

HanVOICE 互聯網線上朗讀系統

HanVOICE Web-to-Speech System

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簡介 Introduction

互聯網線上朗讀系統(HanVOICE)主要應用於互聯網及文字轉語音範疇。融合文字轉語音 (TTS) 的技術以支援普通話、粵語、英語、韓語及日語等多種語言發佈。使用人士僅需要根據 HanVOICE 啓動的語音指示、通過數字鍵盤即可進行網頁鏈接操作，選擇並進入想要瀏覽收聽的網頁內容，方便易用。

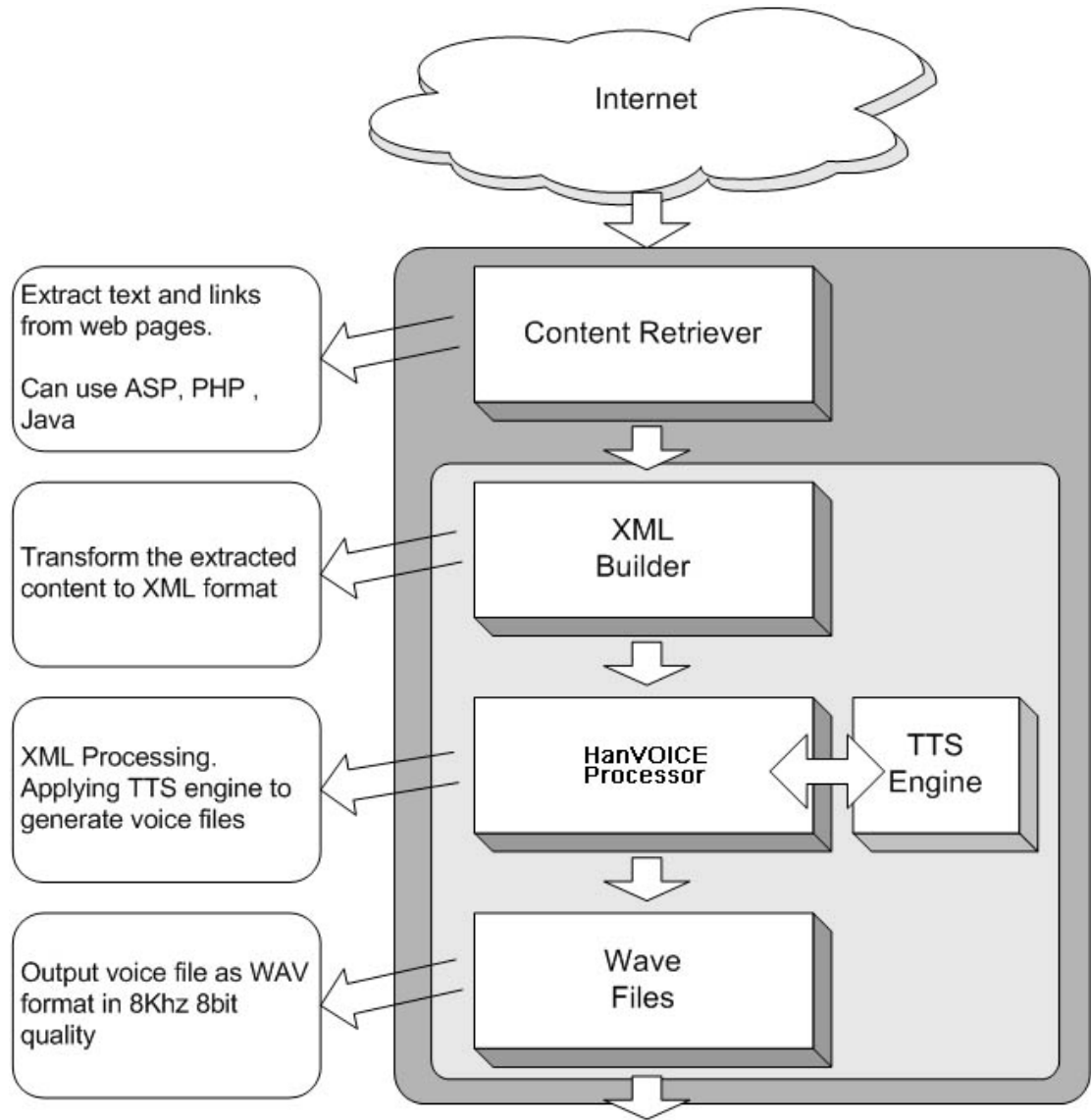
HanVOICE is a voice enabling system for websites. It integrates human sounding text-to-speech technology (TTS) to convert text into voice in real time, supporting Chinese in Cantonese and Putonghua, English, Japanese and Korean and possibly all other international languages when TTS for the corresponding language is available. Visitor of a HanVOICE enabled website uses only the numeric keys on a PC to navigate and listen to the website with standard browser software by following vocal instructions.

系統介紹 System Description

HanVOICE 是一個獨立的應用系統，只需安裝在任何一台已連接互聯網的電腦上，就可以透過 HanVOICE 瀏覽客戶指定的發聲網站內容。所指定的發聲網頁內容會經過分析程式撰取需要的內容。最終的內容會被即時傳送到『文字轉語音 (TTS) 系統』轉換成語音檔案，經過壓縮處理後轉換成再傳送回瀏覽器。用戶可以在聆聽語音文件的同時在瀏覽器上閱讀正在朗讀的文字。語音內容也會被儲存到快速緩衝貯存區，當遇到有用戶瀏覽相同內容時不需再通過 TTS 轉換。

HanVOICE is a standalone software application server. When installed on an Internet connected computer server, it monitors request initiated from a remote web browser for access to web pages specified in the HanVOICE enabled landing website. Those requested web pages will be intelligently analyzed for extraction of only the wanted content. The resulting text content will then be sent to Text-to-Speech (TTS) engine for real-time conversion into voice files for further processing into a compressed format suitable for high-speed streaming to a web browser as if playing a MP3 music file. User will then be able to listen to the voice file at the same time seeing the spoken text via the web browser. The voice files are also stored in cache such that no TTS conversion needed when the same content is requested in the future.

