
ipodshuffle

Release 0.4.1

April 24, 2016

1	What is ipodshuffle?	3
1.1	modules	3
1.2	teresa	6
	Python Module Index	11

Note: This documentation is still incomplete and it's recommended to read the [source](#) for the full details.

What is ipodshuffle?

ipodshuffle is a Python Project for iPod Shuffle.

You can use *modules* to write your own tools:

1.1 modules

1.1.1 ipodshuffle

class `ipodshuffle.Shuffle` (*base*)

Parameters **base** – iPod base path

enable_voiceover

boolean. enable or disable VoiceOver

voice_path_func

callable object or None. when set x.voice, will call it if it's Not None and enable_voiceover is True

max_volume

integer. 0 do not limit, 3-20 is legal value to limit volume

playlists

list-like object, store all playlists

audiodb

store audio. if you don't want to copy file to ipod, you can use this

is an instance of `ipodshuffle.shuffle.AudioDB`

create_track (*path_in_ipod=None, checksum=None*)

Parameters

- **path_in_ipod** – the path of audio file in the iPod base
- **checksum** – CHECKSUM of the audio file in member audiodb

Returns a new Track, you may want append it to the playlist.tracks

create_playlist (*pl_type=None*)

Parameters **pl_type** – one in (MASTER, NORMAL, PODCAST, AUDIOBOOK)

Returns a new Playlist, you may want append it to the playlists

```
class ipodshuffle.Playlist (shuffle, playlist_type=None, playlistdb=None)
```

type
MASTER, NORMAL, PODCAST or AUDIOBOOK. Can not change

tracks
list-like, store all tracks of this playlist

voice
tuple. contain text and lang code

```
class ipodshuffle.Track (shuffle, path_in_ipod=None, trackdb=None)
```

voice
tuple. contain text and lang code

```
class ipodshuffle.shuffle.AudioDB (shuffle, log_path, storage_dir)
```

add (src)
store an audio file to storage dir

Parameters **src** – audio file path

Returns checksum value

get_filename (checksum)

Parameters **checksum** – checksum

Returns filename no storage base part

example

```
1  #!/usr/bin/env python3
2  import shutil
3  import os
4  import tempfile
5
6  from ipodshuffle import Shuffle
7  from ipodshuffle import MASTER, NORMAL, PODCAST, AUDIOBOOK
8
9
10 # for VoiceOver, make sure you have already installed svox TTS software
11 def voice_path_func(text, lang):
12     tmp_file = tempfile.NamedTemporaryFile(delete=False)
13     tmp_file_name = tmp_file.name + '.wav'
14     tmp_file.close()
15
16     cmd = 'pico2wave --wave={} --lang={} {}'.format(tmp_file_name, lang, repr(text))
17     # print('\n\n', cmd, '\n')
18     os.system(cmd)
19
20     return tmp_file_name
21
22
23 base = '/media/data/ipod_base_doc_text'
24
25 ipod = Shuffle(base)
```



```

26
27 ipod.playlists.clear()
28
29 # enable VoiceOver
30 ipod.enable_voiceover = True
31
32 # when track or playlist set "voice = 'text', 'lang code'", will call this function
33 ipod.voice_path_func = voice_path_func
34
35
36 # create a master playlist, it's the "All songs" in ipod
37 master_playlist = ipod.playlists.append_one(pl_type=MASTER)
38
39
40 # create a normal playlist
41 normal_playlist = ipod.playlists.append_one(pl_type=NORMAL)
42 normal_playlist.voice = 'Bob Dylan', 'en-US'
43
44
45 # copy file to ipod
46 track1_pathinipod = 'Bob Dylan - Farewell.mp3'
47 shutil.copyfile('/media/data/music/Bob Dylan/Bob Dylan - Farewell.mp3',
48                 ipod.base + '/' + track1_pathinipod)
49 track1 = ipod.create_track(path_in_ipod=track1_pathinipod)
50 track1.voice = 'Farewell', 'en-US'
51 normal_playlist.tracks.append(track1)
52
53
54 # use AudioDB copy file to ipod
55 track2_checksum = ipod.audiodb.add('/media/data/music/Bob Dylan/Bob Dylan - Mr. Tambourine Man.mp3')
56 track2_pathinipod = ipod.audiodb.get_filename(track2_checksum)
57 track2 = ipod.create_track(path_in_ipod=track2_pathinipod)
58 track2.voice = 'Mr. Tambourine Man', 'en-US'
59 normal_playlist.tracks.append(track2)
60
61
62 # tracks can use same file, and you can set different voices for tracks
63 track3 = ipod.create_track(path_in_ipod=track1_pathinipod)
64 track3.voice = 'Farewell, Bob Dylan', 'en-US'
65 master_playlist.tracks.append(track3)
66
67 track4 = ipod.create_track(path_in_ipod=track2_pathinipod)
68 track4.voice = 'Mr. Tambourine Man, Bob Dylan', 'en-US'
69 master_playlist.tracks.append(track4)
70
71
72 track5_checksum = ipod.audiodb.add('/media/data/music/Goo Goo Dolls - Name.mp3')
73 track5_pathinipod = ipod.audiodb.get_filename(track5_checksum)
74 track5 = ipod.create_track(path_in_ipod=track5_pathinipod)
75 track5.voice = 'Name, Goo Goo Dolls', 'en-US'
76 master_playlist.tracks.append(track5)
77
78
79 ipod.write_db()

