Halfslashed Lessons

Basic Rhythm

Discussion by Halfslashed and Mir with RSA, b00 and Me

Emphasis

Halfslashed-14/08/2017

So let's start this discussion on basic rhythm.

Basic rhythm: active/passive, polarity, instrument switching, layering, brief introduction to instrument merging, and note strain (particularly with 1/4).

First thing to say here is that you guys likely have some experience with how this works already since you've attempted to do it yourself, ofcourse. But it's important to have an additional understanding so that you know when you don't have to follow these things later on. Also, very good for modding.

Anyways, to start this off I'll address why rhythm is important. Obvious thing that comes to mind is "this is a rhythm game so rhythm must be important". But you see many maps that don't exactly... fit that, and still get ranked fairly easily. These maps function because they address the basic level of rhythm in that it is predictable and readable.

Which function based on a term you may or may not be familiar with: **filler rhythm.** This is the practice of keeping consistent rhythm gaps, which allows a player to focus more on the aim component than having to interpret when they have to click/how long a slider is, etc. Usually 1/2, but this does vary from song to song. And while it is a common practice, you can of course deviate from that when you know what you're doing

questions?

ok

There are some other ways to use "filler rhythm" to describe something but let's stick to one definition here just add as you see fit~

Mir-14/08/2017

okay

I'm worried you'll end up doing all the work

Halfslashed-14/08/2017

Well now would be a good time to say anything else on "why rhythm is important".

Mir-14/08/2017

Rhythm is important because if your map has sub-optimal rhythm your entire thing weighs down on it. It serves as the basis for your map, you build patterns around the rhythm you choose. Pretty much everything relies on the rhythm you choose to use, so it's important to pick a rhythm that fits what you're trying to do and what the song is doing.
yea

Halfslashed-14/08/2017

Anyways, so about active/passive. This is where i'll introduce a decent bit of terminology.

active rhythm: refers to objects you click
passive rhythm: refers to objects you do not click (but still have a hitsound)

The hitsounding part is important because this does mean that you are still providing feedback even without clicking. But clicking is still the most important thing to keep track of here, especially for insane/extra difficulties.

Celektus-14/08/2017

also spinners kinda don't count right?

Halfslashed-14/08/2017
nah, they do

RSA-14/08/2017

They'd be passive right?

Halfslashed-14/08/2017

Spinners are weird since you actually click them to start (if there isn't a clickable object before that) but they don't provide hitsound feedback. The end gives more feedback due to the hitsound.

b00-14/08/2017

Hehe, Mir. This reminds me of your "hitsounding to provide better emphasis".
Even though it's better to follow the more important sounds with active notes.
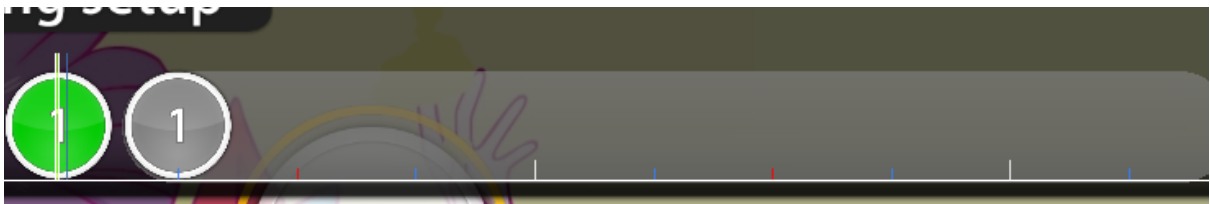
Halfslashed-14/08/2017

Well hitsounding is a pretty different subject, one thing at a time xD

Something I didn't mention that you may know if you read the discussions in #sticky (good resource btw) is that objects have movement associated to them - this becomes more important later.

