the complexity of the layering that is aimed at achieving a natural appearance in this case.

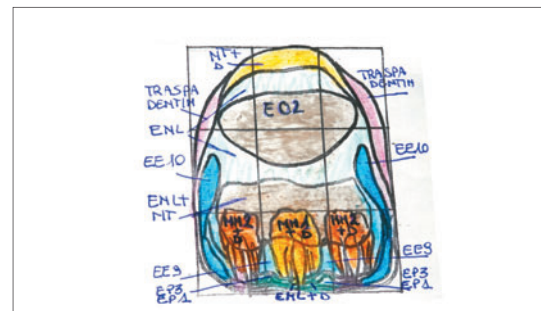


Fig. 10 The final veneers on the plaster model: here, we can already see that transluence and the balance of the incisal edge contour are greatly improved in comparison with the initial situation.



Figs. 11 and 12 Lateral views of the restorations used: not only the impression of the shade but also the tooth shape of each veneer is convincing. The tooth surfaces with their silk-matt texture also provide a life-like and natural effect.



Fig. 13 A detailed look at the right side: youthful and translucent incisal edges, with mamelons also emphasized. Overall, a natural physical appearance.



Fig. 14 Realistic overall impression with a balanced incisal edge contour and equally harmonious tooth proportions.



Fig. 15 Even with the mouth half closed, the incisal edges, which are balanced in comparison with the initial situation, are in perfect proportion with the lip line.

THE DANGER OF IDEALIZING OUR WORK

As dental technicians, we often run the risk of fashioning veneers for crown and bridge restorations based on our own expectations. During the course of our work, we develop a kind of ideal as to how the shape and shade, for example, of an upper central incisor or a lower canine tooth should look, and let ourselves be guided by this vision without realizing it.

This makes our often stressful work easier; however, the final results with their distinct "signature" are so similar that it is often very easy to tell who fabricated a particular veneer. This can be compared with a hairdresser, whose customers all have the same fashionable hairstyle when

they leave the salon. The daily routine during which the technician and patient generally never meet is almost an open invitation to working in this manner. However, the patient's own expectations suffer as a result.

NO ANALYSIS, NO RESTORATION

Every restoration should begin with a detailed analysis of the case. This is the only way to ensure the requirements for a successful outcome can be met. During this analysis, we should proceed systematically and step-by-step, and record our findings in writing. The result should be a detailed diagram that provides all of the information necessary for the veneer.

In addition to the tooth shade and shape, other details also play an important role in creating a realistic restoration. These include characteristic tooth features, the level of translucency and opacity in all areas of the tooth, specific anomalies in the enamel such as calcium deposits, and so on. However, even the tooth shade itself can only rarely be determined as a unique value for the entire tooth, as it varies depending on the tooth area.

Nevertheless, it makes little sense to collect all of this information if we cannot put it into practice later with the veneering material. Detailed knowledge of the ceramic is therefore a prerequisite for subsequent targeted implementation during veneering.

THE WAX-UP – THE BASIS FOR SUBSEQUENT TREATMENT

Before beginning treatment, we need to fabricate a diagnostic wax-up. The wax-up is not only used for planning the size and shape of the teeth—it also allows us to show patients exactly what the options are in their situation. Particulars that already have been discussed with the patient in this regard during the first session now become more concrete.

The importance of the wax-up cannot be emphasized enough, as it provides the definitive basis for all subsequent restoration steps—for the mock-up as a kind of “demonstration model” of the wax-up, for the temporary as a preemptive restoration that is already very similar to the final restoration, and for the final reconstruction of the tooth. It also provides the practitioner with information as to how preparation should be approached.

INITIAL SITUATION

In the case shown here, a 35-year-old woman who was unhappy with her central incisor because of shape and shade defects and gaps in the positioning of the tooth presented in the dental practice (Fig. 2). She also wanted the contour of the incisal edge in the upper anterior area to be more balanced (Fig. 3). With veneers on tooth Nos. 13 to 23, a restoration option was selected that was as gentle as possible on the tooth substance.

1. In the first planning session, the patient and the technician discussed the desired esthetic changes. Using a model of the situation, the technician created a wax-up, which he used to show the patient the changes he felt were possible in terms of the tooth shape and the contour of the incisal edge (Fig. 4). As a result of being included in this creative step, the patient’s attitude to the subsequent restoration was positive right from the beginning.

2. The temporary has come to play a role that has long been undervalued, particularly in the case of anterior restorations. The main original function, which was to protect the prepared tooth surface, continues to be met. However, thanks to the continued progress of adhesion technology, the spot-etch technique now enables single-tooth temporaries to be fabricated that offer greatly superior esthetics and can perform additional tasks because of reliable bonding at the relevant location.

Taking the wax-up as a basis, we used cold-curing polymer resin (VM CC / VITA Zahnfabrik) to fabricate the temporary (Fig. 5). In addition to the protective function described above, this temporary also enabled the patient to already become used to the final restoration

at a very early stage by “preempting” it, to consult family and friends on their opinion, and to request changes before the final ceramic veneers were fabricated (Fig. 6).

3. During preparation, the healthy tooth substance was protected and maintained as far as possible (Fig. 7).

4. The individual tooth features that were already recorded during the detailed analysis as veneer diagrams now provided the basis for designing the ceramic veneers (Figs. 8 and 9). Following fabrication of the fireproof dies (Cosmotech/GC), the quite complex process of layering was carried out using VM 9 (VITA Zahnfabrik). At this stage, in-depth knowledge of the ceramic used as well as of its esthetic possibilities, together with experience in shape and surface design, are essential to ensure above-average results. The result already makes a good impression on the model (Fig. 10).

5. Following adhesive bonding, the six veneers were truly convincing (Figs. 11 to 15). The tooth shade, shape, surface and texture, as well as the individual features, combined to create a captivating and natural-looking restoration. The treatment goals—a balanced incisal edge contour in the upper anterior area, as well as correction of the shape and shade defects of the central incisor and of the gaps in tooth positioning in the incisal area—were successfully achieved.

CONCLUSION

We have used the real-life patient case shown here to demonstrate important steps that are critical in the success of demanding anterior restorations of this kind. The detailed analysis of the initial situation as well as clarification of the patient’s individual wishes and expectations led, via a wax-up, to an esthetically pleasing temporary solution. This solution formed a crucial part of the treatment by effectively preempting the final esthetic result and acting as a definitive template for the final restoration. Only as a result of the spot-etch technique has this approach to minimally invasive restorations, such as the veneers shown here, become possible. **lab**

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Luke S. Kahng, CDT

Lateral implant custom shade matching

How custom shade matching helped give this patient the esthetic smile she desired.

by Luke S. Kahng, CDT

This case study presentation describes how I selected material and matched adjacent teeth, surface texture and contouring when fabricating restorations for the laterals.

The 30-year-old female patient sought to replace her lateral implants, which, at 3.0 narrow, had a tight neck area in the gingival area. The dentist and I both sought to increase the gingival width and make it broader. However, we noted

the gingival line for the laterals was cosmetic compared to the centrals and the canines.

During custom shading, I took a look at the patient's opacity and translucency with saliva in the mouth, and again without saliva in the mouth. There was a definite color differentiation between tooth Nos. 8 and 9 even though they were natural dentition. Central No. 8 had a white horizontal line in the gingival and No. 9

did not. The incisal 1/3 on tooth No. 9 had deep translucency compared with No. 8, which also had a slighter stain to it than No. 9.

Because of this, I chose gold abutments for this case. Gold is much stronger than zirconia and the hue is a natural color that I knew would blend well with the gingival area of the patient's new restorations.

THE RIGHT SHADE



Fig. 1 Examination of provisionals



Fig. 2 Without abutments



Fig. 3 Incisal 1/3 check with custom guide



Fig. 4 After insertion of gold abutments



Fig. 5 Pre-sintering stage



Fig. 6 Mirror image



Fig. 7 Natural, extracted teeth for study and training



Fig. 8 GC IQ Lustre Paste



Fig. 9 Apply L1 stain



Fig. 10 After finish, in the mouth



Fig. 11 Mimic adjacent teeth



Fig. 12 After GC IQ Lustre Paste in the mouth



Fig. 13 Tooth No. 7 immediate insertion, opacity and translucency check



Fig. 14 Tooth No. 10 immediate insertion, opacity and translucency check



Fig. 15 Immediate insertion, uneven incisal edge position check

CASE STUDY

With the provisional teeth in place for tooth Nos. 7 and 10, it is obvious that the color is too white (**Fig. 1**). Tooth No. 8 has a yellow orange tone and the temporary does not; it has a grayish tone to it. **Fig. 2** shows a pre-operative view of tooth Nos. 7 and 10 without the abutments in place.

01 After insertion of the gold abutments from GC Milling Center, I checked on the incisal 1/3 translucency (**Fig. 3**). In the impression stage, retraction was held for 15 seconds (**Fig. 4**) to get an accurate assessment of opacity for the natural dentition. I noted there was a dull color because of dehydration.

