
Subject: example proposal particularly how the RichEdit is working

Posted by [dodobar](#) on Sun, 15 Jun 2025 07:51:46 GMT

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```
/**
 * @file main.cpp
 * @brief A minimal, self-contained example of a custom LogView control in U++.
 *
 * This application demonstrates how to create a specialized "Facade" class by inheriting
 * from RichEdit to produce a clean, easy-to-use, and reusable logging component.
 * It's designed to be a clear, practical example for community forums, showing how
 * to abstract away complex setup and formatting.
 */
#include <CtrlLib/CtrlLib.h>
#include <RichEdit/RichEdit.h>

using namespace Upp;

//=====
//=====
/**
 * @class LogView
 * @brief A specialized RichEdit control designed for displaying formatted log output.
 *
 * This class encapsulates all the setup and QTF formatting logic required to create
 * a clean, readable, read-only log display. It provides a simple API for appending
 * styled text, abstracting away the complexities of the underlying RichEdit control.
 */
//=====
//=====
struct LogView : RichEdit {
public:
    /// Defines the visual style for a log entry.
    enum LogStyle { LOG_NORMAL, LOG_HEADER, LOG_SUCCESS, LOG_ERROR };

    /**
     * @brief Constructor that applies sensible defaults for a log control.
     * Sets the control to be read-only, hides the ruler and non-printing characters,
     * and initializes the font.
     */
    LogView() {
        SetReadOnly();
        NoRuler();
        ShowCodes(Null);
        qtf_log_buffer = "[A1] "; // Initialize with 8pt Arial font.
    }
}
```

```

/**
 * @brief Appends a styled line of text to the log.
 * @param text The string to be logged.
 * @param style The visual style to apply (e.g., HEADER, SUCCESS).
 * @param newline If true, a newline character is appended.
 */
void Log(const String& text, LogStyle style = LOG_NORMAL, bool newline = true) {
    String qtf_text = text;

    switch(style) {
        case LOG_HEADER: qtf_text = "[* " + qtf_text + "]; break;
        case LOG_SUCCESS: qtf_text = "[@g " + qtf_text + "]; break;
        case LOG_ERROR: qtf_text = "[*@r " + qtf_text + "]; break;
        case LOG_NORMAL:
        default:
            break;
    }

    qtf_log_buffer.Cat(qtf_text);
    if(newline) qtf_log_buffer.Cat("&");

    SetQTF(qtf_log_buffer);
    Move(GetLength());
    Ctrl::ProcessEvents(); // Keep UI responsive during long operations.
}

/// @brief Adds a horizontal rule to the log for visual separation.
void AddSeparator() {
    Log("[--]", LOG_NORMAL);
}

private:
    /// The internal QTF string that acts as the data model for the control.
    String qtf_log_buffer;
};

//=====
//=====
/**
 * @class ExampleRunner
 * @brief The main application window that hosts and demonstrates the LogView.
 */
//=====
//=====
struct ExampleRunner : TopWindow {
    typedef ExampleRunner CLASSNAME;

```

```
Splitter    splitter;
LogView     logDisplay;    ///< Our custom control for displaying detailed output.
Button     actionBar;    ///< The main button, used for cancelling or closing.
```

```
bool        tasks_cancelled = false; ///< Flag to gracefully stop the process.
```

```
/// @brief Logs a simple message to the standard console output.
```

```
void ConsoleLog(const String& text) {
    Cout() << text;
}
```

```
// --- Example Tasks ---
```

```
// These simple functions demonstrate using the LogView.
```

```
void Test_TaskA() {
    logDisplay.Log("Running: Task A", LogView::LOG_HEADER);
    logDisplay.Log(" Performing some work...");
    Sleep(500); // Simulate work
    logDisplay.Log(" -> PASSED", LogView::LOG_SUCCESS);
}
```

```
void Test_TaskB() {
    logDisplay.Log("Running: Task B", LogView::LOG_HEADER);
    logDisplay.Log(" This one is much faster.");
    Sleep(100); // Simulate work
    logDisplay.Log(" -> PASSED", LogView::LOG_SUCCESS);
}
```

```
void Test_AFailingTask() {
    logDisplay.Log("Running: A Failing Task", LogView::LOG_HEADER);
    logDisplay.Log(" Oh no, something went wrong.");
    Sleep(300); // Simulate work
    logDisplay.Log(" -> FAILED", LogView::LOG_ERROR);
}
```

```
/// @brief A macro to simplify running a task and logging its console status.
```

```
#define RUN_TASK(TASK_NAME) \
    if(tasks_cancelled) break; \
    ConsoleLog("Running: " #TASK_NAME "... "); \
    TASK_NAME(); \
    if(tasks_cancelled) break; \
    ConsoleLog("DONE\n"); \
    logDisplay.AddSeparator();
```

```
/**
```

```
 * @brief Executes all defined example tasks in sequence.
```

```
*/
```

```
void RunAllTasks() {
```

```

ConsoleLog("=====\n");
ConsoleLog(" Running Example Tasks\n");
ConsoleLog("=====\n");
logDisplay.Log("LogView Example Suite", LogView::LOG_HEADER);
logDisplay.Log("");

do {
    RUN_TASK(Test_TaskA);
    RUN_TASK(Test_TaskB);
    RUN_TASK(Test_AFailingTask);
} while(0);

logDisplay.Log("");
if(tasks_cancelled) {
    ConsoleLog("\n** Tasks Cancelled By User **\n");
    logDisplay.Log("Tasks Cancelled By User", LogView::LOG_ERROR);
} else {
    ConsoleLog("=====\n");
    ConsoleLog(" Tasks Finished\n");
    ConsoleLog("=====\n");
    logDisplay.Log("All tasks finished.", LogView::LOG_SUCCESS);
}

actionButton.SetLabel("Close");
actionButton.Enable();
actionButton <<= callback(this, &TopWindow::Close);
Title("LogView Example - Finished");
}

/// @brief Sets the cancellation flag and updates the GUI to reflect it.
void CancelTasks() {
    tasks_cancelled = true;
    actionButton.Disable();
    actionButton.SetLabel("Cancelling...");
}

/// @brief Constructor for the main application window.
ExampleRunner() {
    Title("LogView Example - Running...").Sizeable().Zoomable();
    SetRect(0, 0, 700, 400);

    splitter.Vert(logDisplay, actionButton);
    splitter.SetPos(9000); // 90% for log, 10% for button
    Add(splitter.SizePos());

    actionButton.SetLabel("Cancel");
    actionButton <<= THISBACK(CancelTasks);
}

```

```
    // Schedule the tasks to run after the window is created and displayed.
    PostCallback(THISBACK(RunAllTasks));
}
};

/**
 * @brief The main entry point for the U++ GUI application.
 */
GUI_APP_MAIN
{
    StdLogSetup(LOG_COOUT);
    ExampleRunner().Run();
}
```
