

# Modeling the V&T Virtually

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2010 V&T History Conference

V & T RR Historical Society

# Agenda

- Intro to virtual railroading
  - Overview
  - Pros / cons (virtual / physical)
  - Simulator overview
- V&T in Trainz
  - Why Trainz?
  - Content
    - What's already available
    - How do you make new models?
  - Route
    - How do you make a new route
    - V & T Route screenshots
  - Demo

# Introduction to Virtual Railroading

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# What is it?

- Basically, model railroading on your computer
  - Is not 'either-or' – many people enjoy both traditional and virtual modeling
- Enjoyed by people all over the world



# Pros and cons

- Pros
  - Cab view is an option
  - Minimal physical constraints
    - Space; derailing; dirty track; where to put the motor, finicky couplers
    - Can model large areas at 1:1 scale
    - Can have multiple layouts simultaneously
  - Can share / duplicate content trivially
    - Say you need 100 ore cars....
    - Can send a copy of what you've made to a friend across the country (or world)
- Cons
  - No physical models to touch / own
    - Must look at items 'through the computer'
  - Backups required to avoid accidental erasure of content
  - Cannot easily modify models you do not create (limited 'kitbashing' or repainting)

# Simulator Overviews

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# Microsoft Train Simulator (MSTS)

- Released in July 2001 ;
- Can occasionally still be found in 'bargain bins'



# Trainz Simulator

- Initial release in December 2001
- Current version is TS 2010 (December, 2009)



# Kuju Rail Simulator

- Released in October 2007
- By the same team that wrote MSTS
- Current version is RailWorks (June, 2009)



# Modeling the V&T in Trainz

# Why Trainz?

- Started back in 2006 – only MSTS or Trainz were available
- MSTS had been out of support for 4 years or so – didn't see any resolution to the various bugs & lack of features
- Preferred the easier route creation
- A Trainz user asked for help!

What is already available for  
Trainz?

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# Generic Old West



# V & T Rolling Stock

# Locomotives

Virginia (New)



Humboldt (1870's)



Empire (1870's)



Virginia (1870's)



I.E. James (1873)



Esmerelda (1870's)



Carson (1870's)



Washoe (1870's)



J.W. Bowker (New)



Comstock (1870's)



Reno (1870's)



Inyo (1880's - 1906)



Nevada (1870's)



Genoa (1870's)



# Passenger Cars

Express #1, mid-late 1880s

Baggage / Mail #2, mid-late 1880s

Coach #3, mid-late 1880s



Coach #4, mid-late 1880s

Coach-Caboose #5 & #6 (green, early 1880s?)

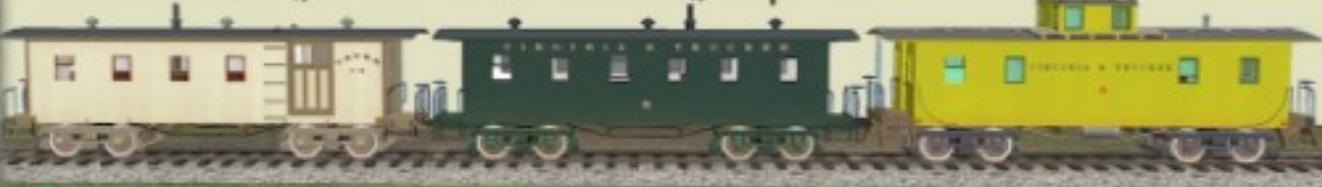
Coach-Caboose #5 & #6 (yellow, late 1880s?)