```

Or use existing command-line tool *teresa* to manage your player:

1.2 teresa

“teresa” is a command line tool, and has few sub commands.

```
usage: teresa [-h] [-v] <command> ...

optional arguments:
  -h, --help      show this help message and exit
  -v, --version    show program's version number and exit

commands:
  <command>
  set             set voiceover enable or disable, set max volume
  show            show ipod low level DB
  sync            sync to ipod

Try 'teresa <command> -h' for command help.
```

1.2.1 show

```
usage: teresa show [-h] -b <path>

optional arguments:
  -h, --help  show this help message and exit
  -b <path>   ipod base path

Example of use:
  teresa show -b /media/ipod_base
```

1.2.2 set

```
usage: teresa set [-h] -b <path> [-v <bool>] [-m <int>]

optional arguments:
  -h, --help  show this help message and exit
  -b <path>   ipod base path
  -v <bool>   enable or disable voiceover, true for enable, false for disable
  -m <int>    max volume, 0 is do not limit

Example of use:
  teresa set -b /media/ipod_base -v true -m 15
```

1.2.3 sync

```
usage: teresa sync [-h] -b <path> -s <path> [-l <langs>] [-e <engine>]
                  [-k <key>] [-f <format>]

optional arguments:
  -h, --help  show this help message and exit
  -b <path>   ipod base path
  -s <path>   source path
  -l <langs>  comma-separated set of target language codes, e.g en-gb,zh-cn
  -e <engine> TTS engine, svox or voicerss
```

Legal lang codes of engines:

svox: de-de, en-gb, en-us, es-es, fr-fr, it-it

voicerss: ca-es, da-dk, de-de, en-au, en-ca, en-gb, en-in, en-us, es-es, es-mx, fi-fi, fr-ca, fr-fr

Two examples of use:

```
teresa sync -b /media/ipod_base -s /media/ipod_src -l en-gb -e svox
```

```
teresa sync -b /media/ipod_base -s /media/ipod_src -l en-gb,zh-cn,ja-jp -e voicerss -k d279f919f738
```

Source path folder structure see: <http://ipodshuffle.readthedocs.org/en/latest/teresa/index.html#source-path-folder-structure>

TTS engines

Program use `langid` to identify title text language of track and playlist, but not work perfectly, It is suggested that you use “-l lang1,lang2...” to specify languages range.

For now, have two TTS engine wrapper:

svox

CLI command is “pico2wave”, if you want to use it, make sure you have already installed it.

voicerss

An http engine. It supports lot of languages(include CJK). For now, daily request is free for 350 times, but need to register on the website to get an API key, website: <http://www.voicerss.org>

source path folder structure

All folders and audio files can be symbolic(soft) links.

“source” is just a example, you can use another name whatever you want. In source folder, only three folders will be scanned: “music”, “podcasts” and “audiobooks”.

Under “music”, all folders(include children folders and children’s children folders and so on) are NORMAL playlists. NORMAL playlist also contain their child folder tracks. MASTER playlist contain all tracks of all NORMAL playlists

Under “podcasts”, only folders will be PODCAST playlists.

Under “audiobooks”, files and folders will be AUDIOBOOK playlists, but folder’s child folder wouldn’t.