Fig. 5 shows the zirconia copings before I fabricated the zirconia crowns on top of the gold abutments. **Fig. 6** is a mirrored image of the restorations. The natural teeth color aspects are all different with layering on top of the stain. How color and staining appear on the teeth depends on the patient's habits. Crack lines and other characteristics all play a role in the dentition's appearance (**Fig. 7**).

02 I followed the natural, extracted teeth for guidance as I stained the color onto the restoration. A subtle application to the mesial distal area in this case gave me the color I was seeking. With GC IQ Lustre Paste, I could use more color for overlay staining and could easily increase or decrease the colors (**Fig. 8**).

03 After finishing the restorations, they were placed in the patient's mouth (**Fig. 9**) for a color and fit check.

04 There was a lack of translucency noted so I applied L3 (a light gray color) to match the distal area of the crown. Next, I applied L1—light blue, tan and white mixed together, pre-baking (**Fig. 10**).

05 I mimicked the adjacent teeth from the gingival to the incisal to create a natural looking color (**Figs. 11 and 12**). Upon immediate insertion, opacity and translucency were checked (**Figs. 13 and 14**). Note the incisal edges of the teeth are not even. I was able to duplicate this natural incisal edge and make the restorations slightly brighter than the other teeth, creating a more natural appearance (**Fig. 15**).

CONCLUSION

The patient was happy with the end result. When we really look at the images provided, we can understand the natural, existing dentition and the segmented gingival, mesial and distal 1/3 colorations. By communicating all these aspects with the patient beforehand, it made it easier to fabricate the restorations because everyone involved was on the same page.

The images demonstrate the difference between tooth Nos. 8 and 9 and also the size differences between Nos. 7 and 10. Tooth No. 10 has a gap while the space for No. 7 is not as large, meaning there was no symmetry between the teeth. Also, No. 7's axis was heading in a different direction. So, not only did color have to be taken into consideration when formulating and fabricating this case, shape, incisal edge position and space between the teeth had to be corrected as well. The patient was happy and gratified with the time involved and the end result. **lab**

ABOUT THE AUTHOR

An accomplished dental technician with more than 20 years of experience, Luke S. Kahng, CDT, is the founder and owner of LSK121 Oral Prosthetics, a dental laboratory in Naperville, Ill. He has published more than 85 articles in dental journals, and his lectures have taken him across the United States and the world. He is the creator of the Chair Side Shade Guide Seasons of Life, 3.0, 4.0, 5.0, 6.0 and 7.0 ceramic shade tabs, which were invented to facilitate effective communication regarding color between doctors, patients and technicians.



Jörg Müller

When digital meets artistry

Using the Aesthetic Press Vanilla Wax in a multi-quadrant case.

by Jörg Müller

For dental technicians, the move to all digital has not always been very easy. The skill to work with a model, with wax or porcelain, or any number of manual skills that were earned over a long period of time are certainly more than planning and designing at a computer screen. Trying to see and work in three dimensions even though there are only two dimensions on a screen can be a challenge.

PLANNING DEPARTMENT

A thoroughly planned case always starts with a wax up. Comprehensive cases such as multiple quadrants or a full-mouth reconstruction need

precise planning. But we don't even have to go that far. Any anterior restoration with more than two units at least should be waxed up to find the right length and position of the teeth. This wax up should be translated into a temporary for the patient to review and get comfortable with the new esthetic smile designed by the team effort of the technician and dentist.

We can achieve this workflow either manually or digitally. However, not every software library produces teeth in a "nature"-like design. Oftentimes, the milled units coming out of the milling machine need some touch-ups. Either it is the marginal area that might need some atten-

tion, using a coping for casting metal, or using a full contoured crown for pressing a porcelain crown. Next to the marginal areas details like occlusal anatomy or functional element, might need some reshaping.

A MULTI-PURPOSE WAX

Most wax blanks have a higher content of resin filled particles, which means the "wax puck" will be very rigid and harder to make any adjustments, not to mention a sealed margin. A crown, which is milled out of a material that handles like conventional carving, is ideal to modify.

Aesthetic Press Vanilla Wax is specially

●●● WAX UP A MULTI-QUADRANT CASE

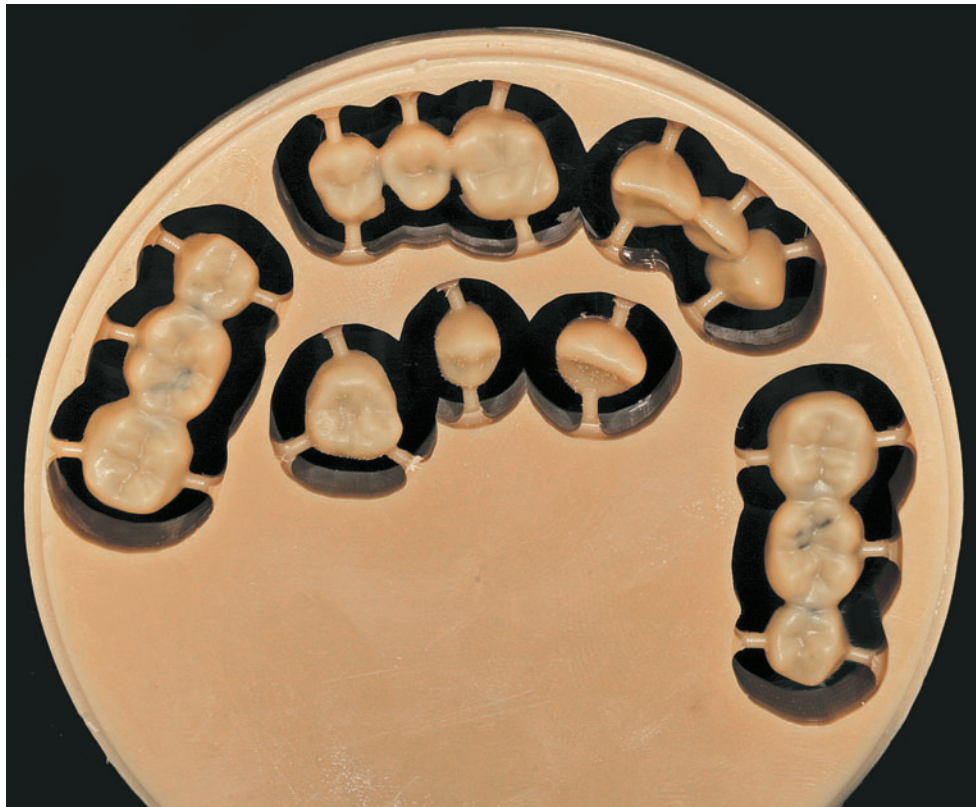


Fig. 1 Aesthetic Press Vanilla wax blank with the milled units. The blank is available in different sizes: 14, 16, 18, 20, 25 and 30 mm



Figs. 2 and 3 The milled units can be transferred very easily onto the coping of the model. With the use of the hairdryer, the flexibility can be increased. A carving wax made out of the same material is available to make adjustments.



Figs. 4 and 5 Adjustments to get the right functional elements and a stable occlusion can be precisely waxed.



Figs. 6 and 7 The finished crowns show a perfect surface and homogenous texture. One stain cycle will provide the desired result saving precious time because of the Feldspathic porcelain.

designed to serve multiple purposes. One can use it as wax flakes for a wax injector, as regular carving wax and also as a wax blank for most CAD/CAM systems on the market. This level of multitasking in a wax is unique in the industry.

Another aspect that is pleasant for every technician—besides the vanilla scent, of course!—is the color of the wax is easy on the eyes and as a technician I can finally “see the anatomy.” This wax even can be used for an esthetic try in, or for functional control movement for posterior restorations.

PRACTICAL CASE

1. After scanning and designing the multi-quadrant case digitally, the case is milled out of the 98 mm AP Vanilla wax blank
2. The anatomy is fine; however, certain details are missing. These details are not always easy to design at a computer screen with the tools available with some of the current software. With the help of an appropriate carving instrument—e.g. the PTC Wax Carver No. 1—the anatomy can be refined to its desired functional design.
3. Certain functional elements are more easily checked and designed in a physical articulator. The split file

technique is today’s frequently used workflow to effectively and precisely plan and fabricate a porcelain restoration.

4. The right framework design is essential for the durability of any restoration. Designing the full-contour crown and being able to reduce the design by approximately 0.8 mm serves enough space for a nice esthetic result but also for a stable occlusion, minimizing the risk of chipping.

PRESS TO ZIRCONIA

5. After pressing the units with the AP Zircon for Staining ingots, very little refinements are necessary.
6. The feldspathic porcelain allows easy repair or adjustment if necessary. The main advantage here is that the glaze cycle is done without the use of a glaze paste. The self-glazing properties save most technicians a lot of time to stain the right shades to the porcelain crowns.

