GDC

Next Level Creature Sound Design

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UBM

Overview

- Introduction
- Initial Thoughts
- Pre-Production
- Recording
- Design
- Implementation

Introduction

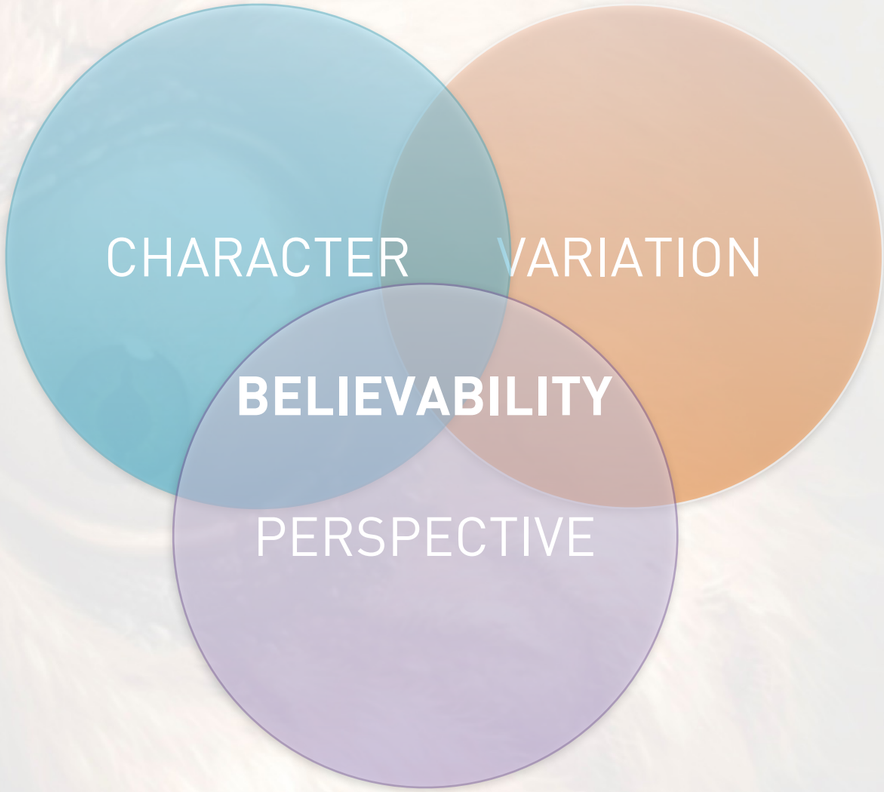
- David Philipp
- Co-founder of Noiseworks Ltd.
- BOOM Library recordist/designer
- Worked on large amount of creature heavy titles
- Elder Scrolls Online, Blade and Soul, Arcania
- Leading creature SFX for Total War: Warhammer

Initial Thoughts

- What's my role as a creature sound designer?
- What makes a creature more difficult than other sound effects?
- Is there a difference between producing creatures for interactive and linear media?