Coach-Caboose #9, as built

Coach-caboose #9, early 1880s

Caboose #9, 1913-1938



Coach-Caboose #10, as built

Coach-caboose #10, early 1880s



# Freight Cars

Boxcar 1001, 1880s-19xx

Boxcar 1003, 1880s-19xx

Boxcar 1005, 1880s-19xx

Boxcar 1007, 1880s-19xx



Boxcar 1009, 1880s-19xx

Boxcar 1011, 1874-1880s

Boxcar 1011, 1880s-1898

Boxcar 1011, 19xx-1938



Boxcar 1013, 1874-1880s

Boxcar 1013, 1880s-1898

Boxcar 1013, 19xx-1938

30' flat car, V&T rebuild  
1891-1898



30' flat, CP, 1873-1880s

30' flat, CP, 1880s-1898

30' flat, Detroit, 1873-1880s

30' flat, Detroit, 1880s-1898



Ore cars

24' flat, 1880s-1898



# V& T Structures

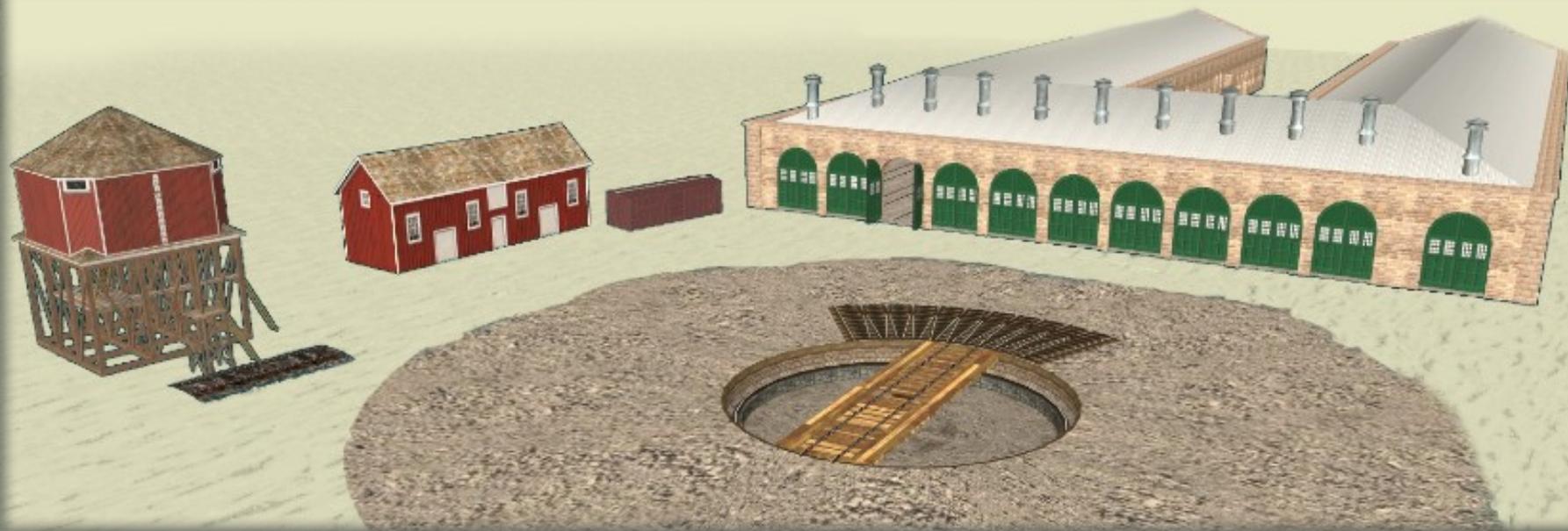
