Voice Based Image Transfer to USB using Arm 7

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Abstract: *A wide range of consumer electronics has been developed that have the capability to capture images such as digital imaging devices like digital cameras and camcorders. In order to assist a user in easily taking high-quality images, many digital image-capturing devices support various scene-modes that are accessible by a means of buttons, dials, or menus. So to overcome this disadvantage the proposed method Voice based Image transfer to USB using ARM 7 involves various aspects such as the hardware platform like LPC2148 (ARM7). Indeed, such a voice-driven scene-mode recommendation has several benefits. It reduces the number of actions required for a user to activate a scene-mode. The system is designed by using ARM 32-bit Microcontroller which supports features of transferring the data to a removable drive by recognizing the voice. The prototype performs the tasks of opening an image, selecting a particular image and copying that image to a particular drive by recognizing a voice and the scene related image share opened and copied to USB with the recognition of voice using voice recognition kit.*

Keywords: Voice Recognition Module, LPC 2148, Software tools as Keil µvision3 and visual studio

1. Introduction

In order to open images in digital cameras and camcorders we have to select menus and buttons. To reduce this problem, a scene-mode recommendation service could adopt a voice driven. Indeed, such a voice-driven scene-mode recommendation has several benefits. First, it reduces the number of actions required for a user to activate a scene-mode. We propose a voice driven scene mode recommendation service in order to more easily select scene modes on portable digital imaging devices such as digital cameras and camcorders. The service is designed to automatically change the scene-mode by recognizing a user's voice command regarding scene or scene-related words but here we cannot copy these images to USB. So to overcome this disadvantage the proposed method Voice based Image transfer to USB using ARM7 involves various aspects such as the hardware platform like LPC2148 (ARM7), the start-up codes which supports features of transferring the data to a removable drive by recognizing the voice. In this paper, we opening an image and copying that image to a particular drive by recognizing a voice command in our system.

2. Related work

Voice activity detection plays an important role for an efficient voice interface between human and mobile devices, since it can be used as a trigger to activate an automatic voice recognition module of a mobile device. If the input voice signal can be recognized as a predefined magic word coming from a legitimate user, it can be utilized as a trigger. In this we propose a voice trigger system using a keyword-dependent speaker recognition technique. The voice trigger must be able to perform keyword recognition, as well as speaker recognition, without using computationally demanding speech recognizers to properly trigger a mobile device with low computational power consumption. We propose a template based method and a hidden Markov model (HMM) based method for the voice trigger to solve this problem. The experiments using a Korean word corpus show that the template based method performed 4.1 times faster than the HMM based method. However, the HMM based method reduced the recognition error by 27.8% relatively compared to the template based method. The proposed methods are complementary and can be used selectively depending on the device of interest.

3. Frame work

Voice recognition system is used for taking the voice command and it is converted electrical signal give it to HM2007L IC which is processing digital data to HY6264AIC for storing data. Whenever repeating the voice command at voice recognition system concern image will open on pc these images are predefined.

4. Proposed method

In this paper I am taking different type of mobile images like Samsung, Nokia, Lg and we open images according to our voice command at the mike. For example if we tell nokia all models which belongs to nokia will open. If we tell particular name of the mobile that is belong to nokia (say E6) E6 image and specifications will open, and if we want to copy the opened image to USB we can copy the image with the copy command. Following is the block diagram of our proposed system.

