Embracing Qt for Python

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PANELIST
Embracing Python
Dr. Cristián Maureira-Fredes

- **Dr. Cristián Maureira-Fredes, Manager Research & Development ,The Qt Company**

- Cristián has been a Python enthusiast for more than 10 years, and due to his academic background he has been using it in different topics like Image Processing, Artificial Intelligence, Robotics, Data Science, and Astrophysics. Currently he is a Manager of Research & Development, Team lead for the QtCore, QML and Qt for Python teams, and continues as a Software Engineer at the Qt Company working on the Qt for Python project.

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Built with Qt Customer Case: SilhouettteFX Paul Miller

- **Paul Miller, Principal Engineer, Silhouette FX** *(Acquired by Boris FX)*

- Paul Miller has developed widely-used applications for the VFX industry for almost 30 years. In 2019 he was awarded an Emmy and Academy Award for his design and development of the Silhouette rotoscoping, digital paint, and compositing system. His company, Silhouette FX, was recently acquired by Boris FX.

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Embracing

From Prototypes to hybrid Applications

Dr. Cristián Maureira-Fredes

Outline 📖

- Setup
  - Installation
  - Building from source
- PySide
  - Widget based app (.ui, .qrc)
  - QML interaction
  - Other Python modules
- Shiboken
  - C++ module to Python
  - C++/Python application

Qt

before we start

What's the deal with Python?

Webinars & Conferences

- Creating user interfaces with Qt for Python
- Develop your first Qt for Python Application
- Python and C++ interoperability with Shiboken
- and many others!

