

# Learn X3D

Web3D Consortium Webinar Series

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# Part 1: Building a Basic Scene

Using text editor and desktop browsers to:

1. create a simple X3D scene in VRML encoding
2. convert it to XML encoding
3. Publish it to a web page

## **Tools:**

1. Text Editor: BBEdit on Mac OS
2. [view3dscene](#)
3. [InstantPlayer](#)
4. [Python 3](#)

## **References**

[X3D V3.3 Standard Documents](#)

[X3D Node Index](#)

[Classic VRML Encoding](#)

# Part 2 : Use OBJ asset in an X3D scene

Will convert an OBJ format model from the Smithsonian Open Access collection into X3D using open source software

Tools:

1. [Meshlab](#)

Assets:

[Morse-Vail Telegraph Key](#) from Smithsonian Open Access

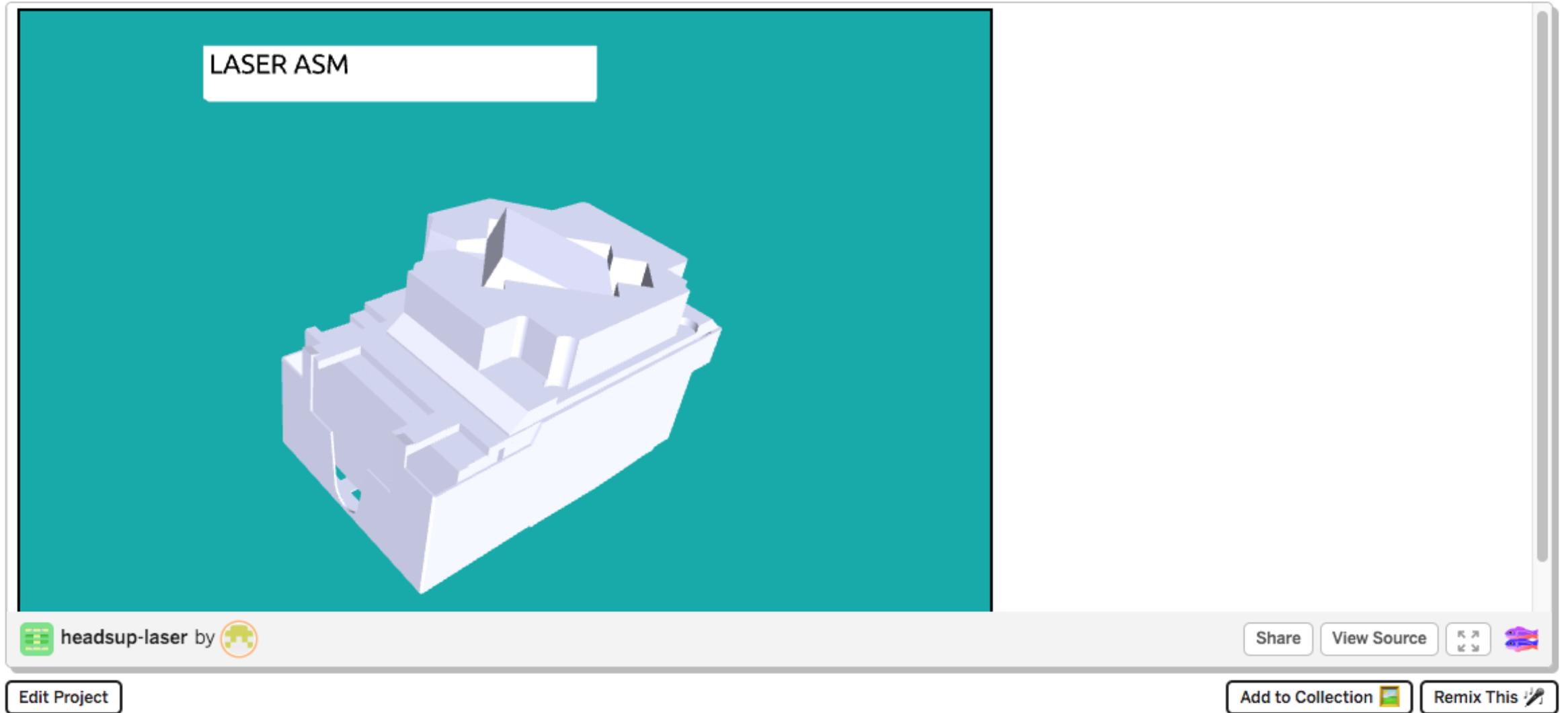
# Part 3 : Add interactivity and animation

Using [X3D Cookbook](#) examples on Glitch

Recommendation: There are many Glitch pages with X3D relevant material. Do search on keywords X3D X3DOM X-ITE.

