

DRS. RICHARD PARKHOUSE AND A. FARINA IN BERGAMO, ITALY WHERE A TIP-EDGE STUDY GROUP WILL BEGIN IN 1997.



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DRS. TOM ROCKE AND E. GALANG, HEAD OF ORTHODONTIC DEPARTMENT, UNIVERSITY OF THE PHILIPPINES, DURING OCTOBER 1996 TIP-EDGE COURSE IN MANILLA.

WINTER 1996-97

EDGE LINES

SATELLITE RINGS

ELIMINATED:

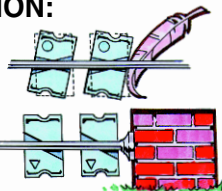


Realization that ordinary elastomeric rings can control

tip, made satellite rings obsolete. Interview, page 2.

ENGAGED PREMOLARS O.K. FOR OVERJET CORRECTION:

Premolar Tip-Edge slots enhance reduction of overjet. Q's & A's, Page 2.

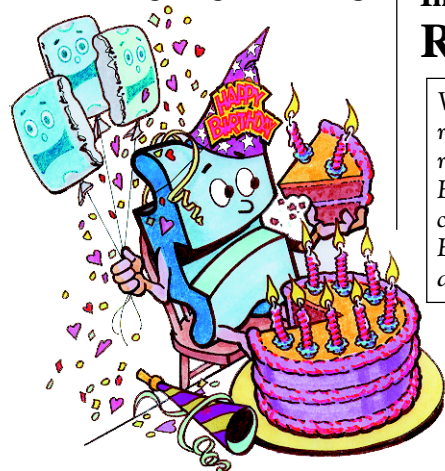


IT'S A TIP-EDGE WORLD:



Over fifty universities and hospitals around the world teach Tip-Edge. Page 4.

TIP-EDGE GRAPHIC



Tippy enjoys his 10TH BIRTHDAY. No other bracket has caused such orthodontic revolutions around the world in a single decade—see cover story.

COVER STORY

Tip-Edge Celebrates Tenth Anniversary

Ten years ago, October 22, 1986, Dr. Peter Kesling introduced the Tip-Edge bracket to orthodontics. The occasion was a meeting of the North American Begg Society held at the Peabody Hotel in Memphis, Tennessee.



P.C. Kesling 1986

Not a scheduled speaker at the meeting, Dr. Kesling reserved a private dining room and invited a select group of orthodontists to learn of this new bracket. Actually those invited didn't know what was going to be discussed/introduced—only that it was a new orthodontic innovation and Dr. Kesling was going to share it with them.

Of the fifteen invited, ten at-

tended and each received a cube of Steuben cut glass which added to the mystery and excitement of the occasion. Dr. Chris Kesling had the foresight to video tape the entire presentation including the discussion that followed. The quality of this tape is marginal due to poor lighting and its 8mm format. However, it captured all the dialogue including that of the late Drs. Harry Barrer and Roy Blackburn.

The meeting began by Dr. Kesling reading a prepared script "Changing the Face of Edgewise." It did not reveal the Tip-Edge bracket but set the stage for a change of some kind. He reviewed the rise in popularity of differential tooth movement (Begg) with ribbon arch type brackets and speculated on the reasons for its dropping at that time. Also the advantages and

disadvantages of preadjusted archwire slots were covered.

He finished by stating he had designed an edgewise bracket that he felt would permit differential tooth movement, yet also provide a preadjusted finish with rectangular archwires if desired. Because of its tipping and edgewise functions, he named the bracket Tip-Edge.

During the slide presentation that followed, he led the group through a series of graphics that rearranged the components in their gifts, the glass cubes, into a Tip-Edge bracket and satellite ring.*

*"Floating Spheres Helped Introduce Tip-Edge," Tip-Edge Today Special Edition, December 1996.

