wx-icons-hicolor

Release 0.2.0

Hicolor icon theme for wxPython.

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Documentation

Chapter

ONE

Installation

1.1 from PyPI

```
$ python3 -m pip install wx_icons_hicolor --user
```

1.2 from GitHub

```
$ python3 -m pip install git+https://github.com/domdfcoding/custom_wx_icons_hicolor@master --user
```

Chapter TWO

Documentation

2.1 Usage

To use `wx_icons_hicolor` in your application:

```
from wx_icons_hicolor import wxHicolorIconTheme

class MyApp(wx.App):
    def OnInit(self):
        wx.ArtProvider.Push(wxHicolorIconTheme())
        self.frame = TestFrame(None, wx.ID_ANY)
        self.SetTopWindow(self.frame)
        self.frame.Show()
        return True
```

And then the icons can be accessed through wx.ArtProvider:

```
wx.ArtProvider.GetBitmap('document-new', wx.ART_OTHER, wx.Size(48, 48))
```

Any FreeDesktop Icon Theme Specification name can be used.

Currently the *Client ID* is not used, so just pass *wx.ART_OTHER*.

2.2 API Reference

`version``()`

Returns the library and theme versions.

Return type `str`

`class wxHicolorIconTheme`

Bases: `ArtProvider`

`wx.ArtProvider` subclass providing the Hicolor Icon Theme.

Methods:

`CreateBitmap`(id, client, size)	Returns the requested resource.
`icon2bitmap`(icon, size)	Converts an *`Icon`* to a `wx.Bitmap`.

`CreateBitmap``(`*id*, *client*, *size*`)`

Returns the requested resource.

Parameters

- **id** (Any) – Unique identifier of the bitmap.
- **client** (Any) – Identifier of the client (i.e. who is asking for the bitmap). This only serves as a hint.
- **size** (Union[Tuple[int], Size]) – Preferred size of the bitmap. The function may return a bitmap of different dimensions; it will be automatically rescaled to meet client's request.

Return type Bitmap

static icon2bitmap (*icon*, *size*)

Converts an *Icon* to a wx.Bitmap.

Parameters

- **icon** (*Icon*)
- **size** (int) – The desired size of the icon. If the icon isn't scalable the icon is returned in its original size.

Return type Bitmap

2.2.3 wx_icons_hicolor.constants

Constants for use in wx_icons_hicolor and its derivatives.

Data:

IconTypes	Type hint fot valid icon type strings.
mime	Instance of magic.Magic to identify mimetypes of files.
theme_index_path	Path to the theme index file.

IconTypes

Type hint fot valid icon type strings.

Alias of Literal['Fixed', 'Scalable', 'Threshold']

mime

Type: Magic

Instance of magic.Magic to identify mimetypes of files.

theme_index_path

Type: PosixPath

Path to the theme index file.

2.2.4 `wx_icons_hicolor.directory`

Class to represent directory of icons.

Classes:

`Directory`(path, size[, scale, context, ...])	Represents a directory containing icons.

class Directory (*path*, *size*, *scale=1*, *context=''*, *type='Threshold'*, *max_size=None*, *min_size=None*, *threshold=2*, *theme=''*)

Bases: `Dictable`

Represents a directory containing icons.

Parameters

- **path** (`Union[str, Path, PathLike]`) – The absolute path to the directory
- **size** (`int`) – Nominal (unscaled) size of the icons in this directory.
- **scale** (`int`) – Target scale of the icons in this directory. Any directory with a scale other than 1 should be listed in the ScaledDirectories list rather than Directories for backwards compatibility. Default `1`.
- **context** (`str`) – The context the icon is normally used in. This is in detail discussed in the section called "Context". Default `''`.
- **type** (`Literal['Fixed', 'Scalable', 'Threshold']`) – The type of icon sizes for the icons in this directory. Valid types are `'Fixed'`, `'Scalable'` and `'Threshold'`. The type decides what other keys in the section are used. Default `'Threshold'`.
- **max_size** (`Optional[int]`) – Specifies the maximum (unscaled) size that the icons in this directory can be scaled to. Defaults to the value of Size if not present.
- **min_size** (`Optional[int]`) – Specifies the minimum (unscaled) size that the icons in this directory can be scaled to. Defaults to the value of Size if not present.
- **threshold** (`int`) – The icons in this directory can be used if the size differ at most this much from the desired (unscaled) size. Defaults to 2 if not present. Default `2`.
- **theme** (`str`) – The name of the theme this directory is a part of. Default `''`.