# Virginia City



# Gold Hill – Carson River



# V&T Content: Carson City



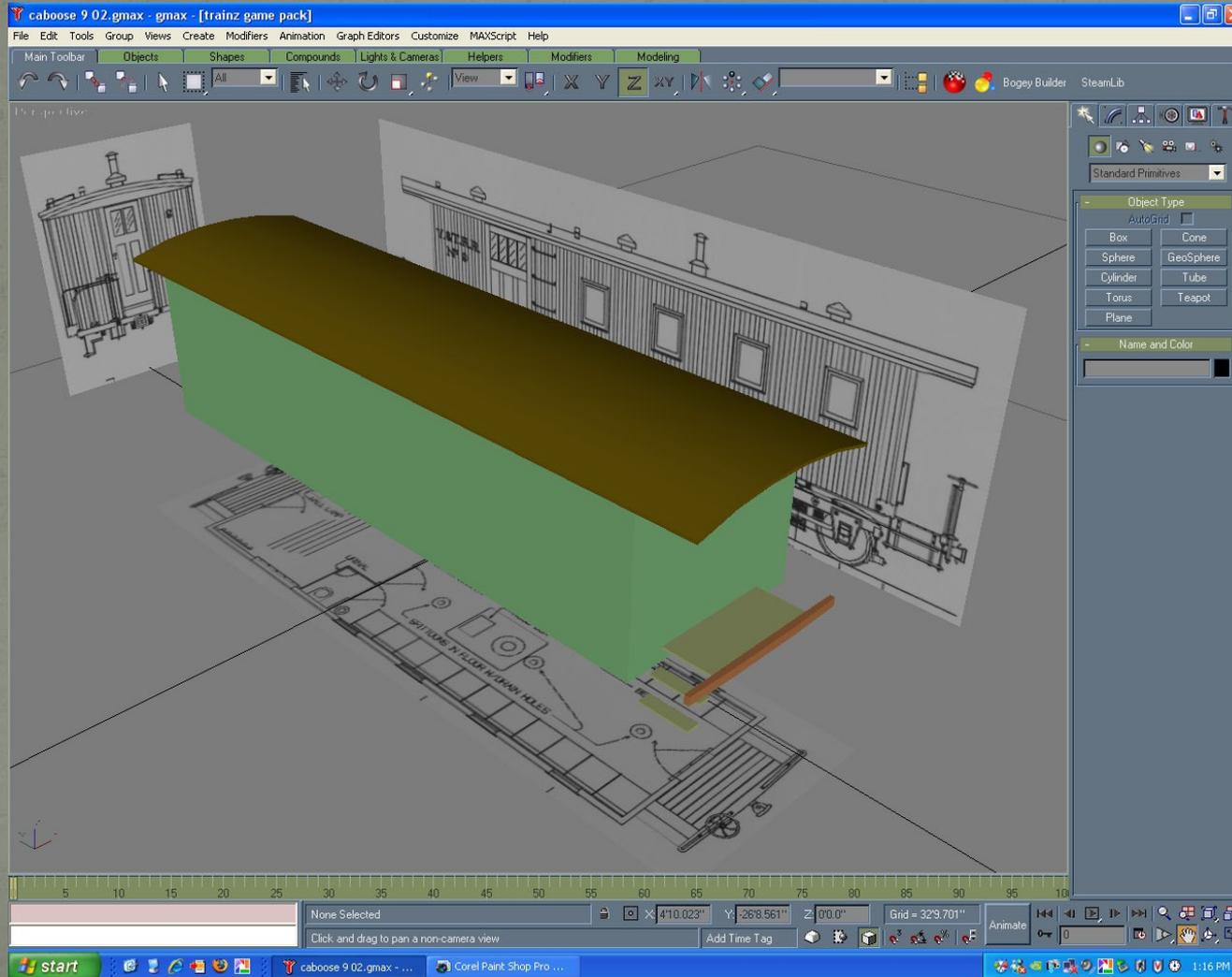
# Steamboat & Reno



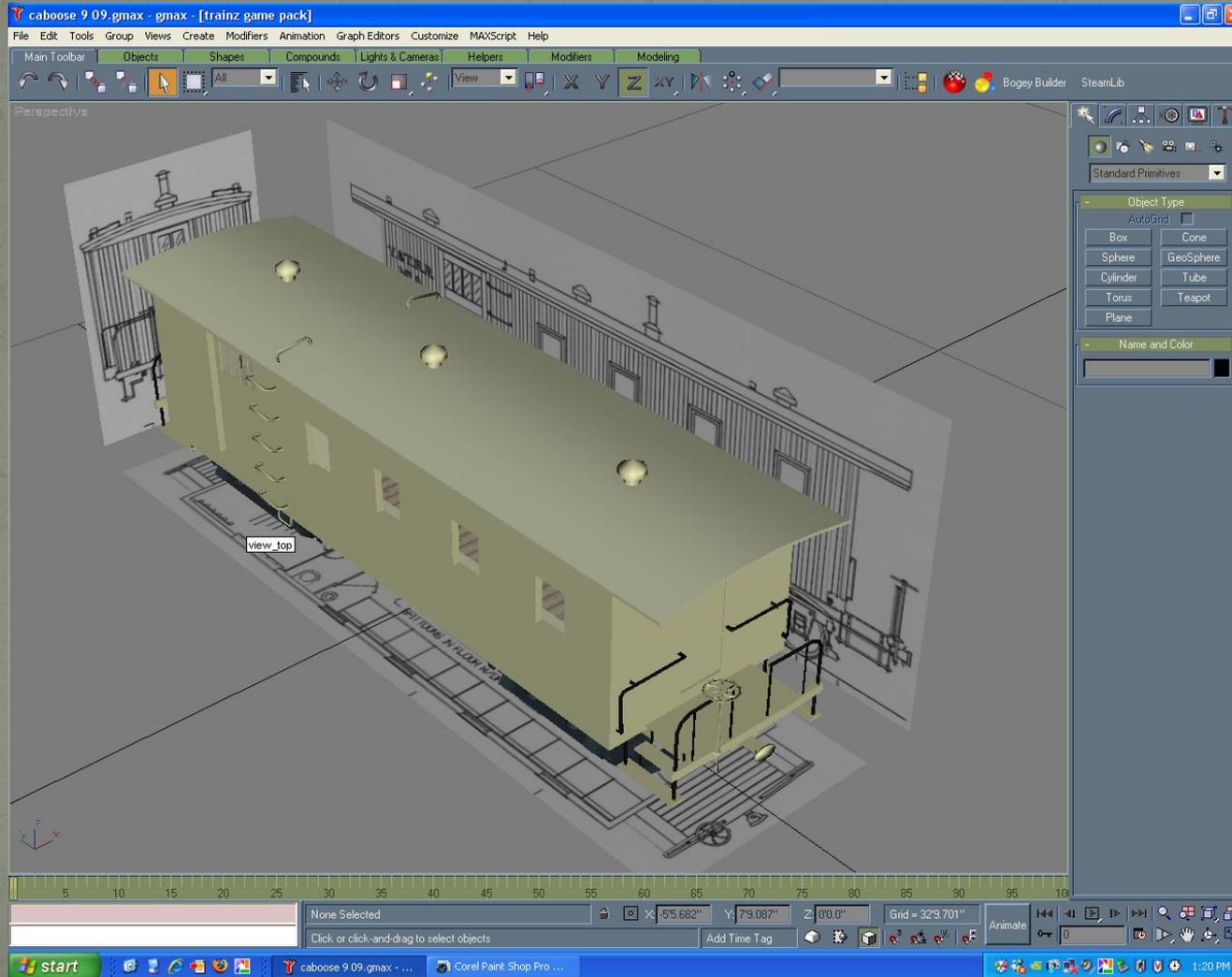
# Making New Models

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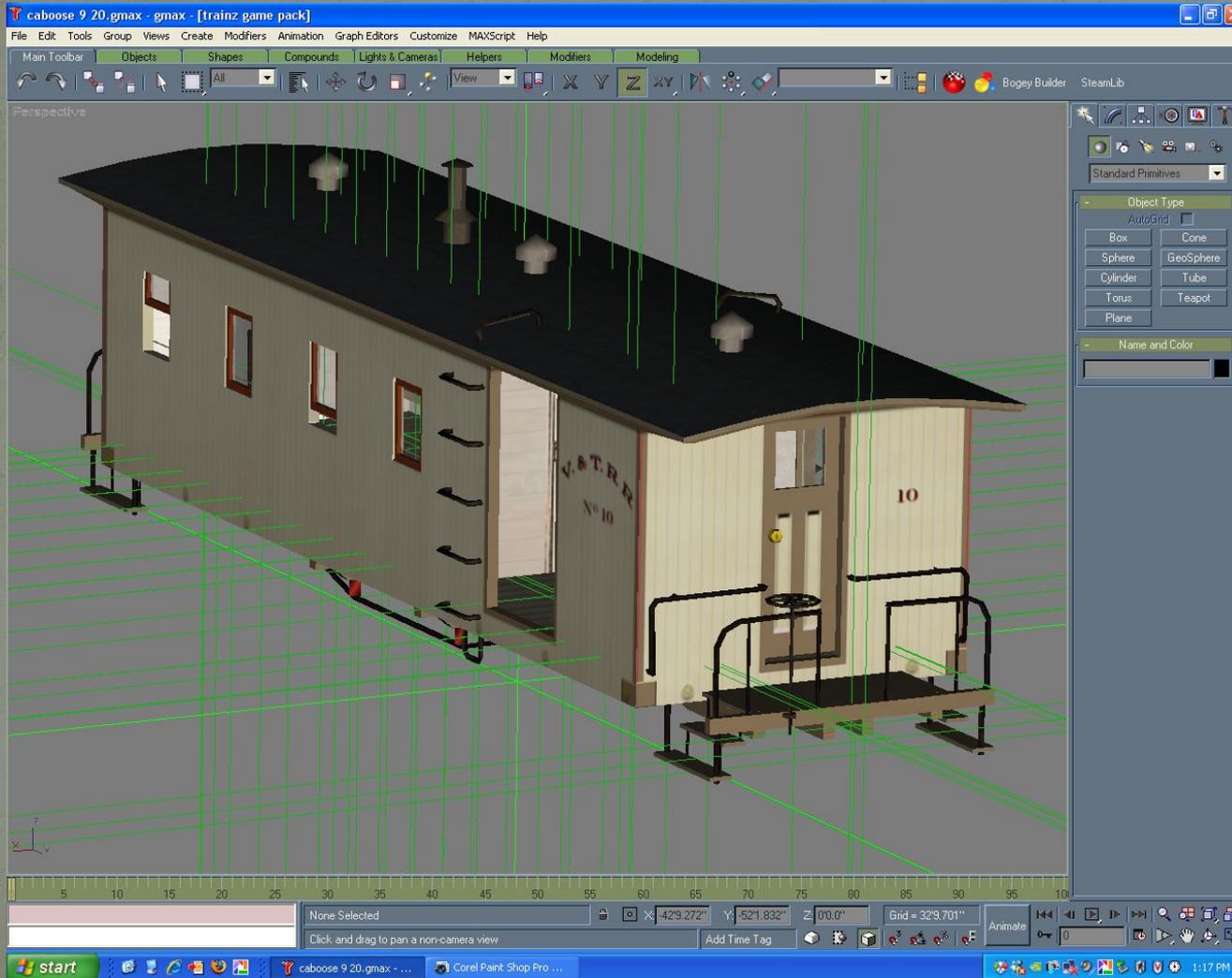
# Create the model in a 3D program



