

How to use video quality profiles in C# with ByteScout Screen Capturing SDK

How to use video quality profiles in C#

Learn how to use video quality profiles in C# with this source code sample. ByteScout Screen Capturing SDK: the screen video recording SDK helps in quick implementation of screen video recording. WMV, AVI, WebM output options are available with adjustable quality, video size, framerate and video and audio codec. Includes special features like live multiple blacking out of selected areas, recording from web cam as main source and as overlay, optional watermarks for output video. It can use video quality profiles in C#.

Fast application programming interfaces of ByteScout Screen Capturing SDK for C# plus the instruction and the code below will help you quickly learn how to use video quality profiles. Follow the instructions from the scratch to work and copy the C# code. Implementing C# application typically includes multiple stages of the software development so even if the functionality works please test it with your data and the production environment.

You can download free trial version of ByteScout Screen Capturing SDK from our website to see and try many others source code samples for C#.

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Source Code Files:

```

namespace ScreenCapture
{
    partial class Form1
    {
        /// <summary>
        /// Required designer variable.
        /// </summary>
        private System.ComponentModel.IContainer components = null;

        /// <summary>
        /// Clean up any resources being used.
        /// </summary>
        /// <param name="disposing">>true if managed resources should be disposed; otherwise,
        /// if false, disposing will only call Dispose on objects which were not created by
        /// the designer. For example, managed objects created using Textbox or
        /// Label, are not managed by the designer.
        /// </param>
        protected override void Dispose(bool disposing)
        {
            if (disposing && (components != null))
            {
                components.Dispose();
            }
            base.Dispose(disposing);
        }

        #region Windows Form Designer generated code

        /// <summary>
        /// Required method for Designer support - do not modify
        /// the contents of this method with the code editor.
        /// </summary>
        private void InitializeComponent()
        {
            this._txtOutputFile = new System.Windows.Forms.TextBox();
            this.label1 = new System.Windows.Forms.Label();
            this._numWidth = new System.Windows.Forms.NumericUpDown();
            this.label2 = new System.Windows.Forms.Label();
            this.label3 = new System.Windows.Forms.Label();
            this._numHeight = new System.Windows.Forms.NumericUpDown();
            this.label4 = new System.Windows.Forms.Label();
            this._numFramerate = new System.Windows.Forms.NumericUpDown();
            this._cmbQuality = new System.Windows.Forms.ComboBox();
            this.label5 = new System.Windows.Forms.Label();
            this._lblBitrate = new System.Windows.Forms.Label();
            this.label6 = new System.Windows.Forms.Label();
            this._numEncodingThreads = new System.Windows.Forms.NumericUpDown();
            this._btnScreenCapture = new System.Windows.Forms.Button();
            this._btnPauseScreenCapture = new System.Windows.Forms.Button();
            ((System.ComponentModel.ISupportInitialize)(this._numWidth)).BeginInit();
            ((System.ComponentModel.ISupportInitialize)(this._numHeight)).BeginInit();
            ((System.ComponentModel.ISupportInitialize)(this._numFramerate)).BeginInit();
            ((System.ComponentModel.ISupportInitialize)(this._numEncodingThreads)).BeginInit();
            this.SuspendLayout();
            //
            // _txtOutputFile
            //
            this._txtOutputFile.Location = new System.Drawing.Point(16, 31);
            this._txtOutputFile.Margin = new System.Windows.Forms.Padding(4);
        }
    }
}

