SFX Powers devices with embedded voice recognition software

Wake-up, command, and control your smartphone, tablet, smartTV, robots, or any electronic device or application with SFX voice recognition software. Highly efficient, with minimal MIP and CPU requirements, SFX software can be embedded on a chip that powers the next generation of smart devices. Our embedded software is the “voice-trigger” command for any client device that interacts with cloud content.

Conversational technologies and voice commands are in demand. Speech interfaces are a natural way to control and navigate devices with small screens, keyboards and remote-controls for improved safety and ease of use. Using SFX Voiceln software, developers can quickly and easily integrate and embed Voice Recognition (VR) on chips, devices and apps. Most applications and devices are likely to need a voice interface soon. SpeechFX has it now!

SFX Voiceln Command and Control

Embedded SFX Voiceln on a low-powered chip to “power-up” and “menu-control” your device – a TV, robot, smart device, tablet, to command the device menu and functions to access cloud content. Just a few sample words to “power-up” and “control” your device with your voice through an open, far field mic:

- **Trigger words like**: just say -- Device On, Wake up TV, Start TV, etc. Developers can select any word or combination of words to power-up the device.
- **Menu control words like**: just say -- SKYPE, Netflix, Facebook, Twitter, Video, Pictures, channel up / down, volume up/down, etc... allowing your voice to control the smartTV or mobile device instead of cumbersome hand controllers and small screens. Once connected to an on-line application, you continue to voice command access to the information; for example – just say “SKYPE”, then say ‘Contact”, and then Voice-In the contact name or number to dial your contact. Access a movie on Netflix with just a voice command. Very simple and fast!

SFX Voiceln Embedded Programming Interface Requirements:

- **OS Commands Pushed into FNX API**
- **Memory Usage**
  - Base Engine: 352 KB ROM
  - Dictionary: 0 – 2,323 KB ROM
  - Neural Networks: 50 – 225 KB ROM
  - 200 KB - 1 MB RAM based on number of words or grammar size (approximately 1.2 KB per word ROM/RAM)
- **MIPS**
  - Word spotting: 10 words – 25 MIPS (can vary based on the CPU architecture)
  - Finite state grammar for continuous speech (not dictation): 20 words
  - 70 MIPS (can vary based on the CPU architecture)
- **Audio Requirements**
  - Microphone-in, speaker-out support
  - 8 KHz – 8 bit jlaw/alsa (mono channel)
  - 8 KHz, 11 KHz, 16 KHz 10–16 bit linear, mono-channel
  - Bandwidth: 100 Hz to sample frequency/2 -- LPF 3dB skirt
  - Spectral Flatness: +/- 6dB
  - Total Harmonic Distortion (THD) < X %
  - Signal-to-noise (SNR) > 0dB for best results

SFX Language Support:

UK/US English, Canadian/European French, German, Italian, Japanese, Castillian/Latin American Spanish, Swedish, Korean and Mandarin Chinese. Any additional languages like Russian, Polish, etc. are available subject to defined word list.

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