

PokScene JSON Format

Oleg Loshkin

January 30, 2020

Doc git repo: <https://github.com/LoshkinOleg/DocPokScene>

1 Files location

Currently .pokscene files are located under **"save/Scenes"** instead of AppData. This will need to be addressed at some point since scenes need to be in the Switch as assets.

2 Arrays

Arrays are fields that look like "someField": []. These are preceded by the **length of the array** with a name of **fieldName + "Count"** like so: **"someFieldCount": 0**.

WARNING: Array indices begin at 1 instead of 0. Value of 0 is reserved for the default index that indicates it is not a valid one (ex: game object with "parent": 0 field signifies it has no parent. Game object with "parent: 1" signifies that the game object at the first position in the array is its parent.).

3 Empty or default fields

Empty or default fields such as "myTexturePath": "" or "parent":0 **are automatically removed upon .pokconvertiblescene file generation by UPDC on Unity's side** as long as the string value describing what the default field looks like is written in "Empty Fields" tab in UPDC. **If you don't find a particular field somewhere, it means it is set to the default value.**

WARNING: These are exceptions to this rule:

- All values and sub-values of a game object's "transform".
- A game object's "instanceId" (Unity's unique identifier for a game object instance).
- A "model"'s "diffuseColor".
- A "model"'s "roughness".
- A chunk's "position".
- A chunk's "size".

The values listed above are always present as long as their parent values are present (every model will have a color for instance but not all game objects will have a model).

4 Prefabs

Nested prefabs are not supported.

TODO: Prefabs are not yet handled by ConvertibleSceneToPokSceneTool on Poke's side!

5 Overall Format

The jsons in this documentation are formatted for easy reading.

```
{
  "resources": // Hash - filename pairs for ressources to load. Can be empty.
  {
    ...
  },
  "gameObjectsCount": ... ,
  "gameObjects": // Game object and prefab instances.
  [
    ...
  ],
  "skybox": // Textures used by the skybox in scene.
  {
    ...
  },
  "chunksCount": ... ,
  "chunks": // Scene's chunks with indices to game objects and prefabs they contain.
  [
    ...
  ],
  "chunkTimeEventsCount": ... ,
  "chunkTimeEvents": // ChunkTimeEvents with indices to chunks.
  [
    ...
  ],
  "chunkTriggerEventsCount": ... ,
  "chunkTriggerEvents": // ChunkTriggerEvents with indices to chunks.
  [
    ...
  ]
}
```

6 resources

```
"resources":
{
  "texturesCount": 1,
  "textures": // Enum index corresponding to ResourceType defined in resource_type.h.
  [
    {
      "hash": 68431, // Generated with engine's hasher from the string below.
      "name": someTexture.png"
    }
  ],
  "meshesCount": 1,
  "meshes":
  [
    {
      "hash": 68431,
      "name": someMesh.obj"
    }
  ]
}
```

7 gameObjects

The first game object shows a game object with only "parent" field removed since it has no parent. The second game object shows one with all fields set to default values except "parent" which is set to the index of the first one. (NOTE: see "Arrays" section of the document as to why indices start at 1 instead of 0.)