Interview With Dr. P.C. Kesling:

Reflections On The Past Ten Years—And More

While dining at his favorite restaurant, Dr. Kesling was recently interviewed by TIP-EDGE TODAY (T.E.T.) concerning his invention of the Tip-Edge concept, its acceptance and related subjects.

T.E.T. Do you remember when you first thought of the possibilities of a Tip-Edge archwire slot?

P.C.K. My first thoughts of edgewise archwire slots were influenced by conversations with

my father, Dr. H.D. Kesling and Dr. P.R. Begg. Both had vast experience with edgewise brackets



P.C. Kesling—1996

and both warned me of the dangers that lie within their slots. The teeth cannot move on their own—they must be driven and usually by relatively high forces.

Because of this I did not look to the edgewise slot as a means of finding a way to design the ultimate "combination" bracket. For a quarter of a century I considered it the problem—not the solution.

It was while considering the lack of progress Dr. Tom

See INTERVIEW on page 2

Interview . . .

Continued from page 1

Rocke was having in treating a patient with “straight wire” brackets that it came to me. Everything was the same: age, malocclusion, good cooperation, archwires, elastic forces and an excellent operator. Yet this patient (among all of Dr. Rocke’s similar patients) was not responding. The only difference was that the teeth could not tip distally. The question then was, how to permit the teeth to tip with a straight wire in their edge-wise slots?

Realizing they only needed to tip in one direction led to my decision that only two diagonally opposite corners of each slot needed to be removed. The other two could remain for final tip and torque control—and that, of course, is Tip-Edge pure and simple. That same evening I made a large model of an edge-wise bracket, then cut the corners out with a hand saw.

T.E.T. Did you ever imagine in 1986 how popular the Tip-Edge bracket would become within 10 years?

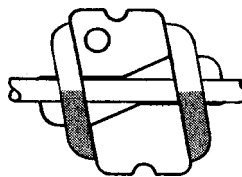
P.C.K. Actually, I thought it would have been more readily accepted by “edgewise” orthodontists than it has to date. I thought they would readily appreciate the “freeing up” of the teeth. For them it should be similar to a driving instructor showing one how to release the parking brake—after having let them drive a few blocks with it on. Of course, many orthodontists—especially those using conventional preadjusted slots, have changed to Tip-Edge and it has changed their lives and those of their patients as well.

T.E.T. What ever happened to the satellite rings which were such a part of your initial Tip-Edge presentation?

P.C.K. Initially I thought it would be necessary to somehow lock the teeth into their final tip positions—to prevent relapse after the uprighting springs were removed. I quickly realized the balls on the satellite rings were too large to wedge into the small cut-out areas of the Tip-Edge archwire slots. Also they were a bit bulky. I then tried wedges that were smaller and on one side of the ring only. What a disaster that was! It was nearly impossible to place the rings

with the wedges pointing inward. They just pointed any way they wanted.

This presented another challenge—how to design an elastomeric ring with wedges on one side that would go into place properly and have the wedges forcing themselves into the cut-outs. Suddenly the solution came, as E.H. Angle used to say, “just out of the black.” I added the crossbar which solved both problems.



Hammock effect of elastomeric ligature permits initial tipping yet is strong enough to prevent relapse (1996 TIP-EDGE GUIDE pp. A-12).

However, over the years it has become apparent that the common, though extremely light **hammock effect** provided by ordinary elastomeric rings is sufficient to maintain final crown tip angles. Things get simpler—that’s a good sign.

T.E.T. When did you first think of the animated bracket “Tippy”?

P.C.K. We were just wrapping up the first issue of Tip-Edge Today in 1992 and needed a graphic to fill out the “Edgeline” column on the first page. To make the point of no friction it

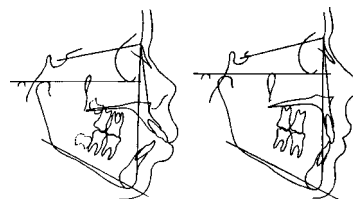
seemed a natural to have a bracket slip on a banana peel—but I don’t remember whose idea it was. Of course, since then Tippy has done many things—some actually too risqué to get in print!



