

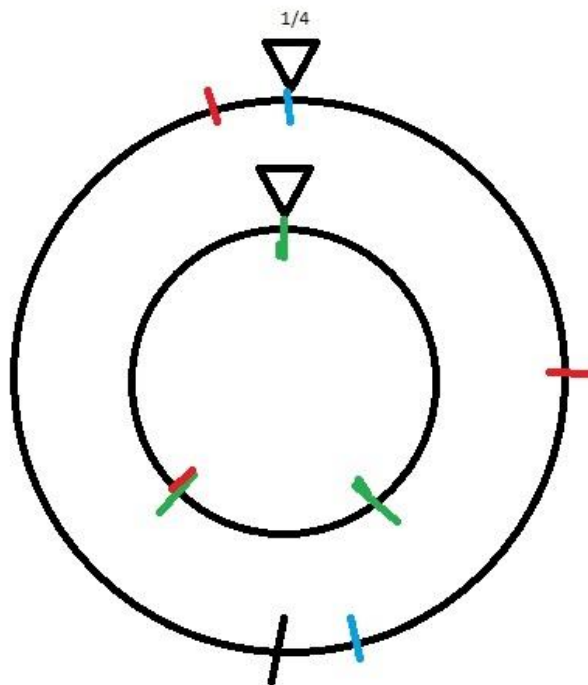
## Terrane Drum Machine design doc

cycles per second (CPS) = 1.3

gravity/lilt:



linear gravity uneven



hihat.wav  
snare.wav  
kick.wav

IMPORT.

a b

c d <- select and build a different groove for interpolation\* with another

Explanation:

TDM \*working name\* is a revolutionary (lol) drum machine allowing you to understand and create grooves from a different perspective.

Features:

in the top left, you can change **the cycles per second (cps)** - this is the equivalent of BPM, linked to the inner circle (**the subdivision circle**). The lower the number, the longer it will take the triangle (or w/e) to make one complete cycle.

**The outer circle (the bar circle)** focuses more on the form of the groove, and is therefore a longer cycle (its ratio to the inner one to be set by the user). So for instance, if at one quarter, it will take 4 times as long to match backup at 12 o'clock with the inner circle.

Nb - could be nice to have an option where divisions are shown in each circle, so it could split the circle into 2, 3, 4, 5 ..up to 12 equidistant points. This could replace snapping, not sure if snapping will be required.

In order to place a beat onto one of the 2 circles, first **import a sound** (top right) (or choose from a small directory of inbuilt samples?), It will automatically be attributed a colour. Then click it to select it (almost like selecting a colour in paint), then **click to place**.

As you click to place, if you hold down, you can then drag your mouse up or down to **attenuate or gain the amplitude** (every beat placed should start at 80% original db level, allowing you to push it louder or duck down very quiet). Similarly if you move the mouse left or right, you will be able to **fade in / cut off faster** (eg drag right = add teeny fade in so softer

transient hit, drag left = shortens wave quicker fadeout, more percussive) (NB need to make sure it's easy to control so the axis is quite long. Could also be done that you click once to place and then it automatically goes towards changing the values, then click again to set it.)

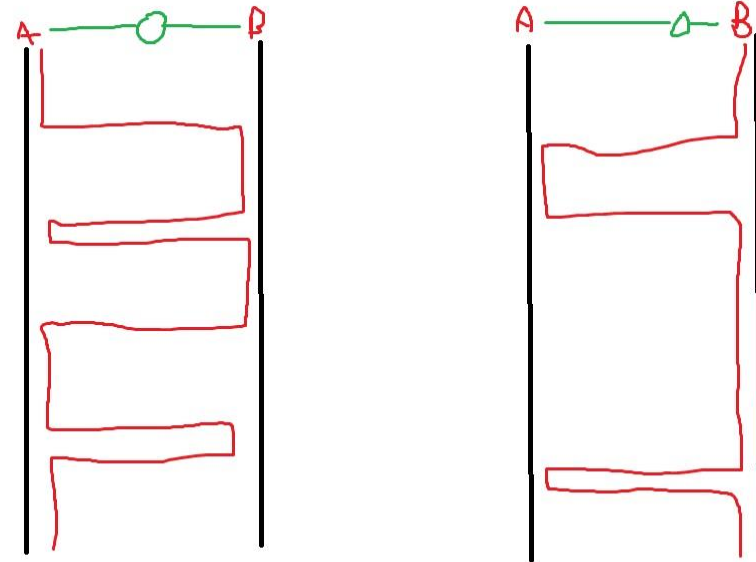
We will need an eraser button/function as well. (Apologies that the example image above has a few weirdly coloured lines, oops.) - We might need a cool way to show graphically that with this hihat, we lowered the amplitude and made the cut off shorter maybe? Maybe not.