The Three Ingredients Of Great Creature Sound Design

- Character
- Variation
- Perspective
- Equals believability and immersion



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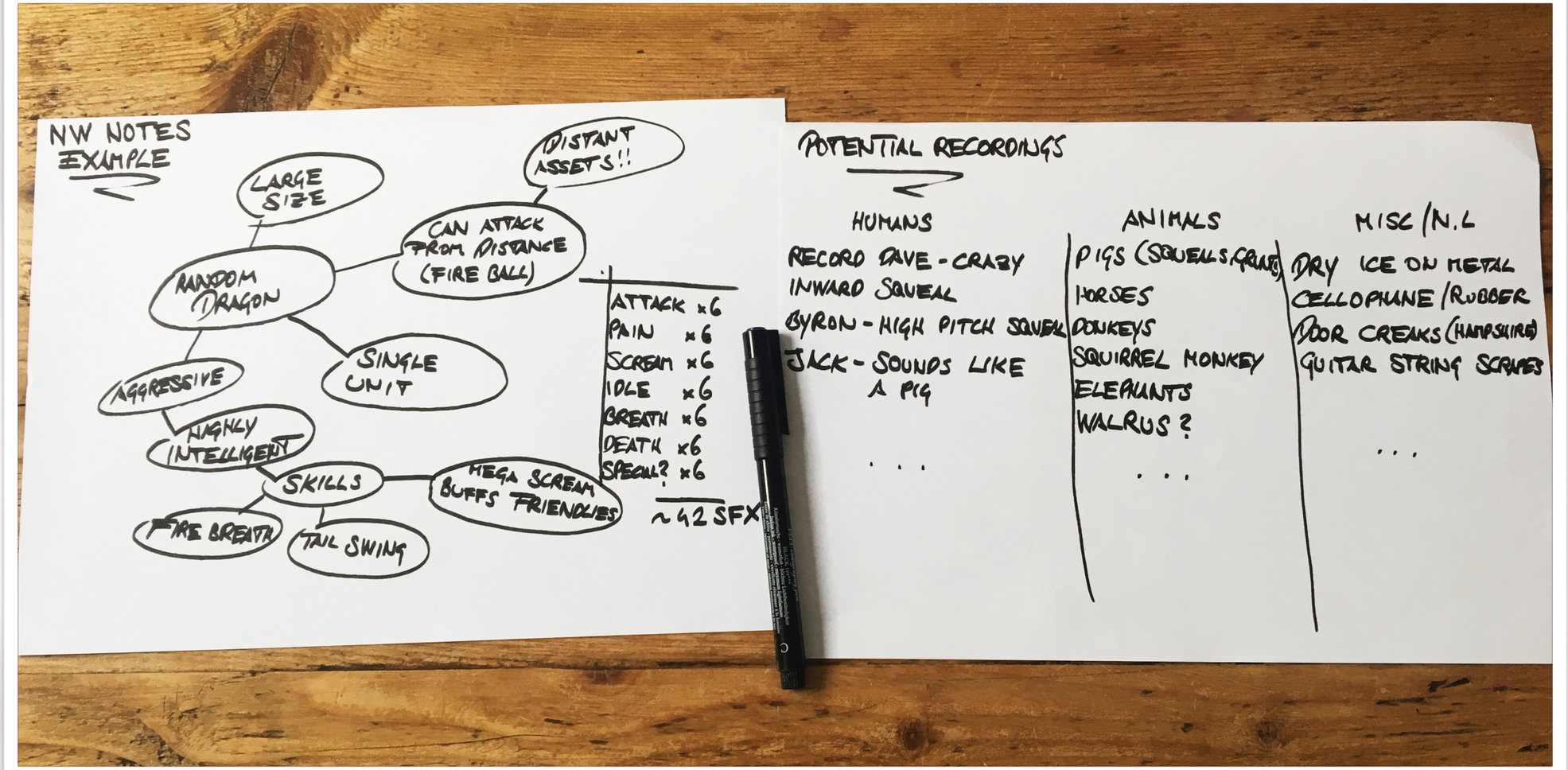
Pre-Production Basics

- Pre-Production one of the most important aspects
- Mostly overlooked and forgotten about
- You need to be aware of what you work on
- And what material you want to use
- One can't paint without colours..
- If you are freelance or with a developer doesn't matter

