

# Orthodontic Perspectives

*Clinical information for the orthodontic professional*

A 3M Unitek Publication

## Focus on the Finish



**SMARTCLIP™**  
SELF-LIGATING APPLIANCE SYSTEM



*Gary L. Weinberger,  
D.D.S., M.Sc.D.*



*Robert A. Miller,  
D.M.D.*



*Rebecca Poling,  
D.D.S., M.S.D.*

## Contents

*Message from the President*  
Waldemar B. Szwajkowski

### *Introduction*

*Fredrik Bergstrand, D.D.S.*

*Case Finishing Utilizing  
the SmartClip™ Self-Ligating  
Appliance System:*

*Case Reports and Update*  
Gary L. Weinberger,  
D.D.S., M.Sc.D. – 3

*Enhanced Efficiency  
with SmartClip™*

*Self-Ligating Brackets*  
Robert A. Miller, D.M.D. – 9

*SmartClip™ Brackets  
Are A “Smart Choice”*

*Orthodontic Staff,  
Hidden Valley Orthodontics,  
Escondido, California – 13*

*World Orthodontic  
Dental Staff Competition – 13*

### *Setting Up a Staff*

*Training Program in Your Practice*  
Rebecca Poling, D.D.S., M.S.D. – 14

*3M Pride in Giving Extends  
to Los Angeles Area Missions – 16*

*The Bottom Line –  
Successful Strategies For  
Private Practice Orthodontists® – 17*

*Orthodontic Perspectives is published periodically by 3M Unitek to provide information to orthodontic practitioners about 3M Unitek products. 3M Unitek welcomes article submissions or article ideas. Article submissions should be sent to Editor, Orthodontic Perspectives, 3M Unitek, 2724 South Peck Road, Monrovia, CA 91016-5097 or call. In the United States and Puerto Rico, call 800-852-1990 ext. 4399. In Canada call 800-443-1661 and ask for extension 4399. Or, call (626) 574-4399. Copyright © 2005 3M Company. All rights reserved. No part of this publication may be reproduced without the consent of 3M Unitek.*

*3M, APC, Clarity, Forsus, MBT, Ortholux, SmartClip, Transbond, Unitek and Victory Series are trademarks of 3M Company. Xbow is a trademark of Duncan Higgins, DDS, MSD. Other trademarks are property of their respective holders.*

## • Message from the President

*by Waldemar B. Szwajkowski*



The successful finish of an orthodontic case is one of the most visible measures of doctor and patient satisfaction. It is both validation and reward for the skill of the doctor and the efforts of everyone, including the patient, over the months of treatment. And fundamental to reaching a successful finish is the selection of the appliance system.

The SmartClip™ Self-Ligating Appliance System has proven to be an excellent appliance choice for treatment finishes. This is evidenced by the outstanding case presentations of Dr. Hugo Trevisi, Dr. Gary Weinberger and Dr. Robert Miller, as they were presented at the AAO and in this and previous issues of this publication.

The SmartClip Appliance System is designed to provide clinical efficiency, reliability, management of case variability, ease of use, and favorable treatment lifecycle costs. Its familiar twin bracket design is unique among self-ligating appliances, providing unmatched flexibility to meet individual treatment requirements.

We invite you to join the growing number of orthodontists worldwide who start their cases by thinking of the finish, using SmartClip Appliances in their practice. Finally, speaking of finishes, we are nearing the end of what has proven to be a most eventful year. We at 3M Unitek wish you all the best and success in 2006. ■

## Introduction

*by Fredrik Bergstrand, D.D.S., 3M Unitek Professional Services Manager and Technical Editor*



Dear Reader:

Welcome to *Orthodontic Perspectives: Focus on the Finish*. Our articles in this issue will concentrate on finished cases using the SmartClip™ Self-Ligating Appliance System. During recent travels worldwide, I have had the pleasure of seeing an increasing enthusiasm and growing interest in self-ligation and the features offered by the SmartClip system in particular.

It is with great anticipation we now start to see more and more documentation and case reports being submitted for publication.

With the awareness of how to reduce the classical friction in the appliance and taking advantage of the SmartClip appliance low-friction “open” twin bracket design, it is now time to focus on the force levels generated by the wires. Wire size dimensions and material properties are reviewed with the new insight of what partial ligation and reduction of resistance can offer, and all of this due to the unique retention mechanism and design of the SmartClip bracket.

The principles of biomechanics are still the same but the components have changed. We need to learn more from one another on how to best utilize these new opportunities and therefore it is very satisfying to see several articles in this issue dealing with the efficiency of the SmartClip bracket. I hope you will find them interesting and helpful. Happy reading. Fredrik ■

Visit our web site at  
[www.3MUnitek.com](http://www.3MUnitek.com)

# • Case Finishing Utilizing the SmartClip™ Self-Ligating Appliance System: Case Reports and Update

by Gary L. Weinberger, D.D.S., M.Sc.D.



*Dr. Weinberger is a graduate of the NYU College of Dentistry, and Goldman School of Dental Medicine at Boston University where he received his Certificate of Advanced Graduate Study in Orthodontics and his MScD in 1976. A Diplomate of the American Board of Orthodontics (ABO), he has worked professionally in Orthodontics since 1976, and maintains a private practice office in Plainview, NY. A published author, Dr. Weinberger's experience has also included appointments as Assistant Professor (Orthodontics) for NYU College of Dentistry and Stony Brook School of Dental Medicine. He is currently on staff at the LIJ Hillside Medical Center, New York. He was a key influencer among the select group of orthodontists who participated in the customer evaluation and testing of the 3M Unitek SmartClip™ Self-Ligating Appliance System before its introduction in 2004. During the development and testing of the SmartClip System, he provided important feedback which led to the final bracket design introduced to the marketplace. Dr. Weinberger continues to provide clinical documentation as well as input for advanced SmartClip System training techniques for 3M Unitek.*

In a previous article (*Orthodontic Perspectives, Vol. XII, No.1*), two cases in treatment with the SmartClip™ Self-Ligating Appliance System were presented together with an overview of the benefits of the system in clinical practice<sup>1</sup>. The purpose of the present article is to report on the management of the finishing phase and results of these cases, as well as the treatment and finishing of an additional case.

Several investigators as well as numerous clinicians have previously reported difficulties in finishing cases with self-ligating brackets<sup>2</sup>. Accordingly, the advantage of the rapid leveling and alignment can be diminished because it may come at the expense of some control. Specifically, torque and rotational control can be compromised<sup>3,4</sup>. This stems from the greater freedom of the archwire/slot relationship present in self-ligating brackets. While claims are made that some self-ligating systems offer ideal control as well as a low friction alignment, some studies appear to contradict these claims<sup>4</sup>. The SmartClip Appliance System is, by design, a passive system. However, a major advantage that the SmartClip Appliance System enjoys over other self-ligating systems is that its mini-twin design and “active on demand”<sup>5</sup> versatility can be called upon for precision and detailing when necessary for the finishing phase of treatment.

