Teledentistry – Online Multimedia in Dentistry

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TELEDENTISTRY

Tele**dentistr**y is a relatively new field that combines **telecommunication** technology and **dental** care

CAPABILITIES OF MODERN DENTAL EQUIPEMENT

- intraoral cameras
- chair side visualizion aids

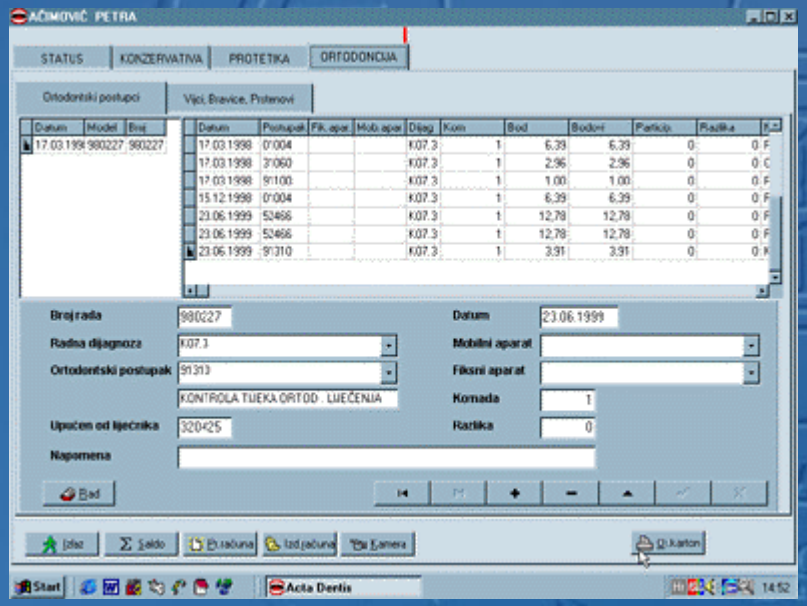
Computerized diagnostics

- EMG units
- axiography
- digitalized morphologic assesment (3D scanners, CAD/CAM)

CURRENT DEVELOPMENTS IN FIELD OF TELEDENTISTRY

- Institute of Learning and Research Technology, University of Bristol, UK
- University of California, School of Dentistry, USA
- Department of Preventive Dentistry, Graduate School of Dentistry, Osaka University, Suita, Japan
- University of Texas-Houston Health Science Center, Huston, USA
- York Health Economics Consortium, University of York, UK
- Dental Health Services Research Unit, University of Dundee, Scotland, UK
- School of Dentistry, University of Louisville, Louisville USA