The third game object shows an instance of a prefab that is a child of game object at index 1.

```
"gameObjectsCount": 3,
"gameObjects":
[
  { // This is a game object at index 1.
    "isActive": true, // Only present if "isActive" is true, else "isActive" is removed
    .
    "transform": // Values are relative to parent.
    {
      "position":
      {
        "x": 50.0, // ALWAYS PRESENT, even if at 0.0.
        "y": 50.0,
        "z": 50.0
      },
      "rotation":
      {
        "x": 50.0,
        "y": 50.0,
        "z": 50.0
      },
      "scale":
      {
        "x": 50.0,
        "y": 50.0,
        "z": 50.0
      }
    },
    "model":
    {
      "meshName": 843148, // Hash of the resource located in the "resources" section.
      "diffuseMapName": 32156,
      "normalMapName": 2148435,
      "occlusionMapName": 410216, // Default value of 0.
      "roughness": 1.0, // Default value of 0.0 .
      "diffuseColor":
      {
        "r": 1.0, // ALWAYS PRESENT, even if at 1.0.
        "g": 1.0,
        "b": 1.0,
        "a": 1.0
      }
    },
    "spline":
    {
      "pointsCount": 2,
      "points":
      [
        {
          "x": 1.0,
          "y": 25.0,
          "z": 30.0
        },
        {
          "x": 2.0,
          "y": 25.0,
          "z": 30.0
        }
      ]
    }
  ]
}
```

```

    },
    "collider":
    {
        "size":
        {
            "x": 1.0, // // ALWAYS PRESENT, even if at 0.0.
            "y": 25.0,
            "z": 1.0
        },
        "radius": 35.0 // Default value of 0 .
    }
},
{ // Game object instance at index 2.
    "parent": 1
},
{ // Prefab instance at index 3.
    "prefab": 5, // Id of the prefab that corresponds to the id in .pokprefab.
    "parent": 1, // This prefab instance is a child of GO at index 1.
    "isActive": true,
    "transform":
    {
        "position":
        {
            "x": 50.0,
            "y": 50.0,
            "z": 50.0
        },
        "rotation":
        {
            "x": 50.0,
            "y": 50.0,
            "z": 50.0
        },
        "scale":
        {
            "x": 50.0,
            "y": 50.0,
            "z": 50.0
        }
    }
}
]

```

8 skybox

A skybox is composed of **6 textures for each face of the skybox**.

```
"skybox":
{
  "left": "skyboxTexture0.png",
  "right": "skyboxTexture1.png",
  "bottom": "skyboxTexture2.png",
  "top": "skyboxTexture3.png",
  "back": "skyboxTexture4.png",
  "front": "skyboxTexture5.png"
}
```

9 chunks

"gameObjects" and "prefabs" fields are always present, even if empty. This is because chunks may be empty at the start of a scene until something moves within it's bounds during gameplay (like the player).

```
"chunksCount": 2
"chunks":
[
  { // Chunk at index 1.
    "position":
    {
      "x": 10.0, // Default value of 0.0 .
      "y": 25.0,
      "z": 30.0
    },
    "size":
    {
      "x": 2.0, // Default value of 1.0 .
      "y": 3.0,
      "z": 50.0
    },
    "gameObjects": // ALWAYS PRESENT. Has no default value.
    {
      3, // Index of the game object in "gameObjects" field. Default value of 0.
      25,
      1
    },
    "prefabs": // ALWAYS PRESENT. Has no default value.
    {
      1, // Index of the game object in "prefabs" field. Default value of 0.
      13
    }
  }
]
```

10 chunkTimeEvents

```
"chunkTimeEventsCount": 1
"chunkTimeEvents":
[
  { // Event at index 1.
    "time": 34.126, // Default value of 0.0 .
    "toShowCount": 1, // Default value of 0.
    "toShow":
      [
        2 // Index of the chunk to show in "chunks" field.
      ],
    "toActivateCount": 1,
    "toActivate":
      [
        2
      ],
    "toHideCount": 2,
    "toHide":
      [
        1,
        3
      ],
    "toDestroyCount": 1,
    "toDestroy":
      [
        1
      ],
  }
]
```

11 chunkTriggerEvents

```
"chunkTriggerEventsCount": 1
"chunkTriggerEvents":
[
  { // Event at index 1.
    "chunk": 2, // Index of the chunk that triggers this event. Default value of 0.
    "toShowCount": 1, // Default value of 0.
    "toShow":
      [
        2 // Index of the chunk to show in "chunks" field.
      ],
    "toActivateCount": 1,
    "toActivate":
      [
        2
      ],
    "toHideCount": 2,
    "toHide":
      [
        1,
        3
      ],
    "toDestroyCount": 1,
    "toDestroy":
      [
        1
      ],
  }
]
```