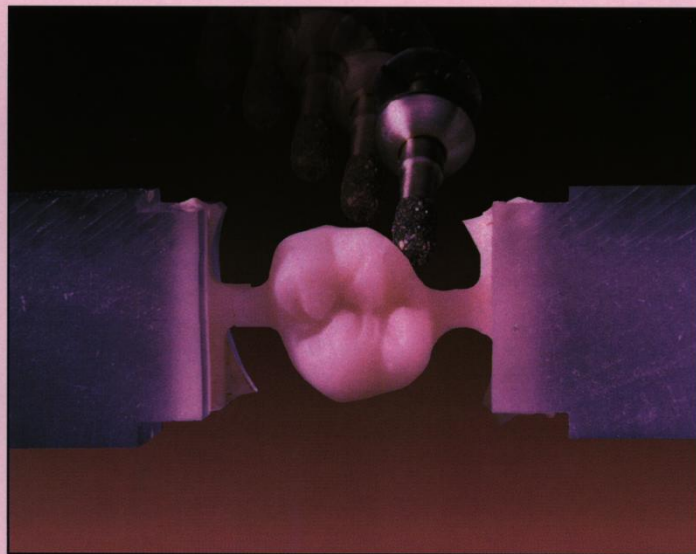
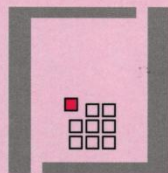


# COMPUTER-AIDED MANUFACTURE OF DENTAL RESTORATIONS



THE SOPHA-CADCAM SYSTEM



s o p h a b i o c o n c e p t

# AFTER 10 YEARS WITH SOPHA-CADCAM, SOPHA TO THE PURSUIT

**S**opha-CADCAM is a computer-aided system developed by sophia bioconcept for the design and fabrication of dental restorations based on the DURET process.

It unites the most recent technologies in a user-friendly system which adapts itself perfectly to the needs of both clinicians and dental technicians alike. This open-ended system is the first step toward the computer-based dental office and dental laboratory of tomorrow.

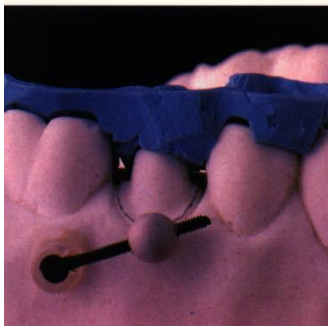
sopha-CADCAM enables fully automated fabrication of dental restorations such as posterior and anterior crowns and copings, in ceramic materials.

Its high degree of automation reduces production time and hence costs:

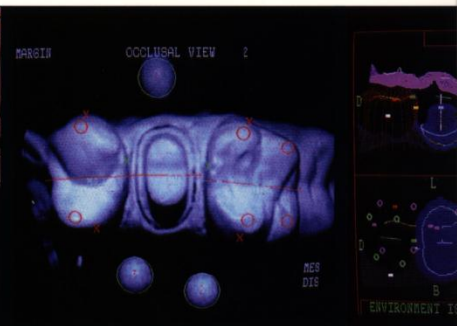
- 30 minutes operator time to obtain a crown in under 2 hours,
- 8 crowns fabricated per 8-hour working day.

# USING SOPHA-C

**OPTICAST**  
 Optical "impression"  
 of the preparation  
 (operator time: 10 min)  
 start  
**\*9:00 AM**



Preparing the model



Defining the environment

Acquisition c

**In its standard version, sopho-CADCAM consists of 3 modules :**

■ **OPTICAST**

This module acquires three-dimensional images of the prepared tooth and its environment, and then adds the definition of the characteristic elements (margin, contact points, grooves, cusps, etc.).

■ **BIOCAD**

The workstation where the restoration is designed using a three-dimensional computer model derived from the OPTICAST data.

■ **DMS**

(Dental Milling System)

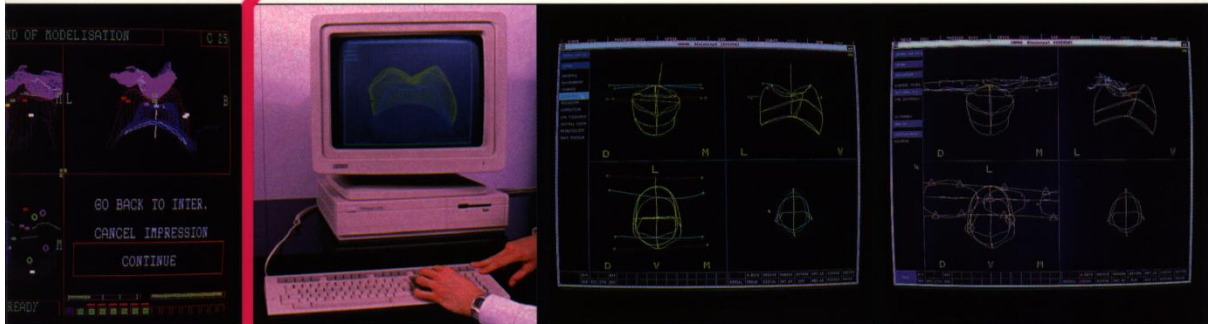
The precision milling machine where the ceramic restoration designed is fabricated.