Naturally, the subdivision cycle will lend itself to hi hats and the wider form cycle towards kick and snare as well as other embellishments. And that's how you build a groove! The fact that there is **no snapping/grid** and all grooves are visually cyclical will hopefully encourage users to start playing around with non-quantised grooves and better access and understand non-Western grooves (that are often thought of in cycles anyway).

To further help people experiment, they can play around with the **gravity/lilt buttons** (top left beneath cps). This controls how the triangle rotates around the circle, which is default set to linear (rotates at a constant speed).

By giving it **gravity** (button 2), think of it a bit like someone on a swing, starting at the top of the swing cycle upside down! It would start falling slowly but gaining momentum quick speeding down the bottom and then a slow crawl to the top (logarithmic then?) - The cps speed is still the same FYI, but the way that it interacts with the beats on the cycle will now be new and refreshing.

The bottom left allows you to play around with the “groove interpolation” feature. **Jon: I actually think this should function a bit more like the version that switches periodically between 2 grooves & the closer it is to one groove, the less it switches to the other one.** The reason why is ultimately I think this will sound better musically, it will sound a bit like a drummer is adding cool little ad lib moments, making the drum groove sound more real again and more alive! Perhaps it could also vary some other parameters like choose to play something a little quieter or shorter. Linear interpolation would help discover more feels but ultimately I think the other option is cooler and more musical and allows for more unique and varied performances that mutate over time. Hopefully this is also an easier mechanic to implement, fingers crossed



between all 4, then the interface might have to look square and you select any space within the square. We need to carefully configure how smoothly the grooves feel uncomfortable. Want it to feel like it has a life

If you are choosing between all 4, then the interface might have to look more like a giant square and you select any space within the square. Thoughts? Will have to carefully configure how smoothly the grooves switch, don't want to feel uncomfortable. Want it to feel like it has a life of its own.

Once usable, we can get feedback from my drum community, and at the end get people to create videos using the application.

### Aesthetic

Since the tool aims to bring a fresh perspective to visualising and creating grooves, would be wonderful to have an aesthetic to complement.

Additionally, treating it a bit like an album or a game continues to align this project with previous Terrane albums/branding etc - all from the same mind, reflects the music made with it etc. just another way to sell the product, hip in itself to own because it looks so enticing.

Outsourcing artwork? Art for circular imagery and backgrounds, possible interface design.

