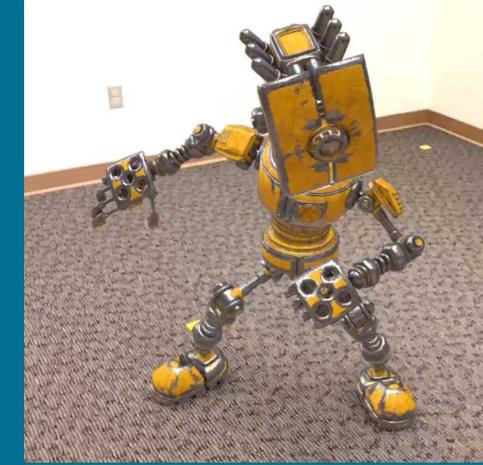


# Developing AR for iOS with USD and USDZ



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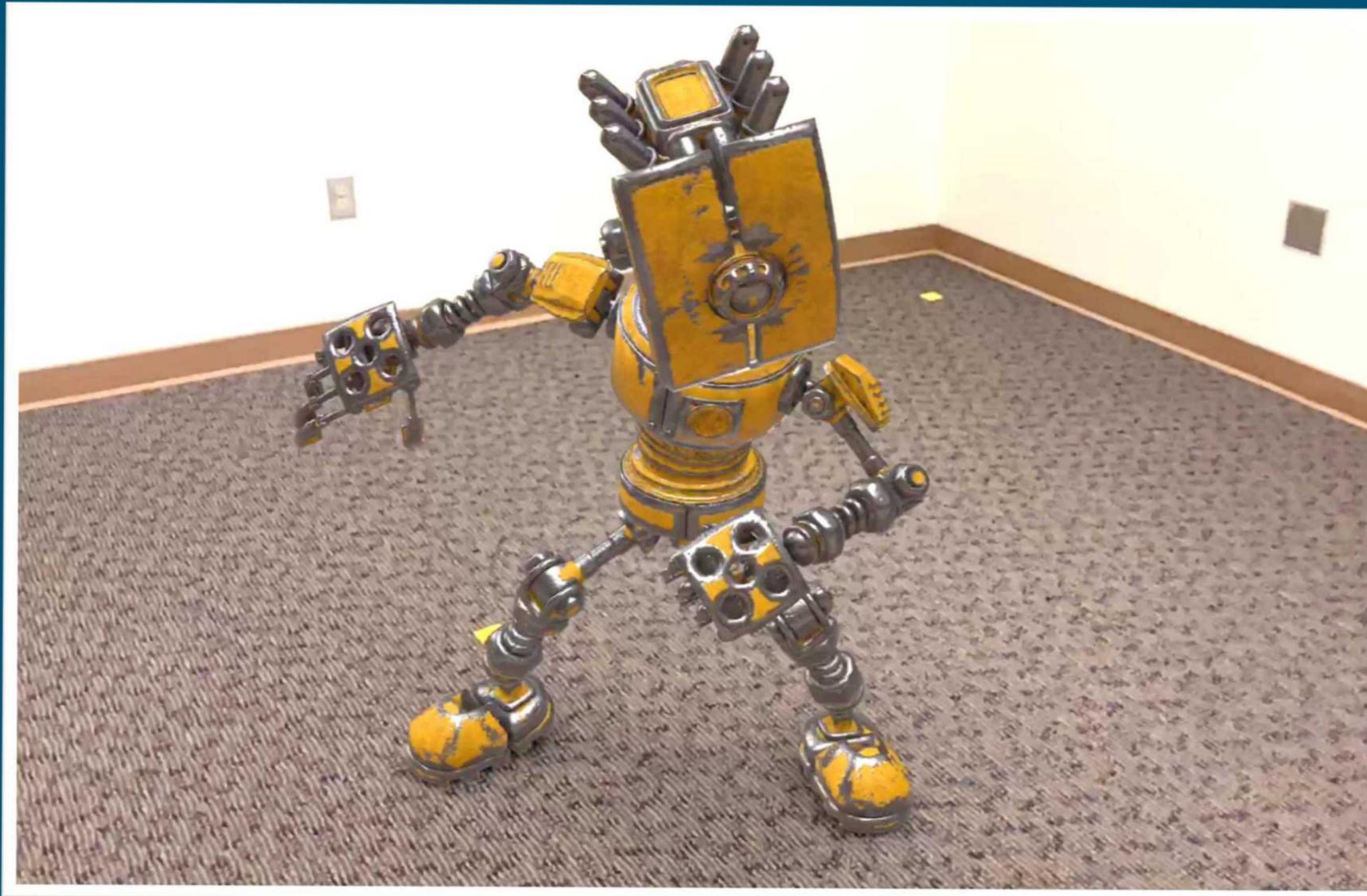
Brad Carvey