Tippy first appeared to demonstrate lack of friction.

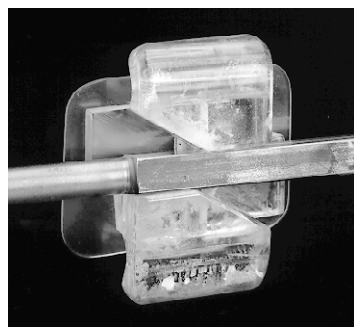
T.E.T. What is the one treatment result/change using Tip-Edge brackets that stands out in your mind?

P.C.K. The case that always comes to mind is an eight tooth extraction—one that was treated several years ago by my students at St. Louis University. The dental and soft tissue changes are dramatic. I feel the quality of results obtained (without surgery



Before (left) and after (right) lateral head x-ray tracings showing the results of treatment with Tip-Edge brackets. No surgery or extraoral force was required for changes shown.

See INTERVIEW on page 3



The first Tip-Edge bracket—a 20 times size plastic model. The “dual” archwire was used to test control with both round and rectangular wires.

Q’s and A’s

Q. I started to incorporate Tip-Edge into my practice within the last year, after twelve years of “straight wire.” I really like the speed and bite opening efficiency, but have a question: In a non-extraction case, it is recommended to delay bonding of the bicuspids until the bite is opened and the maxillary anterior teeth are edge-to-edge. Is it safe to say that this statement means **no** overbite and **no** overjet?

PIKETON, OHIO

A. Usually the overbite and overjet correct simultaneously. However, your question points out that this is not always the case. If the anterior bite were open but overjet remained, it would be proper to bond and engage the premolars. Remember to eliminate the localized anchor bends and replace them with gentle, full arch “sweeps.” Upon the application of Class II or III intermaxillary elastics, the Tip-Edge archwire slots will automatically create anchorage in the desired arch and permit distal crown tipping in the other.

Q. A patient has a massive shift of the maxillary midline to the right and is to be treated by extraction of the maxillary left first bicuspid only. Thus, the desired tipping of the maxillary right incisors and cuspid in stage one is mesial rather than distal. The question is whether it would be appropriate to bond left incisor and canine brackets on the right incisors and canine in this unusual case?

BELFAST, IRELAND

A. No—the Tip-Edge brackets should be bonded in the usual manner. The archwire slots of the distally tipped maxillary right canine and incisors will be wide open (more than .022”) for easy archwire insertion. As their teeth tip to the left, the slots will become smaller until the desired, normal inclinations are reached. If left side brackets were bonded to these teeth, it would have been difficult to insert .022” archwires. Also, if Side-Winder springs were placed to help correct the midline, there would be no automatic stopping. The teeth could tip too far and swing the midline across to the left. ☐

Interview . . .

Continued from page 2

or extraoral force) are directly related to the anchorage potential that lies within the dynamic Tip-Edge archwire slot.

T.E.T. *Why didn't you introduce the Side-Winder springs at the same time as the Tip-Edge bracket?*

P.C.K. We had an uprighting spring at that time which did the job—that seemed good enough.

However, as the appliance became more streamlined—less vertical loops and torquing spurs, the coils of uprighting springs became more and more obvious and, I felt, objectionable. Also they were often difficult to place on teeth with short crowns—especially premolars and, of course, that could be uncomfortable for the patients.

The challenge then was to have a spring with the coil some place else. I designed them with coils on the mesial or distal of the brackets but the best and most versatile proved to be a spring with its coil on the bracket face. It is less visible there too.

It does add to the overall profile height but patients don't mind. I think the importance of low profile height has been blown way out of proportion by supply companies.

