

VTK/Examples/Cxx/Utilities/Timer

From KitwarePublic

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This example demonstrates how to use a timer with an interactor. It outputs a count every specified interval.

Timer.cxx

```
#include <vtkSmartPointer.h>
#include <vtkCommand.h>
#include <vtkRenderer.h>
#include <vtkRendererCollection.h>
#include <vtkRenderWindow.h>
#include <vtkRenderWindowInteractor.h>
#include <vtkTesting.h>

class vtkTimerCallback : public vtkCommand
{
public:
    static vtkTimerCallback *New()
    {
        vtkTimerCallback *cb = new vtkTimerCallback;
        cb->TimerCount = 0;
        return cb;
    }

    virtual void Execute(vtkObject *vtkNotUsed(caller), unsigned
                        void *vtkNotUsed(callData))
    {
        if (vtkCommand::TimerEvent == eventId)
        {
            ++this->TimerCount;
        }
        cout << this->TimerCount << endl;
    }

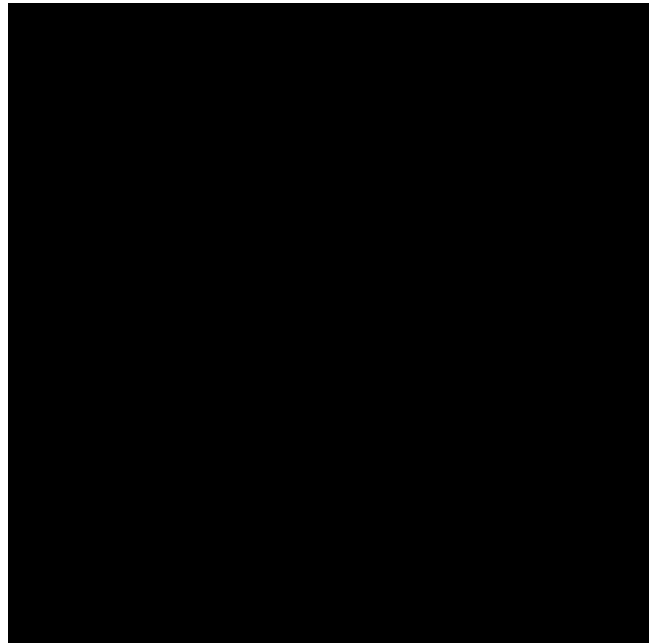
private:
    int TimerCount;
};

int main(int, char *[])
{
    // Setup renderer, render window, and interactor
    vtkSmartPointer<vtkRenderer> renderer =
        vtkSmartPointer<vtkRenderer>::New();
    vtkSmartPointer<vtkRenderWindow> renderWindow =
        vtkSmartPointer<vtkRenderWindow>::New();
    renderWindow->AddRenderer(renderer);
    vtkSmartPointer<vtkRenderWindowInteractor> interactor =
        vtkSmartPointer<vtkRenderWindowInteractor>::New();
    interactor->SetRenderWindow(renderWindow);

    // Initialize must be called prior to creating timer events.
    interactor->Initialize();

    // Sign up to receive TimerEvent
    vtkSmartPointer<vtkTimerCallback> cb =
        vtkSmartPointer<vtkTimerCallback>::New();
    interactor->AddObserver(vtkCommand::TimerEvent, cb);

    int timerId = interactor->CreateRepeatingTimer(100);
    std::cout << "timerId: " << timerId << std::endl;
}
```



```
// Start the interaction and timer
interactor->Start();

return EXIT_SUCCESS;
}
```

CMakeLists.txt

```
cmake_minimum_required(VERSION 2.8)

PROJECT(Timer)

find_package(VTK REQUIRED)
include(${VTK_USE_FILE})

add_executable(Timer MACOSX_BUNDLE Timer)

if(VTK_LIBRARIES)
    target_link_libraries(Timer ${VTK_LIBRARIES})
else()
    target_link_libraries(Timer vtkHybrid vtkWidgets)
endif()
```

Download and Build Timer

Click here to download Timer

(<http://git.torvalds.org/vtkwikiexamplestarballs/vtkwikiexamplestarballs/raw/master/Timer.tar>). and its *CMakeLists.txt* file.

Once the tarball *Timer.tar* has been downloaded and extracted,

```
cd Timer/build
```

- If VTK is installed:

```
cmake ..
```

- If VTK is not installed but compiled on your system, you will need to specify the path to your VTK build:

```
cmake -DVTK_DIR:PATH=/home/me/vtk_build ..
```

Build the project:

```
make
```

and run it:

`./Timer`

WINDOWS USERS PLEASE NOTE: Be sure to add the VTK bin directory to your path. This will resolve the VTK dll's at run time.

Maybe display the count using a `vtkTextActor`?

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Category: `VTKMakeMoreInteresting`

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