Automate, Streamline, Win!

Creating custom workflows for content heavy games

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Out of Bounds

INDEPENDENT GAMES SUMMIT

GAME DEVELOPERS CONFERENCE™ EUROPE
CONGRESS-CENTRUM OST KOELNMESSE · COLOGNE, GERMANY
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THE ADVENTURES OF
"Bertram Fiddle"
RUMPUS!

Systems driven games are like a stew

Content driven games are like mosaics

...and missing pieces stand out much more!

Tons of assets!

1227(ish) lines of dialogue

2899 sprites

603 animations

39 scenes

1608 audio files

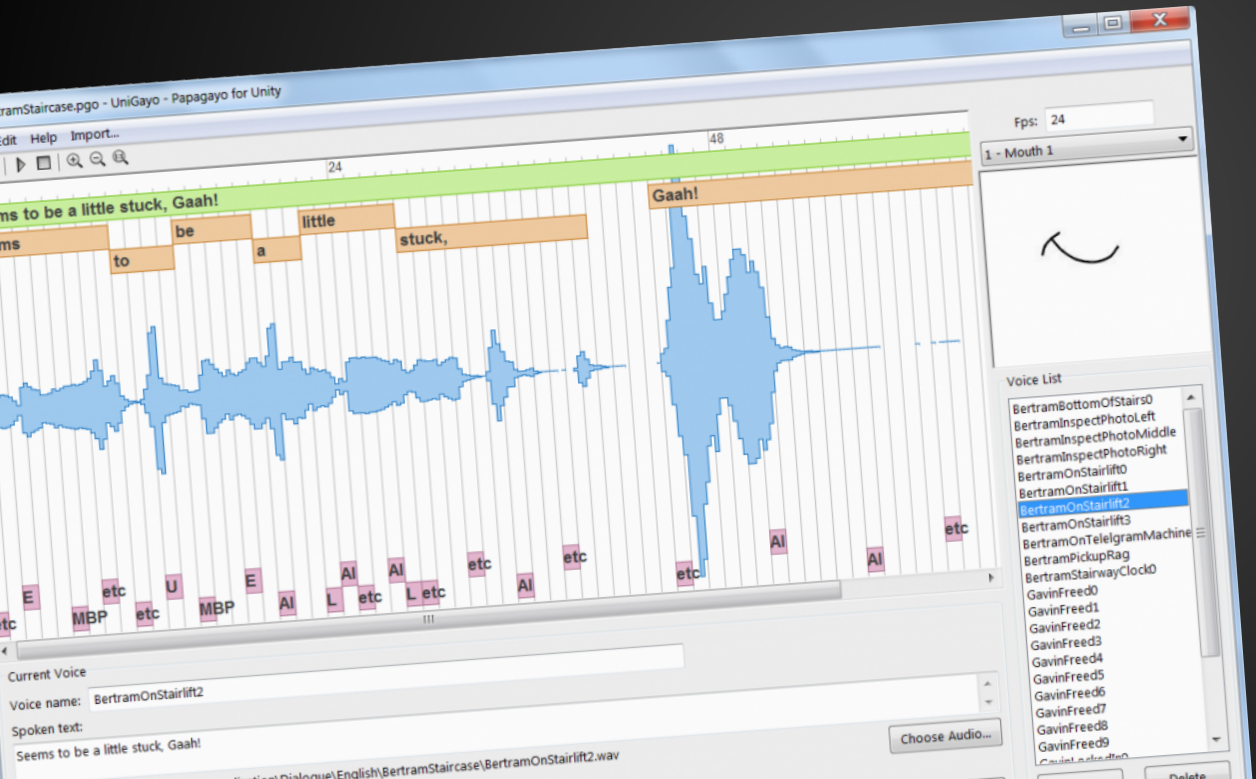
53 characters

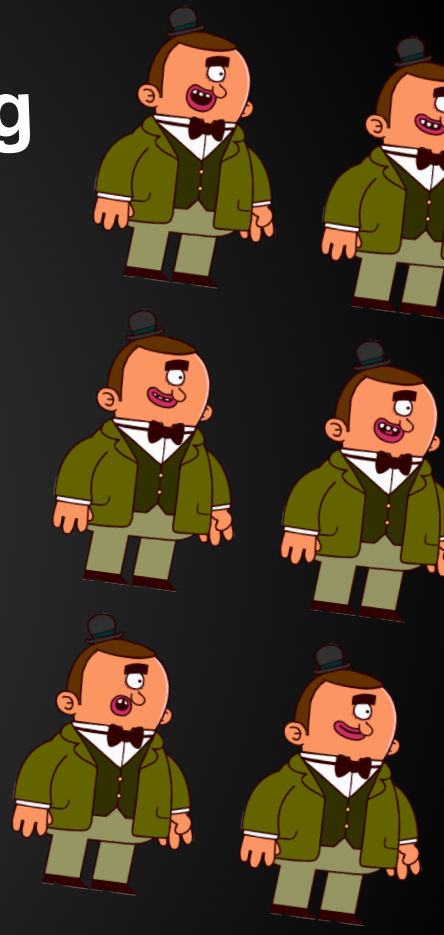
Principle #1

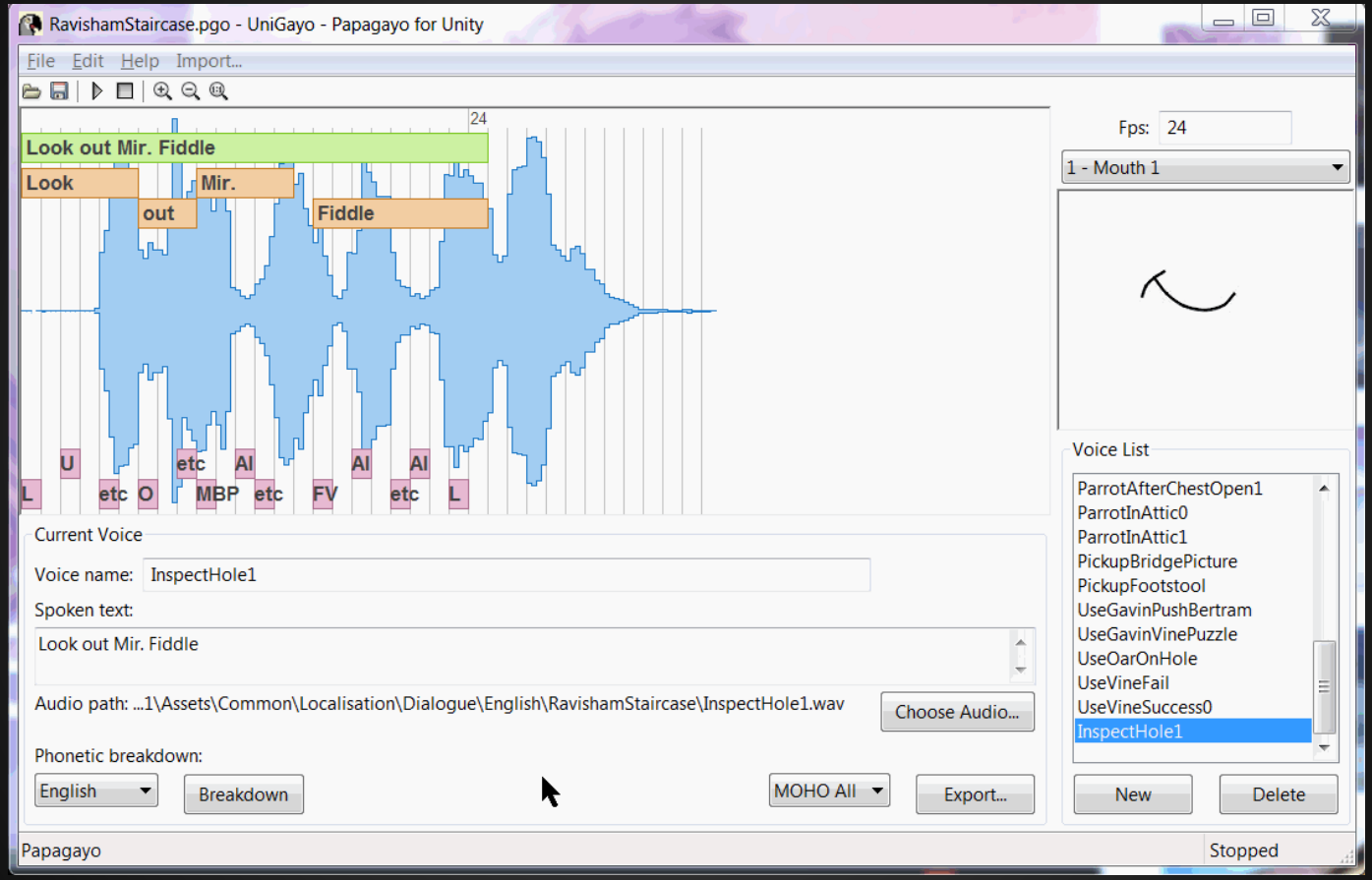
Automate - Brain waves are precious so don’t waste them

