

www.orthocad.com. Alginate impressions, plus a wax bite, should be sent to the company in America, who will then send the digital study models back to the clinician's computer within 7–10 days.

Digital study models can be viewed from any angle, turned through 360° in all planes of space and even opened to allow upper and lower models to be viewed separately. Measurements can be carried out to allow space analyses to be conducted (Figure 9). The digital study models can be turned back into a genuine set of study models. This is somewhat expensive, running at \$400–\$600 per case; however, the cost is expected to reduce significantly within the next 2–3 years, and the need to

convert the digital study models back into a genuine set of study models may occur only rarely, perhaps in litigation cases.

**SUMMARY**

Digital technology has revolutionized the storage and handling of orthodontic records. Digital photographs give the unique opportunity to learn to produce very high-quality extra-oral and intra-oral photographs. The digital technology also allows an enormous amount of leeway in technique as, with the current software available, manipulation of the images is very easy. Digital radiographs are instantly viewable and, combined

with on-screen digitization, make the entire process much less tedious. Digital study models are undoubtedly going to become very useful in the future.

**REFERENCES**

1. Chen YJ, Chen SK, Chang HF, Chen KC. Comparison of landmark identification in traditional versus computer-aided digital cephalometry. *Angle Orthod* 2000; **70**: 387–392.
2. Conover GL, Hildebolt CF, Yokoyama-Crothers N. Comparison of linear measurements made from storage phosphor and dental radiographs. *Dentomaxillofac Radiol* 1996; **25**: 268–273.
3. Geelen W, Wenzel A, Gotfredsen E, Kruger M, Hansson LG. Reproducibility of cephalometric landmarks on conventional film, hardcopy, and monitor-displayed images obtained by the storage phosphor technique. *Eur J Orthod* 1998; **20**: 331–340.

**ABSTRACT**

**CARIES STILL NUMBER ONE**

The Reasons for the Extraction of Various Tooth Types in Scotland: A 15-year Follow-up. L.K. McCaul, W.M.M. Jenkins and E.J. Kay. *Journal of Dentistry* 2001; **29**: 401–407.

This study was a follow-up of a similar study performed previously in 1984 to determine the reasons for tooth

extraction in Scotland. A questionnaire-based study was used and circulated to 20% of Scottish GPs to be completed over the course of one week. In an admirable response rate of 83%, the authors reported that 25% fewer teeth were extracted per patient than in 1984. The most frequently extracted teeth were upper premolars followed by upper third molars, then lower first and second molars. Caries was the main cause for extraction of teeth, followed by periodontal disease, then orthodontics.

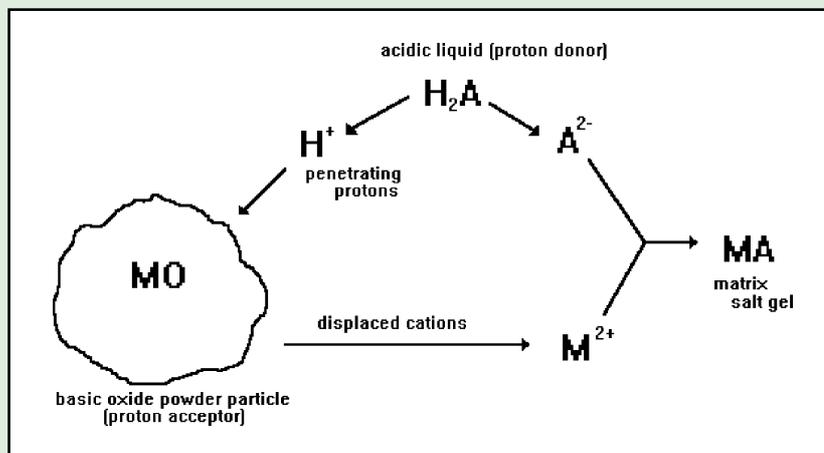
Indeed, in the under 21 age group of patients, premolars were more frequently extracted than molars, compared to 1984; this was accounted for by the increase in orthodontic treatment.

The results of the study demonstrated a changing pattern of dental status in Scottish patients, echoing the results of the 1998 Adult Dental Health Survey.

**Richard Oliver**  
University Dental Hospital of Manchester

**ERRATUM**

In the article by G.J.P.Fleming, F.J.T.Burke, D.J.Watson and F.J.Owen: **Materials for Restoration of Primary Teeth: 1. Conventional Materials and Early Glass Ionomers** (*Dent Update* 2001; **28**: 486–491), Figure 1 should be as follows:



**Figure 1.** The setting reaction in acid-base dental cement: hydrogen ions from the liquid penetrate into the powder particles, liberating metal ions that migrate into the liquid and combine with the anion to form the salt-like gel matrix.