Speech Translation SDK

Test Tool Guide

Version 1.0

Table of Contents

[1. About This Document 3](#_Toc375049302)

[2. Description of the Test Tool 3](#_Toc375049303)

[2.1. Overview 3](#_Toc375049304)

[2.2. File organization 3](#_Toc375049305)

[2.3. Languages 4](#_Toc375049306)

[2.4. Operating environment 5](#_Toc375049307)

[2.5. Installation 5](#_Toc375049308)

[3. How to Use the Test Tool 6](#_Toc375049309)

[3.1. Running the test tool 6](#_Toc375049310)

[3.2. Test results 7](#_Toc375049311)

[3.3. Parameter settings 8](#_Toc375049312)

[4. Test items 10](#_Toc375049313)

[4.1. Common test items 10](#_Toc375049314)

[4.2. Test items for ASR 10](#_Toc375049315)

[4.3. Test items for MT 10](#_Toc375049316)

[4.4. Test items for TTS 11](#_Toc375049317)

Update History

|  |  |  |
| --- | --- | --- |
| Version | Release Date | Features |
| 1.0 | Dec. 20, 2013 | Released |

# About This Document

This document is a guide to use the test tool for checking whether the MCML system, a server system of Speech Translation SDK (Software Development Kit), runs correctly.

# Description of the Test Tool

## Overview

This test tool is used to send ASR, MT, and TTS requests to the MCML system (servers) for verification of responses generated by the servers.

## File organization

The test tool consists of the following files.

McmlTestTool/

McmlTestTool.bat --- Main body of the test tool for Windows

McmlTestTool.sh --- Main body of the test tool for Linux

McmlCheckTool/

McmlCheckTool.jar

mcmlTest.properties --- Property file for server connection setting

RespChecker/

checkCommon.pl

respcheckASR.pl

respcheckMT.pl

respcheckTTS.pl

XML/

TreePP.pm --- Additional installation needed (see "2.5.

Installation").

input/

output/

## Languages

Functions and language parameters that can be tested with this tool are listed below.

* ASR

|  |  |
| --- | --- |
| Language | Language parameter |
| Japanese | ja |
| English | en |
| Chinese | zh |
| Korean | ko |
| Vietnamese | vi |

* MT

|  |  |
| --- | --- |
| Language set for translation | Language parameter |
| English -> Japanese | en-ja |
| English -> Malay | en-ms |
| English -> Vietnamese | en-vi |
| English -> Chinese | en-zh |
| Japanese -> English | ja-en |
| Japanese -> Indonesian | ja-id |
| Japanese -> Korean | ja-ko |
| Japanese -> Vietnamese | ja-vi |
| Japanese -> Chinese | ja-zh |
| Korean -> Japanese | ko-ja |
| Vietnamese -> English | vi-en |
| Chinese -> Japanese | zh-ja |

* TTS

|  |  |
| --- | --- |
| Language | Language parameter |
| Japanese | ja |
| English | en |
| Chinese | zh |
| Korean | ko |
| Indonesian | id |
| Vietnamese | vi |

## Operating environment

The test tool runs on Windows and Linux (CentOS). Before running the tool, install Java and Perl (ActivePerl ), and make a path to each of them.

## Installation

* Create a directory for installation of the test tool, and copy the "McmlTestTool" folder to it.
  + [testtool-install]/

(Note: [testtool-install] indicates the test tool installation directory hereafter.)

McmlTestTool/

* Download the XML library (TreePP.pm), and copy it to the following directory.

http://xml-treepp.googlecode.com/svn/trunk/XML-TreePP/lib/XML/TreePP.pm

* + [testtool-install]/McmlTestTool/RespChecker/XML/TreePP.pm

# How to Use the Test Tool

The testing procedure is explained in this section. Prior to execution of the test tool, edit the property file to specify a function (ASR, MT, or TTS) and a language.

## Running the test tool

Windows and Linux use different files to execute the tool, but the following common format is used on a command prompt or a terminal.

* + Command Function Language parameter
    1. Windows
* Start a command prompt and run the command.
  + Run-time arguments

(1) Command : McmlTestTool.bat

(2) Function : ASR, MT, or TTS

(3) Language parameter : See the language parameters in "2.3. Languages"

* + Example run command (for the ASR process to recognize Japanese speech)

> McmlTestTool.bat ASR ja

* + 1. Linux
* Start a terminal and run the command.
  + Run-time arguments

(1) Command : McmlTestTool.sh

(2) Function : ASR, MT, or TTS

(3) Language parameter : See the language parameters in "2.3. Languages"

* + Example run command (for the ASR process to recognize Japanese speech)

$ ./McmlTestTool.sh ASR ja

## Test results

Results of testing are presented on the command prompt or the terminal (standard output) at which the script has been run.