CONCLUSION

In my experience, combining the best of both worlds is a perfect connection of the dots. Being able to manually modify a CAD/CAM supported restoration with a material that enables the properties a technician is used to maintains

the joy and fun factor at work. A seamless integration of material and workflow is the most important guarantee and success for each case, but also maintains the happiness of each technician! [lab](#)

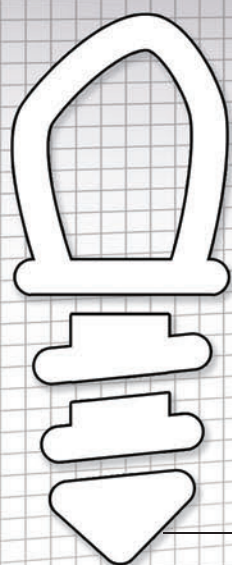


Vanilla Wax Blanks

Wax blanks with no resin components. These blanks are available in the following sizes: 14, 16, 18, 20, 25, 30 mm.

Aesthetic Press

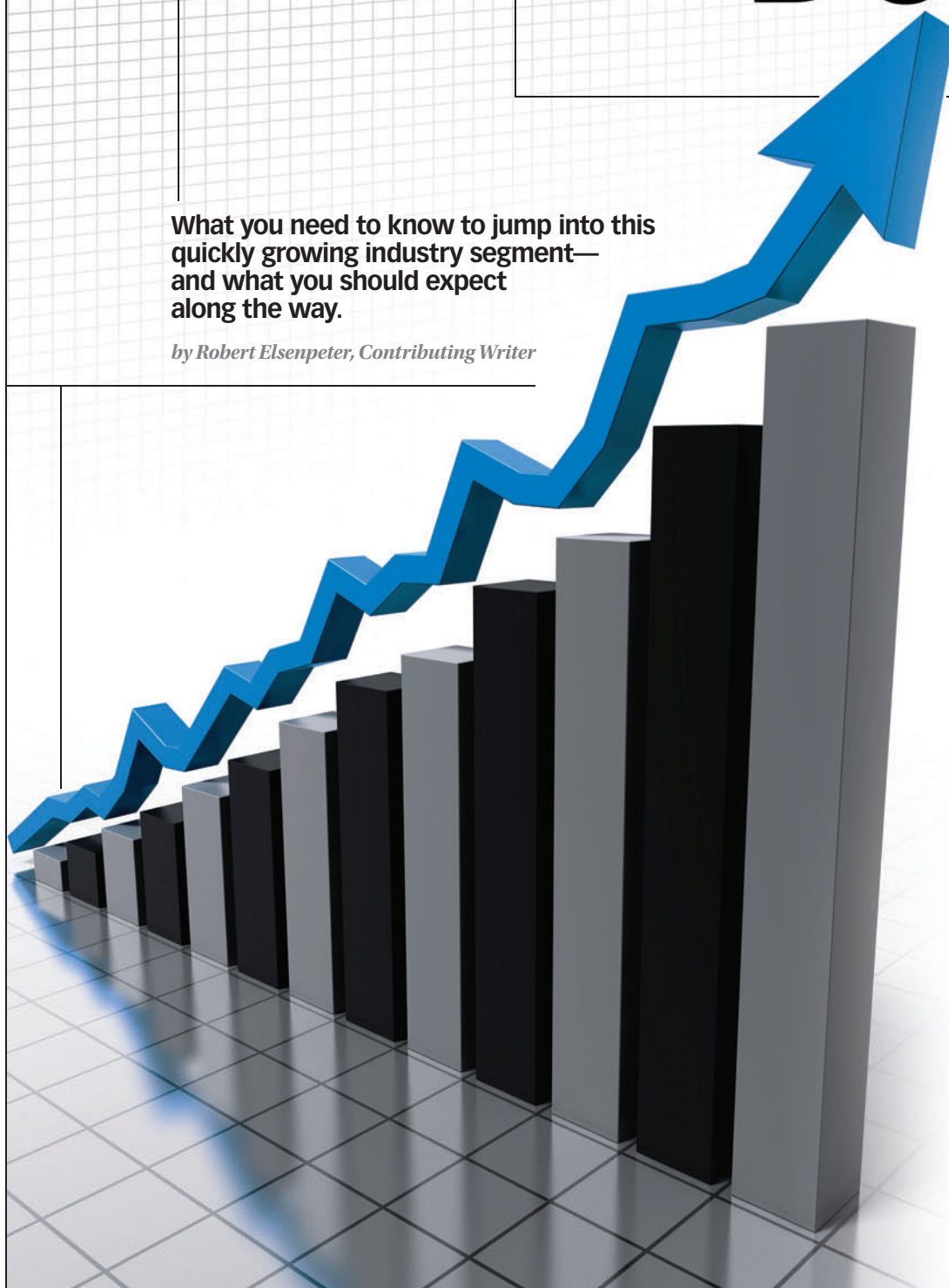
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The Business of Implant Dentistry

What you need to know to jump into this quickly growing industry segment—and what you should expect along the way.

by Robert Elsenpeter, Contributing Writer



In 1931, archeologists in Honduras came across a mandible they traced back to a woman in her 20s living about 600 A.D. Three pieces of shell were embedded in the mandible. Later research concluded what any modern CDT might assume: the Mayans were early users of dental implants. But instead of titanium, her “implants” were three tooth-shaped pieces of shell placed into the sockets of missing teeth.

Thankfully, the Mayan method is not standard practice today, but while implants were experimented with more than 1,400 years ago, it has become more common practice in modern times. In the 1950s Swedish orthopedic surgeon Per Brånemark placed the first modern dental implants, but it has taken another 60 years for implants to fully mature. Now dental implants are an exploding segment in the dental lab market—and maybe something you should consider adding to your business.

POPULAR AND PREVALENT

There's a good reason implant dentistry—and by extension, implant work at dental labs—is so popular these days. According to the American Association of Oral and Maxillofacial Surgeons, 69 percent of adults ages 35 to 44 have lost at least one permanent tooth to an accident, gum disease, a failed root canal or tooth decay. Furthermore, by age 74, 26 percent of adults have lost all of their permanent teeth.

“Twenty years ago, these patients would have had no alternative but to employ a fixed bridge or removable denture to restore their ability to eat, speak clearly and smile,” according to the association's website. “Fixed bridges and removable dentures, however, are not the perfect solution and often bring with them a number of other problems. Removable dentures may slip or cause embarrassing clicking sounds while eating or speaking. Of even greater concern, fixed bridges often affect adjacent healthy teeth, and removable dentures may lead to bone loss

in the area where the tooth or teeth are missing. Recurrent decay, periodontal disease and other factors often doom fixed bridgework to early failure. For these reasons, fixed bridges and removable dentures usually need to be replaced every seven to 15 years."

While implants have a long history, they have evolved greatly, especially in the past 20-30 years. They have become far more popular and prevalent today, and it is an area that many dental labs are moving into. "Implant dentistry is one of the few segments of our industry that is showing positive growth year after year," says Bob Brandon, General Manager at Keating Dental Arts in Irvine, Calif.

There is a good reason so many dental labs are adding this work—it's a profitable arena. "It's a good way to expand services and improve sales," says Dave Hodson, General Manager at Harmony Dental Laboratory in Jacksonville, Fla. "Implants show the highest growth percentages of all laboratory offerings."

But that growth percentage doesn't come automatically. Creating implants is not something that just any lab can do. Adding implants to your offerings requires training, knowledge, skill and specialized equipment. "It requires education and experience that evolves naturally through exposure to this type of work," Hodson says.

That doesn't mean the door is closed to labs interested in implant work. The fact that implant dentistry is so popular makes it easier for labs to include it. They just need to decide to make the leap.

"It's easier to do now. You don't need a \$40,000-a-year kit," says Uwe Mohr, MDT, owner of Smart Ceramics Dental Art Studio in Toronto.

