1026-68-204   **Rudolfs Kreicbergs*** (`rkreicbergs@gmail.com`), University of Latvia, Raina bulvaris 29, Riga, LV1459, Latvia, and **Martins Zviedris** (`MZviedris@gmail.com`), University of Latvia, Raina bulvaris 29, Riga, LV-1459, Latvia. *Recognition of Hamming code words by probabilistic finite automata.* Preliminary report.

We consider probabilistic finite automata recognizing Hamming code-words. An algorithm determining whether the given $2^n - 1$ bit word is a Hamming code-word is constructed, and this algorithm makes only 2^{n-1} bit-queries. This algorithm produces the correct result with the probability $\frac{2^n - 1}{2^n + 2^{n-1} - 2}$. The work shows how to create a Hamming code system and how to create the algorithm specifically for this system. (Received February 27, 2007)