```

```
this._txtOutputFile.Name = "_txtOutputFile";
this._txtOutputFile.Size = new System.Drawing.Size(300, 22);
this._txtOutputFile.TabIndex = 0;
this._txtOutputFile.Text = "output.wmv";
//
// label1
//
this.label1.AutoSize = true;
this.label1.Location = new System.Drawing.Point(17, 7);
this.label1.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this.label1.Name = "label1";
this.label1.Size = new System.Drawing.Size(73, 17);
this.label1.TabIndex = 1;
this.label1.Text = "Output file";
//
// _numWidth
//
this._numWidth.Increment = new decimal(new int[] {
2,
0,
0,
0});
this._numWidth.Location = new System.Drawing.Point(16, 96);
this._numWidth.Margin = new System.Windows.Forms.Padding(4);
this._numWidth.Maximum = new decimal(new int[] {
10000,
0,
0,
0});
this._numWidth.Name = "_numWidth";
this._numWidth.Size = new System.Drawing.Size(160, 22);
this._numWidth.TabIndex = 2;
this._numWidth.Value = new decimal(new int[] {
1024,
0,
0,
0});
//
// label2
//
this.label2.AutoSize = true;
this.label2.Location = new System.Drawing.Point(16, 76);
this.label2.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this.label2.Name = "label2";
this.label2.Size = new System.Drawing.Size(44, 17);
this.label2.TabIndex = 3;
this.label2.Text = "Width";
//
// label3
//
this.label3.AutoSize = true;
this.label3.Location = new System.Drawing.Point(184, 76);
this.label3.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this.label3.Name = "label3";
this.label3.Size = new System.Drawing.Size(49, 17);
this.label3.TabIndex = 5;
this.label3.Text = "Height";
//
// _numHeight
//
```

```

this._numHeight.Increment = new decimal(new int[] {
2,
0,
0,
0});
this._numHeight.Location = new System.Drawing.Point(184, 96);
this._numHeight.Margin = new System.Windows.Forms.Padding(4);
this._numHeight.Maximum = new decimal(new int[] {
10000,
0,
0,
0});
this._numHeight.Name = "_numHeight";
this._numHeight.Size = new System.Drawing.Size(160, 22);
this._numHeight.TabIndex = 4;
this._numHeight.Value = new decimal(new int[] {
768,
0,
0,
0});
//
// label4
//
this.label4.AutoSize = true;
this.label4.Location = new System.Drawing.Point(352, 76);
this.label4.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this.label4.Name = "label4";
this.label4.Size = new System.Drawing.Size(73, 17);
this.label4.TabIndex = 7;
this.label4.Text = "Framerate";
//
// _numFramerate
//
this._numFramerate.DecimalPlaces = 2;
this._numFramerate.Increment = new decimal(new int[] {
2,
0,
0,
0});
this._numFramerate.Location = new System.Drawing.Point(352, 96);
this._numFramerate.Margin = new System.Windows.Forms.Padding(4);
this._numFramerate.Maximum = new decimal(new int[] {
10000,
0,
0,
0});
this._numFramerate.Name = "_numFramerate";
this._numFramerate.Size = new System.Drawing.Size(160, 22);
this._numFramerate.TabIndex = 6;
this._numFramerate.ThousandsSeparator = true;
this._numFramerate.Value = new decimal(new int[] {
20,
0,
0,
0});
//
// _cmbQuality
//
this._cmbQuality.DropDownStyle = System.Windows.Forms.ComboBoxStyle.DropDown;
this._cmbQuality.FormattingEnabled = true;

```

```

this._cmbQuality.Location = new System.Drawing.Point(520, 96);
this._cmbQuality.Margin = new System.Windows.Forms.Padding(4);
this._cmbQuality.Name = "_cmbQuality";
this._cmbQuality.Size = new System.Drawing.Size(240, 24);
this._cmbQuality.TabIndex = 8;
//
// label5
//
this.label5.AutoSize = true;
this.label5.Location = new System.Drawing.Point(516, 76);
this.label5.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this.label5.Name = "label5";
this.label5.Size = new System.Drawing.Size(52, 17);
this.label5.TabIndex = 9;
this.label5.Text = "Quality";
//
// _lblBitrate
//
this._lblBitrate.Location = new System.Drawing.Point(352, 145);
this._lblBitrate.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this._lblBitrate.Name = "_lblBitrate";
this._lblBitrate.Size = new System.Drawing.Size(408, 51);
this._lblBitrate.TabIndex = 11;
//
// label6
//
this.label6.AutoSize = true;
this.label6.Location = new System.Drawing.Point(17, 145);
this.label6.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this.label6.Name = "label6";
this.label6.Size = new System.Drawing.Size(192, 17);
this.label6.TabIndex = 15;
this.label6.Text = "Number of encoding threads:";
//
// _numEncodingThreads
//
this._numEncodingThreads.Increment = new decimal(new int[] {
2,
0,
0,
0});
this._numEncodingThreads.Location = new System.Drawing.Point(217, 142);
this._numEncodingThreads.Margin = new System.Windows.Forms.Padding(4);
this._numEncodingThreads.Maximum = new decimal(new int[] {
16,
0,
0,
0});
this._numEncodingThreads.Name = "_numEncodingThreads";
this._numEncodingThreads.Size = new System.Drawing.Size(127, 22);
this._numEncodingThreads.TabIndex = 14;
this._numEncodingThreads.Value = new decimal(new int[] {
3,
0,
0,
0});
//
// _btnScreenCapture
//
this._btnScreenCapture.Location = new System.Drawing.Point(19, 200);