IMPLANTS

When a patient decides to get a dental implant, an oral surgeon performs the work with the patient, but dental labs are responsible for creating the dental implants. Implants are comprised of three parts:

- Crown—The restoration replacing the lost tooth or teeth
- Abutment—An anchor linking the prosthetic tooth to the implant
- Implant—A titanium screw that is inserted into the maxilla or mandible

Implants are treatment options for patients who have lost one or more teeth. For instance, if a patient loses three molars, the oral surgeon inserts the tita-

QUICK CASE STUDY: PREDICTABLE SUCCESS WITH SCREW RETAINED HYBRIDS

by Uwe Mohr, MDT



Figure 1: Matrices are formed of existing temporary bridge

Figures 2 & 3: Incisal Index of Mounted Temp Bridge Model is made on the Kois Analyzer Mounting Platform

Figure 4: Denture Teeth are set up to match the Temp bridge

Figure 5: Denture Teeth Setup in Labial View



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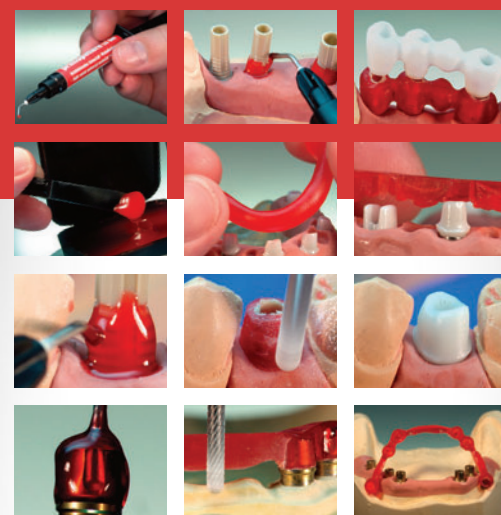
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Figure 6: Occlusal view of setup on screw retained Lightcure base

Figures 7 & 8: Heraeus Mondial 6i/8i Denture teeth

Figure 9: Denture Teeth setup in lateral /buccal view

Figure 10: Frontal view of upper & lower setup

nium screws into the bone at the locations of the first and third teeth. After healing time—and the bone and tissue having grown around the anchors—those screws are attached to the abutment for three artificial teeth, which are connected as a single unit.

The crown is attached with either cement or a screw—the main difference in the connection method is how easy it needs to be to remove the crown; screws tend to be easier to remove. The abutment can be a standard, stock item, but more often it is custom-made to fit the patient's mouth by technicians using CAD/CAM computer software. Abutments can be made from ceramic, zirconia, or noble alloys like gold.

The implant procedure requires thorough preparation on the part of both the oral surgeon and the dental laboratory. Before surgery, planning must be conducted to identify sensitive areas in the patient's jaw and skull. CAD/CAM computer applications are commonly used to help plan the implant.

With this plan in hand, the dental lab can determine and construct the proper implant for the job—bearing in mind such factors as patient need, size and materials to be used.

The procedure can be costly, but the restorations perform like natural teeth and can last a lifetime.

THE COST OF DOING BUSINESS

There is, naturally, an investment for labs deciding to take on implant work. It is an investment, however, that can reap sizable returns. The amount spent depends largely on what types of implants your lab offers, and what equipment and material you initially invest in.

"I don't think it's too costly, but it depends on what you offer," Hodson says.

Labs can expect to spend an initial \$10,000 to train staff; \$10,000 in parts; and between \$25,000 and \$40,000 in equipment, Brandon says.

But making that investment can be done in smaller, easier to afford pieces.

"I would start with proper training, then invest in some parts (lab analogs, prosthetic kits, etc), and then finally in a lab scanner," Brandon recommends.

There is not, however, a one-size-fits-all approach to dental implant work. As such, labs can expect to spend more money getting started with different types of implants and analogs.

"Each type of implant has different components and costs can vary by manufacturer," Hodson says. Luckily for patients and labs, equipment and materials are not as rudimentary as the Mayan woman from 600 AD. Advances in materials and equipment have made the process more effective and easier to craft.

But labs must ensure they have the necessary equipment to create implants. Unfortunately, not every lab can create implants with the equipment they already use for other applications. "Most labs are set up for assembly line work of run-of-the-mill projects like crowns," Mohr says. Implants, on the other hand, need different equip-

ment than labs might currently own. Figuring out the initial investment you would need to make to get into implant dentistry will involve discovering how much new equipment you'll need to purchase.

TEAMING UP

When adding implant work, labs are advised to partner with an implant manufacturer. Manufacturers provide labs with necessary training and bring the most up-to-date and advanced equipment and materials to the practice. From there, the process can be phased in via logical, methodical steps.

"Simple cases can be relatively inexpensive by generating an analog model with a soft tissue moulage and providing a custom abutment that can be outsourced if needed," Hodson says.


While it's useful to partner with a reputable manufacturer, it's advisable not to limit your lab's relationship with just one. Rather, it's a good idea to expose your lab to the offerings of different manufacturers to deliver the best solutions to your customers. "You need to have a good relationship with your local implant representatives," Hodson says. "They can help with client relations, education, and recommend your lab if they have confidence in your skills."

Having a solid relationship with your manufacturer partners is also very helpful when new implant technologies are developed and released. With a good rapport, you can ensure your lab has access to the latest, most reliable restorations available. And by maintaining those relationships, new techniques are easily learned.

TRAINING

Creating implants is, of course, a different animal than building crowns and bridges. It takes a different set of skills, and laboratory staff must be properly trained on those skills.

"In order to be successful and make money in implant dentistry, advanced training is required," Brandon says.

 Labs can expect to spend an initial \$10,000 to train staff; \$10,000 in parts; and between \$25,000 and \$40,000 in equipment, says Bob Brandon, of Keating Dental Arts in Irvine, Calif.

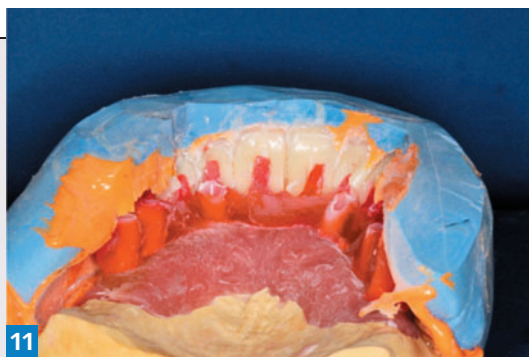


Figure 11: Denture Teeth in Matrix, Primotec Primobase is used to generate the frame

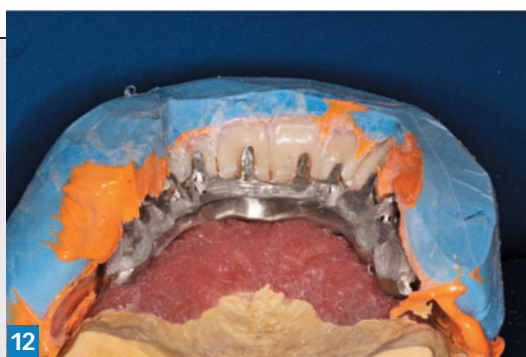


Figure 12: Upper cast base, teeth retrofitted with matrix

Training is usually gathered through seminars conducted by manufacturers to educate lab technicians. But Hodson also advises using local study clubs as resources for additional education.

Study clubs are a resource to consider, especially with new concepts emerging in dental laboratories. That new information can make it challenging for labs to stay up-to-date. Study clubs give you the chance to evaluate new products and techniques—this is especially true if yours is a small dental laboratory with minimal professional interaction with other labs. Study clubs also provide the opportunity to learn about products through your colleagues' experimentation and analysis, or even from industry leaders directly.

For those interested in showing their level of training and skill, the National Association of Dental Laboratories offers a specialty certification for implants—the Certified Dental Technician (CDT) with an emphasis on implants.

"It is not a requirement for technicians to be certified, however it is a good way to obtain training and credibility," Hodson says.

Some in the industry pursue a more complete training.

"I'm a one-man lab," Mohr explains. "I did my training in Germany—it was more comprehensive. We learned about implants and it was always part of what we did."

In addition to his own work in his dental laboratory, Mohr offers to train others, typically small groups of technicians. While individual manufacturers often conduct training, it doesn't necessarily have to be manufacturer-specific. Most implants follow a common design and use.

"A lot of the training I do is three or four technicians at a time," Mohr says. "Once you've mastered the basics, it's all pretty much standard."

FINDING SUCCESS

There's a reason not every lab offers implant work—it's only gained prevalence in recent years, the work is challenging, and it requires plenty of skill. There are some good rules of thumb to follow. Brandon offers the following advice:

"Start off with education and training," he says. "Attend some implant-specific meetings to see what is out there. Partner with a local implant sales rep [because]

they work on commission.

Avoid overpromising and under delivering. Be realistic with your workload and know your lab's limitations. Know what you can and cannot do.

"Don't bite off more than you can chew," Brandon warns. "Only take on the cases you feel qualified to handle."

While it's a great idea to try to prepare for everything and make as few errors as possible, mistakes are still inevitable. Look at them as opportunities to grow and improve your lab's work. But that doesn't mean you should keep making the same mistakes over and over. "Learn from your mistakes," Brandon advises. "They will happen, just try not to repeat them."

THE TEAM

Implant work isn't performed by just one person in a vacuum. While the patient will likely only interact with his or her oral surgeon, there is an entire team working on the project. And it is important for that team to work closely—not only for the success of the restoration on which they are currently working, but also to learn from each other, improving for future implant jobs.

"A successful implant requires that all parties involved—the patient; the restorative dentist, who makes the crown for the implant; and the oral and maxillofacial surgeon, who surgically places the implant, follow a careful plan of treatment," according to the American Association of Oral and Maxillofacial Surgeons' website. "All members of the implant team stay in close contact with each other to make sure everyone clearly understands what needs to be done to meet the patient's expectations."