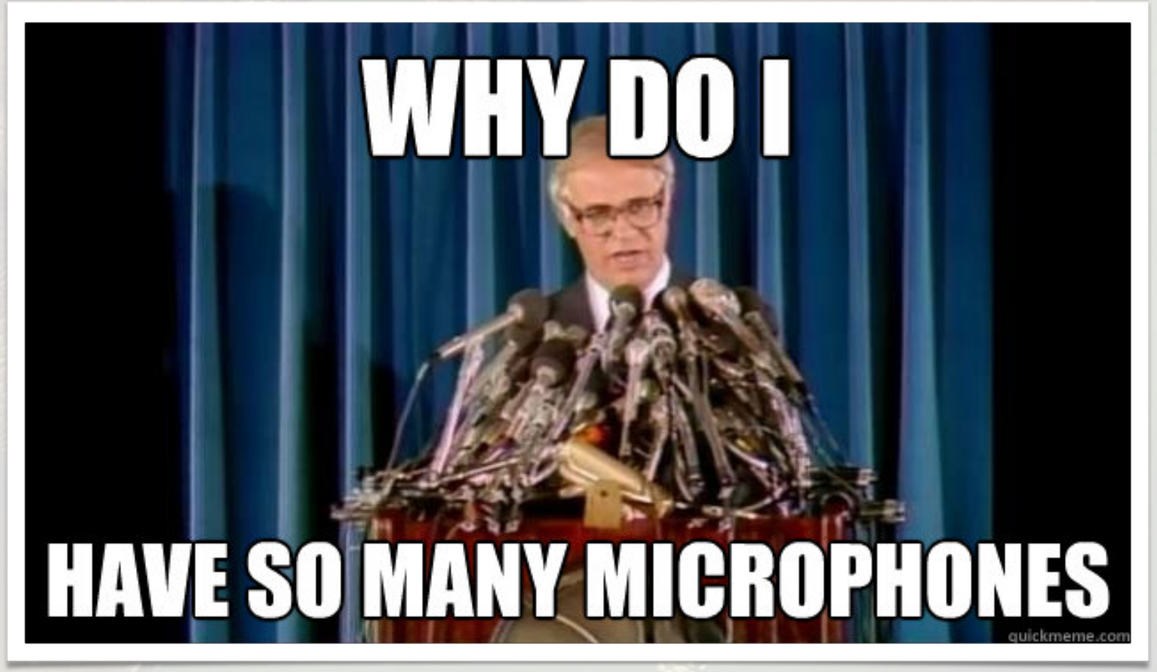
Pre-Production Advanced

- Find out the creatures origin, special characteristics and skills
- How does it produce sound in the first place (voice box, chest cavity)
- Is there need for a language?
- Size and their scale in relation to other creatures in-game
- What and how many articulations do I actually need?
- All this will come together and define the sonic character of your creature


NW NOTES
EXAMPLE
LARGE SIZE
DISTANT ASSETS!!
CAN ATTACK FROM DISTANCE (FIRE BALL)
RANDOM DRAGON
SINGLE UNIT
AGGRESSIVE
HIGHLY INTELLIGENT
SKILLS
MEGA SCREAM BUFFS FRIENDLIES
FIRE BREATH
TAIL SWING
ATTACK x6
PAIN x6
SCREAM x6
IDLE x6
BREATH x6
DEATH x6
SPECIAL? x6
~42 SFX
POTENTIAL RECORDINGS
HUMANS
RECORD DAVE - CRAZY
INWARD SQUEAL
BYRON - HIGH PITCH SQUEAL
JACK - SOUNDS LIKE A PIG
. . .
ANIMALS
PIGS (SQUEALS, GRUNTS)
HORSES
DONKEYS
SQUIRREL MONKEY
ELEPHANTS
WALRUS ?
. . .
MISC / N.L
DRY ICE ON METAL
CELLOPHANE / RUBBER
DOOR CREAKS (HAMPSHIRE)
GUITAR STRING SCRAPES
. . .

Recording

- Different mics = different results
- Literal approach - humans
- Literal approach - animals
- Non-literal approach



Microphones

- Sanken CO-100k
- Sennheiser MKH series (8040s, 8050s)
- Contact mics

Sanken CO-100k

- Most powerful weapon of a creature sound designer
- Picks up signals up to 100kHz (192kHz recording)
- Therefore is a dream for pitching audio
- (Unfortunately) it's an omnidirectional mic
- It stops working below 10c

Example Sound

Sound recording with the Sanken CO-100k

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Sennheiser MKH-series

- Great allrounder
- A very popular choice for recording in the field
- Picks up signals up to 50kHz
- Which is still great for pitching purposes
- Is available as cardioid/super cardioid and therefore a great MS solution

Example Sound

Sound recording with the Sennheiser MKH 8040

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Contact mics

- Not too pricy and normally very durable
- Great way to pick up “different signals”
- Can sound super odd, dependent on the source and placement
- Picks up very dry and isolated signals
- Big difference between budget and high-end solutions

Example Sound

Sound recording with the Barcus Berry

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Human recordings

- A powerful source, especially with the Sanken
- Humans (usually) perform on command and can be directed
- Can be recorded in a controlled environment
- Unless you hire actors, it can be done quite cheaply

Human recordings

- After recording loads of different human sounds it can sound very similar once they are pitched/slowed down
- Variation is always key
- Humans complain about sore throats and hoarseness
- (It's not as much fun)

Animal recordings

- Can be very rewarding as certain animals produce great and powerful sounds
- Difficult to achieve, most animals don't make noises on command
- Time consuming
- Mostly outdoors, uncontrolled environment

Animal recordings

- Sometimes animal recordings are absolutely necessary
- Certain sounds can hardly be reproduced by humans
  (horses, bears, vultures, seals etc.)
- Can be very pricy if agencies have to be involved
- Those recordings can be dangerous
  (panthers, stags, lions)

Animal recordings / Planning and Execution

- Where am I recording?
- Is it possible to do a reccie beforehand?
- What am I recording?
- How much do I think I can get out of it?
- How dangerous is it going to be?
- What equipment do I need? Better take too much than not enough

Listening test for the audience

SOUND NR 1

Which file is made just of human sounds?