Unity Asset Importing
Hold on
Cancel
Assets\Common\Music\General\Streets\Steam Phunk Piano.mp3 (17%)

UniGayo - Semi Automatic Lipsyncing



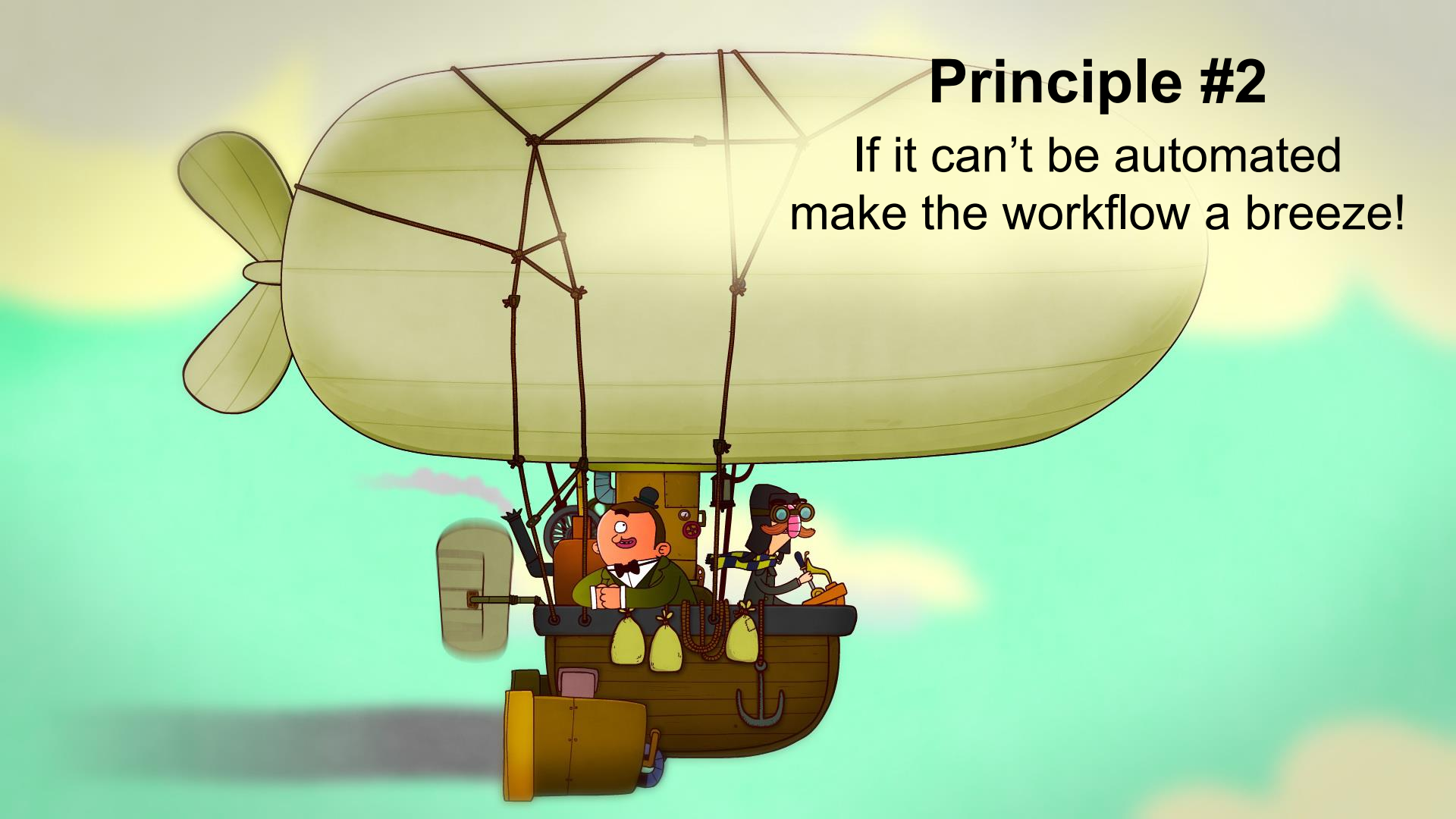



RavishamStaircase.pgo - UniGayo - Papagayo for Unity
File Edit Help Import...
24
Look out Mir. Fiddle
Look
Mir.
out
Fiddle
U etc AI AI AI
L etc O MBP etc FV etc L
Fps: 24
1 - Mouth 1
Voice List
ParrotAfterChestOpen1
ParrotInAttic0
ParrotInAttic1
PickupBridgePicture
PickupFootstool
UseGavinPushBertram
UseGavinVinePuzzle
UseOarOnHole
UseVineFail
UseVineSuccess0
InspectHole1
Current Voice
Voice name: InspectHole1
Spoken text:
Look out Mir. Fiddle
Audio path: ...1\Assets\Common\Localisation\Dialogue\English\RavishamStaircase\InspectHole1.wav
Choose Audio...
Phonetic breakdown:
English
Breakdown
MOHO All
Export...
New
Delete
Papagayo
Stopped

Automation used to locate missing work

1. What dialogue is still missing in the game?
2. What subtitles are too long to fit on the screen?
3. What lines have yet to be lipsynced?
4. What dialogue have we yet to use in the game?
5. Fix configuration bugs in puzzles

In short, it should not be work to figure out what work is left.



Principle #2

If it can’t be automated
make the workflow a breeze!