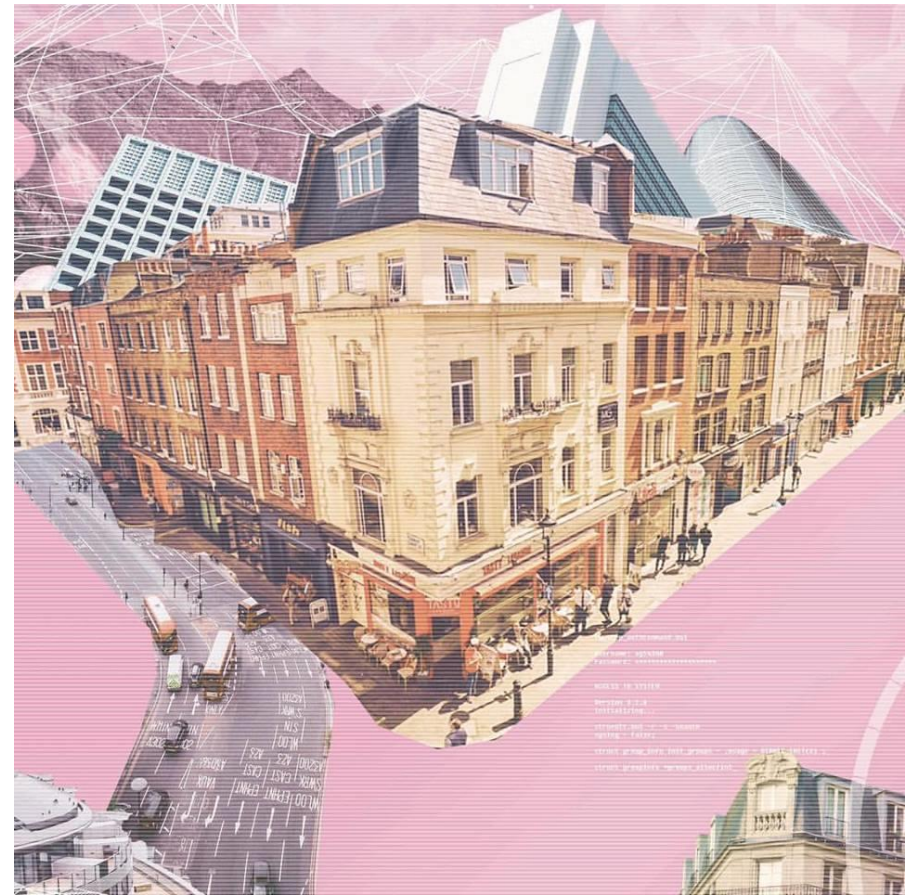
Possible some gentle ambient animation? making a world out of the tool. Reacts to the beats slightly vj? Maybe colours change every time you restart or pick a new A B C D so there's a new feeling to every canvas you start working on.