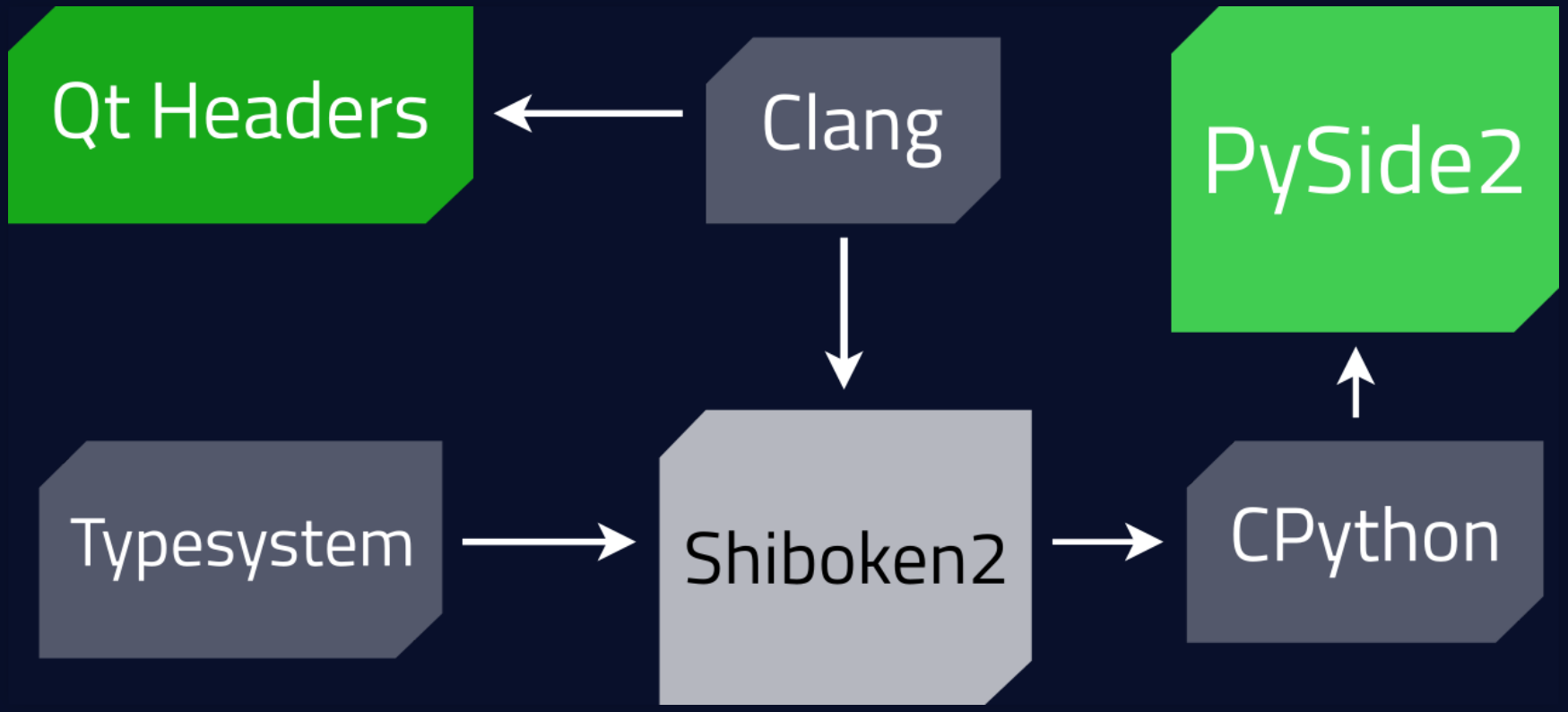
doc.qt.io/qtforpython/videos.html

Documentation

- General: doc.qt.io/qtforpython
- Shiboken: doc.qt.io/qtforpython/shiboken2
- Resources: resources.qt.io
- In progress
  - Video tutorials (Build, Contributing, etc)
  - Qt Creator example gallery
  - More tutorials and examples!

Py

Binding generation



Setup 🔨

Installing PySide

```
pip install pyside2
```

What does that install?

- PySide2 ✔
  - Qt modules ✔
  - pyside2-designer ✔
  - pyside2-rcc ✔
  - pyside2-uic ✔
- Shiboken2 (module) ✔
  - shiboken2 ✔
- Shiboken2_Generator (exe) ✖
  - shiboken2 ✖

Installing Shiboken Generator the simple way

```
pip install \
   --index-url=http://download.qt.io/official_releases/QtForPython/ \
   --trusted-host download.qt.io \
   shiboken2 pyside2 shiboken2_generator
```

But one needs to:

- Set CLANG_INSTALL_DIR to the libclang directory
- Add to PATH a Qt bin path with the same version
- Add to LD_LIBRARY_PATH the Qt lib path with the same version

Installing Shiboken Generator the hard way?

- Set CLANG_INSTALL_DIR to the libclang directory

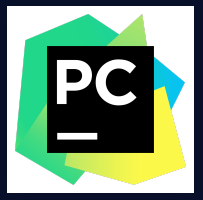
```
python setup.py install
# there are many other options!
```

doc.qt.io/qtforpython/gettingstarted.html

before jumping into the examples

Which IDE should I use?

IDEs support



Let's look at some code 💾

https://maureira.xyz/qtvts2020/code

Resources

- Technical Vision 🔭
  qt.io/blog/2019/08/19/technical-vision-qt-python
- Documentation 📚
  doc.qt.io/qtforpython
- Blogs, Webinars, Conferences, and more 🎉
  resources.qt.io

What's our current state?

- Released M2M Protocols wheels for commercial users 👩‍💼.
- Got rid of a set of nasty bugs related to threading 🐞
- Catching up with Qt6 💪

What's next?

- Currently in active development
- Improvements to the documentation
- A campaign to add more examples started
- Tooling to improve our lives
- Continue extending our commercial offering

but most importantly...

What do you need?

we are community driven.

bugreports.qt.io

Q&A

Let's talk!