T.E.T. *Of all your orthodontic inventions, which one do you feel is the most significant?*

P.C.K. Tip-Edge by far—no other one has the potential for creating such change. I feel orthodontics in general has been swinging away from really moving teeth and alveolar bone and opening deep bites and shifting toward expansion, distal driving and surgery. The reason for this, I believe, is the edgewise slot as designed by Angle and especially in its modern, preadjusted configuration.

It is a shame to think that many orthodontists will go through their professional lives continually fighting the conventional edgewise slot. It simply cannot *let* teeth move and tends to shift the dental arches forward. Tip-Edge changes all that.

New Low Height, Combination Mandibular Molar Tubes Now Available

New mandibular molar tubes have been designed especially for molars with short clinical crowns. They can be used on all patients for increased comfort.

The non-convertible, rectangular occlusal tube accepts a .0215" x .028" wire for maximum control, yet still allows free sliding. The round gingival tube has an inside diameter of .030" and a length of .198".

These reduced length and inside dimensions ensure the same bite opening action as would be created from an archwire with anchor bends in conjunction with the more conventional .036" x .236" buccal tubes.

The gingival hook has a low profile, is shorter and can easily be adjusted. It is also more centrally located to reduce the ten-

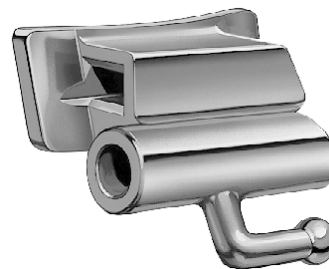
dency for Class II elastics to tip the molar distally.

Mesial end of both the rectangular and round tube are chamfered for ease of archwire insertion. Flat occlusal surface (no tie wings) provides excellent surface to accept band seating pressure.

Distal surfaces of both tubes have the unique "slant back" design

which promotes comfort without reducing anchorage control or anterior bite opening action. Staggered back design facilitates straightening of the end of gingivally bent wires in the occlusal tube. Available prewelded to bands or with either welding or direct bonding pads.

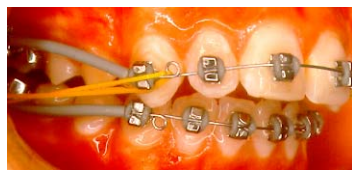
	Weldable	Bondable
Right	391-375	391-377
Left	391-374	391-376
(Mandibular only)		



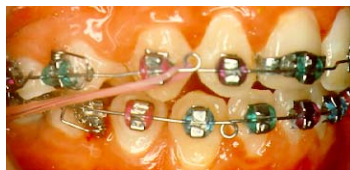
New, tiny Tip-Edge tube functions just like its big brother—yet has one-third the height and bulk.

CASE REPORT

A 15-year-old male with poor lip balance exhibited a Class II, Division 1 malocclusion with 7mm of overjet. Because the mandibular incisor edges were on the A-Po line, a nonextraction treatment plan was indicated.



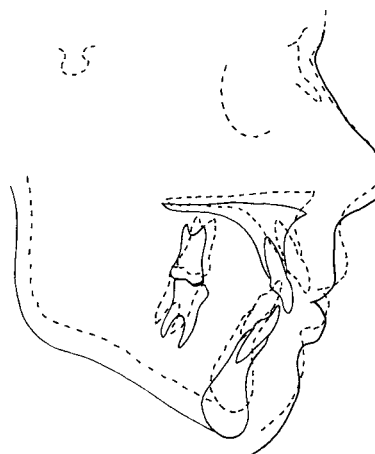
Archwires were formed of .016" Wilcock stainless steel wire. Strong bite opening bends intruded the incisors and kept the anchor molars upright. Light (2 oz.) Class II elastics provided all the force necessary to correct the Class II malocclusion.



Within 6 months the anterior teeth were end-to-end and brackets were bonded to the premolars and rotating springs placed. Due to a restoration, a band was placed on the maxillary right central incisor.



After 10 months of treatment, stage three mechanics were initiated with .022" archwires and Side-Winder springs. A two-spur torquing auxiliary was placed on the maxillary central incisors for the last 3 months of treatment.