Though the oral surgeon is the face of the implant procedure, it is up to the lab to educate the doctors on the implant procedure, helping deliver accurate, quality work.

"As a relationship builds with a client and they gain confidence in our abilities, we are able to make recommendations in their treatment planning, case sequencing, and so forth," Hodson says. "Many of our clients look to us for answers."

Mohr echoes these sentiments, suggesting that learning how the implants are used will help in the overall quality of your work. "With implants, you need

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Figure 13: Lower cast base, teeth retrofitted with matrix

Figure 14: Cast Precious Metal bases are conditioned with GC Metal Primer.

Figure 15: Cast Precious Metal bases are opaqued with GC Tooth Shade and Pink Opaque.

Figure 16: A clear putty matrix has been generated for processing, the denture teeth are conditioned with GC Composite Primer, and GC Tooth Shade composite is flowed into the matrix.

Figure 17: Lingual view of finished Lower Hybrid

to know which abutments are ideal for which type of work," Mohr says.

Taking a very hands-on approach when working with clients gives you more information and can help you learn more about implant work and how to improve your work. Go a little further than just asking simple questions or following-up on a case.

"Get your clients to provide photos of every step, and/or sit chairside so you can evaluate your work live," Brandon says.

Asking your client doctors for some extra help also aids in the overall quality of the restoration. For instance, Hodson notes the value of asking doctors to do a little extra work when they're taking an impression coping, the result of which is a better fit and a more successful implant.

"They've learned that when doctors take an x-ray of the impression coping in place, verifying accuracy, the results are more predictable," Hodson says. "Confirmation of proper positioning of the impression coping is important as it establishes a foundation for the entire case."

TEAM LEADER


Once the project gets to the lab, staff must not only have knowledge of different types of work, they also need someone to coordinate the project. There should be someone who sees the big picture and knows what the end result must be.

"The technicians need to know their part of the job, but there also needs to be someone who sees the larger project and how to delegate the work," Mohr says. "With large labs, the work passes from department to department, but they never really know what it's supposed to look like. Someone needs to coordinate."

Mohr sees a value in smaller labs being better able to have a comprehensive understanding of the project. Because they can be more tightly integrated than large labs, they can have a better handle on the project. Larger labs have departments that do different parts of the job, but they don't necessarily see the whole plan.

A regularly trained ceramist, for example, is capable of crown work, but is not trained for implant work. As such, he or she may not understand the unique ins-and-outs of the implant job.

"Ceramists and removal specialists need to work together, but someone needs to coordinate the work," Mohr says. "They think that since they can do crown work, they can also do implant work, and they end up

 Ultimately, successful labs will focus on ensuring their staff is well trained and prepared to handle the work, learning as they go. Solid relationships with manufacturer partners are also critical.

with custom abutments that aren't very good."

And it is the bigger projects that require advanced training and planning.

"Single crown and three- to four-unit bridge restorations are basic," Mohr adds. "More advanced projects like full arches need to be planned out. You have to know what the final piece will be, and then work backwards from there."

Though implant work can be challenging, often labs will turn to each other when problems arise.

"That's when the phone rings!" Mohr says, laughing. "When someone else messes up or when they're in dire straits."

ROI

Labs are in the business of making money. And while there is a feeling of satisfaction from helping your fellow human, labs do need to worry about their bottom line. Adding implant work does involve up front costs for training, equipment and materials. So, how long does it take to see a return on your investment? It depends on a number of factors.

Hodson says it varies based on the lab, the work they offer, and numerous other variables. On the other hand, Brandon estimates that a profit can be turned within a few months. "[A profit is possible] pretty quickly," Brandon says. "Within six months would be a fair guess."

But labs seem to be on both sides of the income spectrum. While some are realizing a booming business, others are struggling to get by. "Labs tend to either be earning \$2 million a year or going broke," Mohr says.

Ultimately, successful labs will focus on ensuring their staff is well trained and prepared to handle the work, learning as they go. Also, solid relationships with manufacturer partners are critical.

TRENDS

Getting into implant work itself is just the start. Once you get your foot in the door, there are trends you should



Figure 18: Labial view of finished lower hybrid

Figure 19: Occlusal view of finished upper hybrid

Figure 20: Frontal view of finished upper & lower hybrids

keep on top of to remain competitive and viable.

Developments in CAD/CAM technologies have been a boon to dental lab work in general, but in recent years it has been especially beneficial to labs' implant work.

Another trend to stay current on is digital impression systems, which can be integrated into abutment design. Digital impressions make it possible to build custom abutments without having to take physical impressions, Hodson says.

The term "implant" doesn't just refer to a single replacement. It also can be used to refer to multiple unit restorations. Those larger, more complex restorations are another area in which labs should focus their energies.

For centuries, dentures were the standard replacement for missing teeth. But now, as dental implants are becoming more popular, there's been a conversion from dentures to implants. As such, labs should be cognizant of the specific needs that come when patients move from

dentures to implants.

Thankfully, the 21st century offers more to the world of dental implants than pieces of seashell inserted into one's jaw. The field is popular and growing, and it is a good way for dental labs to prove their mettle and remain on top of current trends. With proper planning, a commitment to education, and dependable partners, a lab can confidently make that initial investment and see an ROI by entering into implant dentistry. **lab**

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THE DIGITAL HORIZON

5 Ways to Take the Digital Leap



Here's what you need to know about adopting a digital workflow, no matter where your lab is.

by Daniel Allemeier, MBA

When I talk to labs around the country about making the leap to a digital workflow, I see a divide; many have no idea where to start, while others jump in head-first. A third group is slow and steady—at first they bounce back and forth between loving the digital workflow and cursing it, eventually realizing that finding the right digital partner makes sense.

But for anyone thinking about making the jump to the digital realm, it's important to know the road ahead. What do you need to know, no matter what level of digital expertise or investment you have? What are the pitfalls you can avoid? And what is the standard progression of integrating a digital workflow into your dental laboratory? Here are the five things you need to know as you think about crossing the digital divide.

1. Understand the systems on the market. Not all systems are made equal and doing some research goes a long way. Get referrals from the distributors you trust and take the time to call and discuss their experiences before you invest. A little bit of time and effort up front can go a long way toward identifying the systems that will best work for you and your needs.

2. Think about your current services and what you would like to add going forward. Here's an example: Right now, you are only looking to mill zirconia restorations, but you would like to build your implant and All-on-Four business. Not all laboratory scanners will be able to scan for bars, so it might behoove you to spend a bit more at first so you don't have to start from scratch with a new scanner down the road.

3. Understand your business. Are you a one- or two-man lab with clients that only do XYZ implants? If so, then maybe going with a closed XYZ System from beginning to end will serve you best. If you are not solely a one-system laboratory, or if you want to go after new clients by offering additional services, you may want to look at "open" systems. Know up front that once you bring in the machine, there is more to it than you might think. Each system has CAM software with different amounts of "openness" that creates more responsibility on the user. Working with an outsourcing partner who can provide you with a validated workflow can give you the freedom you want, without the added responsibilities you don't need.

4. Find a distributor who has an interest in not just selling you a system but, more importantly, making sure you know how to use the system. Like any advance in technology, there is a learning curve when you invest in a digital workflow. Whoever you choose to purchase your equipment from, you will need hands-on training along with quick and reliable access to professionals who can help you when problems arise. Don't get wrapped up in geography or perceived convenience. Just because you go with a company that is local or with a company where you see a sales rep every week, that rep won't be the person you talk to when you have a technical problem. For the most part, when you call to get help, someone in some part of the world is going to login to your system and remotely walk through steps to see what is going wrong and work to resolve the issue remotely. The most important thing is to find someone that understands your business and how you will use the system from beginning to end.

5. Decide what business you want to be in. In talking to some of the largest labs around the world, I have had the opportunity to understand issues that plagued many of the early adopters of the

digital laboratory workflow. The common thread among all of them was they got to a point where they asked, "what business do I want to be in?" They saw that laboratory scanning and CAD-restorative design was emerging as a necessary new skill that every dental laboratory was going to need to adopt to stay competitive. However, the revelation they all had was that as soon as you take the next step—which is milling—you are in an absolutely new business and a very expensive business.

I'm not saying don't go buy a C/B Mill and hire someone to run it, because there might be a ROI that justifies doing so; but understand this is now an engineering process. So: decide what business you want to be in. Do you want to focus on the esthetics, artistry and anatomy, while working to cultivate clients? Or do you want to take it all on, from design to manufacturing followed up by finishing? You make the call. **lab**

Daniel Allemeier is Territory Sales and Marketing Manager for the United States for Core3dcentres, an offsite solution for dental laboratories. He lives in Pennsylvania with his family.

PHOTO: WESTEND61 / GETTY IMAGES



Big capability, small footprint

The Objet30 OrthoDesk from Stratasys makes its mark in the 3D printer market.