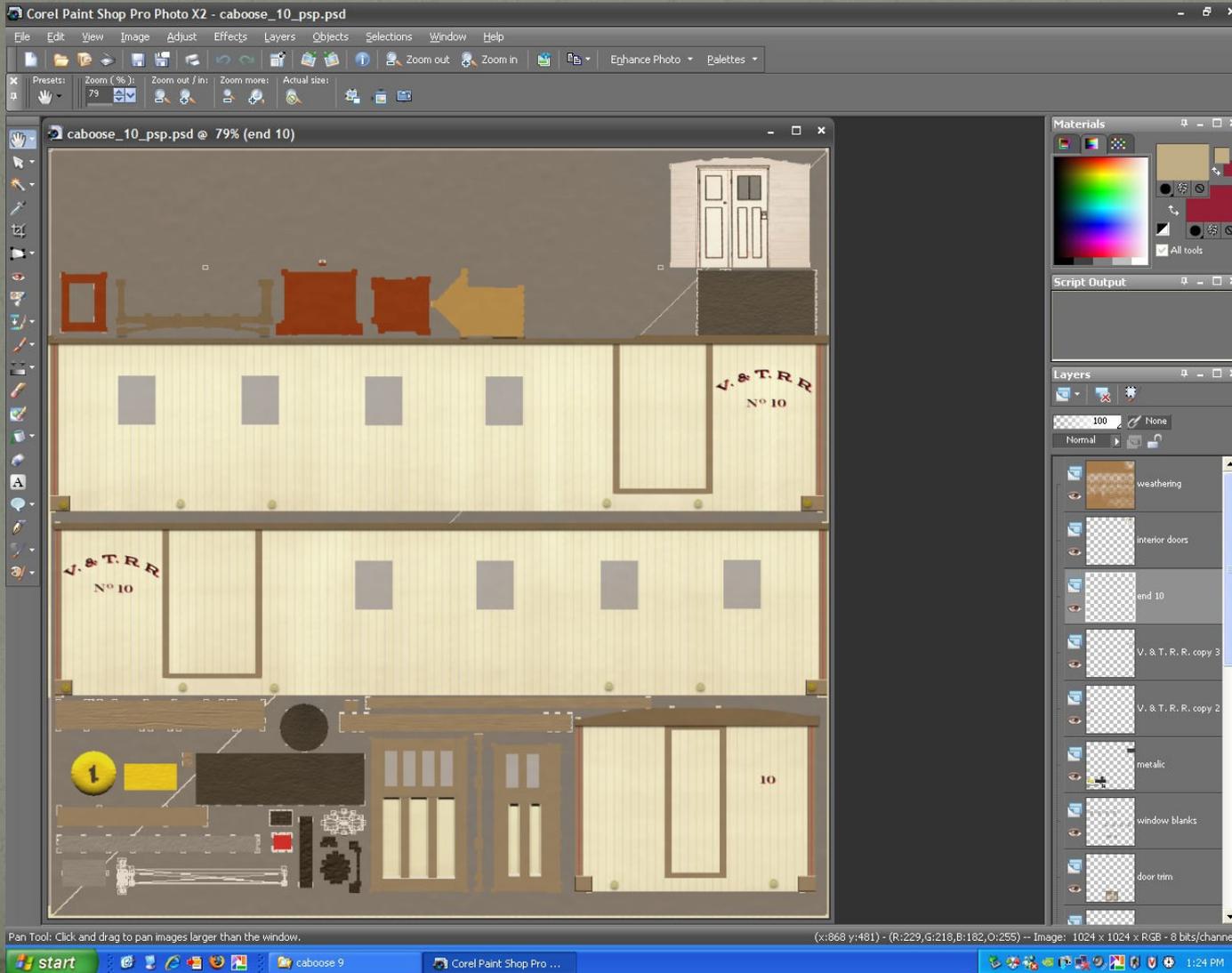
# Create the model in a 3D program



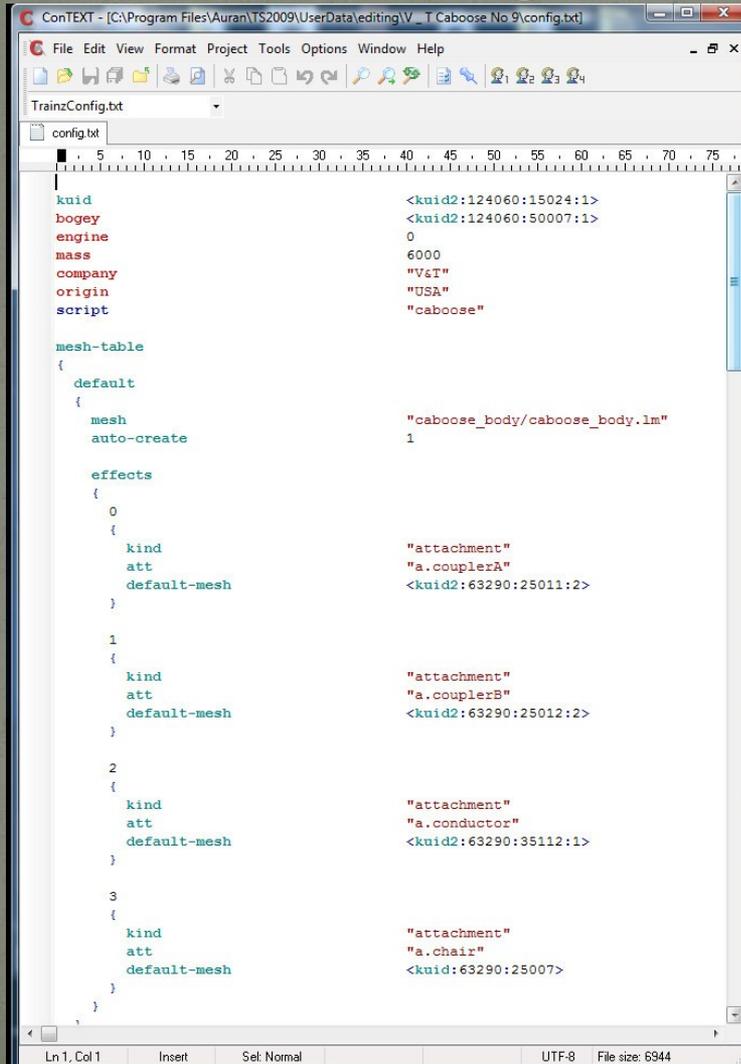
# Create the model in a 3D program



# Use a paint program to 'texture' it



# Add a config file



```
ConTEXT - [C:\Program Files\Auran\TS2009\UserData\editing\V_T Caboose No 9\config.txt]
File Edit View Format Project Tools Options Window Help
TrainzConfig.txt
config.txt
kuid                <kuid2:124060:15024:1>
bogey               <kuid2:124060:50007:1>
engine              0
mass                6000
company             "V&T"
origin              "USA"
script              "caboose"

mesh-table
{
  default
  {
    mesh
    auto-create      "caboose_body/caboose_body.lm"
                    1

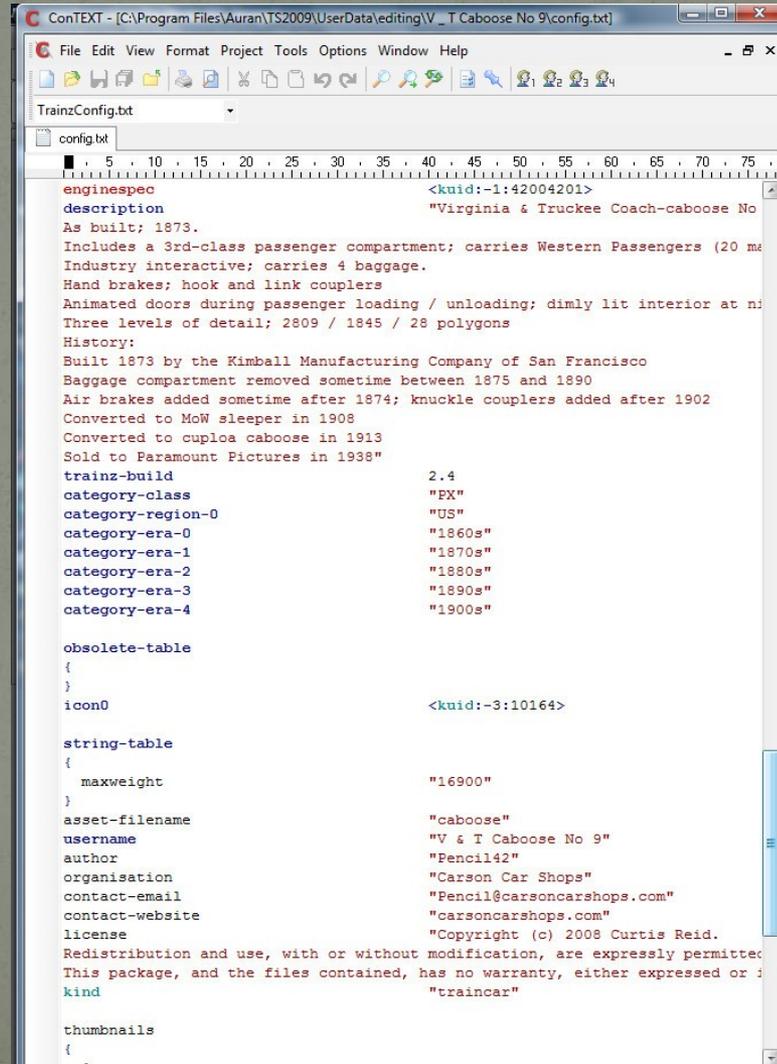
    effects
    {
      0
      {
        kind          "attachment"
        att            "a.couplerA"
        default-mesh  <kuid2:63290:25011:2>
      }

      1
      {
        kind          "attachment"
        att            "a.couplerB"
        default-mesh  <kuid2:63290:25012:2>
      }

      2
      {
        kind          "attachment"
        att            "a.conductor"
        default-mesh  <kuid2:63290:35112:1>
      }

      3
      {
        kind          "attachment"
        att            "a.chair"
        default-mesh  <kuid:63290:25007>
      }
    }
  }
}
```

Ln 1, Col 1    Insert    Sel: Normal    UTF-8    File size: 6944



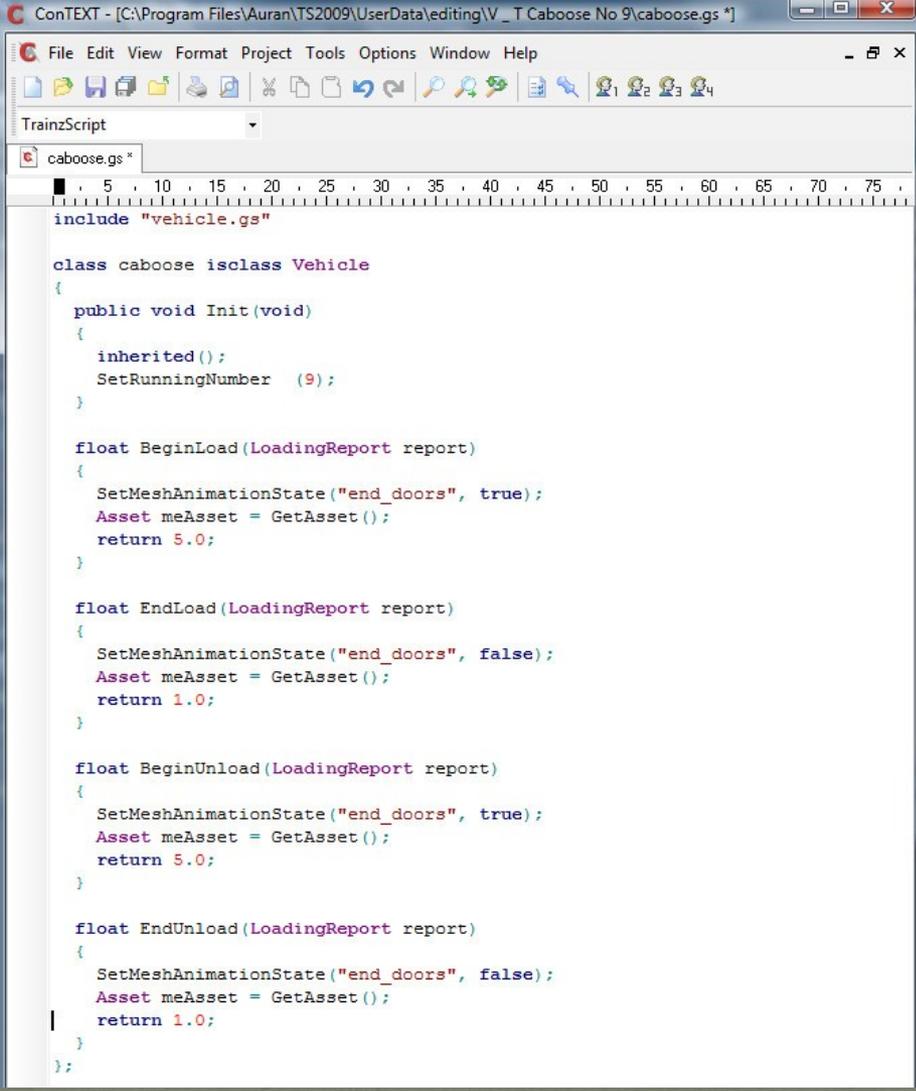
```
ConTEXT - [C:\Program Files\Auran\TS2009\UserData\editing\V_T Caboose No 9\config.txt]