Our workflow

Story &
Puzzles

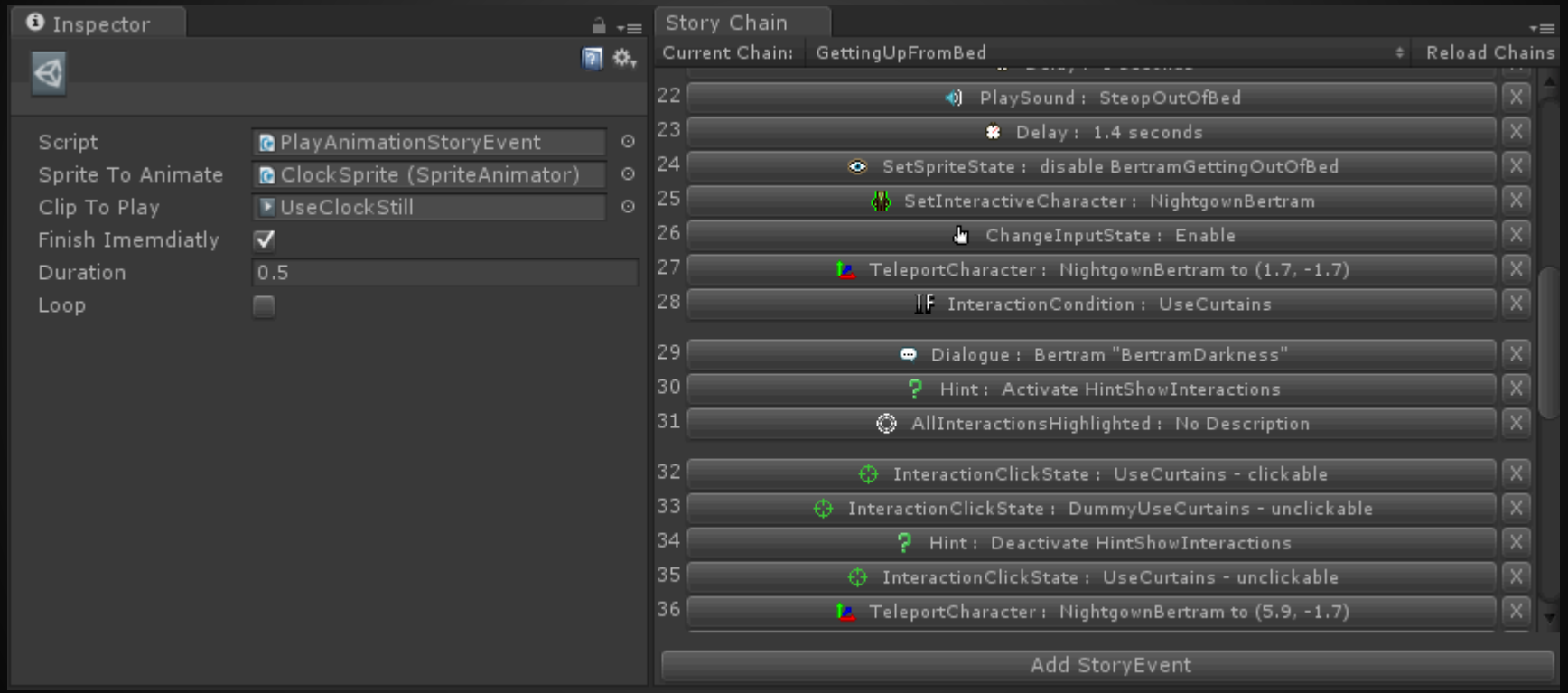
Illustration &
Animation

Music, SFX &
Voice acting

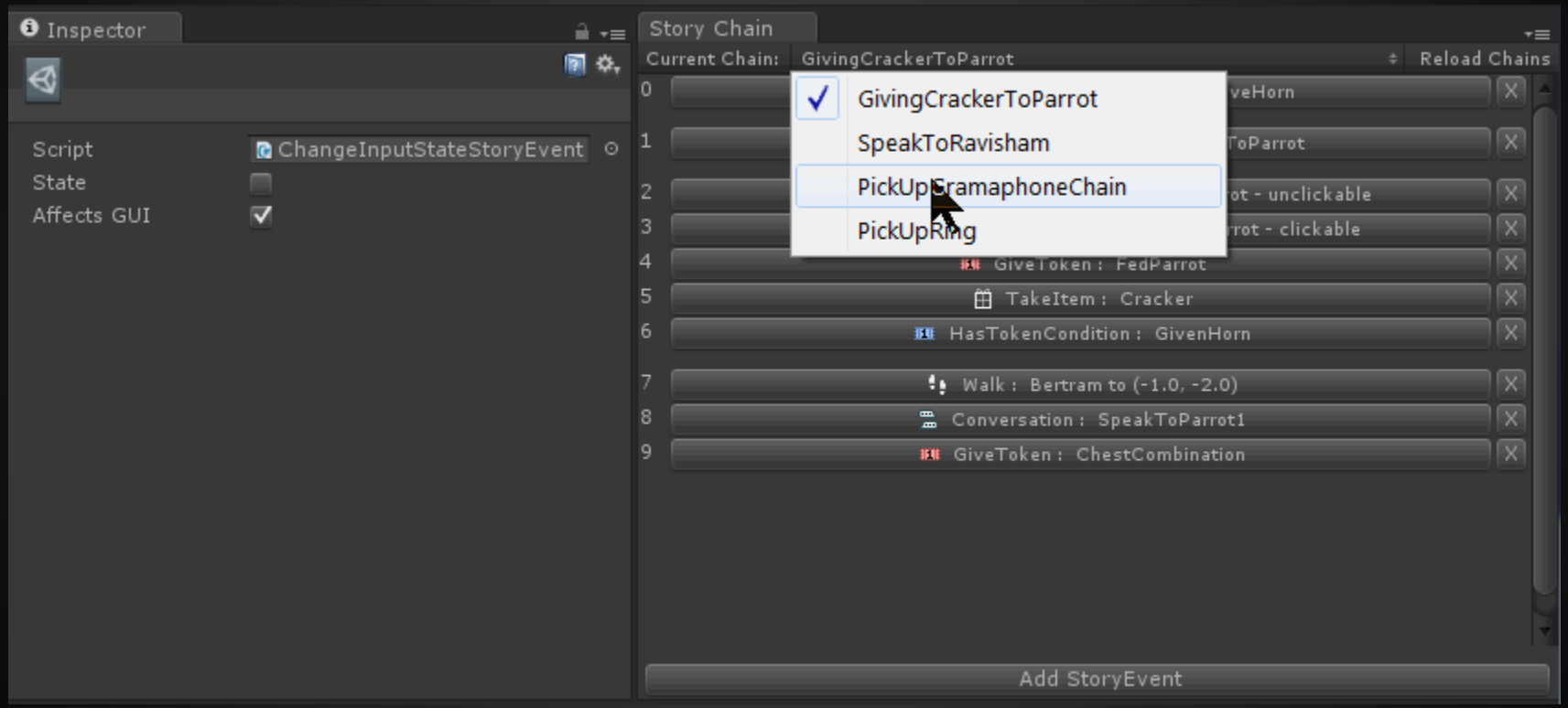
Lipsyncing &
Timing

A story = sequence of events