SOUND NR 2

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Non-literal approach

- Some of the best layers for creature sounds don't have to come from humans or animals
- Think about tire squeals, door creaks, balloon stretches, dry ice on metal, high-pitched scrapes etc.
- Look for sounds, not for props!
- It can add another layer of interest to the creature
- And make it sound different to everything else

Non-literal approach

- Creatively the biggest challenge
- But also the most rewarding
- Very time consuming
- Finding the right spots and props to record can be very difficult

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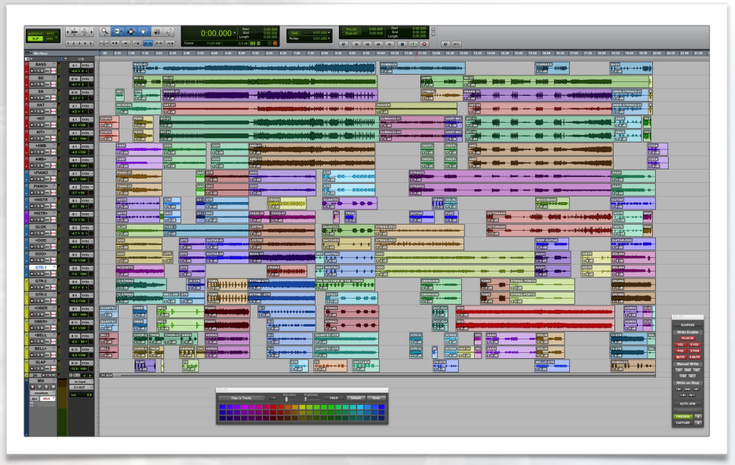
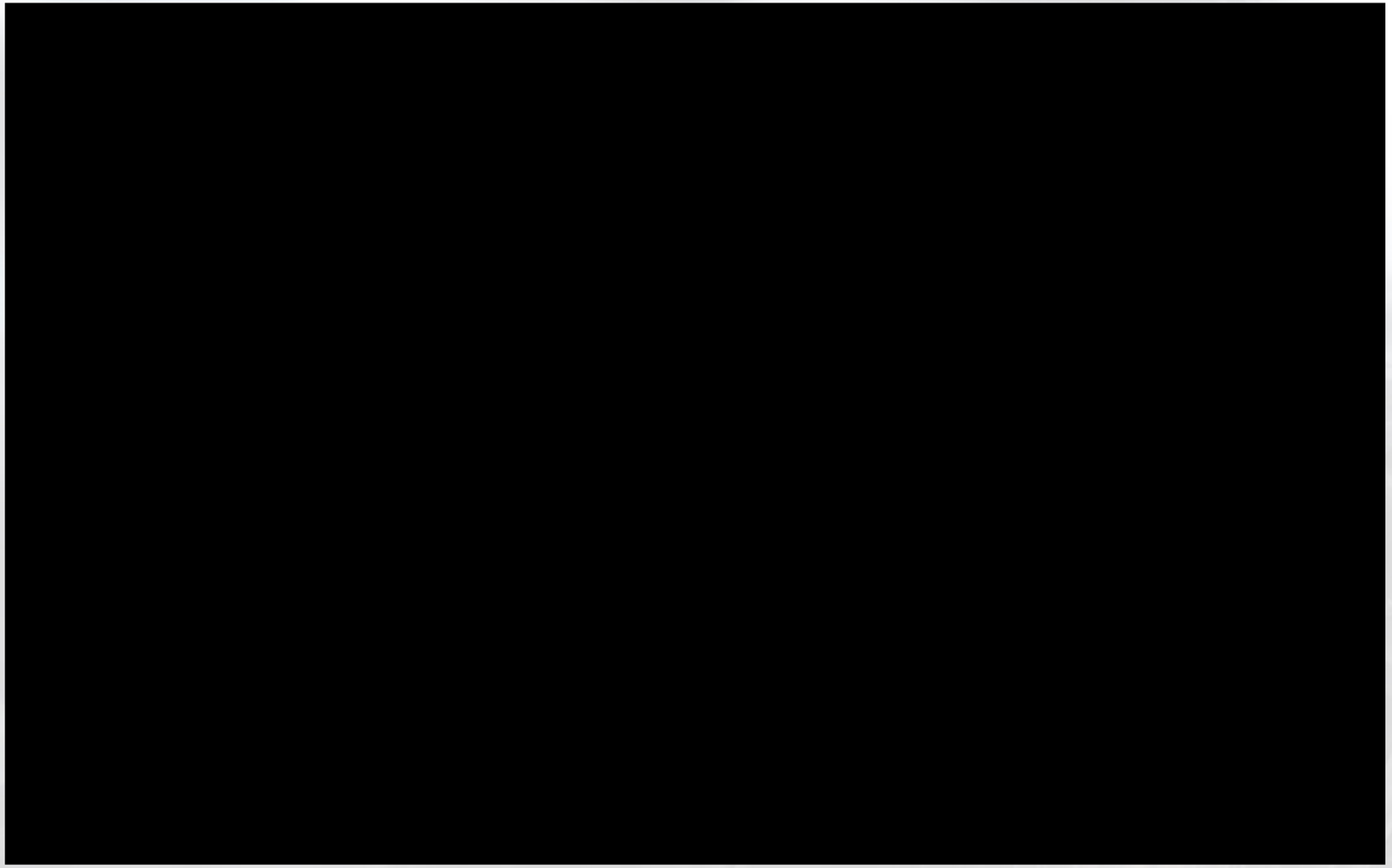
Design