As many clinicians experienced in the treatment of cases utilizing self-ligating systems have realized, there are clinical circumstances that benefit from the intimate archwire/slot contact typically present in a conventional bracket system. A major advantage with The SmartClip Appliance System over competitive self-ligating systems is that this precision is readily available and easily integrated into case management.

The most important consideration in case finishing is precise initial bracket placement, and timely implementation of any necessary repositionings during treatment. Indirect bonding offers advantages to the practitioner in this regard. Thus the finishing stage of treatment should not be a protracted phase if the case has been managed appropriately.

Clinicians utilizing self-ligating brackets have normally finished cases on .019 x .025 archwires when utilizing an .022 slot. Many practitioners, however, prefer the detailing capabilities that are more effectively accomplished with lighter archwires. Three cases below illustrate how the use of SmartClip brackets can be optimized for effective and efficient case finishing. As is true with conventional mechanotherapy, horizontal, transverse, and vertical factors must be considered, along with functional and cephalometric evaluation. Aesthetic considerations must be accounted for as well. With this in mind, three general approaches to case finishing merit consideration:

1. Finishing on the working .019 x .025 archwires
2. Finishing with light round wires in combination with elastomers or steel ligatures
3. Finishing with braided rectangular wires

## CASE PRESENTATIONS:

### Case I – MJ

#### Case Presentation

Patient presents as a 30.2 year old Caucasian male with a chief complaint of crowding. The medical history is unremarkable as concerns orthodontic treatment. The maxillary central incisors are abraded and/or previously affected by trauma.

#### Diagnosis

The patient's photographs reveal a prominent pogonion and orthognathic profile (fig. 1). Facial height and symmetry are within normal limits. Cephalometric analysis reveals a retrusive mandible, somewhat masked by the prominent pogonial development. There is a slight retrusion of the mandibular incisors. Patient presents with Class I molar and cuspid relationships. The mandibular arch shows significant crowding.



Figure 1: Patient MJ

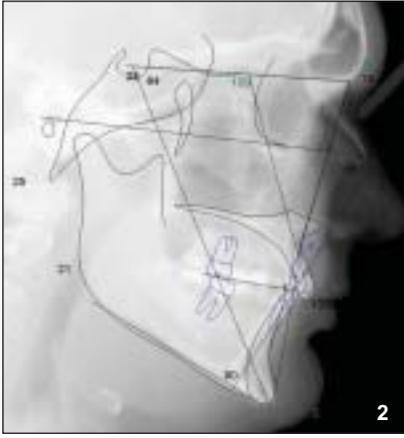


Figure 2: Cephalometric tracing



Figure 3: Panoramic scan



Figures 4A-E: Intraoral photos

## Treatment Plan

A nonextraction treatment plan was decided upon in conjunction with interproximal reduction (IPR), with the projection for long term fixed retention. The facial considerations were a primary determinant in this decision. Dental restoration of the adversely affected teeth is anticipated following orthodontic treatment. The mandibular left third molar is to be extracted. Self-ligating brackets were placed (SmartClip™ Self-Ligating Brackets, 3M Unitek) in the mandibular arch and maxillary posterior segments; aesthetic brackets (Clarity™ Metal-Reinforced Ceramic Brackets, 3M Unitek) were placed in the maxillary anterior segment and maxillary first bicuspsids.

Case finishing in the self-ligating environment requires particular attention to rotation and torque control considerations as mentioned above and reported by Thorstenson and Kusy<sup>6</sup>. With that in mind, the approach to finishing in the mandibular arch was to utilize a .019 x .025 braided archwire (fig. 5) for approximately one month. This selection maintains torque control and imparts greater friction than a round archwire. Both these factors are important in maintaining tooth position. However, the braided wires are somewhat difficult to manage when incorporating first and second order bends, as opposed to rounded wires, and may have somewhat reduced effectiveness in orchestrating the desired changes in this regard. They are also somewhat more cumbersome to remove for adjustment than other types of archwires.



Figure 5: Braided Archwire



Figure 6A-C: Patient MJ



Figure 7A-E: Intraoral Composite



Figure 8: Smile



Figure 9: Digital Ceph

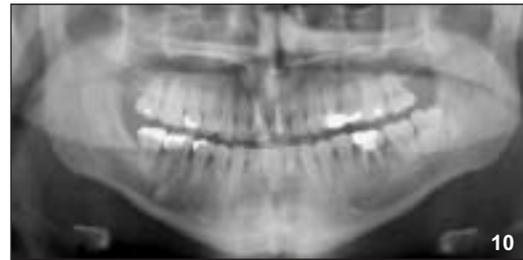


Figure 10: Final Panoramic X-ray

## Case II – Patient PB

### Case Presentation

Patient is a 51.4 year old Caucasian male with a chief complaint of crowding in the mandibular arch. Medically, there is a history of valvular cardiac compromise requiring premedication with the appropriate agents as per protocol. The medical history is otherwise unremarkable as concerns orthodontic treatment.

### Diagnosis

This patient demonstrated a brachyfacial cephalometric pattern and somewhat retrognathic skeletal pattern in conjunction with a pronounced soft tissue pogonion. The dental findings include Class II relationships and a 5 mm overjet. Third molars are absent, and the periodontal status is good. There is incisal wear evident in the maxillary and mandibular anterior segments.

### Treatment Plan

The patient declined extractions of maxillary first bicuspids, an approach designed to predictably eliminate the overjet and preserve the lower anterior inclinations and positions. Alternatively the patient requested a nonextraction approach including IPR, and reducing the overjet as feasible in conjunction with eliminating the crowding. Class II traction was proposed to reduce the overjet. Additionally, second order bends

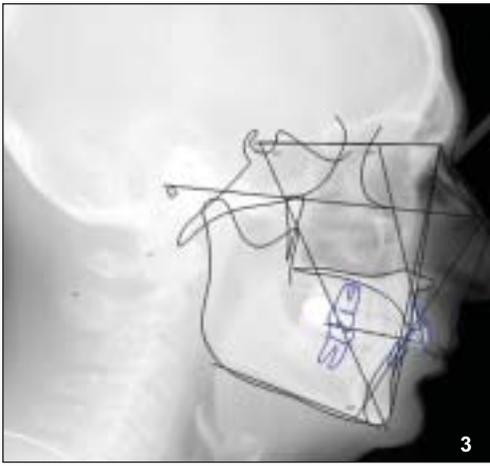
in the maxillary arch were utilized to encourage a more favorable relationship in the posterior segment. The patient was advised that fixed long term retention would be necessary with this approach. An occlusal guard was suggested to interrupt the incisal wear tendencies for the retention phase. Clarity™ Ceramic Brackets were placed in the maxillary arch from first bicuspid to first bicuspid, and SmartClip™ Brackets were utilized on the remaining dentition as appropriate.



