**Unity3D教程：用ScriptableObject打包数据**

Posted on 2013年07月28日 by U3d / [Unity3D 基础教程](http://www.unitymanual.com/category/manual/unity3d-%e5%9f%ba%e7%a1%80%e6%95%99%e7%a8%8b) /被围观 31 次

开发人员一般通过BuildPipeline函数去打包文件，然后通过WWW去下载。但是BuildPipeline打包的对象类型是有限制的，像GameObject，TextAsset这些文件是可以直接打包的，但是，如果要读取一些Unity不支持的类型，我们就需要用到ScriptableObject了。这里用打包Csv表作为例子示例一下：

**1. 编辑ScriptObject对象**

首先，csv表的内容就是一段字符串，又或者说是一段bytes，看程序需求，我这里把csv表的内容当成一段bytes读取，吧

所以，csv表的ScriptableObject可以这样写：

|  |  |  |
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| --- | --- |
| 1 | **using** UnityEngine; |
| 2 | **using** System.Collections; |
| 3 |  |
| 4 | **public** **class** soCsv : ScriptableObject |
| 5 | { |
| 6 | **public** **string** fileName; |
| 7 | **public** **byte**[] content; |
| 8 | } |

**2. 打包文件**

有了Csv的ScriptableObject后，就可以开始写打包函数了。简单流程：

1）.获取选中的csv表对象

2）.赋值到刚声明的csv表对应的ScriptableObject

3）.用该ScriptableObject生成Asset

4）.读取生成的Asset后打包（生成与读取asset的过程有点别扭，但只有这样获得的Object对象，才能打包成功...）

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| 01 |  |
| 02 | **using** UnityEngine; |
| 03 | **using** System.Collections; |
| 04 | **using** UnityEditor; |
| 05 | **using** System.IO; |
| 06 | **using** System.Collections.Generic; |
| 07 |  |
| 08 | **public** **class** BuildTest : MonoBehaviour |
| 09 | { |
| 10 | [MenuItem("Assets/Build Csv")] |
| 11 | **static** **void** BuildCsv() |
| 12 | { |
| 13 | **string** applicationPath = Application.dataPath; |
| 14 | **string** saveDir = applicationPath + "/Resources\_out/"; |
| 15 | **string** savaPath = saveDir + "csv.unity3d"; |
| 16 |  |
| 17 | *//获取选中的对象* |
| 18 | */\*关于SelectionMode参数，目前我只用过Assets,DeepAssets，其他的暂且不说* |
| 19 | *Assets：获取当前选中的单一对象* |
| 20 | *DeepAssets：获取当前选中的对象，如果选中的文件夹，则会获取到文件夹的子对象* |
| 21 | *\** |
| 22 | *\** |
| 23 | *Unfiltered ： Return the whole selection.* |
| 24 | *TopLevel ： Only return the topmost selected transform. A selected child of another selected transform will be filtered out.* |
| 25 | *Deep： Return the selection and all child transforms of the selection.* |
| 26 | *ExcludePrefab ： Excludes any prefabs from the selection.* |
| 27 | *Editable ：Excludes any objects which shall not be modified.* |
| 28 | *Assets ：Only return objects that are assets in the Asset directory.* |
| 29 | *DeepAssets ： If the selection contains folders, also include all assets and subfolders within that folder in the file hierarchy.* |
| 30 | *\** |
| 31 | *\*/* |
| 32 |  |
| 33 | **Object**[] selections = Selection.GetFiltered(typeof(**Object**), SelectionMode.DeepAssets); |
| 34 | List outs = new List(); |
| 35 | **for** (**int** i=0,max=selections.Length; i&lt;max; i++) |
| 36 | { *//Unity3D教程手册：www.unitymanual.com* |
| 37 | **Object** obj = selections[i]; |
| 38 | *//asset path : 相对Asset目录* |
| 39 | **string** fileAssetPath = AssetDatabase.GetAssetPath(obj); |
| 40 | *//判断后缀* |
| 41 | **if** (fileAssetPath.Substring(fileAssetPath.LastIndexOf(&#039;.&#039;) + 1) != &quot;csv&quot;) |
| 42 | **continue**; |
| 43 |  |
| 44 | *//* |
| 45 | **string** fileWholePath = applicationPath + &quot;/&quot; + fileAssetPath.Substring(fileAssetPath.IndexOf(&quot;/&quot;)); |
| 46 | *//Unity3D教程手册：www.unitymanual.com* |
| 47 | *//* |
| 48 | soCsv csv = ScriptableObject.CreateInstance(); |
| 49 | csv.fileName = obj.name; |
| 50 | csv.content = File.ReadAllBytes(fileWholePath); |
| 51 |  |
| 52 | *//这一个存与读的步骤是否必要的?* |
| 53 | **string** assetPathTemp = "Assets/Resources\_Local/Temp/" + obj.name + ".asset"; |
| 54 | AssetDatabase.CreateAsset(csv, assetPathTemp); |
| 55 |  |
| 56 | **Object** outObj = AssetDatabase.LoadAssetAtPath(assetPathTemp, typeof(soCsv)); |
| 57 |  |
| 58 | *//* |
| 59 | Debug.Log("package : " + outObj.name); |
| 60 | outs.**Add**(outObj); |
| 61 | } |
| 62 |  |
| 63 | *//* |
| 64 | **Object**[] outObjs = outs.ToArray(); |
| 65 | **if** (BuildPipeline.BuildAssetBundle(**null**, outs.ToArray(), savaPath)) |
| 66 | Debug.Log("build " + savaPath + " success,length = " + outObjs.Length); |
| 67 | **else** |
| 68 | Debug.LogWarning("build " + savaPath + " failed"); |
| 69 | } |
| 70 |  |
| 71 | } |
| 72 |  |