File Edit View Format Project Tools Options Window Help
TrainzConfig.txt
config.txt
enginespec          <kuid:-1:42004201>
description         "Virginia & Truckee Coach-caboose No
As built; 1873.
Includes a 3rd-class passenger compartment; carries Western Passengers (20 ma
Industry interactive; carries 4 baggage.
Hand brakes; hook and link couplers
Animated doors during passenger loading / unloading; dimly lit interior at n
Three levels of detail; 2809 / 1845 / 28 polygons
History:
Built 1873 by the Kimball Manufacturing Company of San Francisco
Baggage compartment removed sometime between 1875 and 1890
Air brakes added sometime after 1874; knuckle couplers added after 1902
Converted to MoW sleeper in 1908
Converted to cuploa caboose in 1913
Sold to Paramount Pictures in 1938"
trainz-build        2.4
category-class      "FX"
category-region-0   "US"
category-era-0      "1860s"
category-era-1      "1870s"
category-era-2      "1880s"
category-era-3      "1890s"
category-era-4      "1900s"

obsolete-table
{
}
icon0               <kuid:-3:10164>

string-table
{
  maxweight          "16900"
}
asset-filename      "caboose"
username            "V & T Caboose No 9"
author              "Pencil42"
organisation        "Carson Car Shops"
contact-email       "Pencil@carsoncarshops.com"
contact-website     "carsoncarshops.com"
license             "Copyright (c) 2008 Curtis Reid.
Redistribution and use, with or without modification, are expressly permitted
This package, and the files contained, has no warranty, either expressed or
kind                "traincar"

thumbnails
{
}
```