Figure 1: Patient PB



Figure 2: Panoramic scan



**Figure 3:** Cephalometric tracing

In this example, an .018 stainless steel round wire was utilized for finishing with elastomerics in the anterior segment to enhance rotation control at this site (fig. 5). While the round archwire does not impart the torque control of a rectangular wire, this was deemed not necessary, in this example, for settling purposes. The round archwire is more easily adapted for first and second order adjustments when desirable. When optimum rotation control is critical, steel ligatures in combination with archwire adjustments prove to be more effective than elastomerics in the same combination. The round archwires are also more easily removed without distortion than the braided rectangular counterparts, and further bending and adjustment of the archwire is more easily accomplished when necessary.



**Figures 4A-B:** Intraoral photos



**Figure 5:** Patient with Elastomerics



**Figure 6A-C:** Patient PB Final Photos



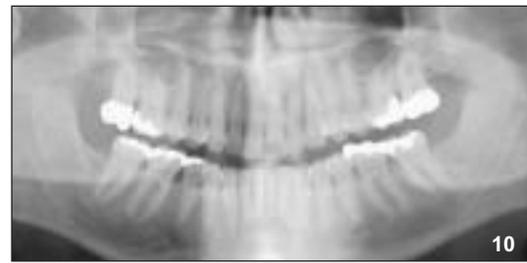
**Figure 7A-E:** Intraoral Composite



**Figure 8:** Smile



**Figure 9:** Digital Ceph



**Figure 10:** Final Panoramic X-ray

## Case III: WH

### Case Presentation

Patient presents as a 13.5 year old Caucasian male with a noncontributing medical history. The chief complaint was “overbite”. Records and diagnosis revealed a Class II division 1 subdivision malocclusion with a convex facial profile, retrognathia, mild vertical sensitivity, and mild arch length discrepancy.



Figure 1A-C: Patient WH



Figure 2A-E: Intraoral Composite

### Treatment Plan

The treatment plan incorporated a nonextraction approach in combination with unilateral extraoral traction and Class II elastics as necessary to secure ideal interdigitation and anterior relationships. Treatment progressed well with our standard sequence of archwire selection specific for the SmartClip™ Appliance System as outlined below:

Maxillary Arch:	Mandibular Arch:
.014NSE	.014NSE
.016 x .025 NSE	.016 x .025NSE
.019 x .025 SS	.019 x .025 N*

The treatment of this case illustrates the optimization of mechanotherapy selection for increased effectiveness and efficiency in the self-ligating environment. Observe the correction of the Class II relationships in the photographs (figures 5A-5B). Others have previously reported on the enhanced Class II corrections of buccal segments with molar distalization with self-ligating brackets<sup>7</sup>.

In the maxillary arch, an .019 x .025 stainless steel archwire with keyhole loops activated by posterior cinching was chosen for incisor retraction and torque control. The activated keyhole loops provide ligatureless intimate slot contact in the incisor segment to maximize torque effectivity. Efficiency is enhanced by this selection in that other means to achieve the intimacy of contact (ligatures or elastomers) are unnecessary. Note that a ligation is placed under the archwire to maintain space closure. (Alternatively, sliding mechanics could have been utilized along with placement of steel ligatures to effect similar control). As is sometimes the case in treatment with either self-ligating or conventional bracket systems, it was deemed appropriate in this case to place a full size archwire (.021 x .025N) in the maxillary arch to enhance torque expression. The archwire was easily placed into position.

No further finishing procedures were deemed necessary.

\*It was not deemed necessary to progress to the stainless steel wire for the mandibular arch in this example, as is more typically the case.

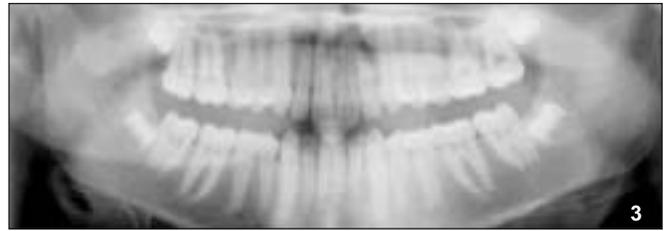


Figure 3: Panoramic X-ray



Figure 4: Initial Digital Ceph

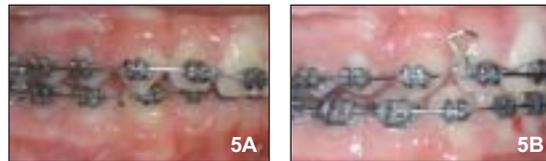


Figure 5A-5B: Enhanced correction of the Class II relationships in the right quadrant



Figure 6: Keyhole loop



Figure 7A-C: Patient WH Final Photos



Figure 8A-E: Intraoral Composite



Figure 9: Smile

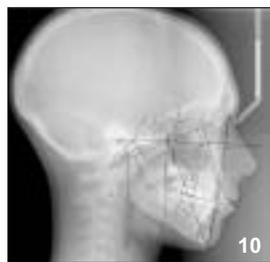


Figure 10: Final Ceph



Figure 11: Final Panoramic X-ray

8

## DISCUSSION:

As illustrated, commonly used mechanisms for case finishing with conventional bracket systems are readily utilized in conjunction with the SmartClip™ Appliance System, with minor modifications. Optimization of mechanotherapy enables the clinician to accurately and predictably accomplish effective and efficient case finishing consistent with the previously determined treatment objectives. Torque control is maintained by finishing with braided rectangular archwires as opposed to round archwires. Round wires with ligatures (elastomeric or steel) have shown to be effective for rotational control and ease of wire adjustments. First or second order bends are more easily incorporated into the round wires when they are deemed appropriate. Finally, as demonstrated in the last case presented, stainless steel full sized wires are also an option, as has been previously recommended by others<sup>7,8</sup>.

It should be emphasized that, as with conventional mechanotherapy, precision bracket placement and effective case management in the earlier phases of treatment assure a short and uneventful finishing phase.

## CONCLUSIONS:

The SmartClip Appliance System offers advantages in Efficiency, Effectiveness, Ergonomics, and Economics, particularly when coupled with a systemized approach that is optimized for the self-ligating environment. Future articles and courses will focus on the incorporation of effective techniques to illustrate the optimized utilization of the appliance as a system with reference to the above. Because of the inherent advantages of self-ligating appliances, it is my expectation, along with others, that the use of self-ligating brackets will continue to attract increasing interest among clinicians. ■

## REFERENCES

- 1 Weinberger, G. L., Utilizing the SmartClip™ Self-Ligating Appliance. *Orthodontic Perspectives*. Vol. XII No. 1, 2005; pp 3-7, 3M Unitek.
- 2 Herradine NWT and Birnie DJ. The clinical use of Activa brackets, *Am. J. Orthod. Dentofacial Orthop* 1996 109: 319-28.
- 3 Kusy, RP Orthodontic biomechanics: vistas from the top of a new century. *Am. J. Orthod. Dentofacial Orthop* 2000 117:589-91.
- 4 Thorstenson GA and Kusy RP. Effect of archwire size and material on the resistance to sliding of self-ligating brackets with second-order angulation in the dry state. *Am J. Orthod. Dentofacial Orthop* 2002 122:295-305.
- 5 Weinberger, G. L., Utilizing the SmartClip™ Self-Ligating Appliance. *Orthodontic Perspectives* Vol. XII No. 1, 2005; pp 3-7, 3M Unitek.
- 6 Thorstenson, G. A. and Kusy, R. P., *Comparison of resistance to sliding between different self-ligating brackets with second-order angulation in the dry and saliva states*; *Am. Journal Orthod/DO*; Vol. 121, No. 5, 2002.
- 7 Voudouris, J. and Kustinec, M. M.; *Excellence and Efficiency Interactive Twin Self-Ligation*; Toronto Canada, 2003.
- 8 Damon, D.H.: The Damon low-friction bracket: A biologically compatible Straight-Wire system, *J. Clin. Orthod.* 32:670-80, 1998.

