

## ABSTRACT

*Butane is one type of gas that has many benefits in daily life. Butane is one component of LPG that is combustible and often used by people as a fuel for domestic purposes such as cooking. In addition butane gas is also widely used in industry as a support in the production process. The more the extent of the use of butane gas in Indonesian society, the possibility of a gas leak and cause a fire could occur. In this thesis, we built a prototype system that can perform mapping of butane gas leaks using a sensor array. The sensor array is a collection of nodes that contains wemos D1 mini and MQ-6 gas sensor, which will be installed at various points in a room. More sensors used means more accurate in detecting the gas leak in the room.*

*If there is a gas leak, then the node will detect the gas and sent to the Internet through a wireless network. Data from the node to be processed and will bring up the mapping images of gas leaks. From the mapping ,it can determine the source of the leak and the area of distribution of a gas leak. Expectation of sytem is an early monitoring of gas leaks that can do a precautions against fire more efficiently.*

**Keywords :** *gas leak, sensor array, node, mapping.*