N.T. Male, 15 Years
 Class II, Division 1
 Nonextraction
 Archwires Used 4 (2U, 2L)
 Adjustments 16, Time: 21 Months
 Retention Tooth Positioner

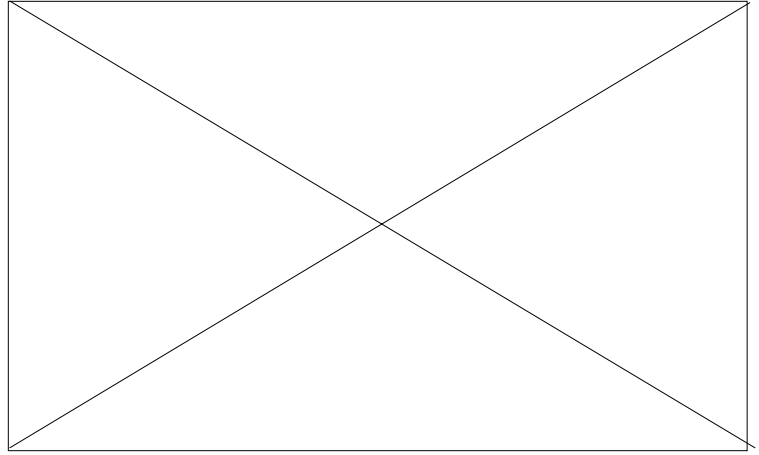
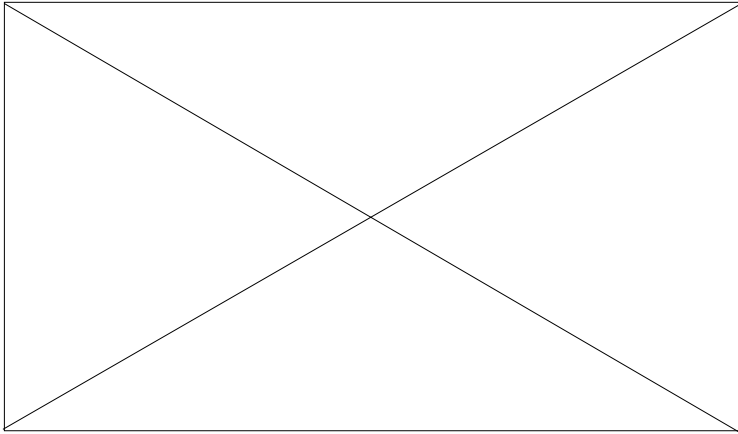
Cephalometric Changes:

	Start-Dotted	Finish-Solid
1 A-Po	.0 mm	+2.0 mm
Wits	+8.5 mm	+5 mm
SN-MP	32.0°	34.0°
ANB	8.0°	5.5°
SNA	84.0°	80.0°
SNB	76.0°	74.5°
1-SN	108.0°	99.0°

Graduate Students' Tip-Edge Course

Over 50 second year, orthodontic graduate students participated in a Tip-Edge course at the Orthodontic Center, November 22nd and 23rd. The course included lectures, diagnosis and typodont exercises on the use of Tip-Edge brackets in conjunction with the Differential Straight Arch® Technique. Actual patients in various stages of treatment by the Kesling and Rocke Orthodontic Group were also examined.

Students and faculty members from the following universities attended the course: Albert Einstein Medical Center, Case Western Reserve University, Columbia University, Harvard School of Dental Medicine, Howard University, Montefiore Medical Center, Saint Louis University, University of Manitoba and University of Missouri at Kansas City. Also present were five practicing orthodontists from the U.S. and foreign countries.



Tip-Edge Course In Kuala Lumpur

Dr. R. Thomas Rocke presented the first Tip-Edge course in Kuala Lumpur in October, 1996. Twenty participants attended the two day, post-graduate course.



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