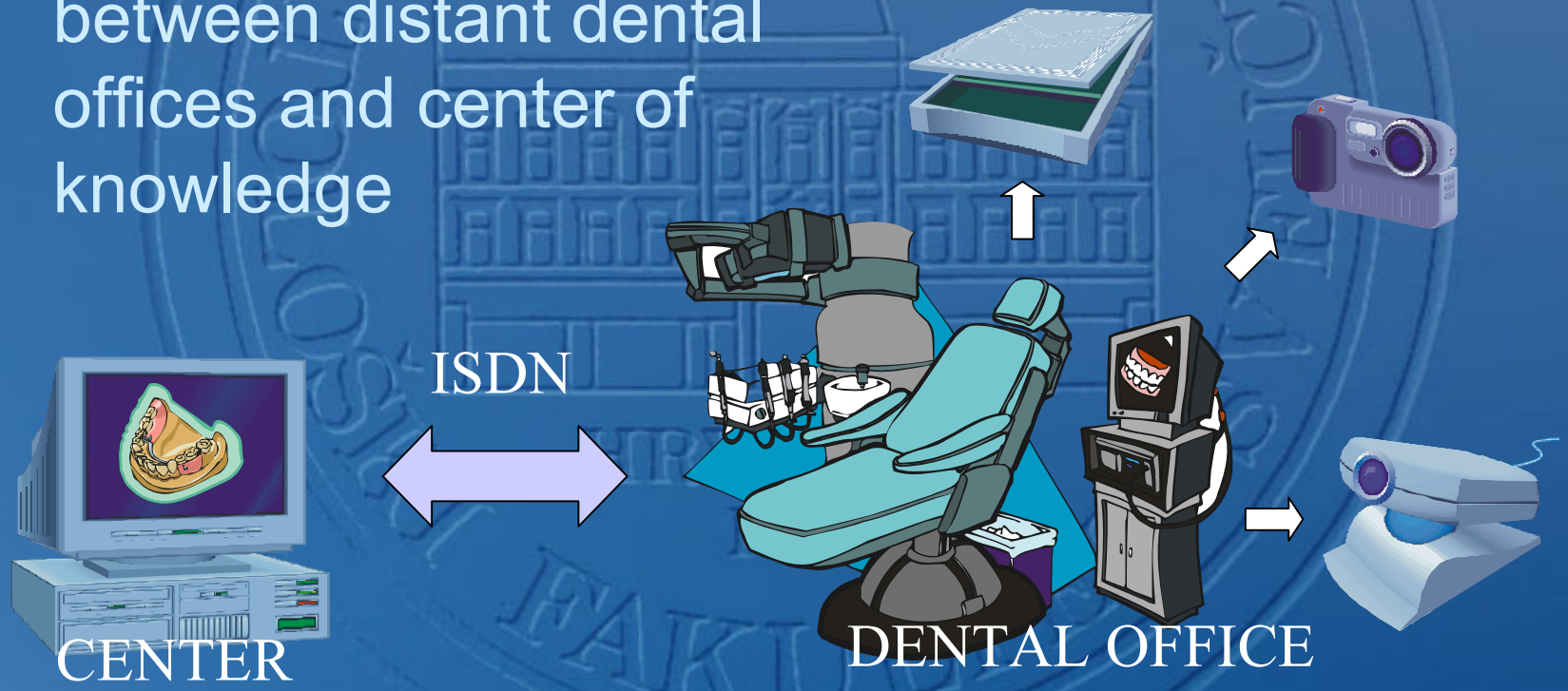
Initialization of Teledentistry system



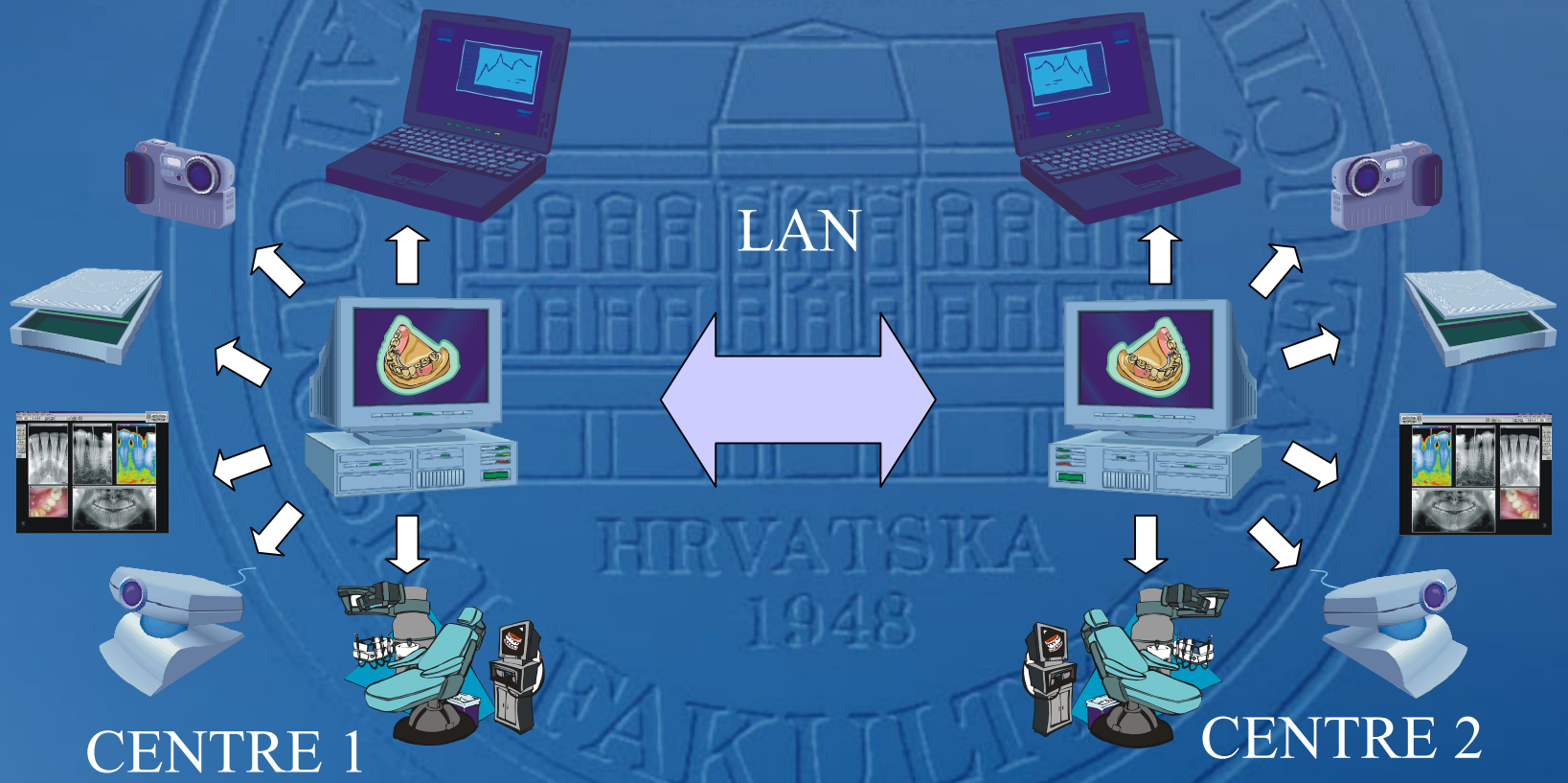
- Five patients were examined
- Diagnostic procedures
  - medical histories
  - X-ray images
  - EMG recording and axiography recording
- Equipment & software
  - Netmeeting software
  - intraoral and extraoral camera
  - Transparency scanner

