

Beginning of Digital Dental Restoration: Scanning and Designing



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The workflow of digital dental restoration composed of three steps: 'image acquisition' step for taking images of intraoral structures, 'CAD, Computer-Aided Design' step of the retrieval of acquired images through the computer, and 'CAM, Computer-Aided Manufacture' step for manufacturing the digital data by machining the appropriate material.

Digital restorative dentistry is rapidly being incorporated into daily dental practice, primarily because advances in intraoral scanners enable the first stage of digital workflow to be applied directly to the patient's mouth. In the meantime, intraoral scanners have been developed in many ways, and the latest generation of intraoral scanners are continuously being developed and useful in practice, including miniaturization, wireless, and improved user interfaces. Accordingly, the trend in intraoral scanner technology is to reduce the inconvenience felt by patients and increase the clinical efficiency of dentists.

The benefits of intraoral scan and CAD/CAM procedures over traditional manufacturing procedures are improved work efficiency, simple impression procedure without using bulky material, online communication with laboratory technicians, and so on.

This lecture will outline considerations for intraoral scanners, the beginning of digital dental rehabilitation, and introduce some parts of the design for digital restorations and models.