```

```

this._btnScreenCapture.Margin = new System.Windows.Forms.Padding(4);
this._btnScreenCapture.Name = "_btnScreenCapture";
this._btnScreenCapture.Size = new System.Drawing.Size(163, 28);
this._btnScreenCapture.TabIndex = 16;
this._btnScreenCapture.Text = "Screen capture video";
this._btnScreenCapture.UseVisualStyleBackColor = true;
this._btnScreenCapture.Click += new System.EventHandler(this._btnScreenCapt
//
// _btnPauseScreenCapture
//
this._btnPauseScreenCapture.Location = new System.Drawing.Point(205, 200);
this._btnPauseScreenCapture.Margin = new System.Windows.Forms.Padding(4);
this._btnPauseScreenCapture.Name = "_btnPauseScreenCapture";
this._btnPauseScreenCapture.Size = new System.Drawing.Size(163, 28);
this._btnPauseScreenCapture.TabIndex = 19;
this._btnPauseScreenCapture.Text = "Pause Screen Capture";
this._btnPauseScreenCapture.UseVisualStyleBackColor = true;
this._btnPauseScreenCapture.Visible = false;
this._btnPauseScreenCapture.Click += new System.EventHandler(this._btnPause
//
// Form1
//
this.AutoScaleDimensions = new System.Drawing.SizeF(8F, 16F);
this.AutoScaleMode = System.Windows.Forms.AutoScaleMode.Font;
this.ClientSize = new System.Drawing.Size(779, 241);
this.Controls.Add(this._btnPauseScreenCapture);
this.Controls.Add(this._btnScreenCapture);
this.Controls.Add(this.label6);
this.Controls.Add(this._numEncodingThreads);
this.Controls.Add(this._lblBitrate);
this.Controls.Add(this.label5);
this.Controls.Add(this._cmbQuality);
this.Controls.Add(this.label4);
this.Controls.Add(this._numFramerate);
this.Controls.Add(this.label3);
this.Controls.Add(this._numHeight);
this.Controls.Add(this.label2);
this.Controls.Add(this._numWidth);
this.Controls.Add(this.label1);
this.Controls.Add(this._txtOutputFile);
this.FormBorderStyle = System.Windows.Forms.FormBorderStyle.Fixed3D;
this.Margin = new System.Windows.Forms.Padding(4);
this.MaximizeBox = false;
this.MinimizeBox = false;
this.Name = "Form1";
this.Text = "Screen Capture Video";
this.Load += new System.EventHandler(this.Form1_Load);
((System.ComponentModel.ISupportInitialize)(this._numWidth)).EndInit();
((System.ComponentModel.ISupportInitialize)(this._numHeight)).EndInit();
((System.ComponentModel.ISupportInitialize)(this._numFramerate)).EndInit();
((System.ComponentModel.ISupportInitialize)(this._numEncodingThreads)).EndI
this.ResumeLayout(false);
this.PerformLayout();

}

#endregion

private System.Windows.Forms.TextBox _txtOutputFile;
private System.Windows.Forms.Label label1;

```

```

private System.Windows.Forms.NumericUpDown _numWidth;
private System.Windows.Forms.Label label2;
private System.Windows.Forms.Label label3;
private System.Windows.Forms.NumericUpDown _numHeight;
private System.Windows.Forms.Label label4;
private System.Windows.Forms.NumericUpDown _numFramerate;
private System.Windows.Forms.ComboBox _cmbQuality;
private System.Windows.Forms.Label label5;
private System.Windows.Forms.Label _lblBitrate;
private System.Windows.Forms.Label label6;
private System.Windows.Forms.NumericUpDown _numEncodingThreads;
private System.Windows.Forms.Button _btnScreenCapture;
private System.Windows.Forms.Button _btnPauseScreenCapture;
}
}

```

Form1.cs

```

using BytescoutScreenCapturingLib;
using System;
using System.Diagnostics;
using System.Windows.Forms;

namespace ScreenCapture
{
    public partial class Form1 : Form
    {
        #region Fields

        private BytescoutScreenCapturingLib.Capturer _capturer;
        private bool _converting = false;
        private bool _paused = false;

        #endregion

        public Form1()
        {
            InitializeComponent();

            /// <summary>
            /// Form Load Event Hanlde
            /// </summary>
            private void Form1_Load(object sender, EventArgs e)
            {
                try
                {
                    _cmbQuality.DataSource = Enum.GetValues(typeof(VideoQualityProfileType));
                    _cmbQuality.SelectedIndex = 0;
                }
            }
        }
    }
}