Compiled by Ryan Hamm. Information provided by Stratasys.

The manufacturing world is increasingly turning to 3D printing in an effort to meet the fast pace of today's competitive marketplace. By answering industry production challenges, lab owners can save costs and move more quickly to digital production.

To meet this demand, Stratasys has released the new generation of Objet30 OrthoDesk, part of the Objet Eden™ line of systems. Objet30 OrthoDesk is specially designed for small- to medium-sized labs and clinics. It is reportedly compact, affordable and easy-to-use. With patented PolyJet 3D Printing technology, it offers all of the advantages of a 3D printer in a package created to work with labs of any size.

Within the Objet30 OrthoDesk, the PolyJet jetting head slides back and forth along the X-axis, similar to a line printer, depositing a single, super-thin layer of polymer onto the build tray. After building each layer, UV bulbs alongside the jetting bridge emit UV light, immediately curing and hardening each layer. This step eliminates the additional post curing required by other technologies.

Avi Cohen, Director of Global Dental at Stratasys, elaborates: "The internal jetting tray moves down with extreme precision and the jet heads continue building, layer by layer, until the model is complete. Sophisticated software tools enable all heads to work in perfect harmony and superb accuracy, to synchronously jet identical amounts of materials on the tray. This results in a perfectly even and smooth surface. Two different materials are used for building: one for the actual model—the VeroDent material, and another gel-like material for support. The geometry of the support structure is pre-programmed to cope with complicated geometries, such as cavities, overhangs, undercuts, delicate features and thin-walled sections."

Stratasys' goal with the Objet30 OrthoDesk is that any lab can fabricate stone models, appliances, delivery and positioning trays, models for clear aligners, retainers and surgical guides—right on the benchtop. Stratasys says the advancements in their Objet30 OrthoDesk sets a new standard in 3D Printing. **lab**

Features

- Specially designed for small- to medium-sized labs
- Small benchtop footprint allows you to have access to 3D printing technology without taking up too much space
- Store all cases digitally instead of storing bulky models
- Includes PolyJet 3D printing technology
- Digitizes your model workflow for better efficiency and cost effectiveness

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SCAN:



3D Printed model using VeroDentPlus material

REAL TIME ROI

Ivoclar Vivadent's IvoBase Injector

How this injection system has helped Master-Tech not only increase its bottom line, but deliver better work to its customers.

Compiled by Stan Goff



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Bob Carpenter, CDT



Debbie Arceneaux

THE LAB

Master-Tech Dental Lab, Inc. is a full-service lab located in Slidell, La. The lab offers fixed and removable prosthetics, and specializes in implants, especially fixed hybrid prosthetics. Master-Tech has 18 employees and 110 active accounts. The company is co-owned by Bob Carpenter, CDT, and his partner, Debbie Arceneaux.

THE PRODUCT

IvoBase Injector permits a fully automated, controlled injection and polymerization procedure of special PMMA resins, which are coordinated with the system. The chemical shrinkage of the resin is entirely compensated during polymerization—thanks to the patented temperature control in the flask and the heater. This

enables the fabrication of denture bases featuring high accuracy of fit and precision. The injector has been especially developed for the IvoBase material and is said to permit exceptional restorations. The IvoBase Injector also can be used for the tried-and-tested SR Ivocap material.

The product's advantages include:

- “All-in-one” injector, quick and easy setting into operation possible
- Controlled polymerization shrinkage for optimal accuracy of fit
- No water and compressed air connection necessary (plug and play)
- Compact, modern and ergonomic design; requires only a small space
- OSD indicator: current operating status visible from a great distance
- RMR key for a clear reduction of the residual monomer content
- USB port for software updates via PC/Internet
- Direct flask heating without water bath permits polymerization without annoying steam
- High maintenance friendliness and easy replacement of the heating elements due to the removable cover
- Versatile injector with various Ivoclar Vivadent and reserve programs

THE RESULTS

Carpenter, who is president at Master-Tech, says they switched to the IvoBase system about a year ago and is happy to report they now get much better results.

“We were drawn to the IvoBase system because we were using another injection system for our fixed hybrids and were not happy with the results we were getting,” he notes. “I was looking for a system that would produce esthetic-dense acrylic.”

The lab now uses the IvoBase system for a variety of cases.

“We have been using the system for about a year. We process all of our acrylic cases using the IvoBase—den-



Inside Master-Tech Dental Lab, where the laboratory uses the Ivoclar Vivadent IvoBase Injector for great results.

tures, acrylic and cast partials and fixed hybrid cases,” Carpenter says.

Master-Tech is thrilled by an improvement in its efficiency as well as with the quality of its work now.

“The IvoBase system has a two-fold benefit to our lab. It immediately improved the efficiency of our removable department,” the lab’s president explains. “Traditional mixing and packing of acrylics is fraught with inefficiencies in mixing of material and packing

technique. The IvoBase eliminates these variables; the material is pre-measured and impossible to mix incorrectly and the injection technique is foolproof. The resulting improvement in the quality of the work cut down on in-lab repairs and remakes saving time and money.”

This efficiency helps the lab’s ROI, but just as important, Master-Tech is delivering even better cases to its customers.

“Secondly, it greatly improved the quality of our work,” Carpenter says. “The

injection system and technique is vastly superior to anything else available. It is so superior that we have rebased cases that were done with our previous system at no charge. The improvement in our quality was possible because of the increased efficiency in the department and the fact that it is hands down a superior acrylic and process.

“The IvoBase stands apart from the other systems simply because it is a better acrylic and the injection system consistently outperforms any other system we have used. For us, seeing is believing; it is head and shoulders over any other way of processing acrylic. Our customers love the fits (they have improved) and the density of the acrylic (it does not stain or collect calculus like the other acrylics).

“In summary, our choice of the IvoBase system is one of the best decisions we have made in our business. It has provided an excellent return on the investment.” **lab**

“The IvoBase stands apart from the other systems simply because it is a better acrylic and the injection system consistently outperforms any other system we have used.”

—Bob Carpenter, CDT

REAL TIME ROI

A more precise, efficient and flexible waxer

One lab technician describes her experience with the Ultra-Waxer 2
—and how it's helped her become better at her job.

Compiled by Ryan Hamm



SCAN:



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Jennifer Crane

THE LAB

Pizzi Dental Studio is a small dental laboratory in Staten Island, N.Y. Jennifer Crane, a dental technician and administrative assistant at Pizzi, says they work with between 10-15 clients and they “specialize in esthetics and communication.” Crane handles multiple cases needing wax-ups and is a committed dental technician who takes time out during her day and even

on weekends to practice her techniques—particularly honing her very fine diagnostic work. She also snaps pictures of each practice wax-up she does, looking for ways her technique has improved and where she can find areas to practice further in.

THE PRODUCT

The Ultra-Waxer 2 from Kerr is an electronic

waxer with dual spatulas. It comes with two waxing tips (sizes large and small), with up to 10, color-coded spatula types available, ranging from a needle shape to a denture spoon shape. The Ultra-Waxer 2 features a temperature range of 97°F to 500°F. To give lab technicians full control over any specific temperature need, the four programmable temperature presets provide the precision needed for excellent and

“I fabricate a lot of diagnostic wax-ups and provisionals, [so the Ultra-Waxer 2] is my most used piece of equipment in the laboratory.”

—Jennifer Crane, Pizzi Dental Studio

detailed work. The unit also features a quick heat function, which quickly raises the temperature of a cold spatula and reduces waiting time. The Ultra-Waxer 2 is also dual voltage, meaning labs all over the world can take advantage of the flexibility offered by the waxer.

THE RESULTS

Crane has used the Ultra-Waxer 2 for about a year and is thrilled with her results. “The waxer is an everyday instrument of mine,” Crane says. “I fabricate a lot of diagnostic wax-ups and provisionals, [so the Ultra-Waxer 2] is my most used piece of equipment in the laboratory.”

For Crane, the features available on the Ultra-Waxer 2 make it a perfect fit for her and her work at Pizzi Dental Studio. “I have been using the Ultra-Waxer 2 since it came out,” she says, adding that she previously used the Ultra-Waxer 1. “It’s great to use because it has both the waxing spatulas and I have temperature control on both of them. Depending on what I’m trying to do, I can set the different

spatulas for different temperatures—it makes it easier.”

Crane also appreciates the flexibility offered by the Ultra-Waxer 2’s variety of tip options. “The interchangeable tips feature is good too because I need to use multiple tips,” she says. “If I’m doing a very fine diagnostic wax-up, I’ll use the very small tip and then they have the thicker tips for a more bulk wax-up.”

The results are dependably excellent in Crane’s experience. On cases she uses the Ultra-Waxer 2, she says feedback is uniformly positive. “When we send doctors the diagnostic wax-up, they give us their input on the wax-up and most of the time it’s all good things they have to say about it,” she says. “The doctors are happy with the work we’re making from the Ultra-Waxer 2.” For any lab, the ability to routinely make clients happy is a key component in an equipment purchase.