**3. 下载并解析内容**

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| --- | --- |
| 01 |  |
| 02 | **using** UnityEngine; |
| 03 | **using** System.Collections; |
| 04 | **using** System.IO; |
| 05 |  |
| 06 | **using** LumenWorks.Framework.IO.Csv; |
| 07 |  |
| 08 | **public** **class** Test : MonoBehaviour { |
| 09 |  |
| 10 | WWW w; |
| 11 | **string** path ; |
| 12 | **void** Start () { |
| 13 | *//File协议主要用于访问本地计算机中的文件，所以这里还需要加file:///* |
| 14 | path = "file:///" + Application.dataPath + "/Resources\_out/csv.unity3d"; |
| 15 | w = new WWW(path); |
| 16 | } |
| 17 |  |
| 18 | *// Update is called once per frame* |
| 19 | **void** Update () { |
| 20 | **if** (w != **null**) |
| 21 | { |
| 22 | **if** (w.isDone) |
| 23 | { |
| 24 | Debug.Log("download " + path); |
| 25 |  |
| 26 | Debug.Log(w.assetBundle.mainAsset); |
| 27 |  |
| 28 | */\*loadall的参数如果不指定类型，很可能会读取到额外的内容* |
| 29 | *\* 像我测试的时候，就发现一直多出了一个名字叫soCsv的对象* |
| 30 | *\* 最好还是指定一下类型* |
| 31 | *\* \*/* |
| 32 | **Object**[] objs = w.assetBundle.LoadAll(typeof(soCsv)); |
| 33 | Debug.Log("count : " + objs.Length); |
| 34 | **for** (**int** i = 0, max = objs.Length; i &amp;lt; max; i++) |
| 35 | { |
| 36 | **Object** obj = objs[i]; |
| 37 | soCsv csv= obj **as** soCsv; |
| 38 |  |
| 39 | *//用string表做一个例子吧* |
| 40 | **if** (csv.fileName != &amp;quot;string&amp;quot;) |
| 41 | { |
| 42 | **continue**; |
| 43 | } |
| 44 |  |
| 45 | *//* |
| 46 | MemoryStream ms = new MemoryStream(csv.content); |
| 47 | **if** (ms == **null**) |
| 48 | { |
| 49 | Debug.LogWarning(&amp;quot;转换csv失败&amp;quot;); |
| 50 | **continue**; |
| 51 | } |
| 52 |  |
| 53 | StreamReader sr = new StreamReader(ms); |
| 54 | TextReader tr = sr **as** TextReader; |
| 55 | **if** (tr == **null**) |
| 56 | { |
| 57 | Debug.LogWarning(&amp;quot;text reader is **null**&amp;quot;); |
| 58 | **continue**; |
| 59 | } |
| 60 |  |
| 61 | CsvReader cr = new CsvReader(tr, **true**); |
| 62 | **if** (cr == **null**) |
| 63 | { |
| 64 | Debug.LogWarning(&amp;quot;CsvReader is **null**&amp;quot;); |
| 65 | **continue**; |
| 66 | } |
| 67 | *//Unity3D教程手册：www.unitymanual.com* |
| 68 | *//将字段头输出* |
| 69 | **string**[] headers = cr.GetFieldHeaders(); |
| 70 | **foreach** (**string** szHeader **in** headers) |
| 71 | Debug.Log(szHeader); |
| 72 |  |
| 73 |  |
| 74 | } |
| 75 |  |
| 76 | w = **null**; |
| 77 | } |
| 78 | } |
| 79 | } |
| 80 |  |