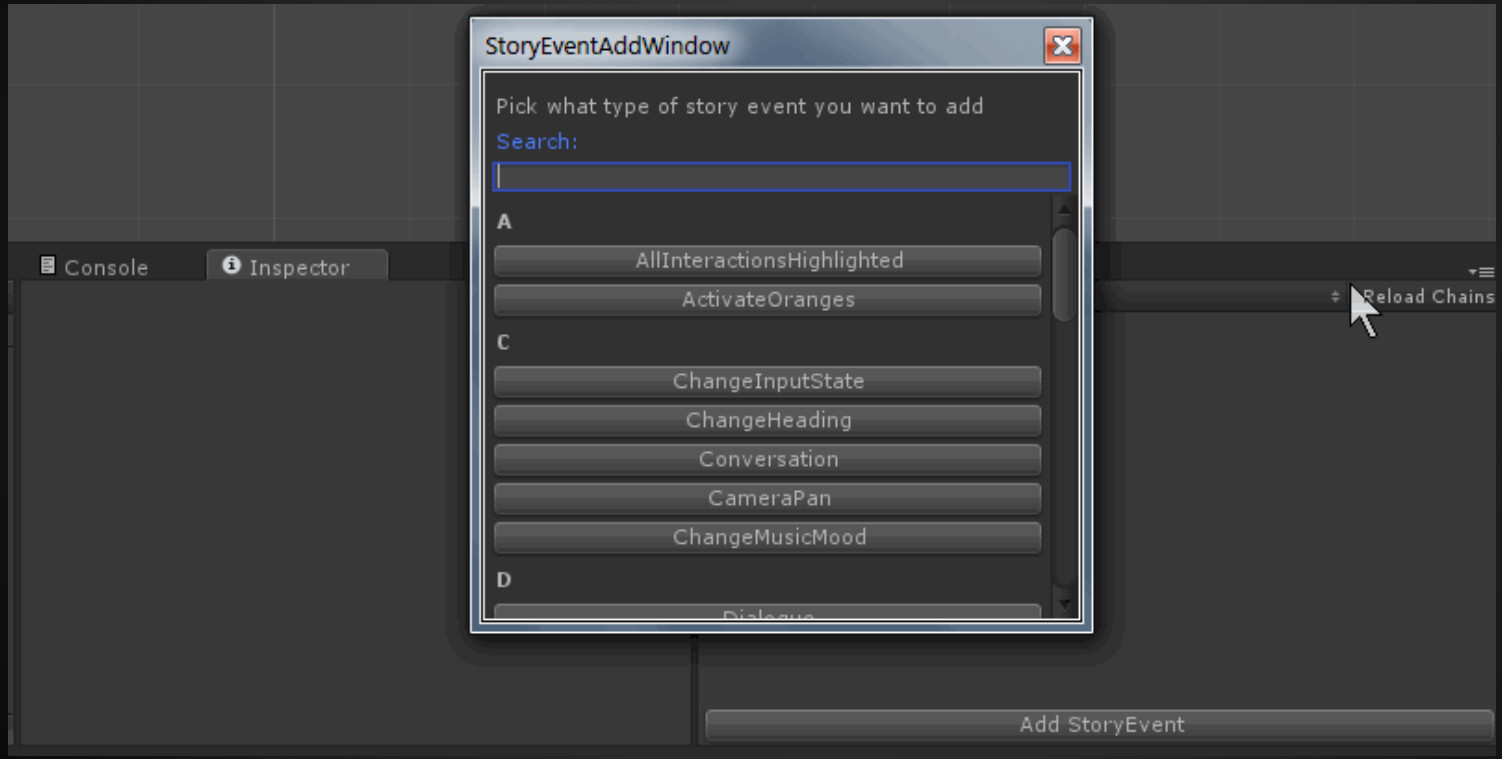
Storyline Tool



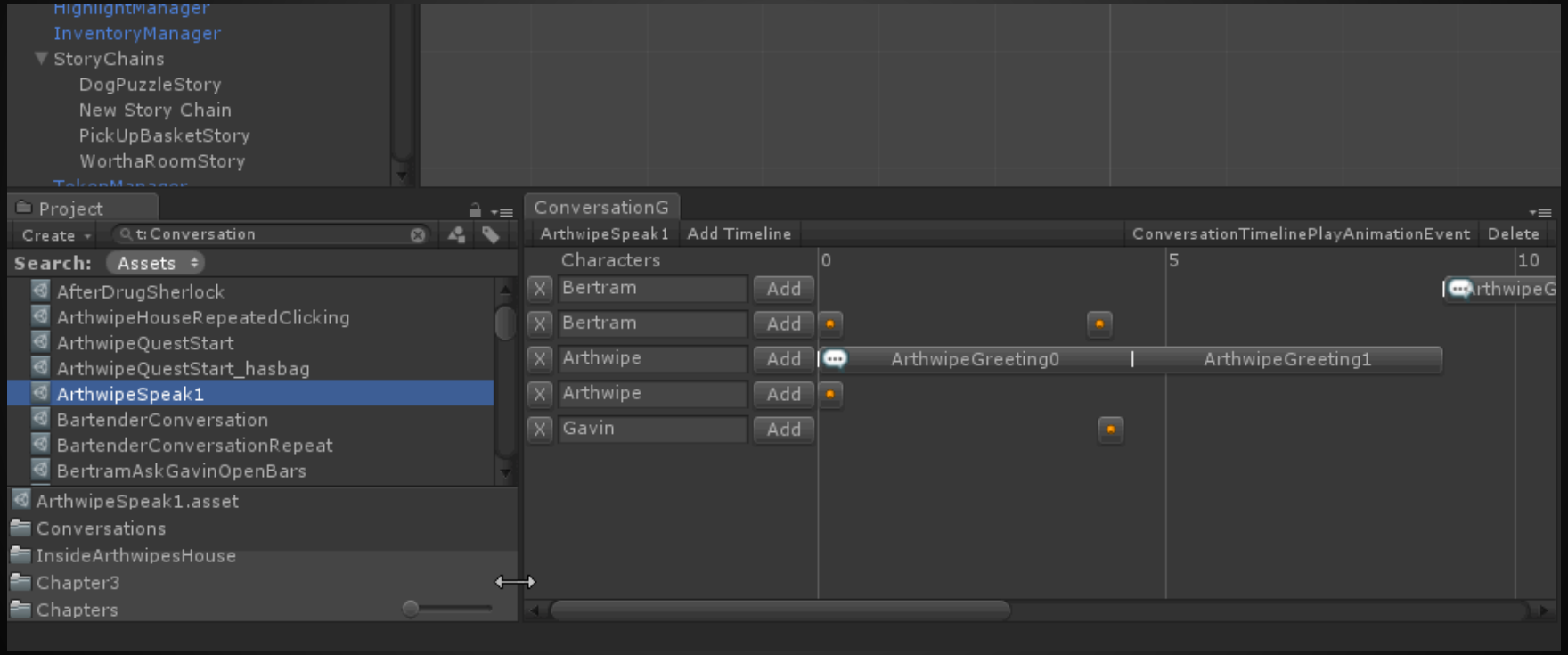
Storyline Tool



Storyline Tool

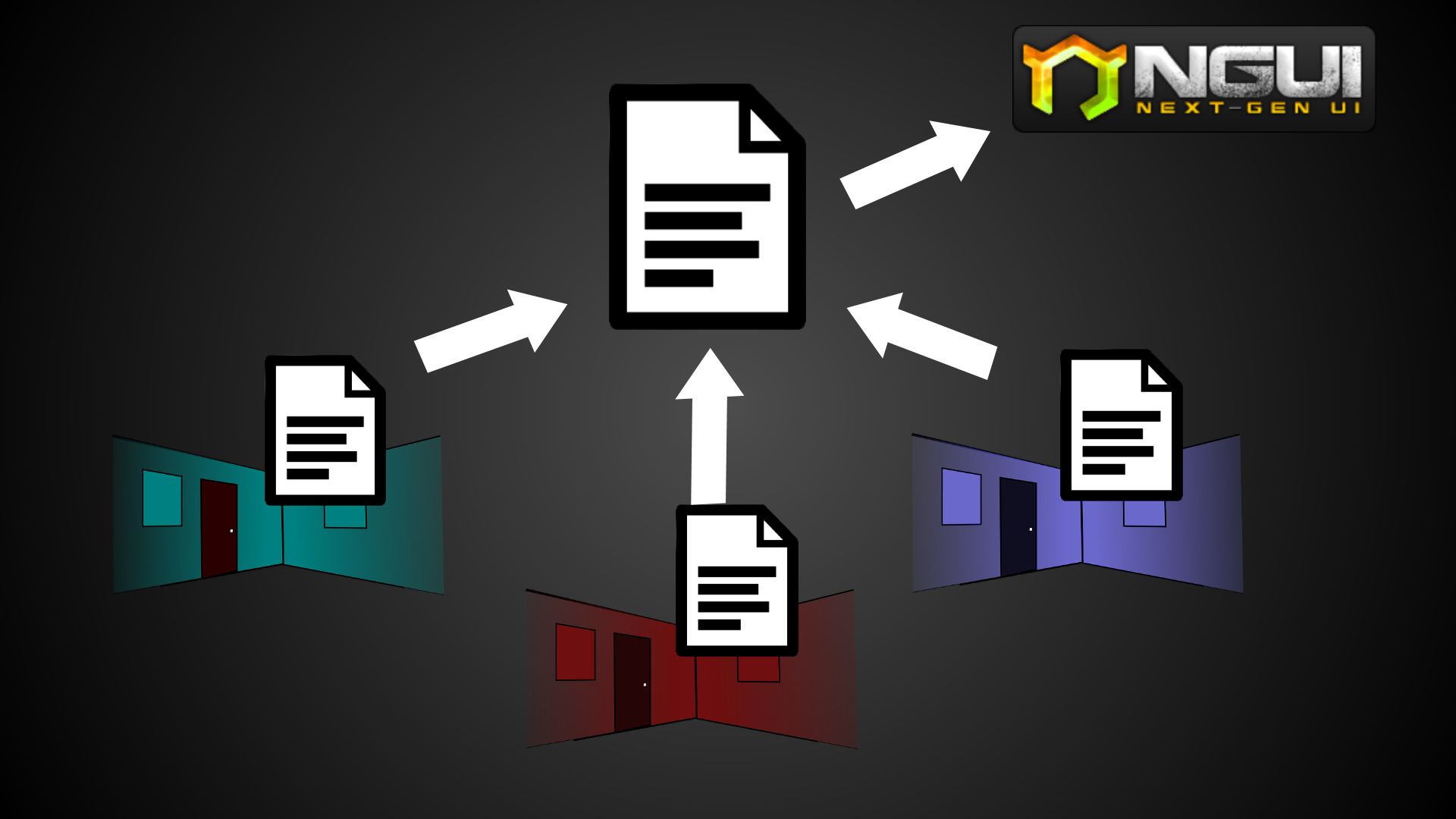


Cutscene Tool