# Add scripting (optional)



The screenshot shows a ConTEXT editor window with the following content:

```
ConTEXT - [C:\Program Files\Auran\TS2009\UserData\editing\V_T Caboose No 9\caboose.gs *]  
File Edit View Format Project Tools Options Window Help  
TrainzScript  
caboose.gs *  
5 10 15 20 25 30 35 40 45 50 55 60 65 70 75  
include "vehicle.gs"  
  
class caboose isclass Vehicle  
{  
    public void Init(void)  
    {  
        inherited();  
        SetRunningNumber (9);  
    }  
  
    float BeginLoad(LoadReport report)  
    {  
        SetMeshAnimationState("end_doors", true);  
        Asset meAsset = GetAsset();  
        return 5.0;  
    }  
  
    float EndLoad(LoadReport report)  
    {  
        SetMeshAnimationState("end_doors", false);  
        Asset meAsset = GetAsset();  
        return 1.0;  
    }  
  
    float BeginUnload(LoadReport report)  
    {  
        SetMeshAnimationState("end_doors", true);  
        Asset meAsset = GetAsset();  
        return 5.0;  
    }  
  
    float EndUnload(LoadReport report)  
    {  
        SetMeshAnimationState("end_doors", false);  
        Asset meAsset = GetAsset();  
        return 1.0;  
    }  
};
```

And, you are done!