- The process where it all comes together
- Ideally you'd know what you're trying to achieve by now
- But sometimes it can feel more like throwing paint on a canvas and seeing what happens
- The DAW of your choice is **not** important (unless you have to collaborate with other people)



Design

- Creature sound design consists of layers
- Hardly ever there will be one sound which is enough
- The art is to make all the different layers work together and sound like a homogenous creature
- Focus your attention on the tonal relation between the different layers (pitch)



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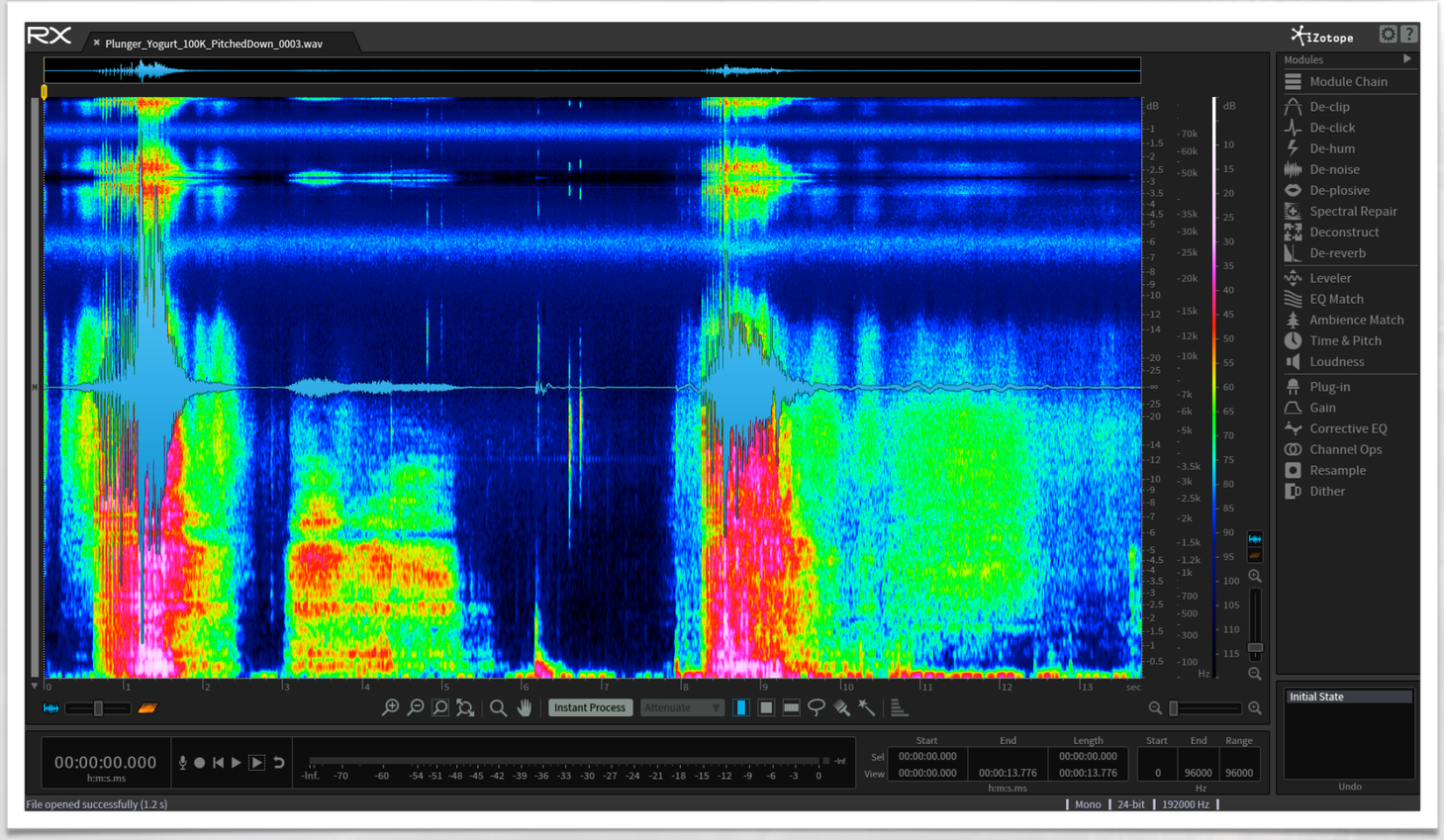
Design

