

Figure 5: Bitewing x-ray, original data

examine and provide an accessible space between the contact points and the wedge (fig. 3). The applicator in the approximal tray is a small plastic tip with a foil bag that can be rotated 360°. The foil bag is perforated on one side to ensure that the material is dispensed only on one side (fig. 4). For ease of handling, the applicator has a green and a white side. The material dispenses only on the green side. With the applicators, the HCl etching gel and the infiltrant are applied to the tooth surface. Applicator and syringes are connected according to the Luerlock principle. The fluid materials,

important information. Bitewing radiographs required for caries diagnosis exhibit certain quality variations, both digital and analog. These can easily be improved with digital image processing by changing the gamma, contrast, or brightness settings. Furthermore, there are application-specific aids, so-called filters that, if enabled, can highlight targeted structures with a mouse click to bring them out further.

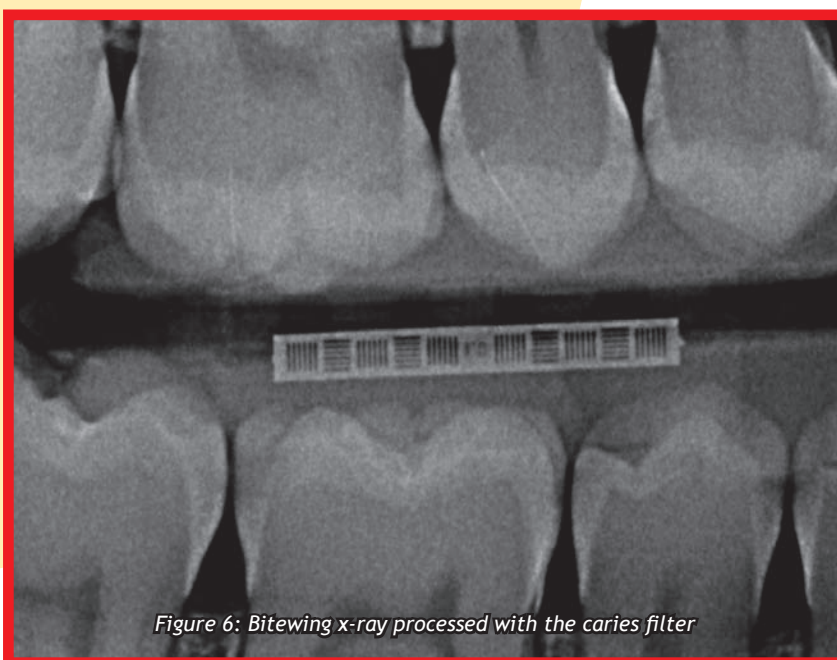


Figure 6: Bitewing x-ray processed with the caries filter

HCl gel, ethanol, and infiltrant, are prefilled in syringes, the plungers of which can be turned and moved forward by means of a mechanism that controls the flow of the fluid material from the syringe.

Treatment objective

The treatment objective is to fill enamel regions demineralised by caries with a light-curing composite. For this process, the removal of the pseudo-intact surface layer on the enamel is crucial since it is too dense and cannot be penetrated by the composite. Because of frequently asked questions it should be emphasised once again that the infiltration treatment is limited to class E1, E2, and D1 defects only and should not be regarded as preventive measure for defect-free areas.

Radiodiagnostics

Most digital systems allow fairly effortless image processing of x-rays to emphasise important information. Bitewing radiographs required for caries diagnosis exhibit certain quality variations, both digital and analog. These can easily be improved with digital image processing by changing the gamma, contrast, or brightness settings. Furthermore, there are application-specific aids, so-called filters that, if enabled, can highlight targeted structures with a mouse click to bring them out further.

The x-ray in fig. 5 shows the original data of a digital bitewing image. After using one of the caries filters included in the software, the lesions are clearly diagnosable (fig. 6).

The success of a therapy can only be measured against the documented initial situation as reference. The documentation of the initial situation is the original bitewing image on which findings, diagnosis, and therapy decision are based. A second radiograph taken for a follow-up exam must be made with the same ray path.

Due to the infiltrant's excellent penetration characteristics, it is not possible to obtain good radiopaqueness at the same time. In order to document enamel defects, however, especially in consideration of a change of dentist, the patient receives a patient card (fig. 7) in which the treated teeth and their respective radiological