AXIS I

- For communication between distant dental offices and center of knowledge



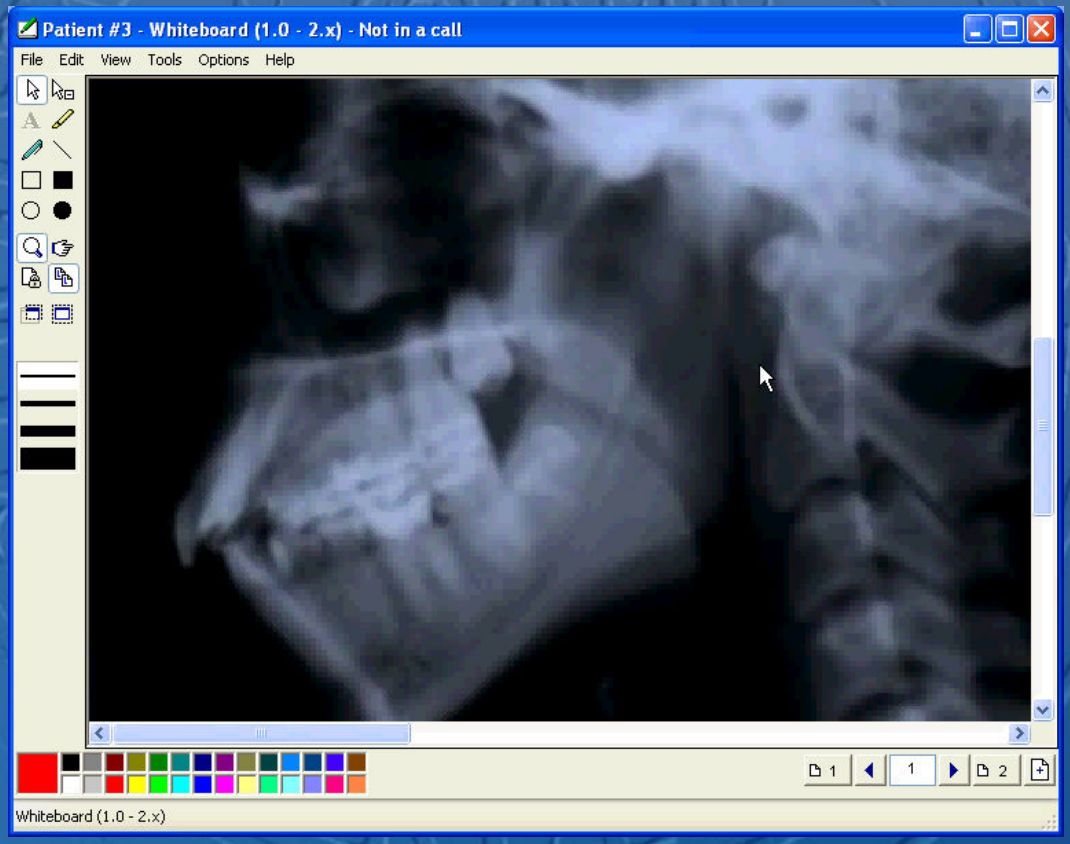
AXIS II



Online radiographic analysis

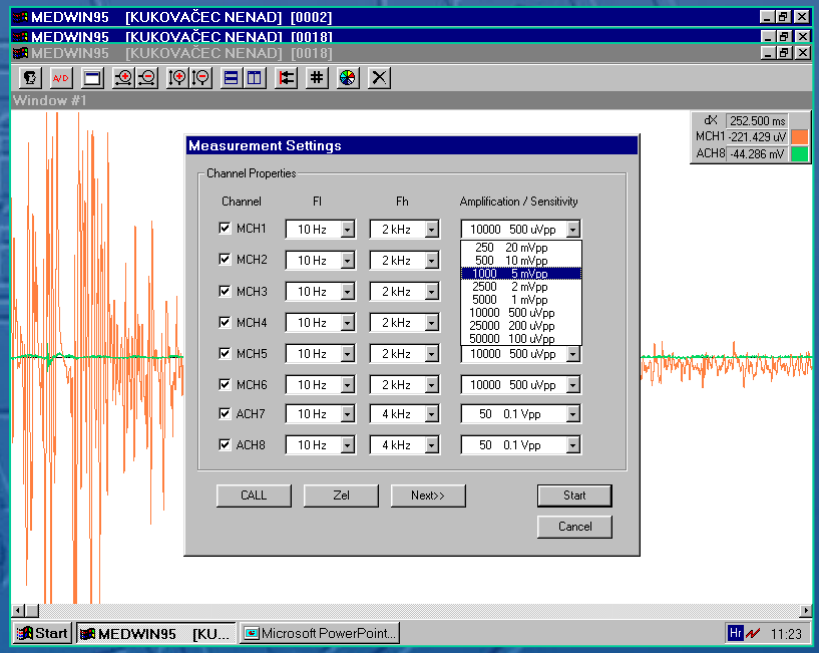
- **Digital images** offer huge advantages to dentistry in terms of the potential for :
  - lower exposure to patients,
  - absence of darkroom or processing problems,
  - convenience of image enhancement techniques and
  - capacity for **remote** tele**dentist**ry movie
- As technology continues to improve they may ultimately replace film as the medium of choice for **dental imaging.**