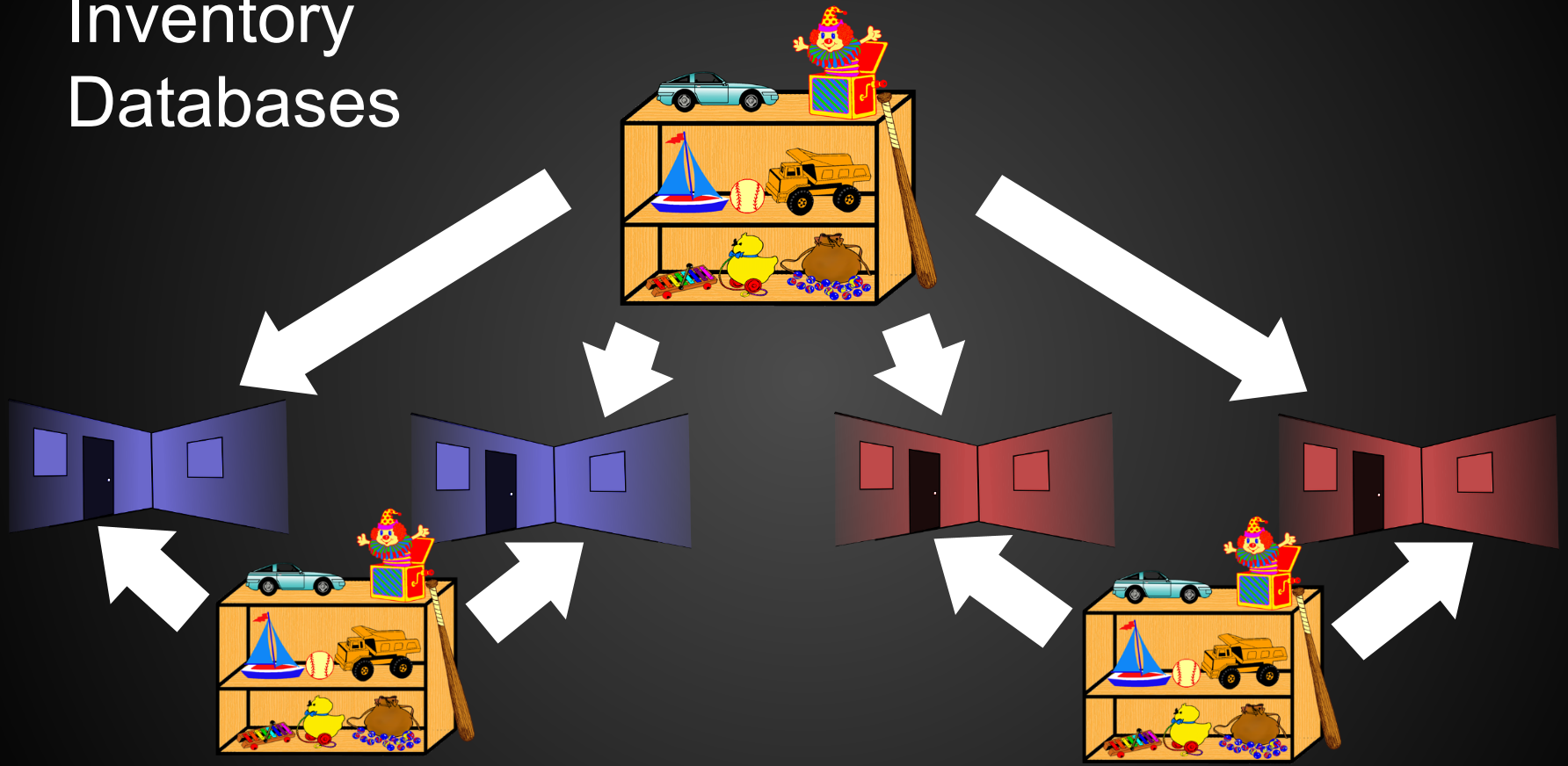


Principle #3

Structure your files around the workflow that best suits your team

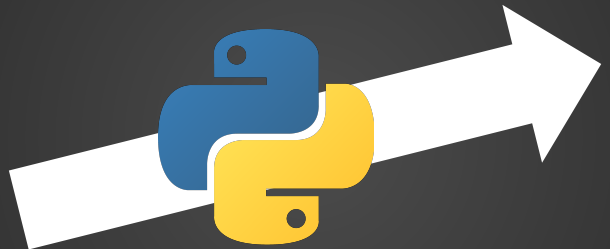

NGUI
NEXT-GEN UI

Inventory Databases