# Enhanced Efficiency with SmartClip™ Self-Ligating Brackets

by Robert A. Miller, D.M.D.



Robert Miller, D.M.D.

Upon completing his Orthodontic residency at the Medical College of Virginia, Dr. Miller entered the Air Force where he was the Chief of Orthodontics at Clark Air Base in the Philippines. After 3 years he moved to Charlottesville, Virginia where he practiced in a group private practice for 12 years. He currently has a private office located in Culpeper, Virginia. Dr. Miller is a diplomate, American Board of Orthodontics, and has published numerous articles in the JCO on adhesives and Class II Correctors.

Self-ligating brackets are becoming increasingly popular because, unlike conventional brackets, they have a fastening system that reduces friction between the archwire and the bracket slot. Some self-ligating brackets provide the benefits of increasingly active ligation as the archwire size increases. Many also have moving doors or latches that can break, stick or spontaneously open, but the overall design is different than conventional brackets.

3M Unitek has combined the advantages of a conventional twin-wing bracket design along with the MBT™ System Prescription in a self-ligating bracket that avoids the problems associated with doors and latches. The SmartClip™ Self-Ligating Bracket uses two Nitinol clips that deform when the archwires are placed or removed.



The SmartClip bracket and clip design provides advantages over other self-ligating mechanisms in that functional tie wings are maintained that could be used for elastic ties (fig.1). In addition, the clip design permits a single clip engagement for a severely rotated tooth (figs 2-4.). Wire size and progression differs from conventionally



ligated twin-wing brackets (photo later in this article). Archwire placement and removal does require a special instrument and technique that will be discussed.

Figure 1: Intraoral photos showing color elastic ties



Figures 2-4: Occlusal lower photos showing initial alignment at 4 months

Before exploring the topic of fixed appliance efficiency, one must have a bonding system that consistently demonstrates a low bond failure rate. When using self-ligating brackets, bonding is the foundation of efficiency. I recommend a simple tracking system that helps identify problems so changes can be made to bring bond failure rates from 10% (national average) down to as low as 2%<sup>1</sup>.

More recently, it has been reported that combining a self etching primer with precoated brackets yields “an integrated system” that requires fewer steps. It was concluded this reduces variables which leads to significantly higher shear bond strengths and an overall reduction of bond failures.<sup>2</sup> The SmartClip Bracket System offers the option of APC™ Adhesive precoating and Transbond™ Self-Etching Primer is also available from 3M Unitek.

## Case Example

The case shown in this article exemplifies one major advantage self-ligating brackets have over conventional brackets. “Passive self-ligation” simply means the frictional component from elastomeric or steel ties is eliminated. This allows us with the opportunity to close spaces or apply sliding mechanics of less force, since we do not have to overcome the binding force of ligation. It has been reported by various clinicians that less force is needed to create tooth movement<sup>3</sup>. In cases where excessive space closure is needed, this can best be exemplified. Total fixed treatment time in the following case is 14 months.

# Case Presentation



10

Initial photos 10-22-02



Progress photos 10-22-02 Self Ligating brackets placed/ .014 niti initial wire



Progress photos 11-19-02 Archwire removed with Archwire removal tool/ .017X.017 heat activated AW placed showing ice tie technique (Frozen clip).



Progress photos 5-22-03 .018 SS upper and lower archwires with power thread for space closure.



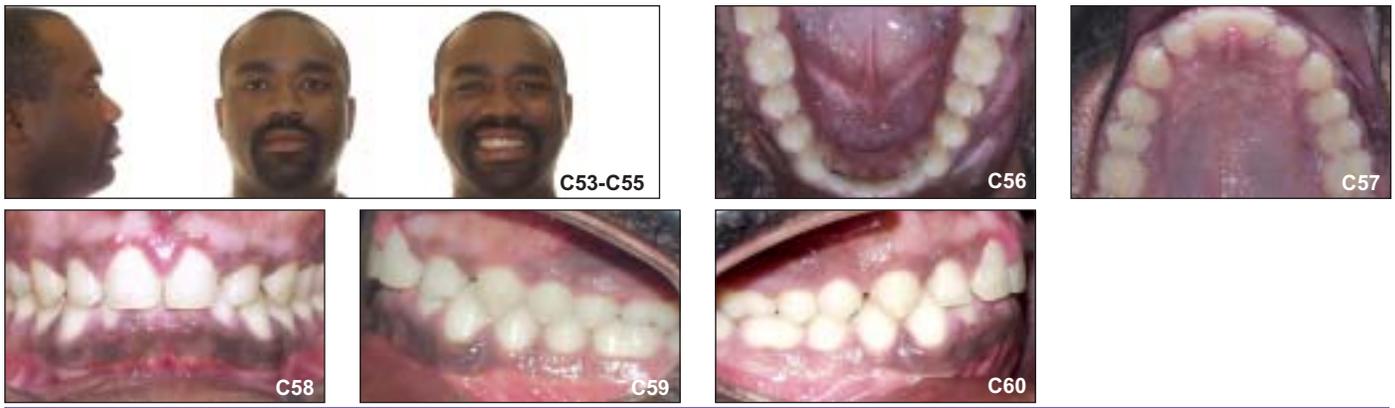
Progress photos 7-1-03 .019x.025 SS upper and lower archwires with accentuated/reverse curve prior to frenectomy.



Progress photos 10-27-03 1 month post frenectomy/replaced power thread.



Progress photos 11-21-03 loop chain placed to close the anterior segment.



Post treatment photos 1-27-04 Some spacing remains for eventual cosmetic bonding.



18 month post treatment photos 8-18-2005. Photos taken after cosmetic bonding.

The final photo shows archwires currently in development by 3M Unitek specifically for use with the SmartClip™ Brackets and other self-ligating appliances. All light round niti and stainless steel wires tend to “walk”. Fig 5) This can be alleviated by using a “dimpled” wire on all round and rectangular wires smaller than .016 x .025.