# Heads Up Display

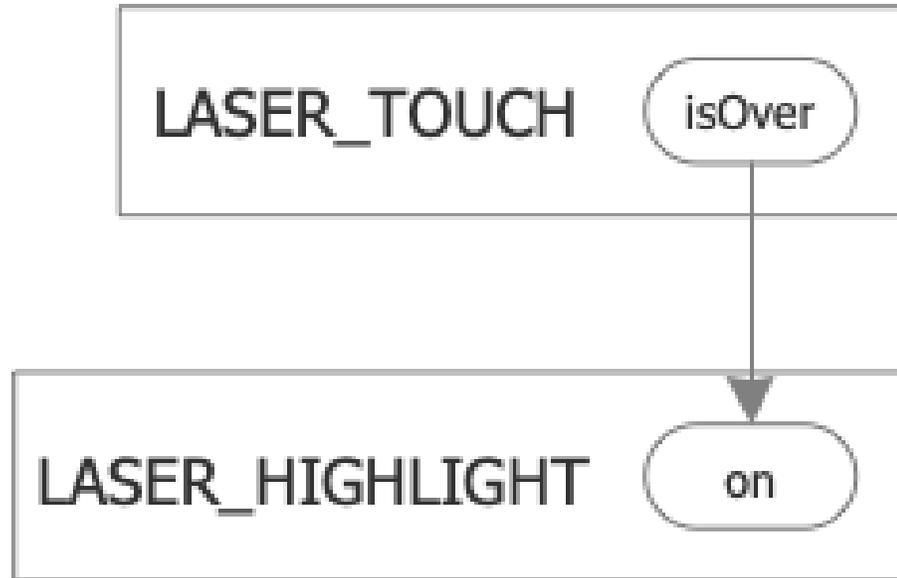
<https://glitch.com/~headsup-laser>



## Techniques demonstrated in Heads Up Display

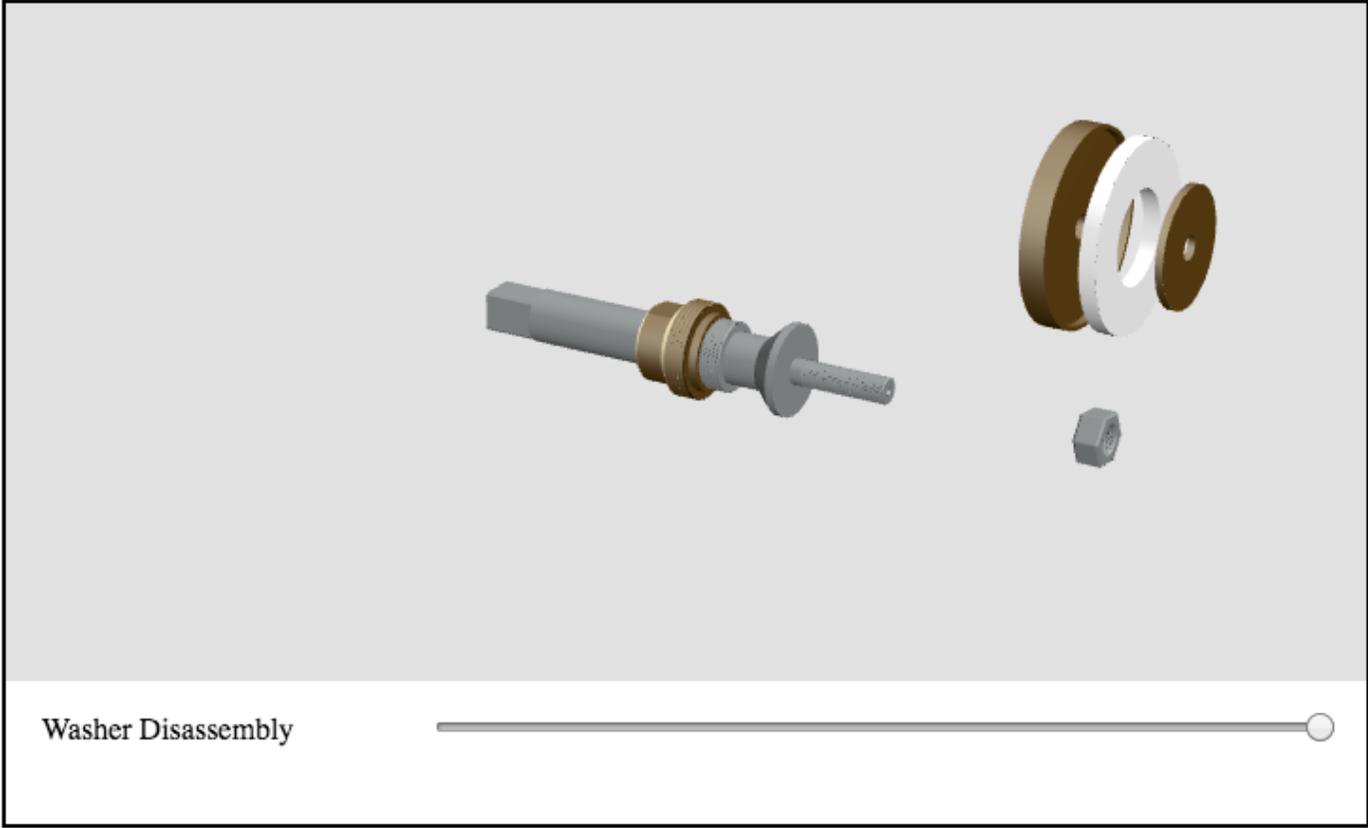
- Attach a visual element that moves with the point of view – a Heads Up Display
- Interacting and controlling the scene with a pointing device -- mouse

## Event Flow for turning on a light



# Controlled Motion

<https://glitch.com/~control-motion>



Washer Disassembly

control-motion by 

Share View Source 

Edit Project Add to Collection  Remix This 

The image shows a 3D CAD model of a mechanical assembly, specifically a washer disassembly. The assembly consists of a central shaft with a hexagonal end, a grey cylindrical component, a brass-colored ring, and a grey nut. To the right, there are three stacked washers: a brown one, a white one, and another brown one. Below the model is a horizontal slider control with a white circle at the right end. The interface includes a title 'Washer Disassembly', a user profile 'control-motion by [avatar]', and several interactive buttons: 'Share', 'View Source', 'Edit Project', 'Add to Collection', and 'Remix This'. There are also social media icons for Facebook, Twitter, and YouTube.

Welcome to Glitch

## Techniques demonstrated in controlled motion

- Defining coordinated animation motion in an X3D scene
- Interaction with an X3D scene through HTML 5 user interface controls

# Event flow for showing controlled motion