* + 1. Successful connection to the server (MCML system)

When the testing is finished, a test number and a test result (OK/NG) will be displayed. The following are examples.

* When the test result is OK:

|  |
| --- |
| [ASR003] : OK |

* When the test result is NG:

|  |
| --- |
| [ASR003] : NG (<Language> tag not found.) |

"NG" due to the absence of a <Language> tag that is essential.

* When the precondition of the test is not met:

|  |
| --- |
| [ASR003] : NG (because of the result of [ASR002] is NG.) |

When a successful [ASR002] result ("OK") is essential for execution of [ASR003] but the actual result is "NG", the test [ASR003] will be invalid and not executed.

* + 1. Failure in connection to the server (MCML system)

When the test tool cannot connect to the server (MCML system), an error message including Java errors will appear. The following is an example.

Exception in thread "main" java.lang.reflect.InvocationTargetException

・・・・・

Caused by: java.io.IOException: Server returned HTTP response code: 502 for URL: http://MyServer/ControlServer/ControlServer

・・・・・

Exit because of McmlCheckTool Exception

## Parameter settings

The property file specifies the settings used to connect servers (MCML system) for testing and the audio formats of speech synthesized by TTS.

* + 1. Path of the property file
* Parameters are described in the following file:
  + [testtool-install]/McmlCheckTool/mcmlTest.properties

# Proxy Info

proxy.host=proxy.MyServer

proxy.port=83

# Audio Format

audio.format.rate.sampling=16000

audio.format.rate.bit=16

audio.format.channel.qty=1

audio.format.size.frame=1

audio.format.rate.frame=16000

audio.format.endian=false

date.format=yyyyMMddHHmmss

# Server Info

server.url=http://MyServer/ControlServer/ControlServer

* + 1. Parameters
* Proxy setting

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Detail | Value | Remarks |
| proxy.host | Host name of the proxy server | String | e.g., proxy.MyServer  If proxy is not used, comment out the line. |
| proxy.port | Port number of the proxy server | Number | If proxy is not used, comment out the line. |

* Audio formats

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Detail | Value | Remarks |
| audio.format.rate.sampling | Sampling frequency of synthesized speech (Hz) | Number | e.g., 16000 |
| audio.format.rate.bit | Bit rate of synthesized speech (bit) | Number | e.g., 16 |
| audio.format.channel.qty | Number of channels of synthesized speech | Number | 1: monaural  2: stereophonic |
| audio.format.size.frame | Frame size of synthesized speech (byte) | Number | e.g., 1 |
| audio.format.rate.frame | Frame rate | Number | e.g., 16000 |
| audio.format.endian | Endian of synthesized speech | true or false | true: Big Endian  false: Little Endian |
| date.format | Format of date | String | e.g., yyyyMMddHHmmss |

* Servers to connect

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Detail | Value | Remarks |
| server.url | URL of a server to connect | String | e.g., http://MyServer/ControlServer/ControlServer |

# Test items

Test items to be checked by the test tool are shown below.

## Common test items

|  |  |
| --- | --- |
| Test number | Detail |
| COMMON001 | Reponses are consistent with XMLSchema. |

## Test items for ASR

|  |  |
| --- | --- |
| Test number | Detail |
| ASR001 | The Service attribute of the MCML/Server/Response tag is "ASR". |
| ASR002 | A Text tag exists immediately below the MCML/Server/Response/Output/Data tag. |
| ASR003 | A Language tag exists immediately below the MCML/Server/Response/Output/Data/Text/ModelType tag. |
| ASR004 | The ID attribute of the MCML/Server/Response/Output/Data/Text/ModelType/Language tag is identical to that of the MCML/Server/Request/TargetOutput/LanguageType/ tag in MCML requests. |

## Test items for MT

|  |  |
| --- | --- |
| Test number | Detail |
| MT001 | The Service attribute of the MCML/Server/Response tag is "MT". |
| MT002 | A Text tag exists immediately below the MCML/Server/Response/Output/Data tag. |
| MT003 | A Language tag exists immediately below the MCML/Server/Response/Output/Data/Text/ModelType tag. |
| MT004 | The ID attribute of the MCML/Server/Response/Output/Data/Text/ModelType/Language is identical to that of the MCML/Server/Request/TargetOutput/LanguageType/ tag in MCML requests. |

## Test items for TTS

|  |  |
| --- | --- |
| Test number | Detail |
| TTS001 | The Service attribute of the MCML/Server/Response tag is "TTS". |
| TTS002 | An Audio tag exists immediately below the MCML/Server/Response/Output/Data tag. |
| TTS003 | A Language tag exists immediately below the MCML/Server/Response/Output/Data/Audio/ModelType tag. |
| TTS004 | The ID attribute of the MCML/Server/Response/Output/Data/Audio/ModelType/Language tag is identical to that of the MCML/Server/Request/TargetOutput/LanguageType/ tag in MCML requests. |