CATEGORIZATION OF ANEASTHESIOLOGISTS THINKING REPRESENTED BY ARTIFICIAL INTELLIGENCE AND COMPARISON OF EACH CATEGORY. ( A COMPUTER CONTROL SYSTEM OF APPLYING ANEASTHESIA USING FUZZY LOGIC FOR MEDICAL OPERATION. )

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<Abstract>
Medicine is not always an exact science. Previously this factor made the use of automatic control with a computer very difficult. But, if we can utilize the advantage of fuzzy logic we can use a computer for automatic control in this field. Fuzzy logic can be very beneficial in this field if it enables us to use computers. This system can replicate the following method used by the professional anesthesiologists. Presently, the doctor looks at the blood pressure and changes in systolic blood pressure to determine the amount of medicine to administer to the patient. Then the doctor uses a fuzzy way of thinking. He observes the rise in blood pressure and using a type of fuzzy thinking he adjusts the dosage of medicine that the patient receives.

<Method>
First, we use the data gathered from professional anesthesiologists to construct a membership set of variables. We then use this membership set to create fuzzy logic reasoning
and install in a laptop computer. A separate measuring device inputs blood pressure measurements automatically. The computer then automatically adjusts and administers the correct dosage of anesthesia. We can try to control the amount of operation time using this system.

<Results>

1. We traced the past experience of anesthesiologists charts in order to attempt simulation. We are able to achieve similar results to the actual cases using the computer. 2. We can successfully simulate a particular doctor's actual case results using the data from his records. However, when we combine this doctor's actual case with another doctor's thinking the success rate of the simulation falls. 3. We can successfully use this system during the operation to control blood pressure for actual patients.