- Approaching those designs can be a bit like arranging music
- Pitch matching is most important and plug-ins can't take that work off you
- Good source can allow you to work with just volume and EQ
- There's still plug-ins out there which are a must have for every (creature) sound designer

Plug-Ins

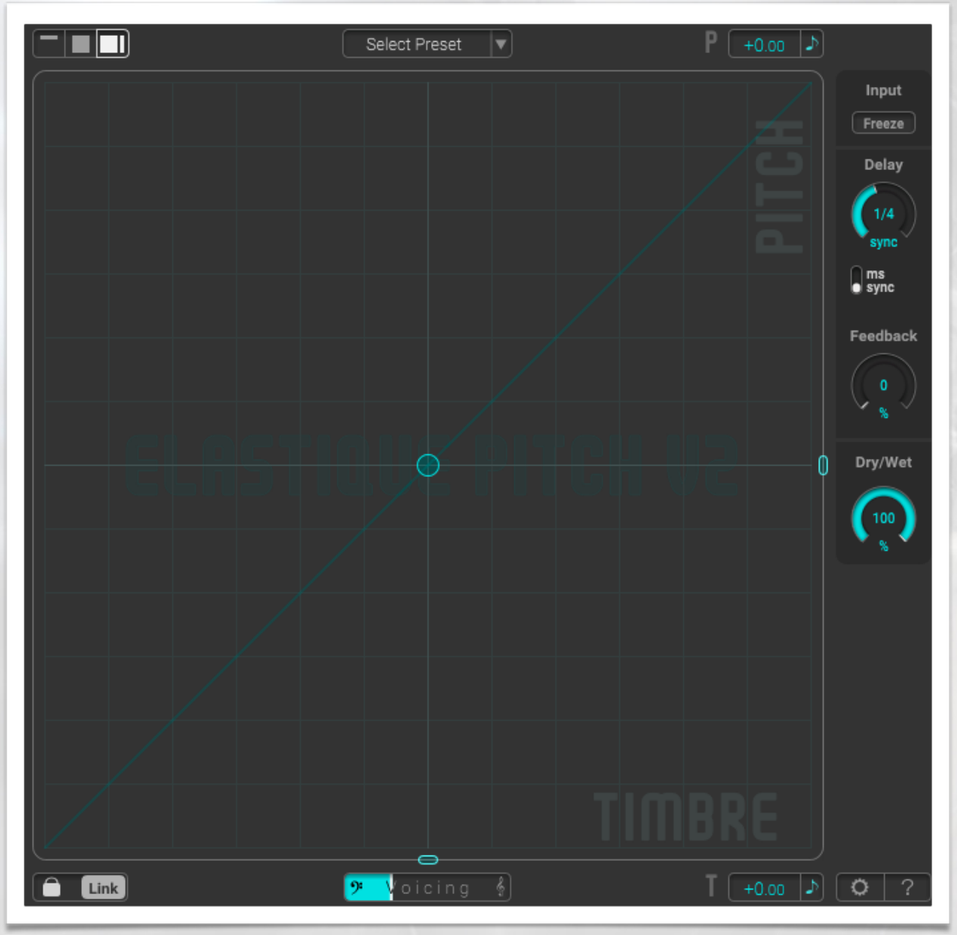
- Izotope RX (Advanced)
- Zynaptiq Morph II
- Zplane Elastique Pitch
- Maag EQ
- Waves Lo-Air
- Krotos Dehumaniser 2

Izotope RX (Advanced)