*sopho-CADCAM comprises a whole range of software programs for each type of restoration fabricated. The system is complete with a start-up kit of ceramic preforms, tools and lubricant, as well as the technical documentation.*

*Depending on the characteristics of the installation site, several OPTICAST's or DMS's can be connected to the BIOCAD workstation.*

# CADCAM, YOU CAN PRODUCE 8 CERAMIC

**BIOCAD**  
Computer-aided  
restoration design  
(operator time: 15 min) \* **9:35 AM**



complete

Adaptation to the environment

Occluding

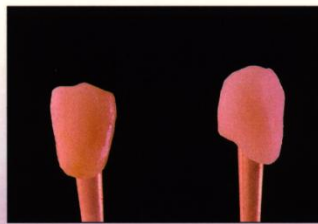
## THE DIFFERENT RESTORATIONS FABRICATED

sopha-CADCAM is equipped with a program library which at present enables the fabrication of anterior and posterior crowns as well as copings. Programs are being developed for other types of restorations.

New software will be available for these in the very near future, in particular the software for the fabrication of inlays.

The fabricated restorations are totally adapted to the preparation and its user-defined environment. Creation of the occlusion is fully automated.

The marginal fit of the restoration is of the order of 50  $\mu\text{m}$ .



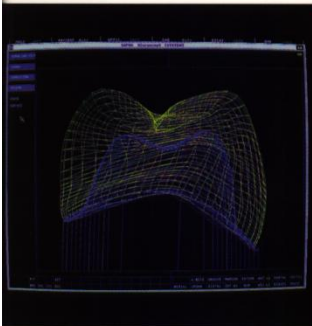
Anterior crown



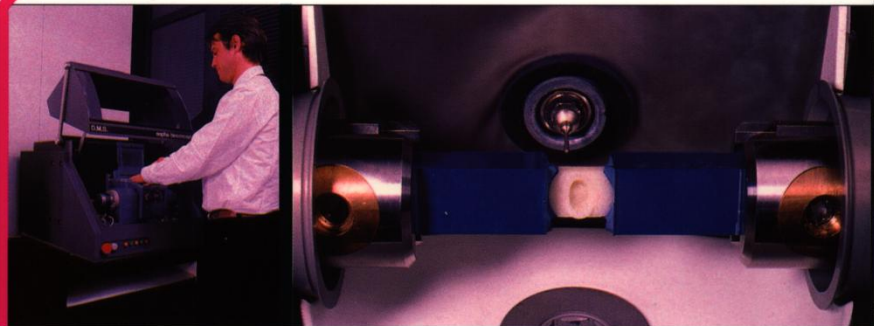
Posterior crown

# RESTORATIONS IN 4 HOURS OPERATOR T

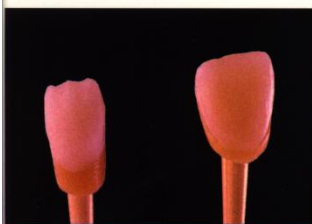
**DMS**  
Automated restoration \*9:50 AM  
milling (operator time: 5 min)



Crown ready for fabrication



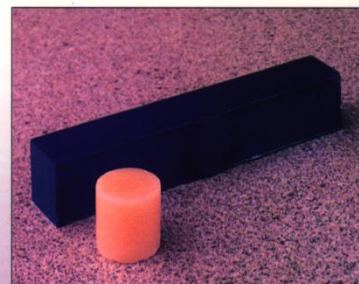
Milling in progress



Coping

## THE CERAMIC PREFORMS SUPPLIED BY S

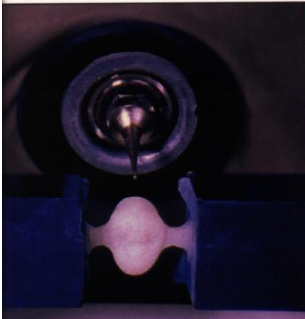
In response to the long cherished wish of clinicians and patients alike for metal free esthetically-appealing restorations, sophia bioconcept allows the use of millable ceramic blanks, which meet the most stringent requirements in biocompatibility and hardness. These ceramic blanks are tested and approved by sophia bioconcept.



