情報電子工学科工学科 論文発表

題名	A Braking System of Instruments for Dental Treatments in Case of Earthquake
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概要	Many earthquakes occur in Japan in comparison with other countries. In fact, many residents and businesses were seriously damaged due to Large-Scale-Earthquakes such as the Great East Japan Earthquake in 2011 and Kumamoto earthquake in 2016. Medical institutions were also no exception. According to dental care institutions, there are possibilities that earthquakes interfered doctor's hands, resulting in hurting a patient's mouth with a tip of dental handpieces: instruments for dental treatment. Some patients have concerns over earthquakes during their dental treatments. In order to protect patients' mouth from these accidents, the system of dental handpieces was developed in the study that can stop the rotation of the drill at the tip of dental handpieces simultaneously with the reception of the Earthquake Early Warning (warnings issued when earthquakes occur). As a result, the program was created that can open and close a solenoid valve using Twitter or EEWEWS-2B; IC for receiving the Earthquake Early Warning. The drill rotation of the dental handpieces can be stopped by shutting off the flow of high-pressure air from the air compressor with the solenoid valve.
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