# Making a New (Prototypical) Route

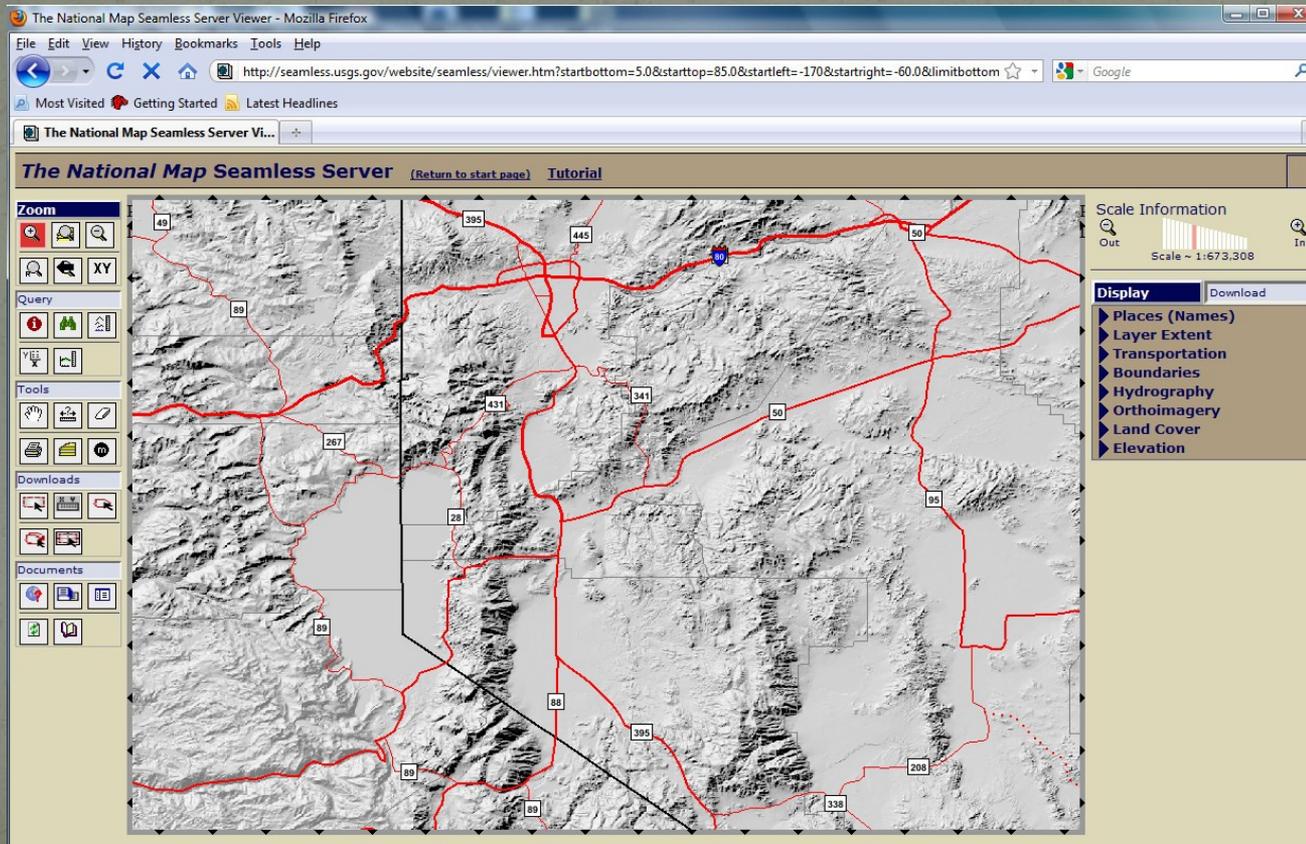
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# Research

- Railroad
  - Where did the track go?
  - What did the track look like?
    - Where were the rail joiners – staggered, or flush?
    - Were tie plates used? Rail chairs?
  - What rolling stock was used
  - What did the bridges look like?
  - Right of way protection?
    - Fences; grade crossings; signs
- Surrounding area:
  - What material(s) were used in road construction?
  - What did signs look like?
  - What landmarks & features have changed?
    - Airport was once at the golf course, Virginia Lake was built by the CC in the 1930's, entire VC topography has changed over the years
    - Road alignments have changed
    - Entire towns are gone now – Ophir, Jumbo, Empire...

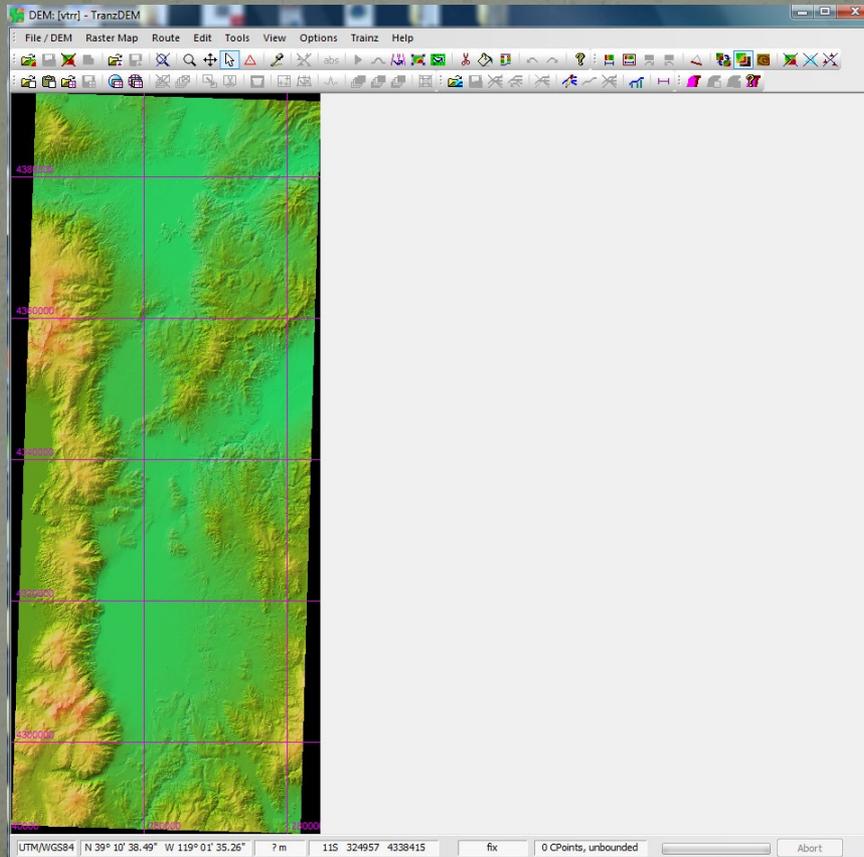
# Create the terrain

- Download DEMs (Digital Elevation Maps) for the appropriate area.



# Create the terrain

- Use TransDEM (separate program) to convert to Trainz format, add lines for tracks, and add basemaps



# Create the terrain

- This is what it looks like ingame:



After a little bit of work:



Some 'work in progress' shots

# Reno



# Reno



# Steamboat



# Carson City Yards



# Vivian Cut



# Virginia City Yards



# Virginia City

