

2016 JCEG VIII Meeting Summary

Superimposition

- Mohamed Bazina presented his Master's research that has been submitted to the AJO-DO for publication. The bottom line of this research was that Dolphin superimposition and Slicer superimposition give the same result within an error margin of 0.25 mm.
- Ken Gladstone demonstrated that Dolphin is currently capable of superimposition on the cranial base for overall assessment of change, on the nasomaxillary complex for assessment of maxillary dental changes as well as localized remodeling changes in the midface. And, with some manual adjustment superimposition on the mandible can be achieved.
- Number one modification would be the ability to save these superimpositions so they could be labeled i.e. Cranial Base, Maxilla, Mandible.
- Kudos to Dolphin for implementing the averaging of 30 or more 2D cephs a la Rick Walker and Dentofacial Planner. ;)
- 2D superimposition can be done with Dolphin using customized structures but does not display more than one set of customized structures.
- topsCephMate- cephalometric package with a unique user interface and currently uses the Roth group numbers for VTO. Suggested implementation of the Bolton Standards as well as the Johnston Forecast grid or Ricketts ie. Mean change expansion as well as minimum and maximum growth.
- Combined MF Bolton Standard drawing to be sent to Dolphin and tops Software.

Registration

- Eliminate this topic for 2016 and add Emerging Technologies area. Emerging Technology application to orthodontics i.e. Smartphone capture of tooth movement Dental-Monitoring.com and Holograms.

3D Morphologic Standards

- Explore possibility of using the 3D Bolton Wire Frames for 3D DICOM volumes
- Creating an Atlas of "Normal" DICOM skulls- 13 YR M F Lea Bauserhal CWRU Resident
- Possibly use laser scans of models rather than CBCT teeth for averaging.
- Demster and Duddles 1964 jada for root morphology

IntraOral Scanning

Not much new this year. Still many players with only three compatible with Invisalign. Itero, True Definition (3M) and Cerec/Sirona. Cerec/Sirona really tightly intergrated with Dolphin (wonder why? ;))

3D Printing

- 3D printers are available using SLA technology that are capable printing at 25 micron resolution. Demo of one for 3500 USD from FormLabs called the Form 2 but material costs are high 150 usd per cartridge; Also Dan Knoch showed a 20K printer that was larger and more economical in terms of material.

Face Scanning

Captures different information compared to Cone Beams. Cannot replace. However, are useful because longitudinal studies can be done i.e. Face Base. Would be especially useful for applications that need to assess soft tissue changes. Per Johan Wisth , University of Bergen

Database of 3D CT images

- Create a registry of CBCT users University's and Private Practice.
- Explore categorical variables for search criteria