

## **ABSTRACT**

In the context of monitoring and controlling firearms, especially individual firearms, the standard procedures applied in military institutions are very strict, especially in procedures for taking, using and returning process from/to warehouse by military personnel after firearms are used. But in reality the management of weapons data inventory is still done manually. So we need to update inventory management systems based on Radio Frequency Identification (RFID), the types of tags in RFID-based inventory management systems are not tags that can be affixed to goods, but in the form of smart military dog tags or personal identity necklaces for military personnel. Automatic recording of the weapons they carry. This research was conducted by making a prototype that was tested, pre and post test. The location of the study was conducted at the 201 / Jaya Yudha or Yonmek 201 / JY Mechanical Infantry Battalion. Based on the results of the study, a multiple regression equation was obtained which states that the time efficiency variable has a linear relationship to inventory management variables in the military armory. Based on the results of the hypothesis test t, it is found that there is a positive linear relationship between time efficiency on inventory management, this shows that time efficiency after using RFID is faster and more efficient in weapons data inventory management.

**Keywords:** RFID, Smart Military Dog Tags, Military Armory Inventory Management, 201 / Jaya Yudha Mechanical Infantry Battalion

## ABSTRAK

Dalam rangka pengawasan dan pengendalian terhadap senjata api khususnya senjata api perorangan, Standar prosedur yang diterapkan di institusi militer sangat ketat terutama dalam prosedur pengambilan, penggunaan dan pengembalian oleh personel militer setelah senjata api digunakan. Namun kenyataannya manajemen inventarisasi data senjata masih dilakukan secara tradisional. Sehingga diperlukan pembaharuan sistem manajemen inventory yang berbasis *Radio Frequency Identification* (RFID), jenis tags dalam sistem manajemen inventory berbasis RFID tidak berupa tags yang dapat ditempelkan di barang-barang, melainkan berbentuk sebuah *smart military dog tags* atau kalung identitas perorangan personel militer, untuk melakukan pencatatan otomatis materiil senjata yang dibawanya. Penelitian ini dilakukan dengan membuat sebuah prototype yang diujicoba, pre dan post test. Lokasi penelitian dilakukan di Batalyon Infanteri Mekanis 201/Jaya Yudha atau Yonmek 201/JY. Berdasarkan hasil penelitian maka diperoleh persamaan regresi ganda yang menyatakan bahwa variabel efisiensi waktu mempunyai hubungan linier terhadap variabel manajemen inventory di gudang senjata militer. Berdasarkan hasil uji hipotesis t diperoleh bahwa ada hubungan linier positif antara efisiensi waktu terhadap manajemen inventory, hal ini menunjukkan bahwa efisiensi waktu sesudah menggunakan RFID lebih cepat dan efisien dalam manajemen inventarisasi data senjata.

Kata Kunci : RFID, *Smart Military Dog Tags*, Manajemen Inventory Gudang Senjata Militer, Batalyon Infanteri Mekanis 201/Jaya Yudha



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