Methods:

`__repr__`()	Return a string representation of the *`Directory`*.
`from_configparser`(config_section, ...)	Constructs a *`Directory`* from a configparser section.

Attributes:

`icons`	Returns a list of icons in this *`Directory`*.

`__repr__`()

Return a string representation of the *`Directory`*.

Return type `str`

classmethod from_configparser(*config_section, theme_content_root*)

Constructs a *Directory* from a configparser section.

Parameters

- **config_section** (SectionProxy)
- **theme_content_root** (Path)

Return type *Directory*

property icons

Returns a list of icons in this *Directory*.

Return type List[*Icon*]

2.2.5 wx_icons_hicolor.icon

Class to represent icons.

Classes:

Icon(name, path, size[, type, max_size, ...])	Represents an icon.

class Icon(*name, path, size, type='Threshold', max_size=None, min_size=None, theme=''*)

Bases: Dictable

Represents an icon.

Parameters

- **name** (str) – The name of the icon.
- **path** (Union[str, Path, PathLike]) – The path to the icon.
- **size** (int) – Nominal (unscaled) size of the icon.
- **type** (Literal['Fixed', 'Scalable', 'Threshold']) – The type of icon sizes for the icon. Valid types are 'Fixed', 'Scalable' and 'Threshold'. The type decides what other keys in the section are used. Default 'Threshold'.
- **max_size** (Optional[int]) – Specifies the maximum (unscaled) size that the icon can be scaled to. Defaults to the value of Size if not present.
- **min_size** (Optional[int]) – Specifies the minimum (unscaled) size that the icon can be scaled to. Defaults to the value of Size if not present.
- **theme** (str) – The name of the theme this icon came from. Default ''.

Methods:

__eq__(other)	Return self == other.
__repr__()	Return a string representation of the *Icon*.
as_base64_png([size])	Returns the icon as a base64-encoded object containing PNG image data.
as_bitmap([size])	Returns the icon as a wxPython bitmap.

continues on next page

Table 7 – continued from previous page

as_png([size])	Returns the icon as a `BytesIO` object containing PNG image data.

Attributes:

mime_type	The mime type of the icon.
scalable	Whether the icon is scalable.

__eq__(*other*)
Return `self == other`.

Return type `bool`

__repr__()
Return a string representation of the *Icon*.

Return type `str`

as_base64_png(*size=None*)
Returns the icon as a base64-encoded object containing PNG image data.

Return type `str`

Returns Base64-encoded string representing the PNG image.

as_bitmap(*size=None*)
Returns the icon as a wxPython bitmap.

Parameters **size** (`Optional`[`int`]) – Default `None`.

Return type `Bitmap`

as_png(*size=None*)
Returns the icon as a `BytesIO` object containing PNG image data.

Return type `BytesIO`

Returns `io.BytesIO` object representing the PNG image.

property mime_type
The mime type of the icon.

Return type `str`

property scalable
Whether the icon is scalable.

Return type `bool`

2.2.6 `wx_icons_hicolor.icon_theme`

Class to represent an icon theme.

Classes:

HicolorIconTheme(name, comment, directories)	The Hicolor Icon Theme.
IconTheme(name, comment, directories[, ...])	Represents an icon theme.

class HicolorIconTheme(*name*, *comment*, *directories*, *inherits=None*, *scaled_directories=None*, *hidden=False*, *example=''*)

Bases: *IconTheme*

The Hicolor Icon Theme.

Parameters

- **name** (`str`) – short name of the icon theme, used in e.g. lists when selecting themes.
- **comment** (`str`) – longer string describing the theme
- **inherits** (`Optional[Sequence[str]]`) – The name of the theme that this theme inherits from. If an icon name is not found in the current theme, it is searched for in the inherited theme (and recursively in all the inherited themes). Default `None`.

