

CRAZY FOR CANALS: THE DYNAMIC NAVIGATION BREAKTHROUGH

Evolution:

MEDICAL SPECIALITIES

CRANIOMAXILLO FACIAL

DENTAL IMPLANTS

ENDODONTICS

Applications:

- SURGICAL OSTEOTOMY
- APICECTOMY

- RETROGRADE ROOT END CAVITY PREPARATION
- ACCESS CAVITY PREPARATION

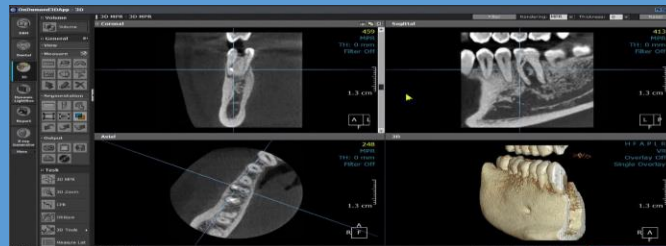
- POST AND CORE
- RETREATMENT

Work flow

Step 1



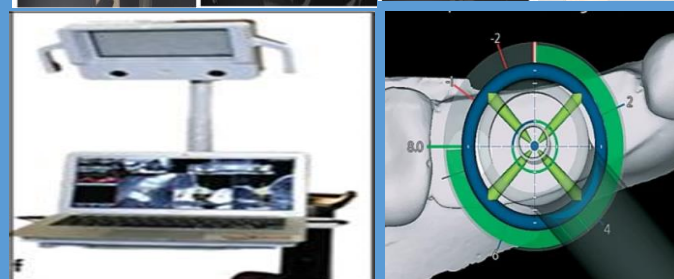
Step 2



Step 3



Step 4



Pros:

- Straight forward procedure, Reduces errors, More accurate.
- High precision minimises the possible risk of injuries to Adjacent vital anatomical structures.

- No need of customised stent.
- Faster than the freehand technique

- Flexibility given to the user

Cons :

- Expensive equipment procurement, upgrades, and device repairs.

- The CBCT scan resolution can influence virtual planning of the preparation.
- Need for a wider field of view CBCT.

- Multiple recalibrations needed during a single operation.
- Heavy and cumbersome sensors on both the handpiece and the patient, makes it uncomfortable for routine use.

Limitations:

Establishing stable reference points intraorally and matching the points with patient's actual CBCT scan.

The minute alteration in position of the patient's head would disturb the file synchronization

During viewing of the device, the user must maintain the right orientation and angle to the handpiece.

Burs utilised has to be recalibrated individually with Drill Calibrator before use

Conclusion:

- ❑ The evolution from 2-D to 3-D imaging and diagnostics allows the Endodontist to overcome the limitations.
- ❑ Dynamic Navigation is a promising technique with a high degree of predictability and a low risk of iatrogenic damage.
- ❑ Hence, quality treatment can be performed with the minimal invasiveness.