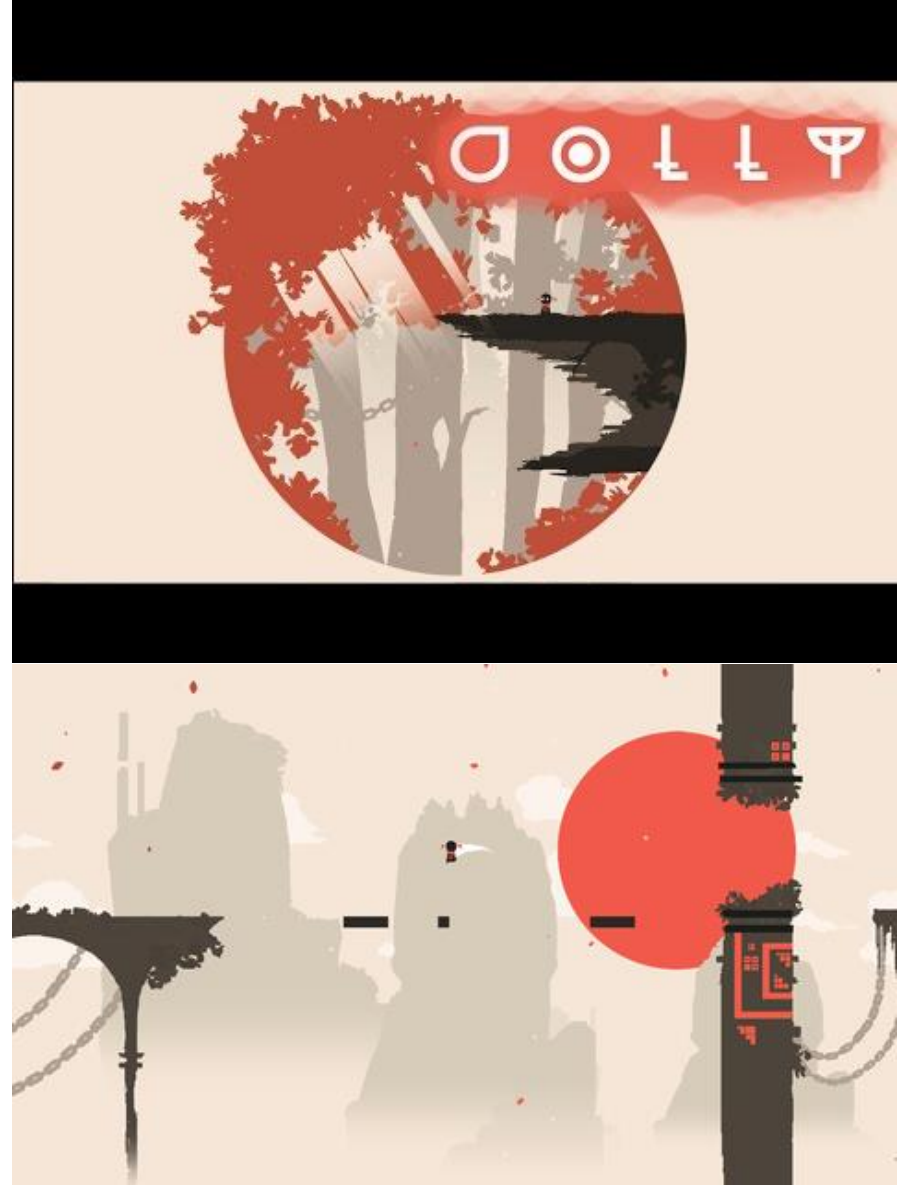
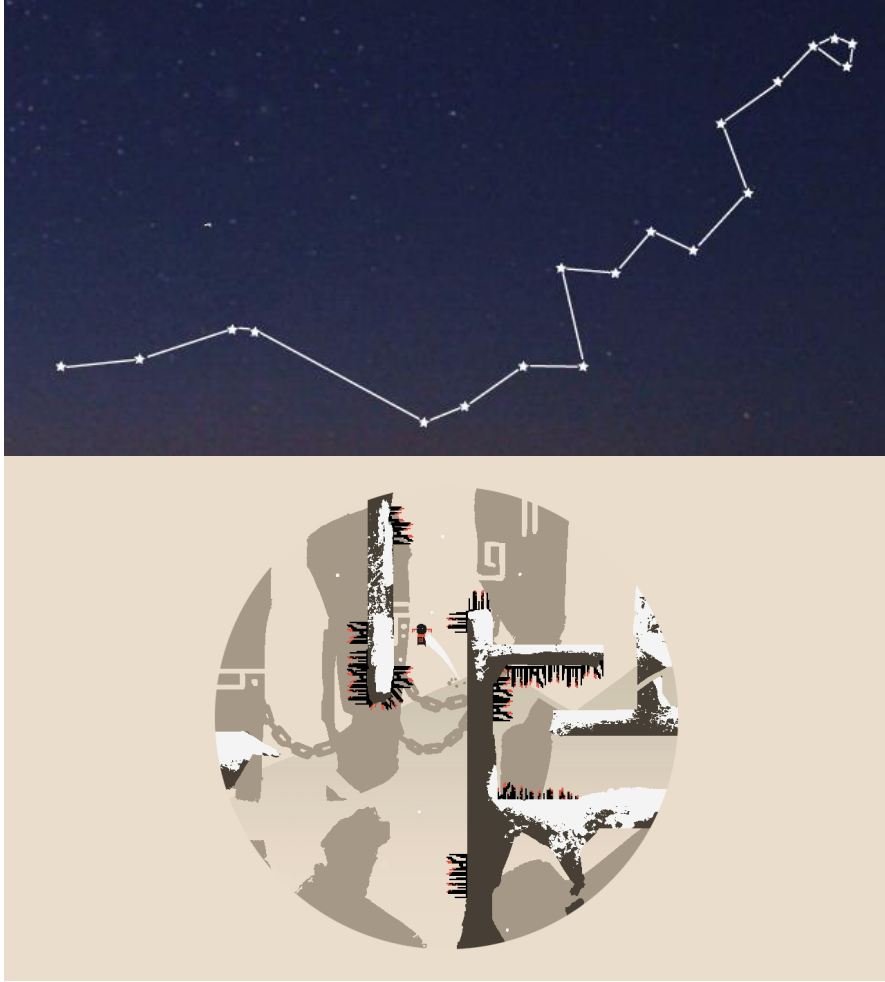
Mood

boards/colour

palettes/design

ideas:









Radostina @fuzindol - Aug 3  
 Heey cool kids! I'm Radostina. I'm illustrator, designer and video adventurer, who likes  
 drawing colorful cutesy stuff #VisibleWomen



planets, spacey, moon, terrane colour palette etc.