See example folders structure following and notice the IGNORED folders and IGNORED audio files:

```
source
|-- music
|   |-- English songs
|   |   |-- Bob Dylan
|   |   |   |-- Bob Dylan - Farewell.mp31
|   |   |   |-- Bob Dylan - Mr. Tambourine Man.mp3
|   |   |-- Mariah Carey
|   |   |   |-- Mariah Carey - Bye Bye.mp3
|   |   |   |-- Mariah Carey - Hero.mp3
|   |-- 邓丽君
```

```

|         |         |--- 邓丽君 - 小城故事多.mp3
|         |         |--- 邓丽君 - 何日君再来.mp3
|         |         |--- 邓丽君 - 恰似你的温柔.mp3
|         |
|         |--- The Clash - Bankrobber.mp3
|         |--- The Weepies - Gotta Have You.mp3
|         |--- 梁静茹 - 小手拉大手.mp3
|         |--- 卢冠廷 - 一生所爱.mp3
|         |--- 喜昌吉 - 花~すべての人の心に花を.mp3
|
|--- podcasts
|   |--- 6 Minute English
|   |   |--- p03fgnf9.mp3
|   |   |--- p03g4k1l.mp3
|   |   |--- p03gtsz8.mp3
|   |   |--- p03hj7dq.mp3
|   |
|   |--- The English We Speak
|   |   |--- p03gmjw3.mp3
|   |   |--- p03hb15j.mp3
|   |   |--- p03j16wv.mp3
|   |
|   |--- Luk's ENGLISH Podcast
|   |   |--- FOLDER_IN_THIS_LEVEL_WILL_BE_IGNORED
|   |   |   |--- THIS_AUDIO_WILL_BE_IGNORED.mp3
|   |   |
|   |   |--- 326-catching-up-with-oli-future-predictions-part-2.mp3
|   |   |--- 327-the-lep-photo-competition-please-check-out-the-photos-and-vote.mp3
|   |   |--- 328-cooking-with-luke-verbs-and-expressions-in-the-kitchen.mp3
|   |
|   |--- AUDIO_IN_THIS_LEVEL_WILL_BE_IGNORED.mp3
|
|--- audiobooks
|   |--- 01.Love Or Money
|   |   |--- 01.mp3
|   |   |--- 02.mp3
|   |   |--- 03.mp3
|   |   |--- 04.mp3
|   |   |--- 05.mp3
|   |   |--- 06.mp3
|   |   |--- 07.mp3
|   |
|   |--- 02.Mary Queen Of Scots
|   |   |--- FOLDER_IN_THIS_LEVEL_WILL_BE_IGNORED
|   |   |   |--- THIS_AUDIO_WILL_BE_IGNORED.mp3
|   |   |
|   |   |--- 01.Fotheringhay.mp3
|   |   |--- 02.France.mp3
|   |   |--- 03.Darnley and Riccio.mp3
|   |   |--- 04.The death of David Riccio.mp3
|   |   |--- 05.My son is born.mp3
|   |   |--- 06.Kirk O'Field.mp3
|   |   |--- 07.Bothwell.mp3
|   |   |--- 08.England.mp3

```

```
|      L-- 09.A Death.mp3  
|  
|-- a book in single audio.mp3  
|-- another book in single audio.mp3
```


i

ipodshuffle, 3

A

`add()` (ipodshuffle.shuffle.AudioDB method), 4
`AudioDB` (class in ipodshuffle.shuffle), 4
`audiodb` (ipodshuffle.Shuffle attribute), 3

C

`create_playlist()` (ipodshuffle.Shuffle method), 3
`create_track()` (ipodshuffle.Shuffle method), 3

E

`enable_voiceover` (ipodshuffle.Shuffle attribute), 3

G

`get_filename()` (ipodshuffle.shuffle.AudioDB method), 4

I

`ipodshuffle` (module), 3

M

`max_volume` (ipodshuffle.Shuffle attribute), 3

P

`Playlist` (class in ipodshuffle), 3
`playlists` (ipodshuffle.Shuffle attribute), 3

S

`Shuffle` (class in ipodshuffle), 3

T

`Track` (class in ipodshuffle), 4
`tracks` (ipodshuffle.Playlist attribute), 4
`type` (ipodshuffle.Playlist attribute), 4

V

`voice` (ipodshuffle.Playlist attribute), 4
`voice` (ipodshuffle.Track attribute), 4
`voice_path_func` (ipodshuffle.Shuffle attribute), 3