Crane also says the Ultra-Waxer 2 makes it easy to hone and improve her skills. “I’ll practice waxing a molar just to improve myself with esthetics,” she says.



Jennifer Crane works on a wax-up using the Ultra-Waxer 2.



A diagnostic wax-up done by Jennifer Crane of Pizzi Dental Studio.

“With this waxer, it’s easy and convenient because it’s right there for me to be able to do that. I take a lot of photos of my work, and every time I do a diagnostic wax-up or some kind of waxing, I like to photograph and look at it a month or three months down the line and look at ways I’ve improved and things I still need to improve on.

“I’m not only using it five days a week for work; I allow time for myself to get better with it.”

Overall, Crane says the Ultra-Waxer 2 will save any dental technician time versus other heating methods that take

longer to heat or lack some of the versatile options of the Ultra-Waxer 2. And that’s why she recommends it to anyone who regularly works with wax. “I would definitely encourage other lab technicians to get it,” she says. “I can’t do my work without it. If there are technicians out there that do a lot of wax-ups, instead of using a Bunsen burner or no-flame, I definitely think this is the way to go. It saves time—you’re not constantly heating up the instrument and you’re not having to constantly heat up the wax. The Ultra-Waxer 2 is esthetically pleasing and a great instrument to work with.” **lab**

ADVICE ON HOW TO SURVIVE AND THRIVE

Use Your Skills to Care

A recent experience at the CDA Cares event showed me how each dental laboratory can make a difference.

by Carol J. Pilmer



Carol J. Pilmer

Just imagine that you, the dental lab technician, have the ability to change someone's life by sharing your time and talent. Opportunities like this present themselves on a regular basis via our work schedules, as we improve the lives of patients through our profession, but there are occasions when the results of our efforts are more than we can ever imagine. This was the volunteer experience I recently shared with about 20 dental lab technicians during a two-day event known as 2013 CDA Cares San Jose (Cal.).

It was the third in a series of volunteer service days created by the California Dental Association Foundation in response to the 2009 elimination of all adult Denti-Cal benefits, due to state budget cuts. More than 3 million poor, disabled and elderly Californians were

left scrambling to find a way to receive oral health services. Figures relating to the number of patients seen (2,202) and value of dental services provided (\$1.6 million) are important, but pale when compared to the changes the 1,600 volunteers made in the lives of those served during the weekend.

Unlike the normal work environment, technicians and the dental lab were not hidden from the clinicians or patients and their dedication to the work at hand was admirable; technicians were the first to arrive each morning and among the last to leave in the evening.

For volunteer dental lab technicians and clinicians alike, it was an opportunity to provide new dentures, repair and relines existing dentures, and fabricate stayplates that replaced missing anterior teeth. Patients' grateful comments regarding these appliances and the ways in which their lives would be changed resonated from the treatment chairs all weekend long. "Thank you for giving me back my smile," was closely

followed by, "Now, I'll be able to look for a job; employers don't want to interview or hire people with missing front teeth." Volunteers conducting the patient exit interviews reported, "The lab department has provided the most incredible feedback of the weekend; patients are blown away with their new smiles."

While volunteers were hard at work providing services and education, the CDA Foundation Leadership discussed the project with members of the media and government in hopes of bringing awareness to and improving the access to care issue. The scale of this event made it a unique volunteer opportunity. Building upon this experience, I look forward to serving on the steering committee for the upcoming CDA CARES San Diego event, which will take place on December 7 and 8.

But changing lives doesn't have to be limited to these focused weekends. It takes a very special mindset to share time, talent and sometimes materials with those less fortunate; if you are one

of those special people, consider contacting the local dental society or free dental clinic in your area. When you ask about the opportunity to give back, you will identify yourself as someone who truly cares. Know and set your limits regarding the amount of work you are willing to accept and materials you are willing to donate.

Your efforts will be accepted with gratitude and you will understand a quote by Edwin Markham that I love: "There is a destiny which makes us brothers; none goes his way alone. All that we send into the lives of others comes back into our own." **lab**

Carol J. Pilmer graduated as a dental assistant from Elkhart University, Elkhart Ind., and spent the first 10 years in the clinical environment. She has been co-owner of R Dental Ceramics, Solana Beach, Calif., for 37 years and can be reached at rdental@sbcglobal.net.

MARKETING MATTERS

Client reviews are king!

Maximizing the potential of dentists and other customers as dental laboratory advocates.

by Naomi Cooper, President, Minoa Marketing & Chief Marketing Consultant, Pride Institute



Naomi Cooper

Experts abound across the Internet in the modern digital culture. It seems as though anyone and everyone can set up a website and proclaim to be the latest and greatest authority around. What is often missing from these so-called experts is that invaluable commodity that cannot be bought—trust.

For dental technicians and lab owners, building trust in the community and the industry as an expert, whether online or outside the lab's front door, is a hard-won battle, and never has this been truer than in today's world, where online marketing—and online reputation management—dominate.

If anyone can purchase a domain name and create a blog or website, how do consumers filter through the "experts" to find what they are actually looking for? As customers—and prospective customers—increasingly turn to the Internet when searching for laboratory information, how can you enhance your online presence and come across as true, genuine, knowledgeable oral health care experts? The answer is putting maximum efforts into building trust online, and garnering positive online reviews to provide a solid foundation.

PROVIDING SOCIAL PROOF

Consumer review websites, such as Yelp!, Google+ Local, and Healthgrades.com, among countless others, play a dominant role in the research that dentists might conduct online when searching for a lab. According to a 2012 survey by Search-EngineLand, almost three-quarters of consumers trust online reviews as much as they do personal recommendations.

As a result, these online review sites present an essential opportunity for labs today to reach clients before they ever pick up the phone to contact a lab, and to reinforce word of mouth referrals as well.

Sites such as Yelp! and Google+ Local automatically create a profile for most businesses based on information gathered from online directories, and the data listed may or may not be accurate, so lab owners/technicians must claim their existing profiles and update them with the current contact information, your logo, as well as hours, a website link and photos and videos of the staff and its services. Typically, there is a link labeled "Is this your business?" or "Claim this profile" that can be used to log into the site and verify ownership of the business to make these key edits and upgrades.

When potential customers are able to find accurate information about your lab and read a history of reviews, (whether those reviews are truly representative of the lab or not) they feel as if

they are getting a real sense of the overall experience.

With these positive online reviews in place, you don't have to figure out how to communicate to prospective customers why your lab is their best option—your existing customers are doing it for you via social media.

AUTHENTICITY IMPORTANT

It's important to note that authenticity is paramount when it comes to online reviews. Internet users are savvy, and while they may rely on the opinion of complete strangers in researching a dental laboratory on websites like Yelp!, they are also on the lookout for anything disingenuous.

The websites that host these reviews also work hard to maintain their own credibility by using algorithms that analyze user data, studying unique identifiers like IP addresses and flagging accounts created for the purpose of writing a single review to ensure "fake" reviews get filtered out. In fact, nothing destroys trust online faster than the laboratory creating multiple accounts to try to post reviews, even if they contain legitimate testimonials from real clients.

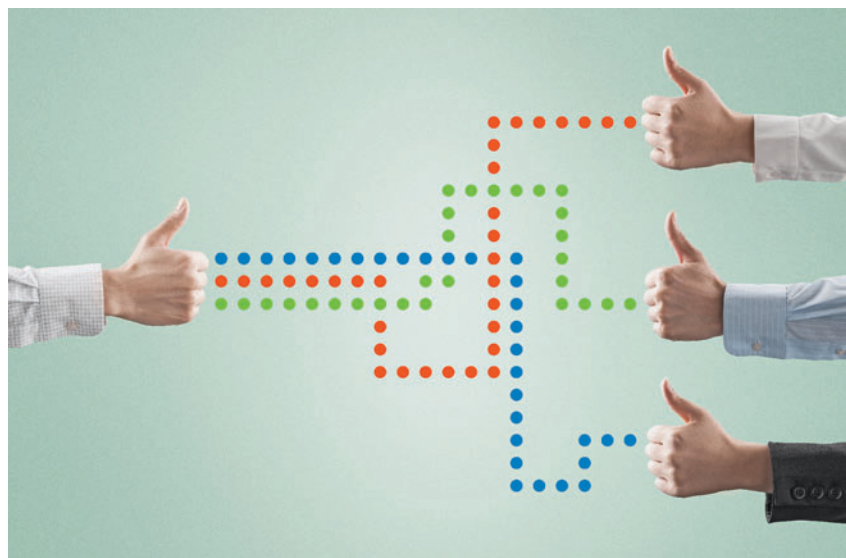
CLIENT REVIEWS & ONLINE MARKETING STRATEGY

There is truly no higher seal of approval than a public testimonial from a satis-

fied client. As online reviews become more and more pervasive—and more trusted—building a reputation through this medium will become a make or break proposition for many dental labs when it comes to attracting new clients.

