80_Working_With_MDF_Class

March 22, 2020

```
[1]: from asammdf import MDF, Signal
     import numpy as np
```

0.1 Create 3 Signal objects

```
[2]: timestamps = np.array([0.1, 0.2, 0.3, 0.4, 0.5], dtype=np.float32)
```

0.1.1 unit8

```
[3]: s_uint8 = Signal(samples=np.array([0, 1, 2, 3, 4], dtype=np.uint8),
                      timestamps=timestamps,
                      name='Uint8_Signal',
                      unit='u1')
```

0.1.2 int32

```
[4]: s_int32 = Signal(samples=np.array([-20, -10, 0, 10, 20], dtype=np.int32),
                      timestamps=timestamps,
                      name='Int32_Signal',
                      unit='i4')
```

0.1.3 float64

```
[5]: s_float64 = Signal(samples=np.array([-20, -10, 0, 10, 20], dtype=np.float64),
                        timestamps=timestamps,
                        name='Float64_Signal',
                        unit='f8')
```

Create empty MDF version 4.00 file:

```
[6]: with MDF(version="4.10") as mdf4:

         # append the 3 signals to the new file
         signals = [s_uint8, s_int32, s_float64]
         mdf4.append(signals, "Created by Python")

         # save new file
```

1

```
    mdf4.save("my_new_file.mf4", overwrite=True)

    # convert new file to mdf version 3.10
    mdf3 = mdf4.convert(version="3.10")
    print(mdf3.version)

    # get the float signal
    sig = mdf3.get("Float64_Signal")
    print(sig)

    # cut measurement from 0.3s to end of measurement
    mdf4_cut = mdf4.cut(start=0.3)
    mdf4_cut.get("Float64_Signal").plot()

    # cut measurement from start of measurement to 0.4s
    mdf4_cut = mdf4.cut(stop=0.45)
    mdf4_cut.get("Float64_Signal").plot()

    # filter some signals from the file
    mdf4 = mdf4.filter(["Int32_Signal", "Uint8_Signal"])

    # save using zipped transpose deflate blocks
    mdf4.save("out.mf4", compression=2, overwrite=True)
```
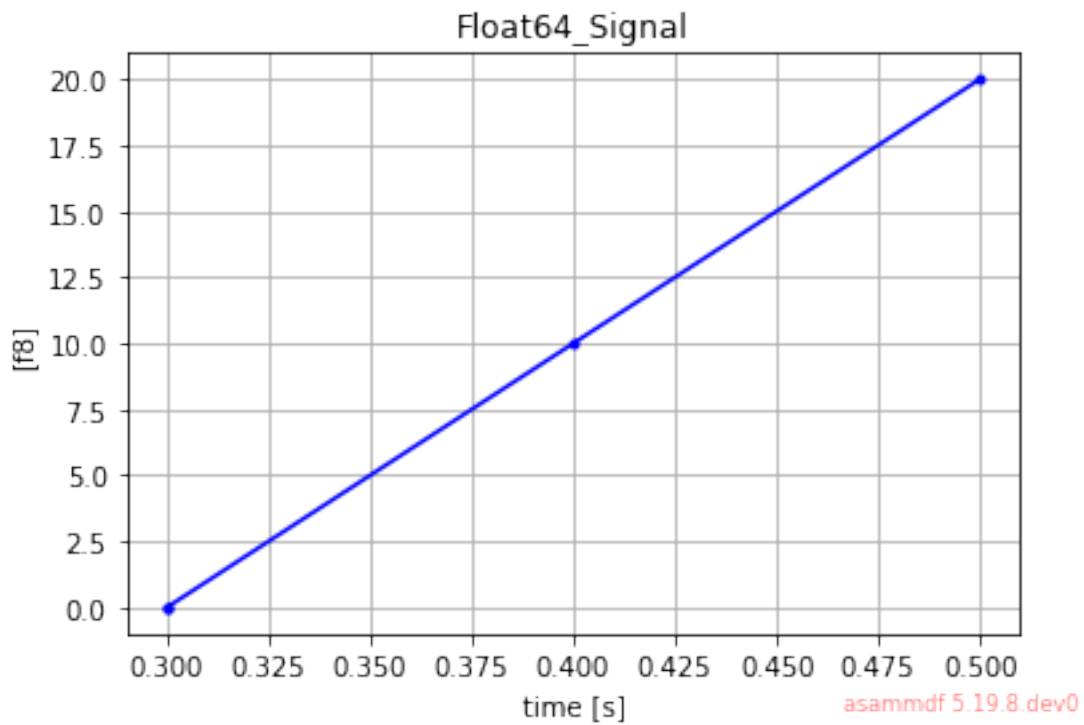
WARNING:root:Signal plotting requires pyqtgraph or matplotlib

```
3.10
<Signal Float64_Signal:
        samples=[-20. -10.   0.  10.  20.]
        timestamps=[0.1        0.2        0.30000001 0.40000001 0.5       ]
        invalidation_bits=None
        unit=""
        conversion=None
        source=SignalSource(name='Created by Python', path='Created by Python',
comment='Module number=0 @ address=0', source_type=0, bus_type=0)
        comment=""
        mastermeta="('time', 1)"
        raw=False
        display_name=
        attachment=()>
```

Float64_Signal

asammdf 5.19.8.dev0

WARNING:root:Signal plotting requires pyqtgraph or matplotlib

Float64_Signal

asammdf 5.19.8.dev0