IRC
#qt-pyside on Freenode
Matrix
#qt-pyside:matrix.org

Telegram
t.me/qtforpython
Gitter
gitter.im/PySide/pyside2

Scripting Silhouette

Python for VFX with Qt for Python

SILHOUETTE

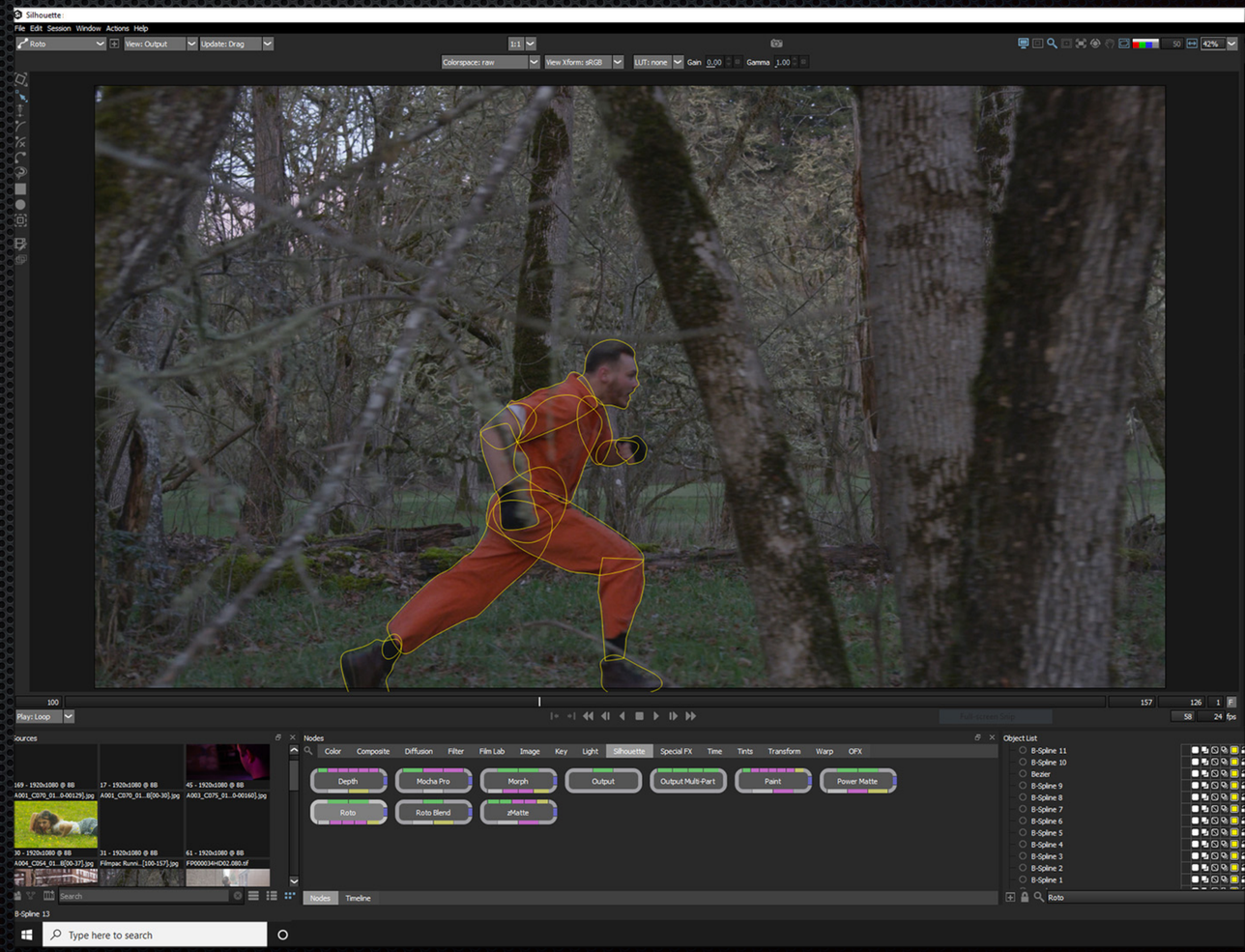
BORIS FX

Boris FX

- Applications and plugins for VFX
- Most written at least in part with Qt & Python

Silhouette

- Industry standard rotoscoping and paint since 2005
- Hundreds of feature films and television shows
- Stereo conversion of feature film
- Academy Award, Emmy recipient
- Highly extensible and customizable using Python



Silhouette and Qt

- Widgets-based desktop application
- Embedded Python interpreter
- Built-in Python console
- Built-in script editor
- PySide2

Demo

Extending Silhouette with Qt for Python

Learn more - Embracing Qt for Python

SIGGRAPH 2020

AUG 25-27

Book a meeting

https://www.qt.io/events/siggraph-2020-1586987037

- Try Qt: https://www.qt.io/download
- Qt for Python: https://www.qt.io/qt-for-python
- Qt for Python Resources: https://resources.qt.io/qt-for-python-2
- Technical Vision: https://www.qt.io/blog/2019/08/19/technical-vision-qt-python
- Documentation: https://doc.qt.io/qtforpython/
- Blogs, Webinars, Conferences and more ✨: https://resources.qt.io/
- Contact us: https://www.qt.io/contact-us
  - IRC: #qt-pyside on Freednode
  - Matrix: #qt-pyside:matrix.org
  - Telegram: t.me/qtforpython
  - Gitter: gitter.im/PySide/pyside2

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Thank you

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