Importing external files

Dropbox

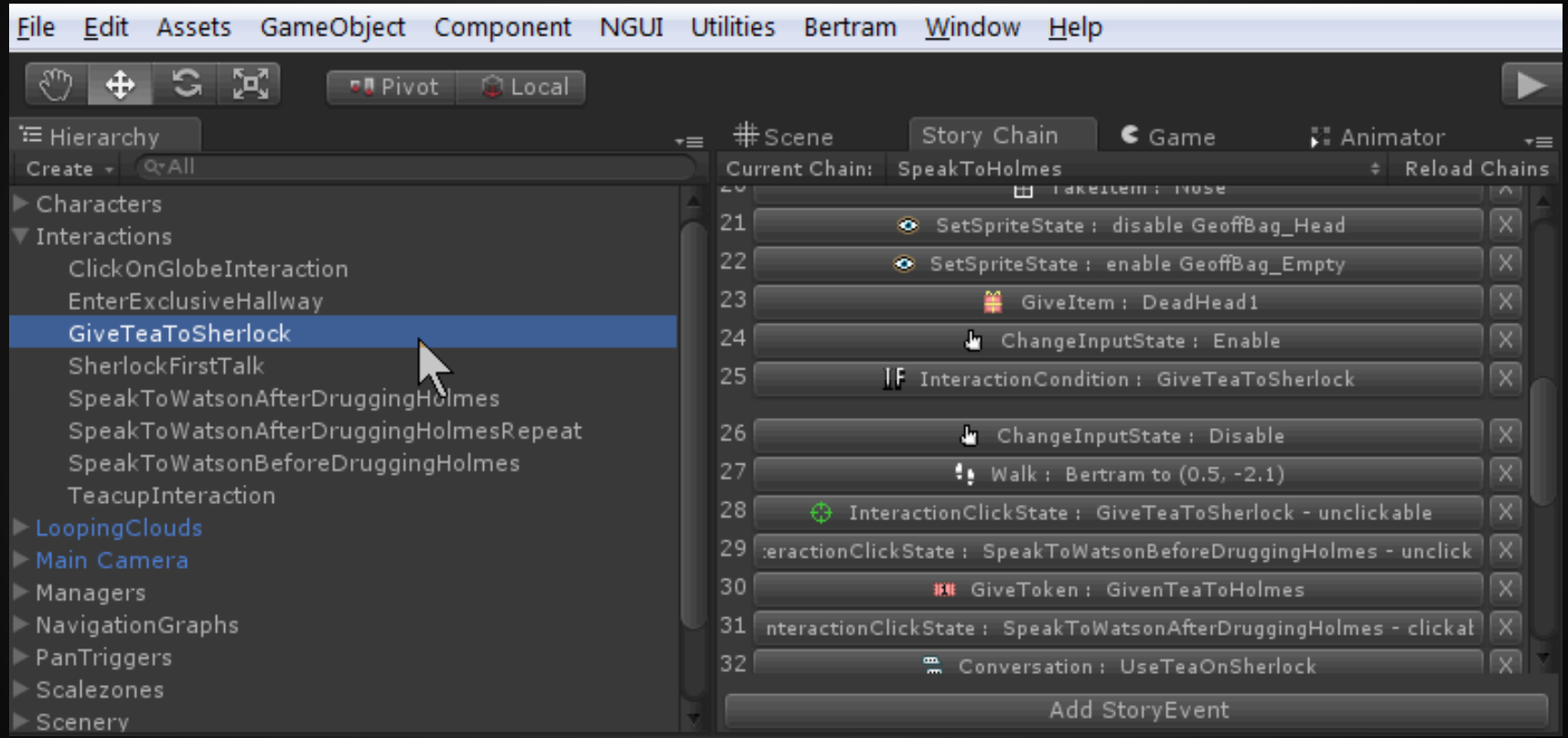


Python scripts

Git repository

Principle #4
Great games are built on a ton of mistakes - create tools that let you find them fast!