Figure 5: Intraoral center photo

We also noticed that proper archwire alignment was required to engage rectangular wires without using excessive force. (Fig's 6-8)



Figure 6-8: Insert wire perpendicular to the base of the slot. This may require torquing of the wire. If the wire does not enter the clip correctly, it can create a positive stop (black arrows) and resist easy wire insertion. Proper alignment to the slot will also assist in wire engagement.

3M Unitek recommends reciprocal pressure when placing the archwire for patient comfort. I have noticed this clinical tip is especially true in Niti wire engagement for rotated teeth and all square or rectangular wires.

In summary, enhanced efficiency starts with either an indirect or direct bonding technique that provides accurate bracket placement with few bond failures. Utilizing a self-ligating bracket such as the SmartClip Bracket, precoated with APC™ Adhesive, along with Transbond™ Plus Self Etching Primer coupled with dimpled archwires will streamline efficiency by enabling the clinician to progress more rapidly into working stainless steel archwires, then into finishing wires for shortened treatment times. ■

<sup>1</sup> Miller RA, *JCO*, Vol XXV, #1, Jan 2001.

<sup>2</sup> Bishara SE, *Angle Orthodontist*, 2005, 75:233-238.

<sup>3</sup> Thortenson and Kusey, *AJO/DO*, 2002, Vol.122, pp295-305.

## • SmartClip™ Brackets Are A “Smart Choice”

by the Orthodontic Staff, Hidden Valley Orthodontics, Escondido, California

Our office, Hidden Valley Orthodontics, started using 3M Unitek SmartClip™ Self-Ligating Brackets in June 2004. We, as a staff, were not too sure about the change at first because we were happy with our old Victory Series™ APC™ Brackets. However, after a short learning curve, our staff has decided that we love SmartClip brackets.

Our favorite feature of the SmartClip bracket is the opportunity for improved hygiene for the patients. Since there is no need for elastics or wire ties, it is much easier for the patients to keep their teeth clean. This is important to us in reducing the risk of hypocalcification! We do have patients that miss the fun-colored elastic ties from time to time. But we inform patients and parents that they may have limited colors on the upper front teeth if they can prove to us they can keep their teeth clean. It is fun to reward patients who work real hard on their oral hygiene goals!

The SmartClip brackets also make it easier to engage the wire into the bracket on rotated teeth. Snapping the wire into the clip is much easier, quicker, and more accurate with less pressure than placing a wire tie. As the teeth straighten with the SmartClip brackets, the wire is always engaged and teeth move efficiently.

We have noticed that there is less friction and the teeth are able to move faster with SmartClip brackets in comparison to brackets that require ligatures. This may mean that you can move up in wire sizes quicker, which can decrease treatment time,

lengthen time in between appointments and will get patients out of braces faster.\* Time at the chair for us and our patients is greatly reduced. This seems to make parents happy because they are in and out of our office and getting the kids back to school.

Another great point about SmartClip brackets is that we have seen a reduction in emergency appointments. We do not have to worry about elastic ties coming off or breaking, causing teeth to rotate. We have also been saving wires because we do not have to go back as much in wire sizes due to one rotated tooth.

If you are looking for a new kind of bracket, we at Hidden Valley Orthodontics recommend that you try SmartClip brackets! ■

*\* Individual case results will vary*



Thank you to the orthodontic staff at Hidden Valley Orthodontics and Dr. Christy Fortney and Dr. Larry Michel – editor

13

## • World Orthodontic Dental Staff Competition



Competition winner Donna Hannel with Dr. Randy Kunik. Her presentation “Reducing Non-Scheduled Office Visits” received the second place award among contestants worldwide. The competition was held in conjunction with the 6th International Orthodontic Conference.

Congratulations to Donna Hannel, who placed second at the World Orthodontic Dental Staff Competition, in Paris, France, September 13, 2005. Her presentation led her to the top as she included both clinical techniques and communications skills that aid in “Reducing Non-Scheduled Office Visits.”

As the North American representative, Ms. Hannel competed against seven other staff members who represented major regions of the world. Ms. Hannel was named North American representative after giving an outstanding performance that stood out among six other contestants at an earlier competition held by the American Association of Orthodontics (AAO) in San Francisco on May 21, 2005. It was a special event that demonstrated her commitment to the orthodontic field and underlined her career as an orthodontic assistant to continually provide her patients with the highest level of care.

Ms. Hannel has worked for Dr. Randy Kunik in Austin, Texas since 1994. ■

# • Setting Up a Staff Training Program in Your Practice

by Dr. Rebecca Poling, D.D.S., M.S.D., Director, International Training Institute



*Dr. Rebecca Poling is a 1981 graduate of the University of Washington, School of Dentistry and a 1984 graduate of the University of Washington Orthodontic Program. A private-practice orthodontist in Alaska since 1984, Dr. Poling is Board-certified, a member of the Edward H. Angle Society, and on the faculty of the Department of Orthodontics at the University of the Pacific in San Francisco. She teaches basic orthodontic procedures to new orthodontic residents at University of the Pacific and to new orthodontic residents and International Fellows at New York University in New York City. International Training Institute (ITI) is a leading developer of orthodontic staff training modules on CD.*

On the surface, it is easy to say that staff training is important in an orthodontic office. But an easy answer is not enough in today's management-oriented world. Let's look how staff training can be to your advantage in having an efficient and effective office, and what you need to do to implement a Staff Training Program.

14

## **Why should you have a Staff Training Program in your practice?**

Having a trained staff can easily be shown to improve office and treatment efficiency, treatment results, general organization and staff satisfaction. What do these things mean to an orthodontic office? How about reduced overhead, stress levels, wasted time and staff turnover. Do you think that improvements in these areas might make a positive impact on your office?

## **What is a Staff Training Program?**

A Staff Training Program is much more than simple task-oriented "training". It is an organized, scheduled, interactive transmission of knowledge and skills, designed to bring one person or a group of people to a standardized (and higher) level of performance. It can be much more effective and therefore more valuable to your organization.

It is organized:

- Into "topics" that must be learned
- Using the equipment, materials, supplies, and other materials that are used in the practice

It is scheduled:

- Into learning activities
- Assessment of knowledge
- Practice sessions
- Skill demonstration
- Assessment of skills

It is interactive:

- The learner's understanding is evaluated and given constructive feedback
- The trainer or mentor supervises training and gives constructive feedback

It is the transmission of knowledge:

- Instructional materials are standardized and delivered in a format in which the learner's understanding can be evaluated.
- Skills are standardized to a specific repeatable performance level and taught by demonstration, practiced by the learner, and given feedback by the trainer who is competent in the standard of the skill

It is standardized:

- The material (knowledge) that is taught is assessed by tests that are based on the material so that the assessment is valid
- Skills that are taught are assessed by performance using checklists evaluating performance of the skill or evaluating the product of the procedure as measured against the standard.



