Supplementary Figures

Patient 1

Patient 1. Top row shows intra oral photographs of a 16-year-old female patient with a left posterior crossbite involving a teeth segment from left lateral incisor to second premolar. Second row, shows an initial NiTi wire with a 6 mm step-up bend fully engaged to brackets of those blocked-out left maxillary teeth segment to intrude and disengage them as initial step. Mandibular .016"X.022" NiTi archwire with intrusive V-bends, and composite build-up placed on the left molar enhanced disengagement. Third row, During-treatment images showing the halfway jump of the affected canine and premolars, before removing the composite. Fourth row, Shows post treatment intraoral photographs after 7 months of treatment.
Patient 2

Patient 2. Top row shows pretreatment models of a 14-year old female patient with a severe skeletal class III (7mm under jet), and bilateral posterior crossbite. Treatment plan called for mandibular first premolars extraction, and consolidating the existing spaces, using V-Bent 0.016”X.022” NiTi, archwires which disengaged incisor teeth without bite raisers, and later stainless steel archwires, allowed retraction of the mandibular incisor teeth. The V-bends activation of archwires while retracting mandibular incisors helped their bodily translation. Middle Raw shows final stage of treatment. With both bilateral crossbite and class III malocclusion corrected. Third row shows post-treatment intraoral photographs 3 years after retention. The post treatment panoramic and cephalometric radiographs show no root resorption.
**Patient 3**

*Patient 3. Top Row* shows intraoral pretreatment photographs of a 14 year-old female patient with a right unilateral posterior crossbite, anterior crowding, and class III cuspids relation. Treatment called for four premolar extractions and crossbite correction. *Second Row,* After alignment the interlock, the composite build-ups on mandibular molars enhanced by the V-Bends on maxillary and mandibular 0.016”X0.022” NiTi archwires disengaged posterior teeth. *Third Row* shows the correction of cross bite and class III relations have been achieved at the finishing stage. *Bottom Row* shows the post treatment photos using this technique.
Patient 4

Patient 4. First row, intraoral pretreatment photographs of a 14-year female patient with severe left side posterior cross bite and deep class III malocclusion. Second row shows the use of composite build-ups and the V-Bent NiTi archwires disengaged posterior and
anterior teeth on both side, and facilitated correction of the massive crossbite and class III relations. Third raw shows post treatment photos. Fourth raw, pre and post treatment cephalometric radiographs showing improved incisal relation without roots resorption.

Patient 5

Patient 5. Top raw; pre treatment intra oral photos of a 15-year-old female patient with total right unilateral posterior cross bite and class III malocclusion. Second row, the intrusive effects of the V-bent 0.016”X.022” NiTi archwires disengaged anterior and posterior teeth in the right side without composite build-ups, allowing effective transverse forces of activated archwires to correct this massive crossbite and the class III relation as well. Bottom row: shows the post treatment intra oral photos.
Patient 6

Patient 6. Top Row showing pretreatment intraoral photographs of a 13-year old female patient with a bilateral cross bite and class III tendency. Nonextraction treatment was performed using the V-Bend technique as usual. Bottom Raw showing post treatment photographs.