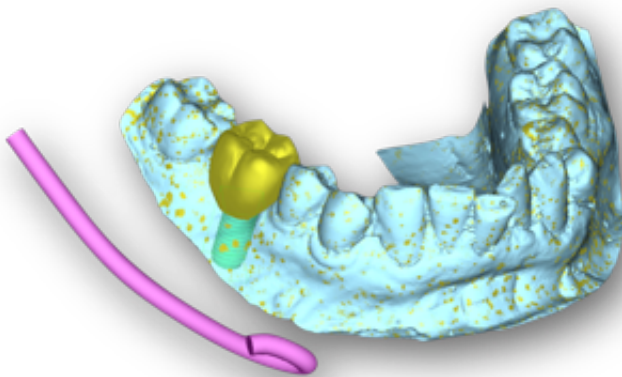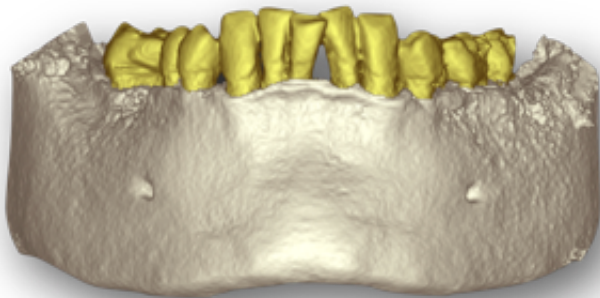**PCO-DT Protocol**

Trumergence LLC

Protocol PCO-DT: Partially Dentate / CBCT+Optical / Deskop Scanner

This is the most common protocol for setting up a CT guided implant case. Thanks to the magic of point cloud merging, there is no need for any scanning appliance whatsoever. This is the new norm for most surgical guides. Essentially, no scanning appliance is needed because the existing teeth are tasked as markers. Because there needs to be a good dispersement of markers, this technique requires that the patient have at least 3 teeth (and/or healing abutments) with an AP (Anterior-Posterior) and left-right spread of at least 20mm (i.e. almost all partially dentate cases).

Facilities / equipment needed:

- -CBCT Scanner
- -Desktop Optical Scanner (Your Dental Office or Dental Laboratory)

Items required:

For CBCT:

- 1) Cotton rolls
- 2) NO SCANNING APPLIANCE NEEDED

Clinically:

- 1) Plaster model of the arch in question.
- 2) Optional: Model of opposing arch if articulator setup is to be used for the waxup

Procedure:

- -CBCT Scan:
    - -If the patient's opposing arch has a removable prosthesis, he/she should be wearing it.
    - -Place cotton roles in the vestibule(s) adjacent to edentulous areas (this is optional, but it helps if the scan is "noisy"; helping us to merge the model based on soft tissue).
    - -Patient should bite on additional cotton rolls in the posterior quadrants. It is important that the patient NOT be in occlusion during the scan.
    - -Field of View (FOV) should be limited to the dental arch in question and extend apical to just beyond the inferior border of the orbits (maxillary scan) or inferior border (mandibular scan).
    - -Prepare CBCT san for Export to Us:
        - -Ask the CBCT technician to give/send you files in one of these two formats:
            - -Standard DICOM SET (A folder with hundreds of .DCM files, one for each slice), or
            - -Anatomage Invivo (.INV file)
- -Optical Scan (Tabletop Optical Scanner, like Dental Wings, 3Shape, etc.):
    - -Scan the unmodified model.
    - -Prepare the "Wax-Up" model:
        - -If the appropriate software is available, you can perform a virtual waxup.
        - -Otherwise, perform a physical waxup. ⚠️Important: If you are also modifying/waxing existing teeth on the cast, PLEASE make a duplicate of the master model first. And leave all the land areas intact; do not grind them off.
    - -Scan the waxed up model (or export the .STL file of the virtual waxup.
    - -Export both models to .STL files.
- - Upload:
    - -Go to our [upload page and upload the 3 files](#).