## **How do you set up a Staff Training Program in your practice?**

Using the ITI Training Program as an example:

1. Decide on the desired skills the staff should demonstrate. Use a list of "Competencies".
  - Are the desired procedures legal in your state or province?
  - What is your comfort level for delegation?
2. Select a trainer. This is basic to the process, as you will see in the discussion below. (This is covered in the ITI Module "Train the Trainer".)

## ITI Training *(continued)*

3. Purchase and load onto a computer in a training area all appropriate Training Modules and subscribe to an ITI Online Account for your trainer.
4. Train the Trainer:
  - Have the trainer view all of the Training Modules and take and pass all online tests.
  - Have the trainer participate in a clinical training session offered by ITI and become an ITI Certified Trainer.
5. The trainer then develops and implements the Staff Training Program for your office.
  - Identifies skills to be taught
  - Prepares a schedule of lessons, practice sessions, assessments
  - Orders materials to be used in training
    - Training modules
    - Assessments in ITI Online Account
    - Manikin
    - Equipment, materials, supplies as needed for training such as a camera, retractors, mirrors, defogging solution, hair clips, photo editing software, and printer if doing training in photography
  - Enrolls the staff who will participate
    - Collects an application and fees for the clinical training
    - Arranges for an ITI Online Account and the fee for each student
    - Creates a schedule for each student
      - To access modules
      - Tests for modules
      - Skills demonstration by trainer
      - Practice sessions

- Skills testing and assessment
- Final skills testing for certification
- Graduation/beginning employment

How can ITI Modules be used in the Staff Training Program? ITI Modules present comprehensive detailed instruction in skills necessary for the clinical orthodontic staff member to know. They teach “clinical practice systems” that are performed to a high standard in a precise sequence.

Knowledge assessment is completed online through an individualized ITI Online Account, thereby providing standardized assessments based on the material taught in the modules. Use of an ITI Online Account eliminates the need for the trainer to develop tests, checklists, and skills assessment. The trainer can supervise the learner’s progress through ITI Online Account Reports of the learner’s test scores and Certificates of Completion earned.

Trainers become ITI Certified Trainers by completing all modules, passing all online tests, earning all Certificates of Completion, completing an online calibration course, successfully completing a clinical performance course in all procedures given by ITI, and completing training in developing and operating a ITI Mini-Clinical Training Center.

ITI Certified Trainers are required to update their skills and attend Trainer Recertification Clinical Courses every two years. ■

*3M Unitek is the exclusive distributor of ITI Training Modules in the United States. For more information on ITI Training Modules, in the United States, contact your 3M Unitek Sales Representative or Customer Service at 1-800-423-4588. Outside the U.S., visit the ITI website at [www.intltraining.com](http://www.intltraining.com). – editor*

15

## • Two New Products Help Make Life Easier

### Victory Series™ Funneled Buccal Tubes

Two new funneled buccal tubes are making wire insertion easier than ever. Victory Series™ 1st Molar Buccal tubes are available for Lower and Upper use, with -20° of torque on the lowers and -14° of torque on the uppers. The Victory Series Upper 2nd Molar Buccal Tubes feature -19° of root torque along with the ease of insertion from the funneled design.



Both tubes are weldable and bondable, and available with APC™ II System Adhesive precoating. They feature the MBT™ System Prescription for predictable treatment results, and they are fully compatible with SmartClip™ Self-Ligating System brackets.

### Unitek™ Debonding Instrument

A new bracket debonding hand instrument has been introduced that includes a specially designed tip to make bracket debonding easier. Able to be used with 3M Unitek metal twin and Clarity™ Ceramic Brackets, the new instrument (REF 900-850) includes a ledge that provides a reference for positioning the instrument on the bracket. The instrument also features an increased lever ratio that reduces the amount of force needed by the operator to debond compared with commonly used multi-purpose instruments.



# • 3M Pride in Giving Extends to Los Angeles Area Missions

## *3M Unitek volunteers visit Los Angeles area Missions.*

With hurricanes causing untold suffering in Florida and the Gulf Coast, and natural disasters around the world, we see the opportunity and need for giving all around us. 3Mers respond each time with substantial donations and support for victims, inside and outside the United States.

With this generosity, it would be easy for individuals to consider cutting back on giving in one area to concentrate on the more pressing needs. But not so for the Sales and Marketing Team at 3M Unitek. During the 2005 National Training Session held in San Diego, California, 85 volunteers gave a total of 255 hours of work to support two of the largest rescue missions in Los Angeles. Along with that work came a cash donation from funds that would have been allocated to a private event at the Session.

Giving back to the community is a fundamental part of the 3M culture. It was also understood that the ongoing needs of the people supported by these missions is not lessened when natural disasters strike elsewhere.

16

Participants in the volunteer work included the entire 3M Unitek Sales and Marketing Team, the Management Operating Committee and 3M Unitek President Val Szwajkowski. Activities included sweeping in and around the missions, cleaning, serving food to the homeless, painting, and working with children with arts and crafts. Teamwork is an important way we can make a difference in our community, and a source of pride in being a part of 3M. Ivette Diaz of the Union Rescue Mission thanked the 3M volunteers for their donation and work. ■



*“3M’s contribution will go to sow deep seeds of hope in the men, women and children that we serve...The projects went off marvelously and you all set a high standard for future volunteers...You were the best group that has ever come to work with the children!”*