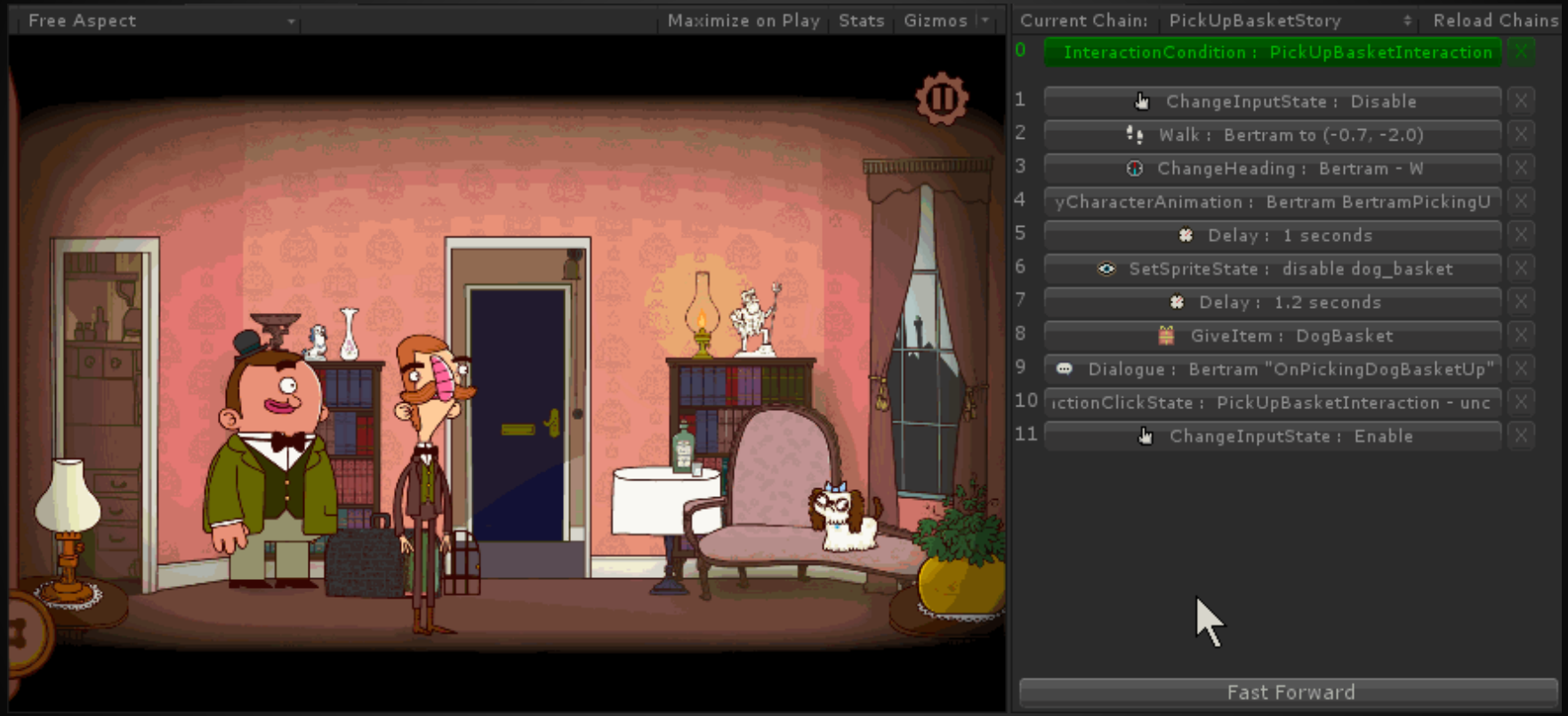
Visualise errors



Visualise the state of the game

Be able to change the speed of time

Fast Forwarding



Principle #5

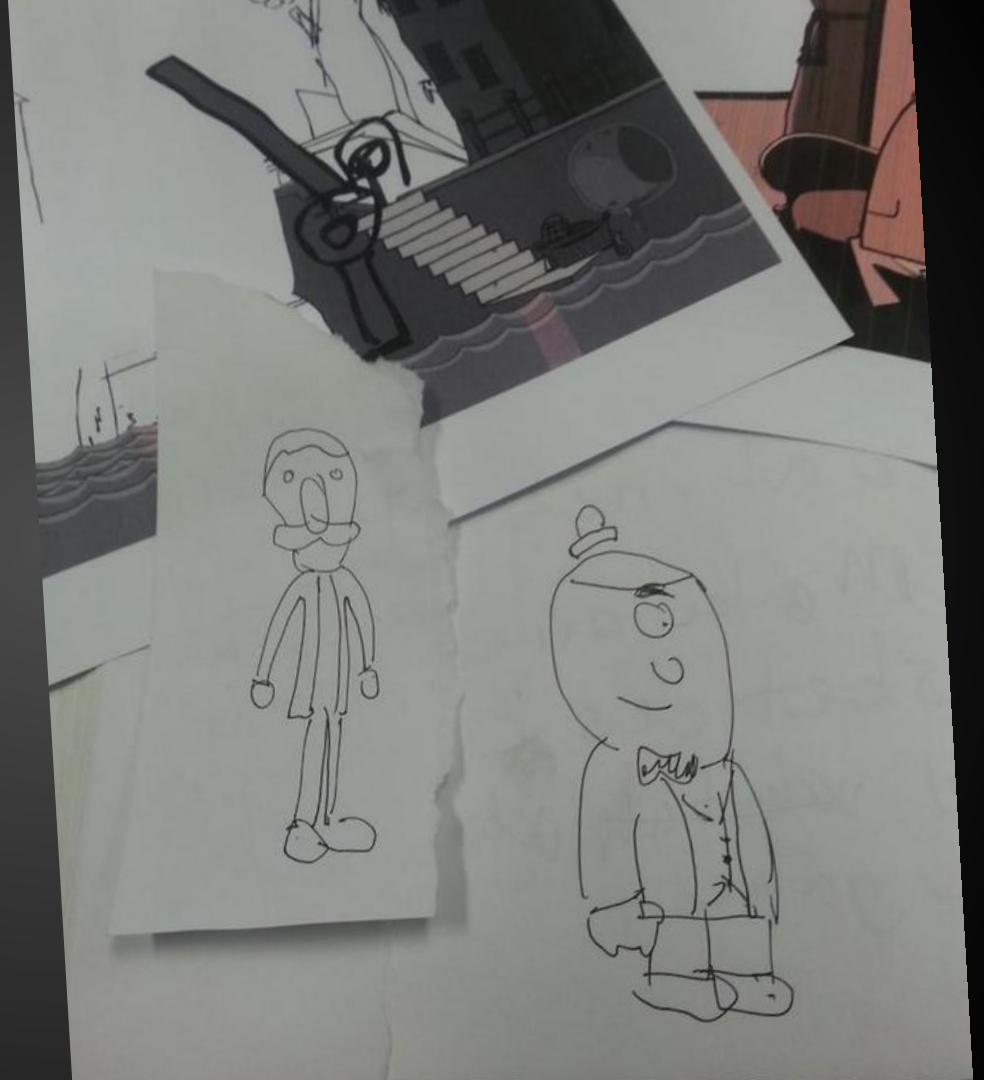
Tools & workflow won't fix everything

Design Documents: What...`

- happens when you enter the scene?
- can you interact with?
- puzzles?
- scenes can you go to?
- items do you pick up?

Paper Prototyping

Fast, flexible and cheap



Start with placeholder Assets

Wrapping up

1. Automate everything that can be automated
2. Make your workflow juicy and effortless
3. Organize your files so it makes sense for you team
4. Make it easy to spot mistakes
5. Remember that technology don’t solve everything

Thank you!

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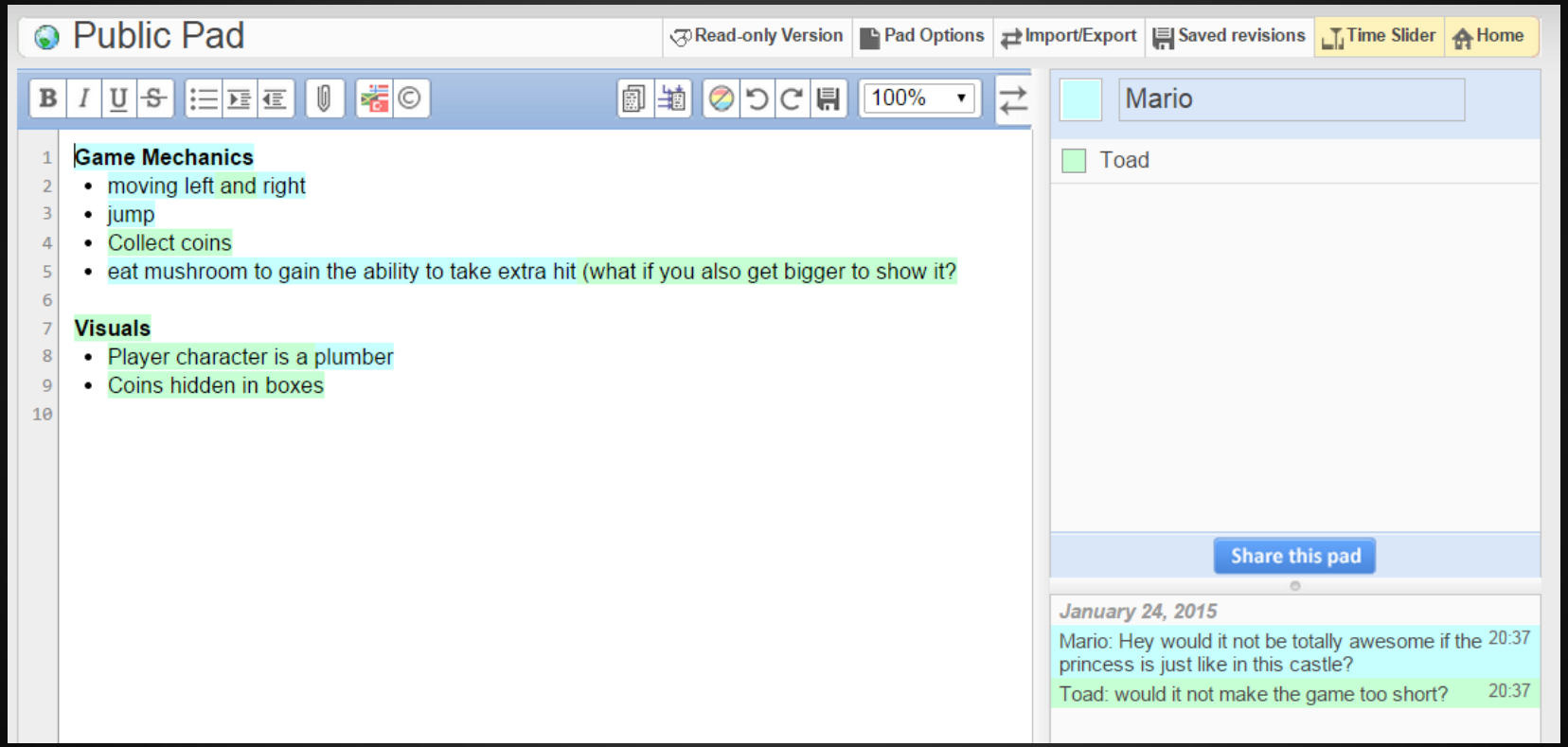
Deleted ~~Scenes~~ Slides

