

# Bree

Esthetic reconstruction of the Social Six is difficult at best without a clear protocol for predictability. Predictability stems from a marriage between both materials and techniques. Modern treatment planning has established that Digital Smile Design is the first step in gold standard esthetic treatment planning, the result used to identify salient dentofacial and dentogingival issues. This blueprint facilitates efficient clinician-patient and clinician-laboratory communication and ingrains the start of patient emotional buy-in. It is then up to the clinician's ability to mix and match materials featuring varying opacities, translucencies and maverick effects to reproduce a seamless replica of nature. This latter area depends not only on flawless technique, but also on the use of smart materials that work precisely to replicate the optical effects found in layers of nature.

GC Essentia™ is a Universal composite system designed to optimize both layering efficiency and optical precision of the final product. Value is the dimension of color most readily identified by the human eye. Essentia™ utilises a histoanatomical, value-based shading system; indeed such a smart, compact system that it only needs two enamel shade options and three dentin shade options. An opalescent modifier and a masking liner round out the seven shade lineup, which can tackle well over 90% of cases in high-level esthetic dentistry. How does this work? The enamel and dentin shades mimic the transition in translucence and chromatic change with aging, and as such, simple preset combinations can be used for bleach/junior (LE/LD), young (LE/MD), adult (DE/MD) and senior patient (DE/DD) situations. There is a Universal shade (U) with amazing physical properties for posterior sculpting, with a shade value perfectly matched as a blend between A2 and A3.

## Case Background

Bree presented to my service on referral from another dentist, as she was dissatisfied with

existing composite veneers placed 16 months prior in Australia. She disliked the color, lack of symmetry, lack of esthetic detail, proportionality and progression form, midline cant and overall masculine look of of the composition. She desired a re-reconstruction of her Social Six.

Digital Smile Design (Smile Designer Pro) revealed the following issues:



- 1) Apparent incisal/occlusal cant down to patient's left side
- 2) Midline cant cervical 1/3rd down to patient's right side. Midline cant incisal 1/2 down to patient's left side
- 3) Overcontoured cervical third tooth 12 with unnatural emergence profile and facial plane in frontal views
- 4) Lateral incisors are the same length as central incisors – lack of Central Dominance
- 5) Underdeveloped incisal embrasures, lending a masculine feel to the composition
- 6) Tooth 13 appears rotated mesially in the frontal views and exhibits a MIB fracture clinically
- 7) Teeth 13 and 23 are diminutive relative to their ideal size. There is overdominance of 12 and 22.
- 8) Lack of symmetry between central incisors
- 9) Monochromatic restorations with lack of incisal detailing or internal characterisation
- 10) Lack of line angle development



## Predictable Esthetic Reconstruction using a Simplified, Bilaminar Technique with GC Essentia™

Case study and technique  
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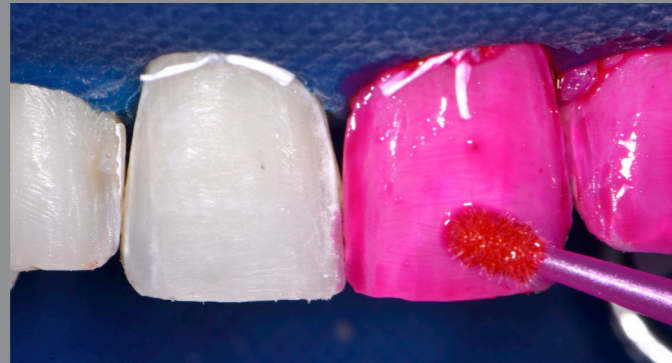


# Technique

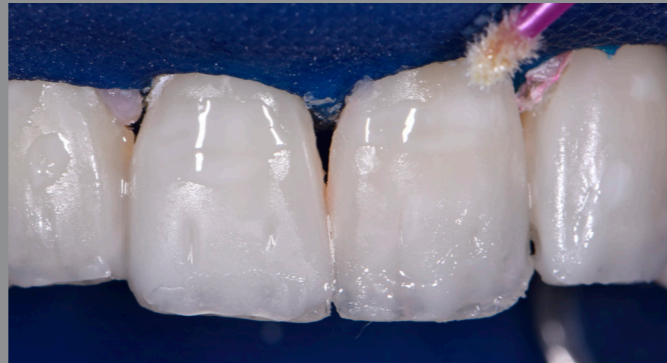
The diagnostic wax-up was guided by the DSD metrics to correct the above issues striving to minimise any further reduction to already compromised tooth structure.