*– Ivette Diaz, Union Rescue Mission*



## Continuing Education Schedule

DATE	SUBJECT	PRESENTER(S)	LOCATION
1/6/06	"A Fraction of the Friction"	<i>Dr. Gerry Samson</i>	Ortho Study Club Richmond, VA
1/13/06	"The Loco Motion Biomechanics Series"	<i>Dr. Gerry Samson</i>	Ortho Study Club Oklahoma
1/13/06-1/16/06	MBT™ System – In-Office Seminar	<i>Dr. Richard McLaughlin</i>	San Diego, CA
2/17/06-2/18/06	Forsus™ Class II Correction Forum and Ski Summit	<i>Dr. William Vogt</i> <i>Dr. Robert Miller</i> <i>Dr. Duncan Higgins</i>	Park City, UT
2/18/06-2/19/06	The Bottom Line – University Program® 2-Day Seminar	<i>Dr. Terry Sellke</i> <i>Dr. John McDonald</i> <i>Dr. Tom Ziegler</i>	Arcadia, CA
2/23/06-2/24/06	"The Vision for Orthodontic Success"	<i>Dr. Jackie Berkowitz</i>	Columbus, OH
2/24/06-2/25/06	"Essence of Efficiency" – In Office Seminar	<i>Dr. Anoop Sondhi</i>	Indianapolis, IN
3/11/06-3/12/06	The Bottom Line – University Program® 2-Day Seminar	<i>Dr. Terry Sellke</i> <i>Dr. John McDonald</i> <i>Dr. Tom Ziegler</i>	Franklin, TN
3/17/06-3/18/06	"Essence of Efficiency" – In Office Seminar	<i>Dr. Anoop Sondhi</i>	Indianapolis, IN
3/24/06	"A Fraction of the Friction"	<i>Dr. Gerry Samson</i>	Brookfield, WI
3/24/06-3/25/06	9th Annual 3M Unitek Summit in Las Vegas	<i>Dr. Richard McLaughlin</i> <i>Dr. Hugo Trevesi</i> <i>Dr. Patrice Pellerin</i> <i>Ms. France Carpentier</i> <i>Dr. Rebecca Poling</i>	Las Vegas, NV
3/25/06-3/26/06	The Bottom Line – University Program® 2-Day Seminar	<i>Dr. Terry Sellke</i> <i>Dr. John McDonald</i> <i>Dr. Tom Ziegler</i>	Mystic, CT
4/6/06-4/8/06	12th Annual Ski and Golf Weekend	<i>Dr. Gerry Samson</i> <i>Dr. Patrice Pellerin</i> <i>Dr. Michael Sherman</i>	Whistler B.C. Canada
5/6/06-5/9/06	AAO Annual Meeting	<i>TBD</i>	Las Vegas, NV
6/9/06-6/11/06	MBT™ System	<i>Dr. Richard McLaughlin</i>	Univ Alumni Mtg Dallas, TX
6/16/06	Maine Ortho Society	<i>Dr. Richard McLaughlin</i>	TBA, Maine
9/14/06-9/15/06	"The Vision for Orthodontic Success"	<i>Dr. Jackie Berkowitz</i>	Columbus, OH
9/15/06-9/16/06	"Essence of Efficiency" – In Office Seminar	<i>Dr. Anoop Sondhi</i>	Indianapolis, IN
10/13/06-10/14/06	"Essence of Efficiency" – In Office Seminar	<i>Dr. Anoop Sondhi</i>	Indianapolis, IN
10/13/06-10/16/06	MBT™ System – In-Office Seminar	<i>Dr. Richard McLaughlin</i>	San Diego, CA
11/3/06-11/6/06	MBT™ System – In-Office Seminar	<i>Dr. Richard McLaughlin</i>	San Diego, CA

For more information or to register, please call the 3M Unitek CE HOTLINE at 1-800-852-1990 ext. 4649 or 626-574-4649. For Canada, call 1-800-443-9002 ext. 4649. Or, visit the Professional Relations/Continuing Education page on the 3M Unitek web site at [www.3MUnitek.com](http://www.3MUnitek.com). Dates and locations subject to change.

## SmartClip™ Self-Ligating Molar Brackets



### Easy Archwire Insertion

- Make distal archwire bends outside of the mouth
- No more converting of your 6's

### No Ligation

- No more post-converting ligation
- Helps to improve patient hygiene

### Low Profile

- No occlusal tie-wings

# GET OFF THE BANDWAGON

Choose Bondable Self-Ligating Molar Brackets from 3M Unitek



**SMARTCLIP™**  
SELF-LIGATING APPLIANCE SYSTEM

18

## THE **BOTTOMLINE**

Successful Strategies For Private Practice Orthodontists®

## Comprehensive Series®

Dr. Sellke is accepting applications at this time for two separate The Bottom Line Comprehensive Series® programs designed specifically for American and Canadian orthodontists. Attendance is limited due to the intense, individualized attention given to each attending doctor. You must attend all sessions with your chosen group.

### Session I: Developing Your Business Plan, Increasing Office Productivity, Scheduling for Fun & Profit

**USA-5:** March 1 – March 5, 2006 (Wednesday – Sunday)

Classroom: March 1 – 3, 2006

Private Consultations: March 4 – 5, 2006

Holiday Inn – Gurnee, IL

#### **CAN-1 (Only 4 spots available):**

January 29 – February 2, 2006 (Sunday – Thursday)

Classroom: January 29 – January 31, 2006

Private Consultations: February 1 – 2, 2006

Marriott Hotel – Aruba (You will need a passport)

### Session II: Refining Your Goals, Growing Your Practice, Staff Hiring, Empowerment, Training & Motivation

Contemporary Hotel – Orlando, FL

**USA-5:** May 17 – 20, 2006 (Wednesday – Saturday)

Classroom: May 17 – 19, 2006

Private Consultations: May 19 – 20, 2006

**CAN-1:** May 11 – 14, 2006 (Thursday – Sunday)

Classroom: May 11 – 13, 2006

Private Consultations: May 13 – 14, 2006

### Session III: Getting Your Staff on Board

No Private Consultations.

Workshop format with numerous breakout sessions.

(Fee includes participation by 5 staff – others may attend for an additional fee. Each office is encouraged to stay an additional day to conduct a staff retreat immediately after Session 3).

**USA-5:** September 27 – 29, 2006 (Wednesday - Friday)

Americana Resort – Lake Geneva, Wisconsin

**CAN-1:** September 18 – 20, 2006 (Monday – Wednesday)

Fairmont Tremblant Resort – Mont Tremblant, Canada

### Session IV: Planning for Next Year, Accumulating Wealth, & How to Use It Wisely

JW Marriott Desert Springs Resort & Spa – Palm Desert, CA

**USA-5:** November 30 – December 3, 2006 (Wednesday – Sunday)

Classroom: November 30 – December 2, 2006

Private Consultations: December 1 – 3, 2006

**CAN-1:** November 26 – 29, 2006 (Sunday – Wednesday)

Classroom: November 26 – 28, 2006

Private Consultations: November 26 – 29, 2006

After Session IV, you will be eligible to join The Bottom Line International Study Group®, which has members from as far away as Australia and New Zealand. Call (877) ORTHO34, visit [www.orthobottomline.com](http://www.orthobottomline.com), or contact your local 3M Unitek Representative for more information.

# THE BOTTOMLINE

## Successful Strategies For Private Practice Orthodontists®



### university programs

Today's orthodontic residents are well prepared clinically. However, few are adequately trained for the challenges of initiating and managing their practices. The Bottom Line University Programs® prepare students for the real world challenges that they will face. Information and guidance on securing financing for a start-up practice, developing and managing a comprehensive marketing program, and developing referral relationships are but a few of the subjects that will be presented. You will learn how to grow at exponential rates while avoiding common graduate mistakes and capitalizing on the opportunities that you may not know exist. This program is a must for every orthodontic resident.

#### The Bottom Line University Programs®

February 18-19, 2006  
Arcadia, CA

March 11-12, 2006  
Franklin, TN

March 25-26, 2006  
Mystic, CT



### one-day programs

How can you evaluate the value of our Comprehensive Series or Study Group? To answer this question we have developed The Bottom Line One-Day Programs® that will highlight the fundamental concepts of The Bottom Line – *Successful Strategies For Private Practice Orthodontists®*. Available to individual orthodontists, office managers and interested orthodontic groups, the One-Day Programs will provide you with new information and new insights on achieving the highest level of personal and practice success. You see, setting goals and seeking excellence in management, marketing, and training, all impact your bottom line. This could very well be the most valuable seminar that you have ever attended. Spend the day with us and prepare to be inspired.

