

Loxodon Framework TextFormatting



(中文版)

Developed by Clark

Requires Unity 2021.3 or higher.

This is a text formatting plugin modified based on the official C# library. By extending the AppendFormat function of StringBuilder, it aims to avoid garbage collection (GC) when concatenating strings or converting numbers to strings. This optimization is particularly beneficial in scenarios with high-performance requirements.

[Loxodon.Framework.TextUGUI](#)

This plugin also extends Unity's UGUI by introducing two new text controls: `TemplateText` and `FormattableText`. These controls support MVVM data binding, allowing `ViewModel` or value-type objects to be bound to the controls. Additionally, they avoid boxing and unboxing of value-type objects, optimizing garbage collection (GC) to the greatest extent possible.

[Loxodon.Framework.TextMeshPro](#)

`Loxodon.Framework.TextMeshPro` provides `TemplateTextMeshPro` and `FormattableTextMeshProUGUI` controls based on `TextMeshPro`, which can further reduce garbage collection (GC) and enable completely 0-GC game view updates.

Installation

Install via OpenUPM (recommended)

[OpenUPM](#) can automatically manage dependencies, it is recommended to use it to install the framework.

Requires [nodejs](#)'s npm and `openupm-cli`, if not installed please install them first.

```
# Install openupm-cli, please ignore if it is already installed.
npm install -g openupm-cli

#Go to the root directory of your project
cd F:/workspace/New Unity Project

#Install loxodon-framework-textformatting
openupm add com.vovgou.loxodon-framework-textformatting
```

Install via Packages/manifest.json

Modify the `Packages/manifest.json` file in your project, add the third-party repository `"package.openupm.com"`'s configuration and add `"com.vovgou.loxodon-framework-textformatting"` in the `"dependencies"` node.

Installing the framework in this way does not require nodejs and openm-cli.

```
{
  "dependencies": {
    ...
    "com.vovgou.loxodon-framework-textformatting": "2.6.2"
  },
  "scopedRegistries": [
    {
      "name": "package.openupm.com",
      "url": "https://package.openupm.com",
      "scopes": [
        "com.vovgou",

```

```

        "com.openupm"
    ]
}
}
}

```

Quick Start

StringBuilder.AppendFormat

This plugin enhances the `AppendFormat<>()` function of `StringBuilder`. It provides support for multiple generic parameters of different types or generic array parameters. When these parameters are of numeric types, `DateTime`, or `TimeSpan`, using them to concatenate strings eliminates the need for value type boxing or unboxing. Consequently, converting numeric types to `String` during string concatenation does not generate garbage collection (GC). See the example below for usage details.

```

using System;
using System.Text;
using UnityEngine;
using Loxodon.Framework.TextFormatting;//make sure to first import the required namespace
public class Example : MonoBehaviour
{
    StringBuilder builder = new StringBuilder();
    void Update()
    {
        builder.Clear();
        builder.AppendFormat<DateTime,int>("Now:{0:yyyy-MM-dd HH:mm:ss} Frame:{0:D6}", DateTime.Now,Time.frameCount);
        builder.AppendFormat<float>("{0:f2}", Time.realtimeSinceStartup);
    }
}

```

<div> <div>Total Used Memory</div> <div>Texture Memory</div> </div>							
Hierarchy	Live	Main Thread	CPU:1.47ms GPU:--ms			No Details	
Overview	Total	Self	Calls	GC Alloc	Time ms	Self ms	
Update.ScriptRunBehaviourUpdate	1.9%	0.0%	1	0 B	0.02	0.00	
BehaviourUpdate	1.9%	0.1%	1	0 B	0.02	0.00	
Example.Update() [Invoke]	1.7%	1.7%	1	0 B	0.02	0.02	
MainThreadExecutor.Update() [Invoke]	0.0%	0.0%	2	0 B	0.00	0.00	
PreUpdate.UpdateVideo	0.0%	0.0%	1	0 B	0.00	0.00	
PreUpdate.WindUpdate	0.0%	0.0%	1	0 B	0.00	0.00	
PreUpdate.AIUpdate	0.0%	0.0%	1	0 B	0.00	0.00	
PreUpdate.SendMouseEvents	1.0%	0.0%	1	0 B	0.01	0.00	
PreUpdate.NewInputUpdate	0.1%	0.0%	1	0 B	0.00	0.00	
PreUpdate.IMGUISendQueuedEvents	0.0%	0.0%	1	0 B	0.00	0.00	
PreUpdate.CheckTextFieldInput	0.0%	0.0%	1	0 B	0.00	0.00	

Contact Us

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