**ME!**

**\* 10:55 AM**  
finish

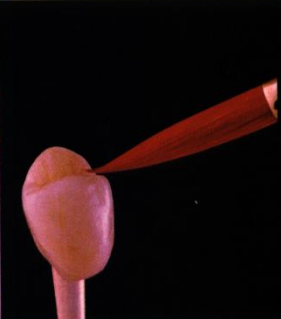
\* All times are approximate



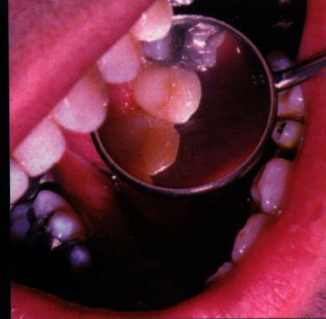
Milling complete



Verification on the model



Characterizing and finishing



Placing the restoration

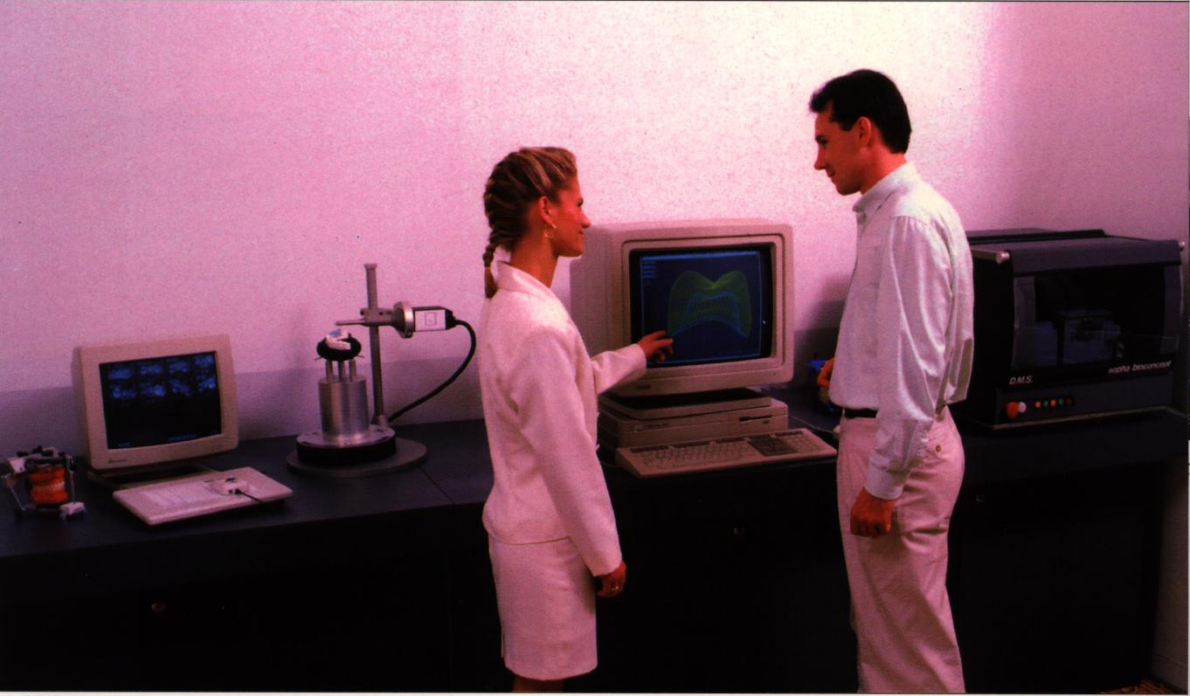
## **SOPHA BIOCONCEPT**

The preforms are produced from ceramic cores of a quality unattainable by standard industrial processes. Standard dental shades are available. The characterization and bonding techniques remain unchanged.

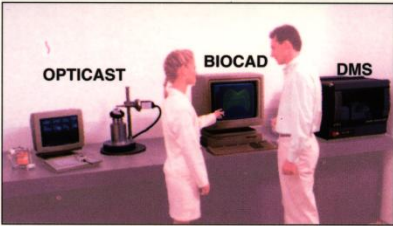
## **TRAINING AND MAINTENANCE**

The technical and clinical training of sophia-CADCAM users is carried out by sophia bioconcept's team of dental experts, and the installation and maintenance by its Customer Service department.

# OF DENTAL CAD-CAM... BIOCONCEPT PUTS INNOVATION FOR PERFECTION



*sopha-CADCAM  
in its base configuration*





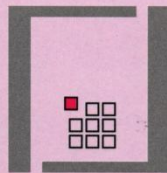
### THE SOPHA GROUP

The sophia group, founded in 1975, is composed of companies working internationally in the health care field. The most notable of them are:

- sophia développement and its subsidiary hospitex, specialized in health engineering systems,
- sophia conseil santé, dedicated to the expertise and management of medical institutions,
- sophia eurotubes services, who service and renovate X-ray tubes and distribute radiotherapy equipment,
- and sophia médical, the world's third largest manufacturer of nuclear medicine equipment, and its subsidiary, magnetech, specialized in magnetic resonance imaging.

At the present day, the sophia group employs 500 people in 15 countries worldwide, with 90 % of its sales figure achieved in the export market.

sophia bioconcept was created in 1991 by the sophia group to undertake the development of dental CAD-CAM.



s o p h a b i o c o n c e p t

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