

## **Analisis Audio Forensik dengan Metode *Voice Recognition***

**Amhar Hadikusumo<sup>1</sup>, Niken Dwi Wahyu Cahyani<sup>2</sup>, Hendy Irawan<sup>3</sup>**

<sup>1,2,3</sup>Fakultas Informatika, Universitas Telkom, Bandung

<sup>1</sup>ahatar@students.telkomuniversity.ac.id,

<sup>2</sup>nikencahyani@telkomuniversity.ac.id, <sup>3</sup>hendyirawan@telkomuniversity.ac.id

---

### **Abstract**

Voice recognition is very important in audio forensics to support investigations in analyzing cases in court. Many research have done this technique with comparative methods to identify voice, but there is always a problem with the noise that occurs when recording sound. In this research, a voice recognition system based on voice components is used for audio forensics purposes and tested for noise levels. The process of collecting data amount of 200 voice recordings and the data is divided into two processes. First, through the process of audio enhancement and without audio enhancement. Then an analysis of each process was performed based on voice components that is pitch and formant. The identification of voice record data on the pitch is tested by comparing the difference in the median pitch value, average pitch value, standard deviation value and on the formant using a one-way ANOVA test. Then from the test results, the accuracy of each component voice parameters is sought. The test results get 69% pitch accuracy and 84% formant through the enhancement process, while 52% pitch accuracy and 73% formant without the enhancement process. The merging of data between the sound component parameters is done to produce more valid data in increasing confidence in the results of the data with an accuracy value of 76.5% through the enhancement process and 62.5% without enhancement.

**Keywords:** voice recognition, enhancement, audio, forensics,

---