  If no theme is specified implementations are required to add the "hicolor" theme to the inheritance tree. An implementation may optionally add other default themes in between the last specified theme and the hicolor theme.
- **directories** (`Sequence[Directory]`) – list of subdirectories for this theme. For every subdirectory there must be a section in the index.theme file describing that directory.
- **scaled_directories** (`Optional[Sequence[Directory]]`) – Additional list of subdirectories for this theme, in addition to the ones in Directories. These directories should only be read by implementations supporting scaled directories and was added to keep compatibility with old implementations that don't support these. Default `None`.
- **hidden** (`bool`) – Whether to hide the theme in a theme selection user interface. This is used for things such as fallback-themes that are not supposed to be visible to the user. Default `False`.
- **example** (`str`) – The name of an icon that should be used as an example of how this theme looks. Default `''`.

Methods:

create()	Create an instance of the Hicolor Icon Theme.

classmethod create()

Create an instance of the Hicolor Icon Theme.

Return type *HicolorIconTheme*

class IconTheme(*name*, *comment*, *directories*, *inherits=None*, *scaled_directories=None*, *hidden=False*, *example=''*)

Bases: `Dictable`

Represents an icon theme.

Parameters

- **name** (str) – short name of the icon theme, used in e.g. lists when selecting themes.
- **comment** (str) – longer string describing the theme
- **inherits** (Optional[Sequence[str]]) – The name of the theme that this theme inherits from. If an icon name is not found in the current theme, it is searched for in the inherited theme (and recursively in all the inherited themes). Default None.

  If no theme is specified implementations are required to add the "hicolor" theme to the inheritance tree. An implementation may optionally add other default themes in between the last specified theme and the hicolor theme.
- **directories** (Sequence[*Directory*]) – list of subdirectories for this theme. For every subdirectory there must be a section in the index.theme file describing that directory.
- **scaled_directories** (Optional[Sequence[*Directory*]]) – Additional list of subdirectories for this theme, in addition to the ones in Directories. These directories should only be read by implementations supporting scaled directories and was added to keep compatibility with old implementations that don't support these. Default None.
- **hidden** (bool) – Whether to hide the theme in a theme selection user interface. This is used for things such as fallback-themes that are not supposed to be visible to the user. Default False.
- **example** (str) – The name of an icon that should be used as an example of how this theme looks. Default ''.

Methods:

__repr__()	Return a string representation of the *IconTheme*.
__str__()	Return str(self).
find_icon(icon_name, size, scale[, ...])	Searches for the icon with the given name and size.
from_configparser(theme_index_path)	Constructs a *IconTheme* from config file.

__repr__()

Return a string representation of the *IconTheme*.

Return type str

__str__()

Return str(self).

Return type str

find_icon(*icon_name*, *size*, *scale*, *prefer_this_theme=True*)

Searches for the icon with the given name and size.

Parameters

- **icon_name** (str) – The name of the icon to find. Any FreeDesktop Icon Theme Specification name can be used.
- **size** (int) – The desired size of the icon
- **scale** (Any) – TODO: Currently does nothing
- **prefer_this_theme** (bool) – Return an icon from this theme even if it has to be resized, rather than a correctly sized icon from the parent theme. Default True.

Return type `Optional`[*`Icon`*]

Returns The icon if it was found, or `None`.

classmethod from_configparser(*theme_index_path*)

Constructs a *`IconTheme`* from config file.

Parameters **`theme_index_path`** (`Union`[`str`, `Path`, `PathLike`])

Return type *`IconTheme`*

Chapter THREE

Contributing

3.1 Overview

`wx_icons_hicolor` uses tox to automate testing and packaging, and pre-commit to maintain code quality.

Install `pre-commit` with `pip` and install the git hook:

```
$ python -m pip install pre-commit
$ pre-commit install
```

3.2 Coding style

formate is used for code formatting.