Zynaptiq Morph II

Zplane Elastique Pitch



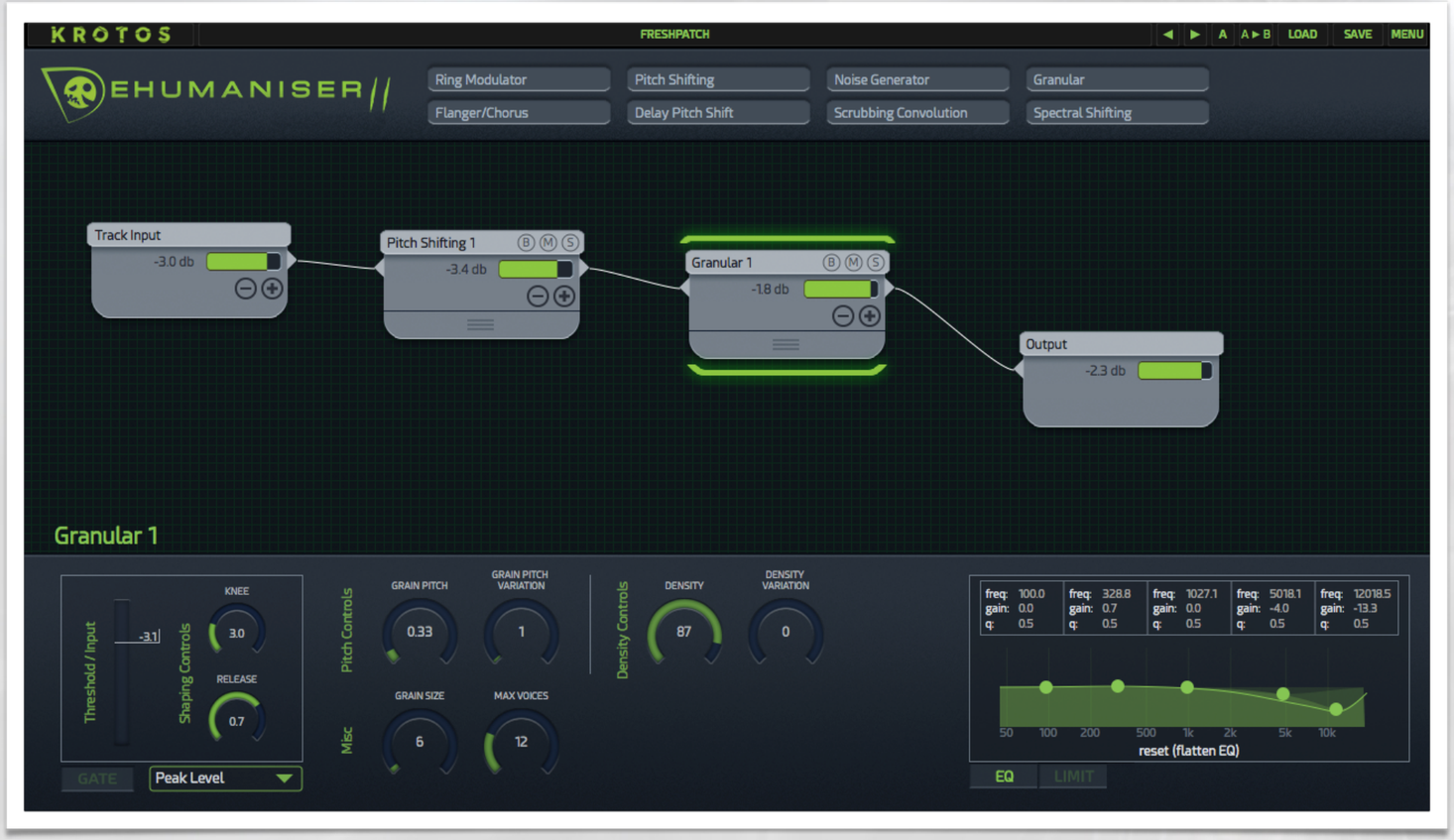
Maag EQ

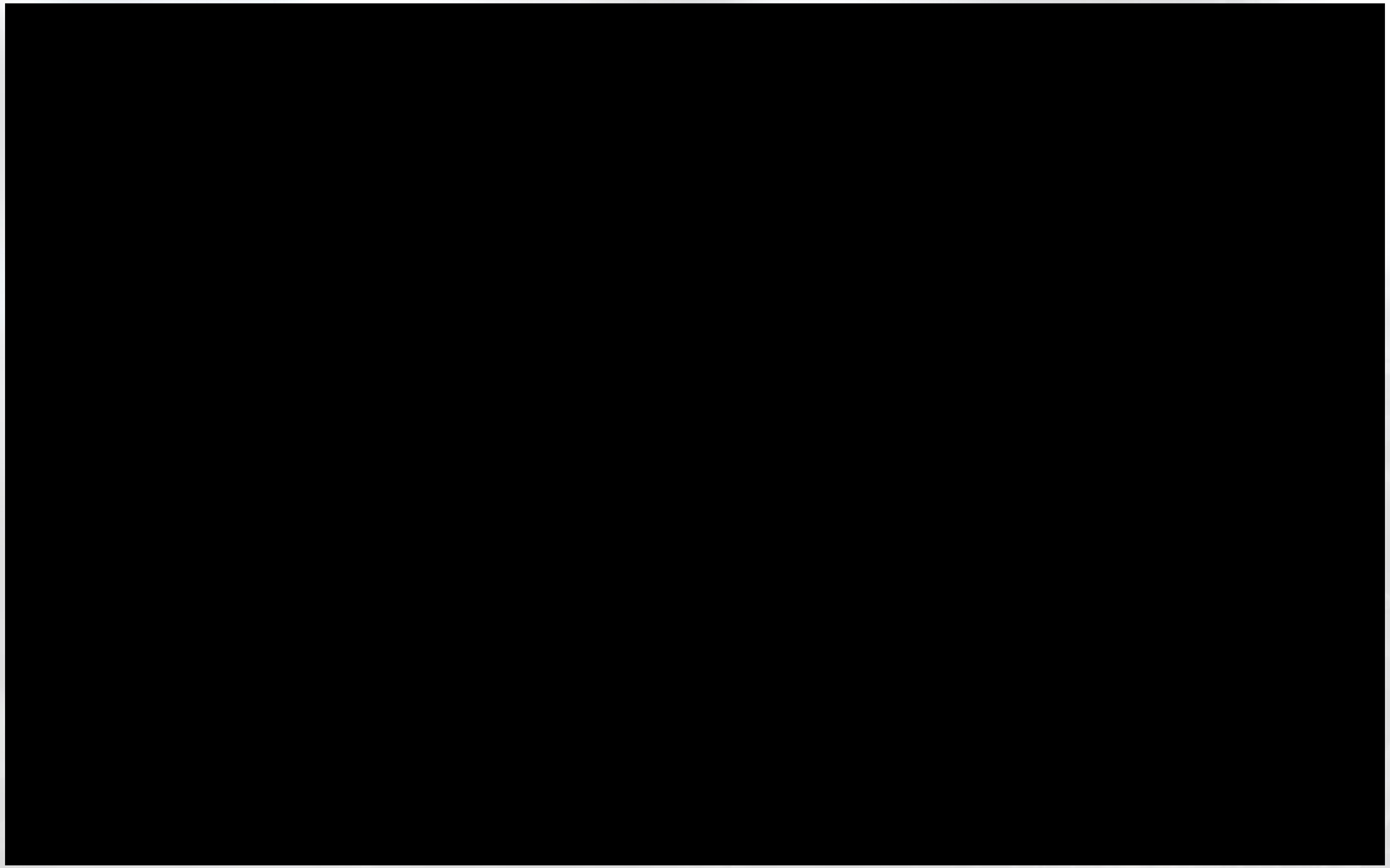
EQ4
SUB
160 Hz
2.5 kHz
40 Hz
650 Hz
AIR BAND
kHz
OFF
2.5
5
10
20
40
AIR GAIN
PEAK
SIGNAL
LEVEL TRIM
IN/OUT
maag AUDIO

Waves Lo-Air

Setup A
A→B
Load
Save
?
RANGE
LoAIR
LO
DIRECT
OUTPUT
0
0
20
120
-Inf
30
-Inf
30
-Inf
0
-60
0
Align
Trim
12.0
WAVES POST PRODUCTION
-36
-24
-12
-6
-3
-1
LOAIR

Krotos Dehumaniser 2





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Implementation Basics

- Last part of the process (apart from the mix)
- If the implementation is bad even the best sound can't save it
- We are dependent on great systems for our sounds to make them shine properly
- Implementation is 50% the experience!
- There's countless possibilities of implementing audio

Implementation Tips

- Hierarchy setup is incredibly important
- Modular approach vs. one-shots
- Distant vs. close assets
- Use of cone attenuation
- Volume = size, make use of it
- Sweetener layers (proximity)

Summary

- Pre-Production is key, know what you're working on
- Be creative with the recording process but sometimes the most simple approach can get the most satisfying result. Trial and error!
- Pitch matching, EQ and volume. Those three ingredients work with good source!
- Get stuck into implementation if you can. If you're freelance, at least try to get involved
- **Believability** and **character** = most important aspects of creature sound design

Thank you very much for your attention!

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