Online radiographic analysis

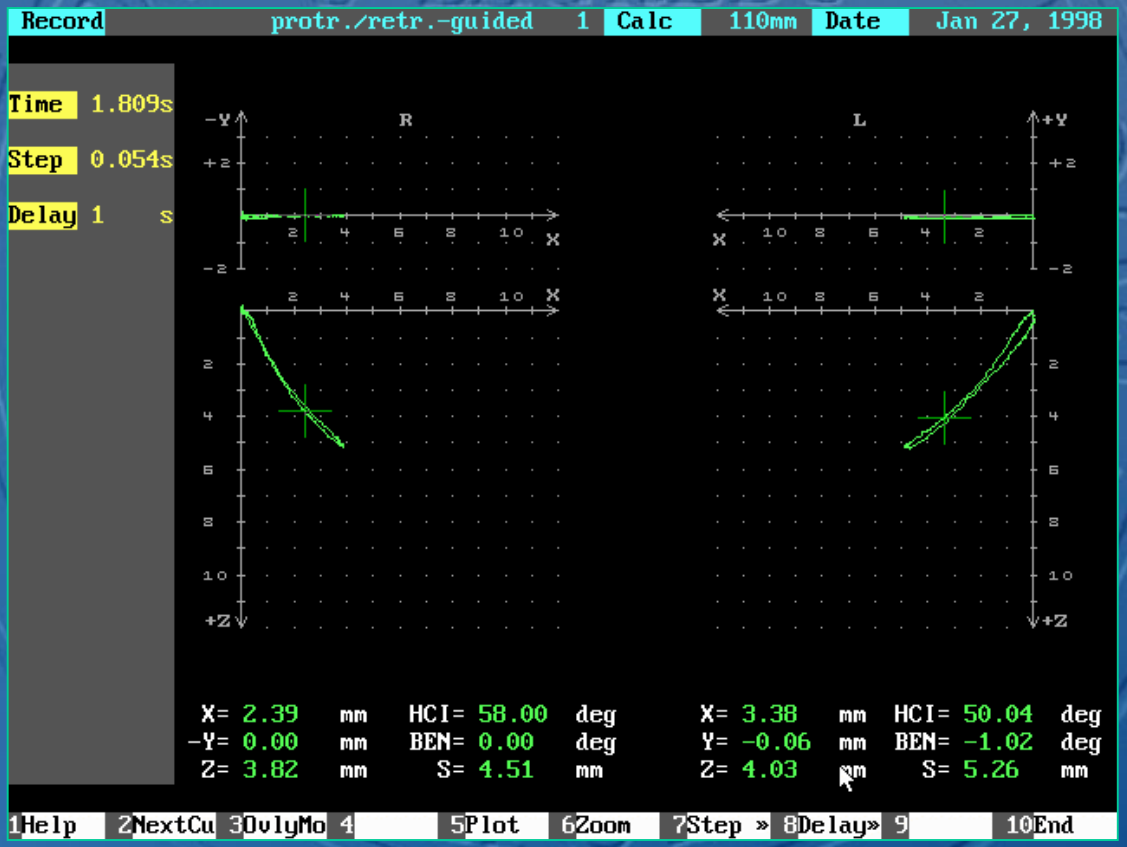


Online electromyography analysis

- Electromyography (EMG) is used in dentistry to assess the relationship between the activity of craniomandibular muscles during different functional and border movements and occlusal conditions



Online axiographic analysis



Online intraoral diagnostics

Online extraoral image analysis

- Picture analysis

Clinical trial

Two teams

Diagnostic data

Password protected web site

Coincidence of diagnosis

Conclusions

- AXIS I
  - Efficient
  - cost effective
  - highly beneficial for quality of dental care
- AXIS II
  - special software should be utilized and developed
  - standardization of data formats and diagnostic signs

Teledentistry & Practice Based Dentistry

Practice Based Dentistry (PBD) - supply advanced students and newly graduated dentists with the diagnostic specialties of some unusual cases, offering through teledentistry insight in dental diagnosis, prognosis and therapy.