It can be run manually via `pre-commit`:

```
$ pre-commit run formate -a
```

Or, to run the complete autoformatting suite:

```
$ pre-commit run -a
```

3.3 Automated tests

Tests are run with `tox` and `pytest`. To run tests for a specific Python version, such as Python 3.6:

```
$ tox -e py36
```

To run tests for all Python versions, simply run:

```
$ tox
```

3.4 Type Annotations

Type annotations are checked using `mypy`. Run `mypy` using `tox`:

```
$ tox -e mypy
```

3.5 Build documentation locally

The documentation is powered by Sphinx. A local copy of the documentation can be built with `tox`:

```
$ tox -e docs
```

3.6 Downloading source code

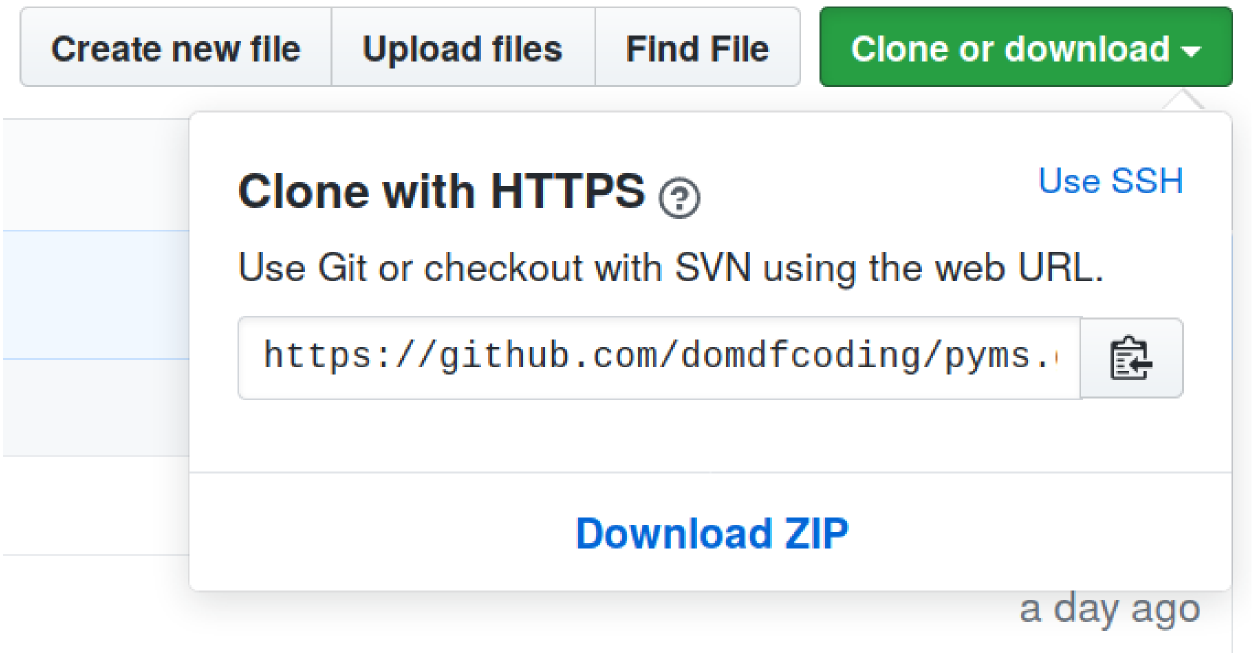
The `wx_icons_hicolor` source code is available on GitHub, and can be accessed from the following URL: https://github.com/domdfcoding/custom_wx_icons_hicolor

If you have `git` installed, you can clone the repository with the following command:

```
$ git clone https://github.com/domdfcoding/custom_wx_icons_hicolor
```

```
Cloning into 'custom_wx_icons_hicolor'...
remote: Enumerating objects: 47, done.
remote: Counting objects: 100% (47/47), done.
remote: Compressing objects: 100% (41/41), done.
remote: Total 173 (delta 16), reused 17 (delta 6), pack-reused 126
Receiving objects: 100% (173/173), 126.56 KiB | 678.00 KiB/s, done.
Resolving deltas: 100% (66/66), done.
```

Alternatively, the code can be downloaded in a 'zip' file by clicking:
Clone or download –> Download Zip



Clone with HTTPS

Use Git or checkout with SVN using the web URL.

https://github.com/domdfcoding/pyms.

Fig. 1: Downloading a 'zip' file of the source code

3.6.1 Building from source

The recommended way to build `wx_icons_hicolor` is to use tox:

```
$ tox -e build
```

The source and wheel distributions will be in the directory `dist`.

If you wish, you may also use pep517.build or another **PEP 517**-compatible build tool.

Python Module Index

Index