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Chen-Han Sung* (drsung@tamui.edu), 5201 University Boulevard, Laredo, TX 78041-1900. *A Study of Code Switching in Coding Theory.*

In a communication, we have a sender, a receiver, a channel of communication, messages, and the possibility of an outsider. The process of communication involves the sender or the outsider encoding a message, transmitting the encoded message through a channel of communication, the receiver decoding the received message, detecting and correcting errors (including removing noise) if there is any, authenticating the message, and confirming the receiving of the message. We may store the final received message, then retrieve for recall and recognition that message later. Language is a special way of communication among human beings. Code switching is when two or more languages are used during the communication process with a stream of encoded messages between the sender and the receiver. Here, we will study the code switching from the coding theory point of view in informatics. An information processing model is proposed for such a code switching among bilinguals and experimental data will be presented to validate the model. The applications of coding theory will be demonstrated in this information processing model of code switching. A discussion of this code switching model and the real world code switching case studies will be given. (Received August 01, 2006)