SAND2019-14849PE

Approved for Unlimited Release:

# Easy Augmented Reality



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# USD and USDZ?



## USD - Universal Screen Description

Developed by Pixar to describe 3d Scenes

Becoming an industry standard for sharing scenes between different 3d applications

Unity supports USD scene files

## USDZ - Universal Scene Description Zip

Developed by Pixar and Apple to implement Augmented Reality Objects

All Apple devices and applications can display USDZ 3d object files.

iOS devices can display as 3d objects or as AR 3d objects.



## 3D Models

Tap any of the 3D models below on a device running iOS 12 or later to view the object and place it in AR. Or click a model on Mac to download the USDZ file.



<https://developer.apple.com/augmented-reality/quick-look/>



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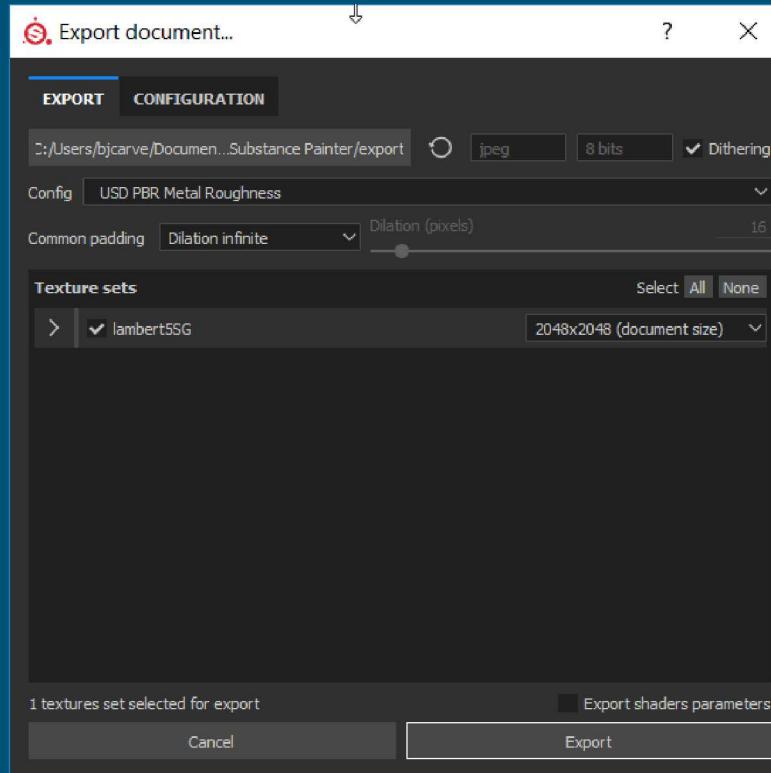
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# Creating a USDZ file with Xcode

```
xcrun usdz_converter my3dObject. Obj my3dObject.usdz
```

