NEW DIRECTIONS IN DENTISTRY

REED'S
INTERNATIONAL
LETTER

Dear Friends

The now well-established cover article, November '88, in the Journal of the American Dental Association features the Francois Duret CAD/CAM approach to the prosthetic fabrication in dentistry with an abundant history and background for the technology.

I certainly refer to that article and encourage your absorbing it if you're at all interested in what I consider to be as revolutionary to our profession as the air-bearing handpiece and anesthesia, combined.

We've discussed this before, and in a sense it's "old hat", but in an ever-changing technology such as CAD/CAM and with the frontiers of dentistry being constantly extended, I choose to report to you the current events as they've most thoroughly been dramatized for me.

CAD/CAM RE-VISITED

HENNSON International, Chateau de Malissol, 200 Vienne France
(January 7 - 14, 1989)

The update information comes from a rare and unusual opportunity that I am presently enjoying. I'm one of two practicing American dentists joined by a significant well-known editor, Art Williams, of the Journal of Practice Administration, and Paul Rotsaert, son of Henry Rotsaert of Canada, one of the leading people in the dental laboratory industry in North America.

The four of us have been privileged to work in teams of two, rotating on two CAD/CAM instruments with the full complement of engineers along with the inventor, Francois Duret, to bring us up to speed in regard to "hands on" operation of the Duret package.

This grueling five-day week, dawn to dark, is proving to be a most remarkable privilege. We have a committed format and the sessions of the program are tightly scheduled. After being carefully oriented by Francois Duret and trooped through the entire laboratory facility at the Chateau, we immediately buckled down to the hands on procedures.

We used both "in the mouth" opportunities and our own cases from our own practice to move through the process to finalization.

I'm impressed with the many years of brilliant research that has gone into this project and am pleased to report that even a person such as myself can follow through the entire process and satisfactorily complete prosthetic excellence without an impression, without a temporary and with remarkable accuracy.

FEBRUARY 1989

entire material allows the coronal distribution of force that resists lateral and vertical sheer, 45 degrees, and 90 degree force distributions.

There is a distance of 35–50 microns between these fiber layers and the forces to test them are dissipated as they are transmitted through the material, well within the limits of intra–oral loading. The material itself is laboratory fabricated, electronically bombarded for over six hours to completely assure saturated molecular maturity and material stabilization.

Much of the crystalline mineral structure of tooth and collagen binding provided by nature have been replicated following extensive studies of the best example we have, that of human dentin and enamel.

I'm impressed with the outcome.

"Expert systems" have philosophically been "used "to generate the technology and to test it actively. Inlays have been seated that have been fabricated out of Dicor and crowns of many common known materials such as Dicor have been fabricated.

Various metals have been used, the potential for creating frameworks for traditional technology and for Branemark implant systems also exists.

During these processes the similarity to current three–dimensional prosthetic fabrication is noteworthy. At any time a zoom can be made to look at the condition of the fit of the margin or any section or slice of the preparation and the crown. Marginal adaptivity, the global expansion of the die material for cement space, the interface with the opposing occlusion. . . all can be zoomed to large screen and can be sectioned through and through in any plane for study.

Views can be recalled, references can be stored, magnifications can be studied and games can be played with multiple lateral menus.

Further news is that there will be a CAD/CAM set up from Lyon, France in Chicago. . . physically. . . for the Chicago MidWinter. This is obviously a very difficult thing to display and as a result of this difficulty, three days prior to and Sunday, Monday and Tuesday of the Midwinter, an invitational arrangement has been created for 400 persons from around the country to, in small groups, enjoy the start to finish process of this superlative experience.

I'll be demonstrating for six groups, as will the other three gentlemen, providing an opportunity for those invited to view this process. Each session is scheduled for 90 minutes, which will provide an opportunity to introduce, to initiate, to demonstrate, and to finalize so that each of the three major divisions of the CAD/CAM process can be demonstrated.

The patterns and procedures will be accomplished on live cases from our offices and should provide an uncommon opportunity. Many of you have been invited. It's my hope that you can be there at the appointed hour. I look forward to seeing you there, and/or to speaking with you personally in regard to CAD/CAM.

On Sunday, a closed circuit presentation on large theater screens will be available for the general attendance. Francois Duret will do a two–hour full demonstration broadcast from an "off campus" location. This will provide one