Building trust online is not an easy process, and it certainly doesn't happen overnight, but the optimal time for dental lab owners to start cultivating a positive online reputation—and positioning themselves as experts—is now. Those of you who make the commitment today to foster a strong history of online reviews will create unstoppable momentum for your lab's online marketing efforts for years to come. **lab**

Naomi Cooper is President & Founder of Minoa Marketing and serves as Chief Marketing Consultant for Pride Institute. She is a respected dental marketing consultant, author, speaker and industry opinion leader who co-teaches Pride's groundbreaking marketing course, "The New Rules of Dental Marketing." Naomi can be reached via email at naomi@minoamarketing.com, and she blogs regularly at minoamarketing.com.



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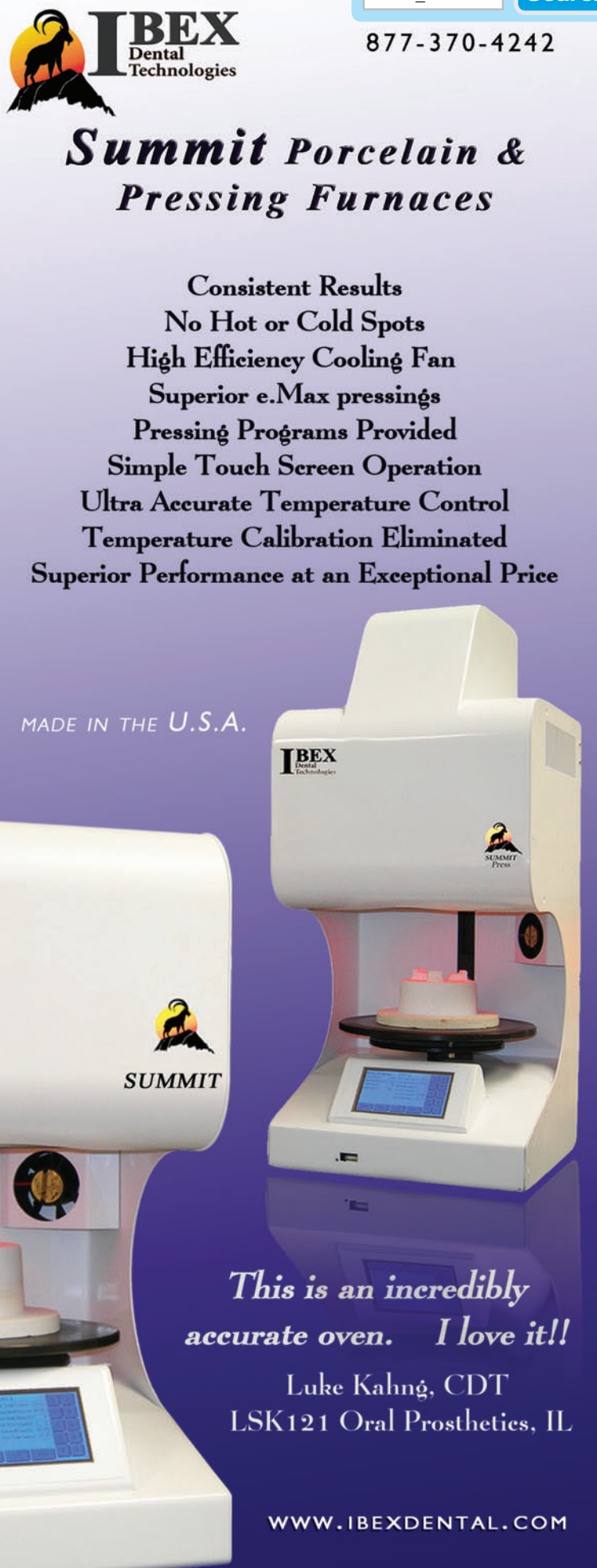


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01. Give us a brief overview of Valplast.

Valplast brand flexible partials and flexible denture base resin is the world's first flexible partial denture solution. The product was introduced in 1953 to provide an affordable and durable esthetic removable denture.

02. What do you see as Valplast's greatest strength?

Valplast provides a resin ideally suited to take advantage of all of the benefits of the flexible partial denture concept. The resin itself has exceptional strength, and the ideal degree of flexibility to provide patients with a comfortable, durable and beautiful restoration.

03. Can any dental lab use Valplast? Is Valplast for every type of case?

While Valplast is well-suited to nearly every patient needing partial replacement of missing teeth, and any dentist can work with Valplast

without extensive special training, laboratories do require special training and special equipment to work with Valplast. The learning curve is very manageable, and with the new innovations we offer in digital dental technology, Valplast can provide services that accelerate the laboratory output and reduce the amount of steps required while also reducing some of the training time for technicians.

04. What have you heard from patients who have experienced Valplast partial dentures?

Patients comment on the comfort and the appearance of Valplast. They also are typically very happy to experience normal function of the Valplast denture without compromising their eating habits.

05. What differentiates Valplast from other offerings?

Valplast brand flexible denture base resin was developed specifically to realize all the benefits of the flexible partial denture. The product and the company behind it are completely dedicated to this concept. Valplast has never been modified since it was first introduced because it remains the standard against which all other offerings are measured. And it is backed by a company that considers flexible partials the gold standard of removable restorations.

06. How can dental labs increase the quality of their communication with dental clients?

Valplast offers published guides for the dental office that are also available for labs to use as guidelines in communicating with their dentist-clients to prepare for a successful restoration with Valplast. We also offer the expertise of our customer service staff to engage in case planning in collaboration with the lab and the dentist.

07. When it comes to innovation, what is Valplast doing?

Valplast is pioneering new ways to engage digital dentistry in the laboratory process. We have already introduced Precise-Fit Functional Trial Bases to make better use of rapid prototyping in creating the actual try-in, and we have developed new systems that will streamline the entire lab process in the fabrication of flexible full and partial dentures.

08. What challenges do today's technicians face in terms of education?

We all recognize that dental technology education in our country is grossly underprovided. I proudly sit on the Advisory Committee for Citytech's Dept. of Restorative Dentistry, one of the few accredited dental technology programs available in the U.S. We all recognize that our profession would benefit greatly for the benefit of patients' health and dentists' satisfaction if formal education in dental technology became the norm for laboratory technicians here, as it is in almost every other country. This commitment would help our industry remain innovative, productive and successful.

09. What can we expect from Valplast in 2013?

You may know that Valplast suffered huge interruptions in 2012, most remarkably from the devastation caused by Superstorm Sandy in late October. We saw the challenges as opportunities to find new ways to be more efficient, to produce record amounts of our product, and to expand our operation internationally. In 2013 Valplast is already becoming bigger and better than ever, and you can expect to see Valplast in more places here and around the world.

10. Where can readers go to learn more about Valplast and its injection system?

You can visit Valplast.com to learn more about our injection system and overall flexible partial solutions. You also can find a distributor and find out more about the educational opportunities we offer along with details about becoming a Certified Valplast Lab or Technician. Alternately, feel free to call us at 800-843-2861. Finally, you can also find us on Facebook, Twitter and YouTube.

“Valplast is backed by a company that considers flexible partials the gold standard of removable restorations.”

— Peter Nagy

PHOTO COURTESY OF VALPLAST INTL. CORP.

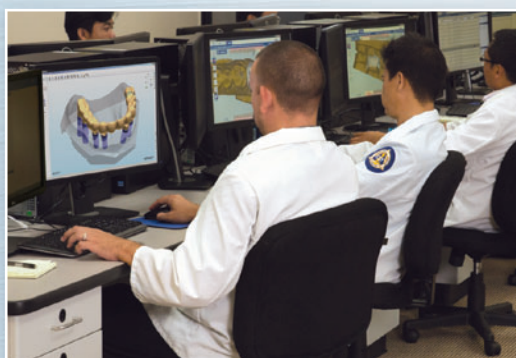
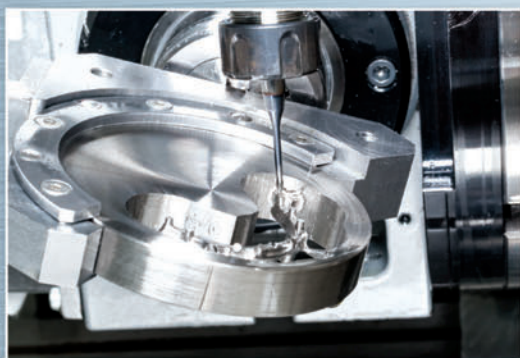


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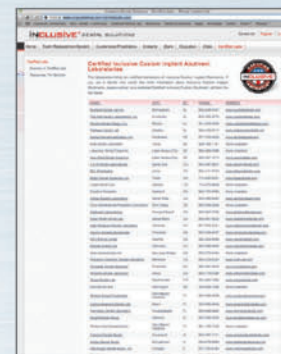
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