

## 1. MAT-160

These speech files are collected from 81 male and 79 female speakers through telephone networks. The speech signal is recorded under the following conditions.

sampling rate : 8kHz  
bits per sample : 16  
encoding type : 16-bit linear PCM  
max. data length : 160,000 samples

They are grouped into five sub-databases. A detail description is given in the following table.

Sub-Databases	Number of Files	Prompting Item Numbers	Speaking Style	Description
MATDB-1	1440	1 - 9	spontaneous	short answering statements
MATDB-2	800	10 - 14	read	numbers pronounced in five different ways
MATDB-3	1920	15 - 26	read	Mandarin syllables
MATDB-4	4800	27 - 56	read	words of 2 to 4 syllables
MATDB-5	1600	57 - 66	read	phonetically balanced sentences

Each recorded utterance is in a speech dat file. The file name has the format;

tnnmms.VAT,

where t -- database code in alphabet,  
nn -- content code in digits,  
mm -- prompting sheet number,  
ii -- item number on prompting sheet,  
s -- sequence number.  
VAT -- file extension name dedicated to MAT speech file

A Phonetic Symbol File (PTC file) is assigned to specify the contents of a set of speech data files. The contents in the PTC file are the designated utterances in sequence of item number. The file name of PTC files has the format;

tmm.PTC

where t -- database code in alphabet,  
mm -- prompting sheet number,

For each item(ii) in a prompting sheet (mm), the format is,

(item no.) <Chinese characters>  
<corresponding Chinese phonetical symbols> (“Ju4 In1 Fu2 Hau4”)  
<corresponding phonetical symbol in Pin-Yin>.

## 2. Programs

## Speech File Editing Program (VEDITOR)

This program runs under a Windows system of Chinese version. It requires the screen display size of 1024 x 768. It provides a tool for users to edit speech files. The file header parameters, as well as the waveform, are displayed on the screen. The user can edit the file header, modify the waveform, and playback the edited voice in an interactive mode.

## File conversion (VATWAV)

This program is for converting an MAT speech data file into \*.WAV format. Then the facilities for \*.WAV files can be applied to the recorded speech data.

## 3. File Structure

### INSTRUCTION

MAT-160-Brief.DOC  
MAT-file-format.DOC  
Mandarin-syllable-table.DOC  
Readme.TXT  
MAT-160-Title-page.DOC

### PROGRAM

VEDITOR.EXE  
POIN2.TAB  
SYL\_IMF.TAB  
VATWAV.EXE

MATDB-1 ----- Quest (nine questions)

```
|
| --- VAT -----T00-----T0000010.VAT
|                   |-----T0000020.VAT
|                   |-----T0000090.VAT
|                   |-----T0001010.VAT
|                   |-----T0001090.VAT
|                   |
|                   |-----T01-----T0100010.VAT
|                   |-----T0100020.VAT
|                   |-----T0100090.VAT
|                   |
|                   |-----T02-----T0200010.VAT
|                   |-----T0200020.VAT
|                   |
```

```

|          |-----T0200090.VAT
|          |-----T0201010.VAT
|          |

```

```

MATDB-k ----Vocabk -----T00.PTC
|          |-----T01.PTC
|          |-----T02.PTC
|          |
|          |
|          |
|          |-----VAT -----T00-----T0000100.VAT
|          |          |-----T0000110.VAT
|          |          |-----T0000140.VAT
|          |          |-----T0001100.VAT
|          |          |-----T0001140.VAT
|          |          |-----T0002100.VAT
|          |          |
|          |          |-----T01 -----T0100100.VAT
|          |          |-----T0100110.VAT
|          |          |-----T0100140.VAT
|          |          |
|          |

```

\*\*(k = 2, 3, 4, 5)