Python packaging in openSUSE

Advantages against other distributions

Matěj Cepl
mcepl@cepl.eu

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Problems in the Python non-specific packaging

- Multiple interpreters
- Complicated commands
- Sheer number of packages
- Not enough checking

Multiple interpreters

```
%build
%if %{with python3}
%py3_build
%else
%py2_build
%endif
```

Multiple interpreters

```
%build
%if %{with python3}
%py3_build
%else
%py2_build
%endif
```

```
%build
%python_build
```

Complicated commands

```
%check
export PYTHONPATH=%{buildroot}%{python_sitelib} PYTHONDONTWRITEBYTECODE=1
pytest --ignore=build.* -v
```

Complicated commands

```
%check
export PYTHONPATH=%{buildroot}%{python_sitelib} PYTHONDONTWRITEBYTECODE=1
pytest --ignore=build.* -v

%check
%pytest
```

Example

```
%{?!python_module:%define python_module() python3-%{**}}
Name:           python-foobar
Version:        1.0.2
Release:        0
Summary:        Example foobar package
License:        MIT
URL:            https://github.com/bumba/foobar
Source:         https://files.pythonhosted.org/packages/source/f/foobar/foobar-%{version}.tar.gz
# PATCH-FIX-UPSTREAM remove_mock.patch bsc#123456 mcepl@suse.com
# we don't need stinking mock
Patch0:         remove_mock.patch
BuildRequires:  %{python_module appdirs}
BuildRequires:  %{python_module pytest}
BuildRequires:  fdupes
BuildRequires:  python-rpm-macros
Requires:       python-appdirs
BuildArch:      noarch
%python_subpackages

%description
foobar is a collection of enhancements to the Python packages that
allow you to build and distribute Python packages,
```

Example (cont.)

```
%prep
%autosetup -p1 -n foobar-%{version}

%build
export NOBUMPA=1
%python_build

%install
%python_install
%python_expand %fdupes %{buildroot}%{$python_sitelib}

%check
# %pyunittest discover -v
%pytest

%files %{python_files}
%license LICENSE
%doc CHANGES.rst README.rst
%{python_sitelib}/foobar
%{python_sitelib}/foobar-%{version}*-info

%changelog
```

Toil to machines!

- Given the number of packages we maintain (over 2,500 in Factory) we need to put as much work as possible on machines.
- Packages are auto-generated by 'py2pack'.
- Automatic rebuilds
- All submissions are reviewed
- Every build in openSUSE ecosystem is checked by rpmlint and unless specifically permitted, failed rpmlint check means failed build.

Thank you!

My email is mcepl@cepl.eu.

There is also interesting presentation by my colleague Steve Kowalik on the Python macros at https://youtu.be/5NDfkwluG1A

LaTeX source of this presentation is available on https://gitlab.com/mcepl/opensuseconf.git.