

SPEECH RECOGNITION USING DYNAMIC FEATURES

ABSTRACT

A speech recognition technique utilizes a set of N different principal discriminant matrices. Each principal discriminant matrix is associated with a distinct class. The class is an indication of the proximity of a speech segment to neighboring phones. A technique for speech encoding includes arranging speech signal (202) into a series of frames. A feature vector (Y_1, Y_2, Y_3) is derived which represents the speech signal for a speech segment or series of speech segments for each frame. A set of N different projected vectors are generated for each frame, by multiplying the principal discriminant matrices by the vector. This speech encoding technique is capable of being used in speech recognition systems by utilizing models, in which each model transition is tagged with one of the N classes. The projected vector is utilized with the corresponding tag to compute the probability that at least one particular speech port is present in said frame.

FIG. 5