# Creating a USDZ file with Substance Painter

- Load 3d Object File
- Paint Object
- Export USDZ file



# Publishing a USDZ file



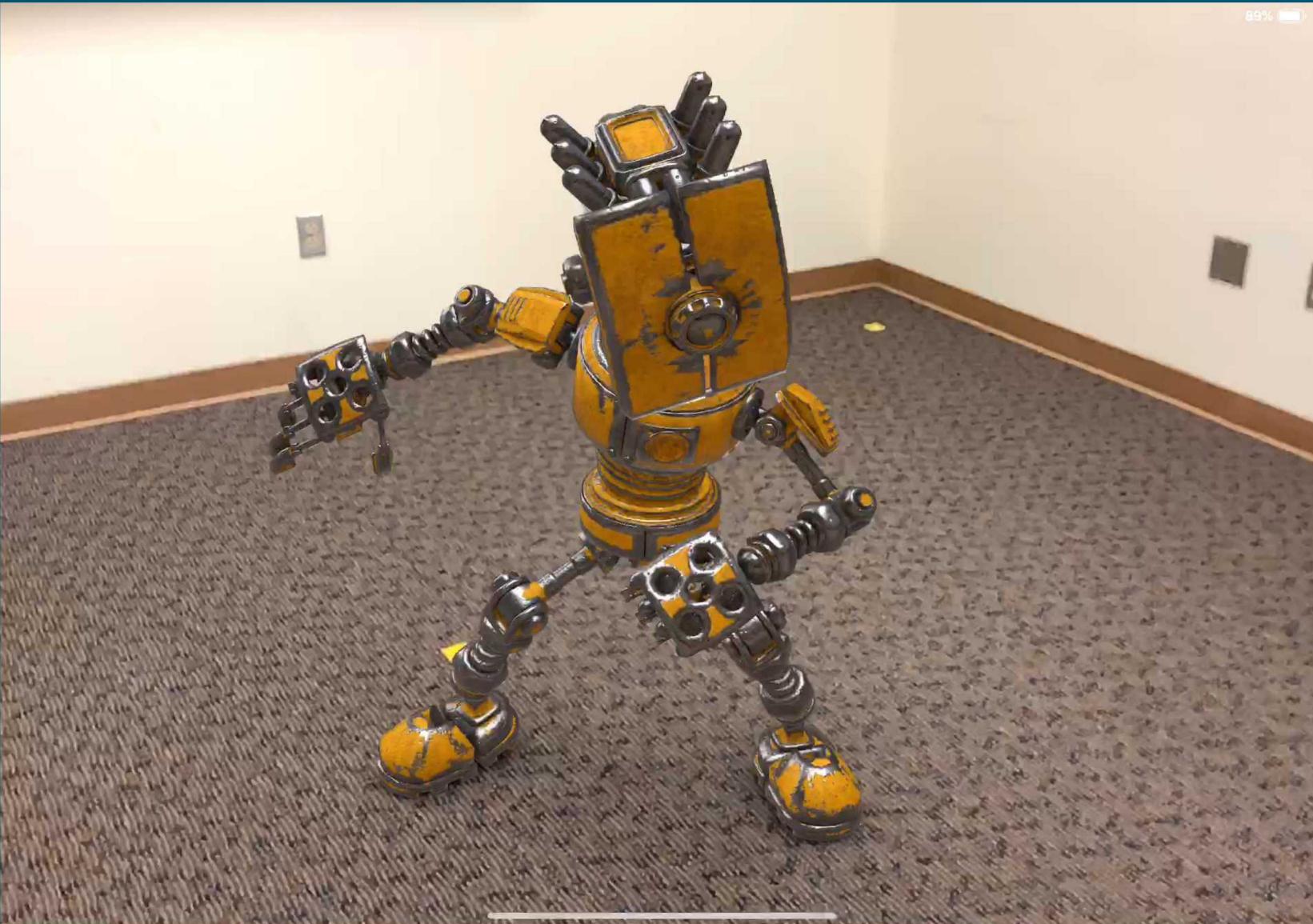
Enable AR Quick Look by linking a USDZ file.

```
<div>
  <a rel="ar" href="Robot.usdz">
    
  </a>
</div>
```

When the user clicks on the link, Safari will display your object with AR Quick Look.

# Live Demo

85%



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