```

```

        _capturer = new BytescoutScreenCapturingLib.Capturer();
        _capturer.RegistrationName = "demo";
        _capturer.RegistrationKey = "demo";
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.Message);
    }
}

/// <summary>
/// Handle screen capture button click
/// </summary>
private void _btnScreenCapture_Click(object sender, EventArgs e)
{
    try
    {
        if (_converting)
        {
            if (_capturer.IsRunning)
            {
                _capturer.Stop();
            }

            StopCapturer();

            _btnPauseScreenCapture.Visible = false;
        }
        else
        {
            _capturer.OutputWidth = (int)_numWidth.Value;
            _capturer.OutputHeight = (int)_numHeight.Value;
            _capturer.FPS = (float)_numFramerate.Value;

            _capturer.SetVideoQualityProfile(BytescoutScreenCapturingLib.VideoQualityProfile.WmvQuality);

            _lblBitrate.Text = string.Format("Bitrate: {0}[kbps], Wmv Quality: {1}, Webm Min Quantizer: {2}",
                _capturer.WMVVideoBitrate / 1000, _capturer.WMVVideoQuality,
                _capturer.WebmMinQuantizer, _capturer.WebmMinQuantizer);

            _capturer.AnimateMouseClicks = true;
            _capturer.AnimateMouseButtons = true;
            _capturer.CapturingType = BytescoutScreenCapturingLib.CaptureAreaType.All;

            _capturer.OutputFileName = _txtOutputFile.Text;

            _capturer.EncoderThreadsCount = (int)_numEncodingThreads.Value;

            _capturer.AudioEnabled = false;

            _capturer.Run();

            _converting = true;
            _btnScreenCapture.Text = "Stop screen capture";

            _btnPauseScreenCapture.Visible = true;
            _paused = false;
        }
    }
}

```



```

        catch (Exception ex)
        {
            MessageBox.Show(ex.Message);
        }
    }

    /// <summary>
    /// Pause screen capture
    /// </summary>
    private void _btnPauseScreenCapture_Click(object sender, EventArgs e)
    {
        if (_paused)
        {
            _capturer.Run();
            _btnPauseScreenCapture.Text = "Pause Screen Capture";
            _paused = false;
        }
        else
        {
            _capturer.Pause();
            _btnPauseScreenCapture.Text = "Resume Screen Capture";
            _paused = true;
        }
    }

    /// <summary>
    /// Stop Capture
    /// </summary>
    private void StopCapturer()
    {
        _converting = false;
        _btnScreenCapture.Text = "Screen capture video";

        // Open captured video
        Process.Start(_txtOutputFile.Text);
    }
}
}
}

```

Program.cs

```

using System;
using System.Collections.Generic;
using System.Windows.Forms;

namespace ScreenCapture
{
    static class Program
    {
        /// <summary>

```

```

/// The main entry point for the application.
/// </summary>
[STAThread]
static void Main()
{
    Application.EnableVisualStyles();
    Application.SetCompatibleTextRenderingDefault(false);
    Application.Run(new Form1());
}
}
}

```

ScreenCapture.sln

```

Microsoft Visual Studio Solution File, Format Version 12.00
# Visual Studio 15
VisualStudioVersion = 15.0.28010.2003
MinimumVisualStudioVersion = 10.0.40219.1
Project("{FAE04EC0-301F-11D3-BF4B-00C04F79EFBC}") = "ScreenCapture", "ScreenCapture.csproj"
EndProject
Global
    GlobalSection(SolutionConfigurationPlatforms) = preSolution
        Debug|Any CPU = Debug|Any CPU
        Release|Any CPU = Release|Any CPU
    EndGlobalSection
    GlobalSection(ProjectConfigurationPlatforms) = postSolution
        {70591ABB-7738-41A5-B1F5-AF2A5BA88570}.Debug|Any CPU.ActiveCfg = Debug|Any CPU
        {70591ABB-7738-41A5-B1F5-AF2A5BA88570}.Debug|Any CPU.Build.0 = Debug|Any CPU
        {70591ABB-7738-41A5-B1F5-AF2A5BA88570}.Release|Any CPU.ActiveCfg = Release|Any CPU
        {70591ABB-7738-41A5-B1F5-AF2A5BA88570}.Release|Any CPU.Build.0 = Release|Any CPU
    EndGlobalSection
    GlobalSection(SolutionProperties) = preSolution
        HideSolutionNode = FALSE
    EndGlobalSection
    GlobalSection(ExtensibilityGlobals) = postSolution
        SolutionGuid = {B68F8AC8-F24A-4270-AE61-D22F0566FB87}
    EndGlobalSection
EndGlobal

```

VIDEO

<https://www.youtube.com/watch?v=fujkvtWUVCw>

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