A New Interpretation of the Decipherability

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Abstract

We define the "quasi code" $H$ as follows: Let $\Sigma$ and $\Delta$ be two finite alphabets. Denote $H$ a finite subset of $2^{\Delta^*} \setminus \emptyset$. We define the function $\bar{f} : \Sigma \to H$, where $\bar{f}$ is called "quasi coding" of $\Sigma$. A quasi code $H$ is called decipherable if, whenever $f(x_1), \ldots, f(x_n), f(y_1), \ldots, f(y_m)$ are in $H$ and satisfy $f(x_1) \cdots f(x_n) = f(y_1) \cdots f(y_m)$, then $n = m$ and $f(x_i) = f(y_i)$ for all $i$, $1 \leq i \leq n$. 