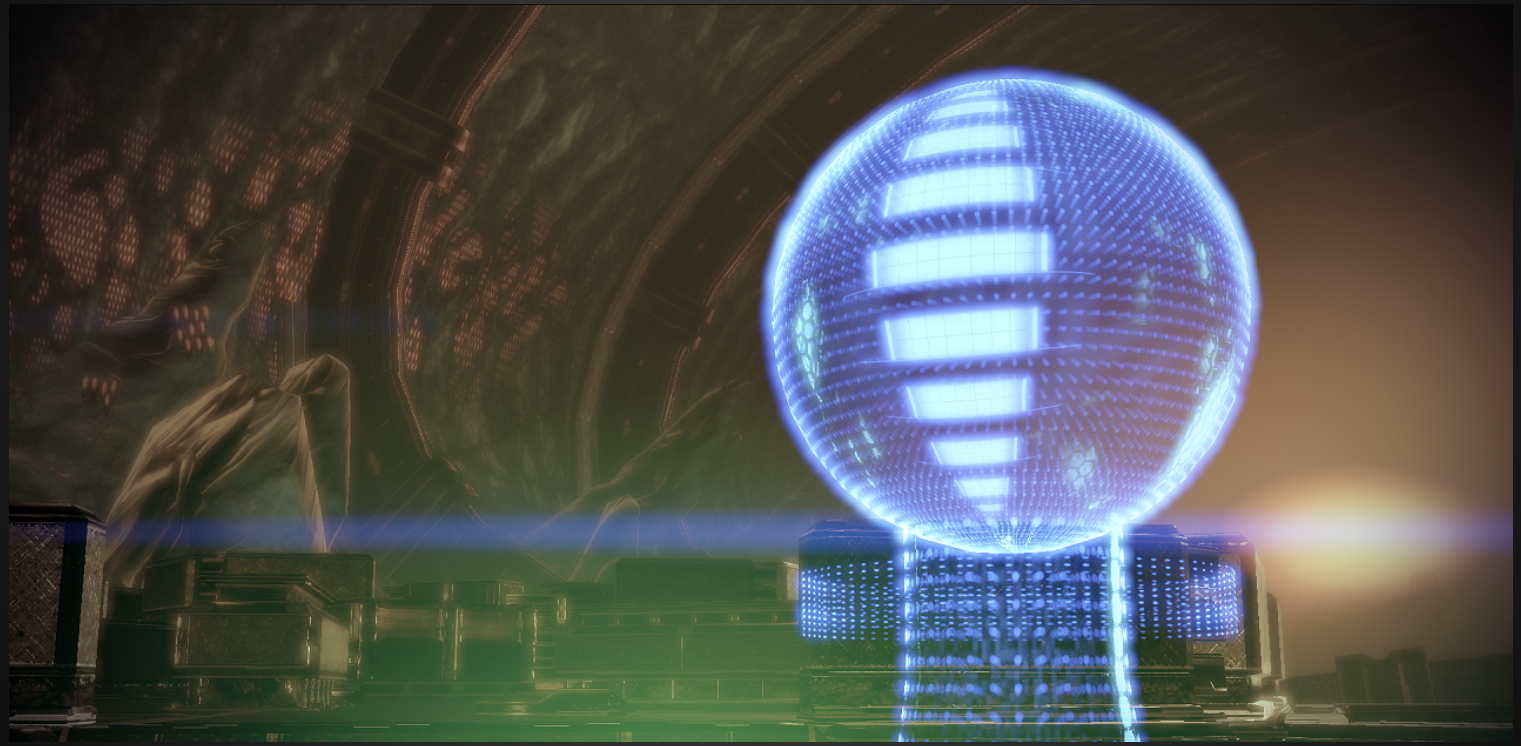
The future!

How will we make games 10 years from now?

Collaborative realtime editing



AI assisted development



Automatic Audio Normalization with sox

```
$ sox track1.wav track1-processed.flac remix - norm -3 highpass 22
gain -3 rate 48k norm -3 dither

Input File     : 'track1.wav'
Channels       : 2
Sample Rate    : 44100
Precision      : 16-bit
Duration       : 00:02:54.97 = 7716324 samples = 13123 CDDA sectors
Sample Encoding: 16-bit Signed Integer PCM
Endian Type    : little

Output File    : 'track1-processed.flac'
Channels       : 1
Sample Rate    : 48000
Precision      : 16-bit
Duration       : 00:02:54.97 = 8398720 samples ~ 13123 CDDA sectors
Sample Encoding: 16-bit FLAC

sox: effects chain: input      44100Hz 2 channels 16 bits (multi)
sox: effects chain: remix      44100Hz 2 channels 16 bits (multi)
sox: effects chain: norm       44100Hz 1 channels 16 bits
sox: effects chain: highpass   44100Hz 1 channels 16 bits
sox: effects chain: gain       44100Hz 1 channels 16 bits (multi)
sox: effects chain: rate       44100Hz 1 channels 16 bits
sox: effects chain: norm       48000Hz 1 channels 16 bits
sox: effects chain: dither     48000Hz 1 channels 16 bits
sox: effects chain: output     48000Hz 1 channels 16 bits (multi)

$ play *.ogg

01 - Summer's Cauldron.ogg:

  Encoding: Vorbis
  Channels: 2 @ 16-bit   Track: 01 of 15
Samplerate: 44100Hz      Album: Skylarking
Album gain: -7.8dB      Artist: XTC
  Duration: 00:03:19.99  Title: Summer's Cauldron

In:20.8% 00:00:41.61 [00:02:38.38] Out:1.84M [  ====|====  ] Clip:0
```