Orthodontic Treatment using Three Dimensional Model Simulation

This technology is among the first available software tools that can automatically segment teeth within the digital model. Segmentation is an essential step in orthodontic treatment because it allows the teeth to be manipulated and aligned individually.

The three dimensional model simulations require little human input because of its ability to automatically separate the gums and teeth from one another. This software allows clinicians to ensure, in a virtual setting, that the selected treatment will produce the optimal outcome.

The digital treatment planning begins with the creation of a three-dimensional digital model of the patient’s dental arches. Two-dimensional methods for producing 3D models have been used by different institutions, but the resulting segmentation is not satisfactory. This simulation software is able to automatically segment the gums from the teeth, as well as segment each individual tooth. The 3D digital model allows orthodontists to manipulate and align individual teeth, saving time and money by removing the requirement to manually segment the dental arches.

Features & Benefits
- Automatic segmentation requires minimal user input. Allows the user to remove the noise in upper jaw with a single click.
- Less time consuming and less expensive. The automatic segmentation removes the reliance on user input.
- Improves accuracy, automatically separates gums and individual teeth within digital model.
- Handles malocclusions well and provides a notable improvement over existing methods.

Technology Status
Segmentation algorithm is complete. The software tool is beta with a GUI written to facilitate testing in real-world dental models.

IP Status
Copyrighted software
This technology is licensed but may be available for sublicensing.

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