#### The Bottom Line One-Day Programs® (For Practicing Doctors)

March 6-7, 2006  
Medical College of Virginia  
Non-Members Invited  
Richmond, VA

May 6-10, 2006  
AAO  
Las Vegas, NV

September 7-9, 2006  
Illinois Orthodontic Alumni Assn.  
Clinical Research  
Chicago, Illinois

November 7, 2006  
MASO/NESO Meeting  
Doctor and Staff Program

March 2-3, 2007  
Alberta Society of Orthodontists  
Banff, Alberta, Canada

19



### comprehensive series

There are few qualified sources today for an orthodontist seeking information on the business aspects of private practice. Existing practitioners facing important decisions on how to grow, become more efficient, become more profitable, while simultaneously improving excellence are similarly hampered. Recent graduates are forced to learn by unguided research, trial and error, or if lucky, by a mentor. The Bottom Line Comprehensive Series® will teach you how to set practice goals and give you the tools to achieve them. It will teach you how to develop a patient-centered practice, driven to excellence that is simultaneously fun and hugely profitable. The Comprehensive Series consists of four, multi-day sessions spread out over a year. Upon completion of the series,

participating doctors become eligible for membership in The Bottom Line Study Group™.  
[www.orthobottomline.com](http://www.orthobottomline.com)

#### 2006 The Bottom Line Comprehensive Series® (One Series Per Year)

**USA-5:** Session I: March 1-5, 2006  
Gurnee Holiday Inn  
Gurnee, IL

**USA-5:** Session II: May 17-20, 2006  
Contemporary Hotel  
Orlando, FL

**USA-5:** Session III: Sept. 27-29, 2006  
Americana Resort  
Lake Geneva, WI

**USA-5:** Session IV: November 30 - December 3, 2006  
JW Marriott Desert Springs  
Resort & Spa  
Palm Desert, CA



### study group

Wouldn't it be nice to belong to a study group of respected colleagues that you could share ideas with on how to excel as practitioners as well as businessmen/women? Imagine a forum where private practice orthodontists could share ideas on staffing, scheduling, management, practice transition, marketing, or achieving financial security. Imagine a forum for sharing new ideas in diagnosis or techniques in treatment that will help to make your results more stable, your treatment shorter, your treatment more profitable, and your patients happier. If these concepts appeal to you, then The Bottom Line Study Group® is right for you. Completion of The Comprehensive Series is required for eligibility to join The Study Group.

#### The Bottom Line International Study Group®

2006 Classroom  
January 15-17, 2006  
Sydney, Australia

Technology Symposium  
January 19-22, 2006  
Hamilton Island, Australia

For more information or to register for the One Day Programs and the Comprehensive Series, please contact Ms. Kelly Buchman at (877) ORTHO34, or outside the U.S.A. call (847) 223-2836. For more information regarding the University Program, contact the 3M Unitek Continuing Education Hotline at (800) 852-1990 ext. 4649.

The Bottom Line – *Successful Strategies For Private Practice Orthodontists, University Programs, One-Day Programs, Comprehensive Series and Study Group* are registered trademarks of Terry A. Sellke, D.D.S., M.S.



**3M Unitek**

*Presents*

**Forsus™ Class II  
Correction Forum  
and  
Ski Summit**

The Forsus™ Class II Correction Forum and Ski Summit is a unique opportunity to hear noted industry professionals describe their experiences, techniques and insights into Class II Correction. More than lectures and case visuals, portions of the program are interactive and there will be doctor demonstrations and opportunity for typodont instruction.

Each lecturer has a style, opinion, preference and approach to Class II Correction. You will hear and see this diversity, and make up your own mind on the material presented.

For your enjoyment, the Summit schedule has been structured to give you the prime afternoon time for skiing or relaxation.

**CE credits will apply.**



**Dr. William Vogt** has maintained a solo practice in orthodontics in Eastern Pennsylvania since 1987. Orthodontically, his special interest is in Class II mechanics. He has lectured internationally and he also holds patents on Class II correction devices, including patents on Forsus brand products from 3M Unitek. He received his DDS from Temple University School of Dentistry in 1981, and earned a postdoctoral certificate in Orthodontics in 1983 from the University of Buffalo (SUNY).



**Dr. Robert Miller** completed his Orthodontic residency at the Medical College of Virginia. He entered the Air Force where he was the Chief of Orthodontics at Clark Air Base in the Philippines. After 3 years he moved to Charlottesville, Virginia where he has practiced in a group private practice for over 10 years. Dr. Miller is a diplomate, American Board of Orthodontics, and has published numerous articles in *JCO* on adhesives and Class II correctors.



**Dr. Duncan Higgins** received his DDS degree from the University of Alberta in 1977, and earned an MSD in Orthodontics from Indiana University in 1981. He is a Fellow of the Royal College of Dentists of Canada and practices in Delta, BC, Canada, a suburb of Vancouver. Dr. Higgins has patented his own Class II spring appliance, called the Xbow™ (pronounced crossbow) and now uses and recommends the Forsus™ Fatigue Resistant Device from 3M Unitek in conjunction with his appliance.

**Registration**

**Register Online At: [www.3MUnitek.com](http://www.3MUnitek.com)**

If you are unable to register online, call the 3M Unitek CE Hotline: 1-800-852-1990 extension 4649. From Canada, 1-800-443-9002 extension 4649.

**REGISTRATION APPLICATION ANNOUNCEMENT**

**The MBT™ Philosophy:  
A 2-Year Orthodontic Program**

Post-Graduate Instruction  
for Orthodontists

*Presented by*

**Dr. Richard P. McLaughlin**  
San Diego, CA

Attendance is limited. Register early.

**Second Program Course Dates**

- Course 1** June 24, 25, 26 and 27, 2006
- Course 2** October 29, 30 and 31, 2006
- Course 3** February 25, 26 and 27, 2007
- Course 4** July 22, 23 and 24, 2007
- Course 5** November 11, 12 and 13, 2007
- Course 6** February 23, 24 and 25, 2008

**Contact**

**Dr. McLaughlin's office**  
directly for registration and inquiries:  
(800) 930-2960 U.S. & Canada  
(619) 223-2960 International Calls

**E-Mail Address:**

Laura Plante at: [LJPBRACES@AOL.COM](mailto:LJPBRACES@AOL.COM)

Dr. McLaughlin's website: [www.MBTeducation.com](http://www.MBTeducation.com)



**MBT™**  
Versatile+ Appliance System

**3M Unitek  
Orthodontic Products**

2724 South Peck Road  
Monrovia, CA 91016 USA

[www.3MUnitek.com](http://www.3MUnitek.com)

**Have technical questions?**

**3M Unitek Technical Hotline, (800) 265-1943  
In Canada (800) 443-1661 ext. 4577**

**Worldwide (626) 574-4577;  
(626) 574-4000 General Information**

012-159 0511

**3M Unitek**

*Products that make your life easier.*