HanVOICE 系統結構圖 System Infrastructure



系統特點 System Advantages

- ◆ 集成最先進模擬真人發聲文字轉語音技術。
Integration of the latest state-of-the-art, human sounding Text-to-Speech technology.
- ◆ 從互聯網獲取準確、快速的即時內容。
Instant connection to Internet for accurate and speedy delivery of dynamic content.
- ◆ 可於不同設計的網頁內摘取需的資訊內容進行語音演算。
Able to extract only the wanted information from websites of diverse design and complexity with no limitation.
- ◆ 用戶可跟隨 HanVOICE 自動生成的語音提示，透過按數字鍵以瀏覽收聽網頁內的不同部份，並且可以於鍵盤上按「↑、↓」鍵於收聽閱讀同一網頁內的不同段落。
Dynamic generation of voice prompts instructing user to invoke the desired link of information by pressing the corresponding numeric key. Additional navigation control allows jumping between paragraphs by using arrow keys.
- ◆ 系統可延伸應用至電話介面，透過語音電話或流動電話瀏覽及聆聽已啓用 HanVOICE 的網頁。
Telephony extension for conventional telephone and mobile phone user navigating and listening to the same HanVOICE enabled web pages.

客戶個案分享 Client Case Study:

(I) 香港盲人輔導會 - 電訊數碼視障人士圖書館 及 Email2Voice 系統

The Hong Kong Society for the Blind – Tele-Digital Library and Email2Voice System

2003 年 10 月，香港盲人輔導會透過 HanVOICE 語音平台技術推出全球首個為視障人士而設的數碼圖書館，為視障人士及其他有需要之人士克服現存的通訊障礙。

On October 2003, The Hong Kong Society for the Blind launched the world's first digital voice library system for the visually impaired (VIP) through HanVOICE which enables VIP and under-privileged communities to overcome information gap via voice enabled technology.



(II) 香港郵政推出語音網站為失明人士及長者提供即時語音資訊

Hong Kong Post Launches Hong Kong's First Voice Enabled Website for the Visually Impaired and the Elderly

二零零八年一月 HanVOICE 技術為香港郵政所採納，推出全港首個政府發聲網站



<http://www.hongkongpost.com>，帶給失明、弱視人士及長者一個重大方便，用戶只需遵照網站語音指引，按下數字及方向鍵，即可收聽由創新文字轉聲音技術，將香港郵政網站上中、英文字內容，轉化為廣東話、普通話及英語的語音。這是繼香港盲人輔導會、香港社會服務聯會、中國殘疾人聯合會後，首個官方機構採用 HanVOICE 技術，方便弱勢社群瀏覽網站，為建構數碼融和社會邁出重要一步。

On January 2008, KanHan has transferred her HanVOICE web-to-speech technology to Hong Kong Post. Utilizing HanVOICE's innovative technology, Hong Kong's first voice enabled government website <http://www.hongkongpost.com> was launched in the New Year following the foot steps of Hong Kong Society for the Blind, Hong Kong Council of Social Service and Federation of China Disabled Person in pursuing the government's initiative in building a digital inclusive society. The enhanced website provides the visually impaired and elderly citizens of Hong Kong a voice browsing interface using only the numeric and arrow keys. By following the voice instructions and push the right key, a user will hear from the website in Cantonese, Putonghua and English at his/her choice. All voices are translated from the website's Chinese and English text in real-time using innovative text-to-speech technology.

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中國殘疾人聯合會盲人語音版網站 及 成都市政府語音網頁

HanVOICE Extends Reach To Mainland China Government Websites



國內機構越來越重視數碼共融的發展，繼 2008 年八月成功為中國殘疾人聯合會官方網站 www.cdpcf.org.cn 建立中國首個盲人版語音網站後，HanVOICE 再為國內機構提供網頁發聲的系統支援。成都市政府已於 2008 年十一月為視障人士提供專用網頁，名為『無障礙通道』。透過 HanVOICE，網頁內容可即時轉化為聲音，以普通話讀出網頁內容，用戶無須安裝任何軟體，

即可透過瀏覽器聽取網頁內容，讓視障人士及長者有機會接觸有關成都市政府的資訊。



In gradually addressing the needs for the blinds, visually impaired and elderly to listen from the web, the web-to-speech HanVOICE technology developed by KanHan Technologies

Limited has assisted the ChengDu City Government to boast the first speech version in China's e-government sites following the foot step of China Disabled Person's Federation (CDPF). The speech section automatically translates live Chinese text into Putonghua speech using human sounding text-to-speech technology. No special software required, users can navigate the voice website. The new voice-based web section of the ChengDu City Government aims to build a digital inclusive society especially for the visually impaired, elderly and cognitive dysfunctional persons.

獎項 Awards

- 2007 Hong Kong ICT Awards - Best Business (Product) Certificate of Merit
- Hong Kong ICT Awards 2006: Digital Inclusion, Gold Award
- KanHan Honored with China Nomination to 2005 World Summit Award
- 2004 6th IT Excellence Awards (SMEs)
- 2002 HK Awards for Industry