BLOCK DIAGRAM OF VOICE RECOGNITION SYSTEM USING ARM 7
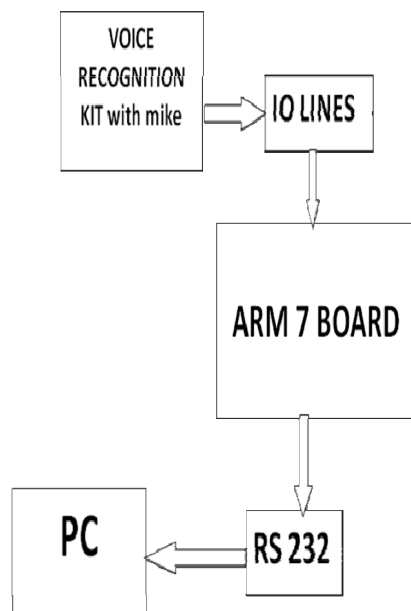
In voice recognition system keypad and digital display are used to communicate with and program the HM2007 chip. The keypad is made up of 12 switches. When the circuit is on, "00" is on the digital display, the red LED (READY) is lit and the circuit waits for a command. At this time we have to give voice command. if we want to give to first switch Press "1" (display will show "01" and the LED will turn off) on the keypad, then press the TRAIN key (the LED will turn on) to place circuit in training mode, for word one. Say the target word into the onboard mike (near LED) clearly. The circuit signals acceptance of the voice input by blinking the LED off then on. The word (or utterance) is now identified as the "01" word. If the LED did not flash, start over by pressing "1" and then "TRAIN" key. for second Switch Press "2" then TRN to train the second word and so on. The circuit will accept and recognize up to 20 words (numbers 1 through 20).if we repeat a trained word into the mike. The number of the word should be displayed on the digital display. For instance, if the word "Asha" was trained as word number 5, saying the word "Asha" into the mike will cause the number 5 to be displayed. In this error codes are there those are 55 = word to long,66 = word to short,77 = no match. To erase all words in memory press "99" and then "CLR". The numbers will quickly scroll by on the digital display as the memory is erased. Trained words can easily be changed by overwriting the original word. For instances suppose word second was the word "Champ" and you want to change it to the word "Vuplus". Simply retrain the word space by pressing "2" then the TRAIN key and saying the word "Vuplus" into the mike. If one wishes to erase the word without replacing it with another word press the word number (in this case second) then press the CLR key. Word second is now erased. in this we taking voice commands as different mobile images as well as copy as a command for copy the image to USB. After giving the voice command to mike first it converts electric signal with transducer then it converts to digital signal. Here we are using HM2007LIC for converting to analog to digital signal processing this to HY6264AIC which is used for storing purpose. When we are giving voice command at the mike which is already storing in system it comparing coming data with storing one and give the data (like codes) to i/o lines through this lines data given to ARM7 board. For sending data from ARM7board we write program in keilµ vision software. In this we have UART from this we connect to PC OR LAPTOP through RS232.in pc we have already stored the images according to our requirement with Microsoft visual studio. Data coming to ARM7 that is given to UART from this it is given pc. In pc image and specifications will open on window (we have create it with Microsoft visual studio).

5. Flow chart
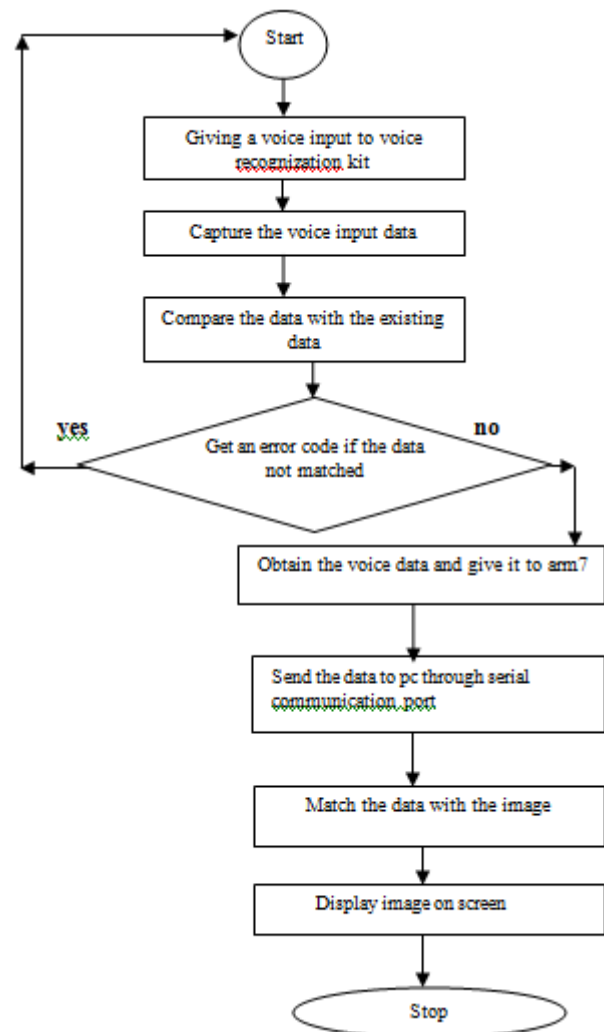
6. Conclusion

In this paper, we proposed a voice-driven scene-mode recommendation service as a means of selecting a desired scene-mode in our system. The service was designed to recommend or automatically change a scène mode by recognizing a user's voice. Here, a less power consume microcontroller like ARM 7is used. We implemented the voice-driven scene-mode recommendation system, with this we open image and copy that image to USB. We apply this method for fast interaction in consumer electronics like shopping malls, mobile shops for fast selection.

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