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Optimization of the Dental Direct Digital Imaging by Applying the Self-Recognition Technology

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Abstract : This paper is intended to introduce the technology to solve some of the deficiencies of the direct digital radiology. Nowadays, digital radiology is the latest progression in dental imaging, which has become an essential part of dentistry. There are two main parts of the direct digital radiology comprised of an intraoral X-ray machine and a sensor (digital image receptor). The dentists and the dental nurses experience afflictions during the taking image process by the direct digital X-ray machine. For instance, sometimes they need to readjust the sensor in the mouth of the patient to take the X-ray image again due to the low quality of that. Another problem is, the position of the sensor may move in the mouth of the patient and it triggers off an inappropriate image for the dentists. It means that it is a time-consuming process for dentists or dental nurses. On the other hand, taking several the X-ray images brings some problems for the patient such as being harmful to their health and feeling pain in their mouth due to the pressure of the sensor to the jaw. The author provides a technology to solve the above-mentioned issues that is called “Self-Recognition Direct Digital Radiology” (SDDR). This technology is based on the principle that the intraoral X-ray machine is capable to diagnose the location of the sensor in the mouth of the patient automatically. In addition, to solve the aforementioned problems, SDDR technology brings out fewer environmental impacts in comparison to the previous version.

Keywords : Dental direct digital imaging, digital image receptor, digital x-ray machine, and environmental impacts
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