

VRM-Animation











 BVH Converter

- [menu](#) - [VRM1](#) - [Experimental](#) - [Convert BVH to VRM-Animation...](#)

`Assets/VRM10/Editor/VrmAnimationMenu.cs`



 VrmAnimation



-  humanoid  hierarchy() 
-  hierarchy()  T-Pose 
-  humanoid 

bvh 



 BVH  T-Pose

UNITY HUMANOID 

 Animator.GetBoneTransform 



VRM Animation exporter 

```
Transform humanoid_hierarchy;  
  
var data = new ExportingGltfData();  
using var exporter = new VrmAnimationExporter(  
    data, new GltfExportSettings());  
exporter.Prepare(humanoid_hierarchy.gameObject);
```

VRM Animation exporter

```
exporter.Export((VrmAnimationExporter vrma) =>
{
    // get human bones
    var map = new Dictionary<HumanBodyBones, Transform>();
    var animator = bvh.Root.GetComponent<Animator>();
    foreach (HumanBodyBones bone in Enum.GetValues(typeof(HumanBodyBones)))
    {
        if (bone == HumanBodyBones.LastBone)
        {
            continue;
        }
        var t = animator.GetBoneTransform(bone);
        if (t == null)
        {
            continue;
        }
        map.Add(bone, t);
    }

    vrma.SetPositionBoneAndParent(map[HumanBodyBones.Hips], bvh.Root.transform);

    foreach (var kv in map)
    {
        var vrmBone = Vrm10HumanoidBoneSpecification.ConvertFromUnityBone(kv.Key);
        var parent = GetParentBone(map, vrmBone) ?? bvh.Root.transform;
        vrma.AddRotationBoneAndParent(kv.Key, kv.Value, parent);
    }
}
```



```
// get animation
var animation = bvh.Root.gameObject.GetComponent<Animation>();
var clip = animation.clip;
var state = animation[clip.name];

var time = default(TimeSpan);
for (int i = 0; i < bvh.Bvh.FrameCount; ++i, time += bvh.Bvh.FrameTime)
```

```
{
    state.time = (float)time.TotalSeconds;
    animation.Sample();
    vrma.AddFrame(time);
}
```



```
});
var glb = data.ToGlbBytes();
```



glb VRMC_vrm_animation

Revision #3

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