European dental imaging equipment market in a state of change

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The market for dental imaging equipment in Europe is quite saturated and has not experienced any significant growth over the past several years. However, in recent years cone beam computed tomography (CBCT) scanners have increasingly begun incorporating 2-D capabilities into their systems, as well as offering a broad range of fields of view to provide greater flexibility. Clinical applications of CBCT systems include implant planning, root configuration, sinus augmentation, root-canal procedures and bony defect detection. As several of these applications are expected to increase in number, the demand and need for CBCT scanners will continue to grow considerably throughout Europe over the next decade.

Intraoral X-ray imaging device market in transition

Analogous technology is a thing of the past and while it is still declining, the transition away from these types of systems has already taken place, resulting in a more stable market situation. Companies now offer two digital alternatives: photostimulable phosphor (PSP) systems and digital sensors. Larger clinics with several rooms, especially those who only recently made the switch to digital technology, typically opt for PSP systems due to the affordability of PSP plates and the similarity in equipment handling compared to conventional analogue film. In countries such as France and Italy, which are largely dominated by smaller clinics with only a single examination room, dentists often opt to use digital sensors instead.

Although the split between PSP systems and digital sensors is quite even, the PSP market has shown strong signs of growth, particularly in countries that were traditionally dominated by sensors, such as Spain, and will continue to be one of the main drivers in a rather stagnant market for imaging equipment as a whole. Part of this trend can be attributed to the fact that the thickness and rigidity of sensors are a greater nuisance when it comes to patient comfort, as well as the frailness of these sensors compared to PSP scanners. Furthermore, digital sensors are much more expensive than PSP scanners, and include parts that are prone to wear, such as cords that can be easily damaged, which further argues the case to switch to PSP systems.

2-D extraoral X-ray imaging vs 3-D CBCT scanners

Extraoral X-ray imaging systems are predominantly used for viewing a patient’s teeth relative to his or her jaw and skull. They aid in monitoring impacted teeth, temporomandibular joint disorder, and possible tumours in and around the intraoral cavity. These specific uses of extraoral X-ray systems are limited to procedures performed by orthodontists, prosthodontists and oral surgeons, resulting in a relatively small market. Most professionals prefer working with a CBCT scanner, which has 3-D imaging capabilities and can perform at a much greater capacity than traditional 2-D extraoral imaging systems, but are limited by the high acquisition cost of these systems. Recently, however, not only have prices of CBCT scanners dropped significantly, but it is now standard for
these systems to also incorporate both panoramic and cephalometric capabilities, resulting in so-called ‘combo-units’, which has resulted in a drastic change in the market. The popularity of these CBCT ‘combo-units’ has increased significantly in recent years and is expected to continue outpacing all other market segments in terms of growth.

Consequently, the outlook of the extraoral X-ray system market in Europe is negative. Already being a replacement market without much innovation, the demand for traditional 2-D systems is on the decline as consumers continue to opt for technologically superior CBCT scanners. Manufacturers have also recognised this, and as such have shifted their focus to capitalise on this trend, investing in producing combo 2-D and 3-D units with the option for future upgrades, greatly improving the marketability of these systems.

**Analysis of the current situation of CBCT scanners**

CBCT scanners are extremely efficient machines that are capable of performing a quick and non-invasive scan, resulting in a high level of patient comfort. It is also possible to instantly show the patient a 3-D image of their jaw and teeth structure, making it easier for dental professionals using these scanners to convince patients regarding necessary treatments. However, the biggest advantage of CBCT scanners is their low cost relative to traditional CT systems found in hospitals. While CBCT scanners are quite a bit more expensive than other dental imaging equipment, they are a much more affordable alternative for capturing 3-D images of a patient’s jaw compared to past methods.

In the European market, sales of CBCT systems have increased considerably, with growth rates surpassing that of nearly all other dental imaging devices. This will most likely continue to be the case throughout the next several years as the technology is constantly improving and prices are dropping. Although most units now offer a variety of field of views (FOVs), the most popular choice continues to be 8 cm x 8 cm, as this size is sufficient to capture the complete maxilla or mandible in one image. Anything above this size has a much more niche usage and typically comes at a greater cost, thus dentists opting to purchase a CBCT scanner are less likely to be persuaded by anything larger, as it is more of a luxury than a necessity. As such, all of the major competitors, including Carestream, Planmeca, Sirona, Danaher Group, Vatech, and Cefla Group, have multiple systems with this size already incorporated into their product line. Today, smaller FOV (sizes smaller than 8 x 8) scanners have essentially all been consolidated with medium FOV scanners, and large FOV scanners are extremely expensive and represent only a very minor percentage of the market.

**Final thoughts**

All in all, the market for dental imaging equipment in Europe is relatively static in terms of growth, but it is in a state of transition. Companies are continuously improving the technology in their products, and the stiff competition is placing intense pressures on prices. Consequently, a growing demand for CBCT scanners is neutered by these falling prices, and in the end, the companies that will be the most successful are the ones who provide the greatest value with their products. The intraoral X-ray imaging sector has almost completely transitioned into a digital market, but is now split between digital sensors and PSP scanners. With new entrants in various segments of the market, the future of this market seems promising and exciting, with many new opportunities on the horizon._

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