Following rubber dam isolation, the shade was selected using the composite button technique. The button on the upper left of the screen is LE (Light Enamel), the lower left is LD (Light Dentin). The upper right is OM (Opalescent Modifier) and the lower right is a Masking Liner. (Hint: Typically, I don't need to use the masking liner unless the patient has a particularly dark area or particularly dark dentin to obscure. The Masking Liner is fantastic as it has the effect of blocking out without lifting value.)



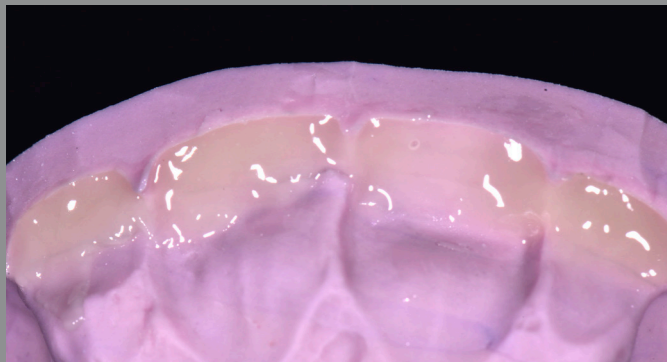
After confirming solid enamel and dentin bases with caries detector dye (Kuraray), the teeth were isolated and micro air abraded using 27 micron aluminium oxide before a total etch procedure using GC Premio (multi-mode bonding agent with MDTP – bonds to zirconia, metal and existing composite!!).



White Modifier (Essentia™ Color Modifier Kit) is applied to mimic the hypoplasia seen in the other teeth (i.e. 14, 24 (#5, #13)).



The final layer was sculpted in a single increment using LE (Light Enamel).



The lingual enamel shelf was a 0.3-0.5mm layer generated from application of LE into the putty matrix before transfer to the mouth and curing.



Teeth 12-22 (#7 to 10) were completed simultaneously, whereas 13, 23 (# 6, 12) were completed at a second stage. GC Stick Resin was used as the modelling resin, ensuring full control of the material.



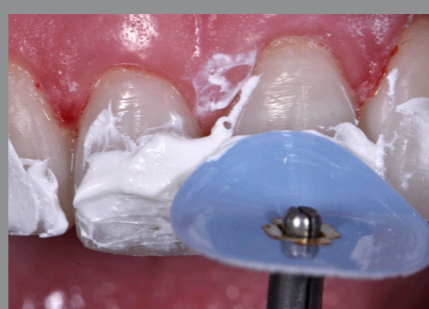
Finishing consisted of developing primary, secondary, and tertiary anatomy (some perikymata developed as seen) before polishing using the DENTSPLY Enhance point, and Double Diamond Series from Clinician's Choice (45 micron, 5 micron sequence) using water with low RPMs.



The dentin layer was modelled respecting histoanatomical dentin form using LD (Light Dentin) and cured.



The incisal effects were enhanced using a worm of OM (Opalescent Modifier), which simultaneously provides both opalescence and translucence.



Final luster was provided courtesy of a 1 micron aluminium oxide polishing paste (Enamelize, Cosmedent) and Flexibuff discs (Cosmedent).



Overall, GC Essentia™ is a paradigm shift; a material made to simply mimic the layers nature in its organic beauty with the least number of steps for the clinician. It will Essentia-ly redefine your direct esthetic practice and be the only system you reach for to deliver stunning, predictable results.

