

How to Build a Fixed Ceramic-Acrylic Hybrid Bridge

Andrea Hegedus, Owner of Great Lakes Smile Design Studio of Muskegon, MI, received international recognition at the IDS show in Cologne, Germany in March, winning second prize for Best Digital Documentation in Candulor's 9th KunstZahnWerk (the Art of Prosthetics) Competition. Candulor has been holding this biennial competition since 2001 and this year was the first time U.S. technicians were invited to participate. Hegedus also plans to participate in the company's first-ever North American competition in 2012; see *Denture Technicians: Show Off Your Skills!* on the opposite page for more details.

Contestants received a competition kit, including Professor Gerber's technique guide to setting teeth, PhysioStar teeth, stone models, grading guidelines, patient history with photos and a description of the restorative challenge. The patient had been suffering with an ill-fitting denture and the treatment plan called for four mandibular implants with a fixed or removable hybrid prosthetic and fully customized maxillary denture with balanced occlusion and set to the patient's facial and smile line specifications. In addition to the prosthesis, participants had to submit written and photographic documentation of the case to demonstrate the reasoning behind



their chosen technique and design.

Here, Hegedus offers a step-by-step look at the ceramic-acrylic hybrid bridge she fabricated for the competition.



Step 1: I mounted the models with the plaster wall provided to a semi-adjustable Candulor articulator and made Splash Putty Guides (from Discus Dental) which helped to maintain the patient's smile line and muscular facial parameters throughout the fabrication.



Step 2: I used the Gerber technique to establish proper occlusion with the PhysioStar teeth. I decided to make a fixed ceramic-acrylic hybrid bridge with no ridge lap on the multi-unit mandibular implants. I used a high noble, white gold ceramic alloy for optimal biocompatibility and to give the underbody of the bridge a hygienic, non-porous ceramic surface for long-term results.

I opted for a hybrid bridge because it's much easier to repair than a ceramic one. The new, light-cured gingival composites, which blend with and bond well to the hard-packed, heat cured denture acrylic, give the dentist a cost-effective, easy way to repair or replace chipped denture teeth chairside. He can use his own bonding and polishing tools without removing the bridge; plus, the patient doesn't have to go without his teeth during the repair.



Step 3: Using the Splash Putty Guides made from the wax setup, I created the internal cast framework using pattern resin and Camlog UCLA implant abutments.



Step 4: I reset the mandibular teeth over the ceramic cast framework with proper buccal support following the Splash Putty Guide.



Step 5: This is the customized full waxup with ceramic gingival body on the mandibular hybrid bridge. Next, I flaked the wax setup, boiled it out and hard packed it with heat-cured acrylic.



Step 6: I divested the prosthesis, adjusted the occlusion and customized the final denture base. I used Candulor's Aesthetic Color Kit with cold-cure acrylic modifiers to apply natural colors to the soft tissue. Next, I polished the prosthesis to a high luster to seal the pores of the acrylic base. To achieve healthy, natural-looking gingiva, I studied the texture and color patterns of gingiva from my collection of before-and-after ceramic veneer photos.



Step 7: I adjusted the final prosthesis for the prescribed working and balancing occlusal function.



Step 8: The final prosthesis ready to be mounted on the Candulor articulator for presentation.

Step 9: For my digital documentation of the case, I selected the photos demonstrating each fabrication step and used Apple's Keynote application to create the presentation.

The competition was extremely challenging, knowing each fabrication step was going to be graded for quality and that I had to provide excellent, high-resolution, untouched photos for credibility. It was by far the most detailed learning ex-

perience I have ever had. The playing field quickly evened out because of the multiple steps you need to complete successfully; even the most experienced technician can make a catastrophic mistake. The ultimate heart and soul of the experience was to keep going even when I thought I had failed, because the final step was understanding my own potential to cross the finish line. The competition was a great way to push new ideas in a safe environment and to see all the fantastic results from other technicians around the world.

Andrea Hegedus, CDT, is the owner of Great Lakes Smile Design Studio, in Muskegon, MI. With 25 years of experience, she completed a B.S. with Honors in Prosthodontics from Ferris State University in 1990; is a member of the American Academy of Cosmetic Dentistry, Francis B. Vedder Study Club, NADL and MACDL; and actively participates in the AACD's *Give Back A Smile* program for domestic abuse victims. Her contact information is: Andrea@glsmilestudio.com, www.glsmilestudio.com and on Great Lakes Smile Design Studio page on Facebook.



Denture Technicians: Show Off Your Skills!

Candulor is sponsoring the first North American Art of Denture Competition, giving U.S. and Canadian contestants the opportunity to display their proficiency in the field of removable dentures by making a fully removable upper and a lower supported by implants.

The case must be set up in lingualized occlusion using the Gerber technique and the finished case may only be submitted on the Candulor Articulator. Candulor provides, free of charge, the full patient case including the appropriate plaster models, denture teeth (Candulor Composite NFC), CAMLOG implant parts and a detailed patient case history. The company is also offering 50% off the Candulor CA II Articulator to all participants.

The cases will be judged by a jury of professionals and the winners will receive their prizes at a Candulor press conference during LMT LAB DAY Chicago in February at the Sheraton Chicago Hotel & Towers. All finished cases will be prominently displayed at the Candulor gallery on Level 2; the top three cases will receive automatic entry into the 2013 International KunstZahnWerk competition at the IDS.

In addition to prestige, prizes for the Best Work Overall category are:

- \$1,000 for first prize.
- \$750 for second prize
- \$500 for third prize.

Participants can win additional prizes for "Digital Documentation" and "Hardcopy Documentation" by submitting step-by-step documentation of the fabrication of their cases.

The deadline for registration is October 14; visit www.candulor.com or call 800-436-3827.