But in terms of strength for active/passive rhythm:
circle (hitsound, movement, accuracy) > sliderhead (hitsound, movement) > slider tail = reverse (hitsound, movement) > spinner end (hitsound)
and then spinner start which you don't even always have to click based on your rhythm. (like if you're already holding down)

This is why you often see stuff like this :

Since how this works is you click the circle and hold down, then just go straight to spinning, you don't need to click twice.

Celektus-14/08/2017

is it related to rhythm when to use spinners most effectively?

or some other topic?

Halfslashed-14/08/2017

Yeah we'll go over that. Trust me, I'd love to tell you about spinners. (and how i think they're the worst hitobject in the game)

but anyways

Celektus-14/08/2017

xD

Halfslashed-14/08/2017

Anything you wanna add to that Mir?

Mir-14/08/2017

Hm, you covered it pretty well so far. I think we're transitioning into the next part that i like.

soon™

Polarity

Halfslashed-14/08/2017

Right then.

So the next topic is polarity. I'm sure you've heard the term. It's not musically correct, but who cares, this is osu…

after some talking…

Before that, **active gap** refers to the timeline gap between objects that are clickable. (circle and circle or circle and sliderhead)
passive gap refers to the timeline gap between an object that isn't clickable and one that is. (sliderend and circle, sliderend and sliderhead, etc.)
And then **polarity** refers to the practice of keeping even rhythm gaps.

I mentioned the idea of keeping rhythm gaps even for when I established "filler rhythm". On a standard 4/4 song (that's a time signature) you have 4 beats in a measure, divided into 4 parts a beat is 1/1 in the editor a measure is 4/1 even rhythm is referring to dividing that evenly. (lol) 1/2, 1/4, 1/8, 1/16 etc.

On a standard song, it is predictable in gameplay to assume rhythms are going to be even, and less so when you have an odd case like 3/4, 5/4, 7/4, etc. However, unless you're mapping rhythm at a Normal difficulty, anything with a timeline gap larger than 1/1 is readable by the approach circle. So the most common use of polarity is to correct 3/4 gaps.

Any questions before I move on to some examples?
That's a shit ton of terminology and numbers and shit so please ask if you don't get it.

RSA-14/08/2017

What'd a 3/4 gap be?

Celektus-14/08/2017

like 3 1/4 gaps

b00-14/08/2017

^

Halfslashed-14/08/2017

2 to 3, 3 to 4, are 3/4 gaps

The easiest way to catch one is that it feels "off" to hear those sounds or by looking at the timeline it always involves a blue tick.

example 1: https://osu.ppy.sh/b/754991 pishi's Extra

00:11:632 (1) - this is the most common way to enforce polarity

Just slap a 3/4 reverse there. You'll notice that you no longer have to worry about uneven gaps here, because the 3/4 rhythms are passively represented.
My opinion on this? this sucks.

These are melody beats he's trying to represent, this is weak. So it'd be nice to have them clickable.

00:13:918 (1,2,3) - and here we go for the next most common way to enforce polarity.

after some more banter on malfunctioning links…

Mir-14/08/2017

ahre

So next is using 1/4 gaps instead of 1/2 gaps temporarily to let each of the 3/4 be clickable. So you switch polarity from 1/2 to 1/4 , and it's not as uncomfortable.

Celektus-14/08/2017

Question, at what difficulty would you rather recommend a reverse?

Mir-14/08/2017

Normal and below.

Halfslashed-14/08/2017

ya

Celektus-14/08/2017

even Hard?

Mir-14/08/2017

Hards you can use 3/4 sliders.

Halfslashed-14/08/2017

Depends on intensity but that's another topic.

Celektus-14/08/2017

ok

Halfslashed-14/08/2017

Anyways, this solution works well because 1/2 sliders give you enough time to process that "hey this is a slider, I'm holding down". Combine it with proper spacing, it's a very predictable way to show this and still keep it clickable.

b00-14/08/2017

00:12:061 - shouldn't this be actively clicked though?
But it's on a slider end, for the end of that reverse.

Halfslashed-14/08/2017

Yep, we went over that. That is why I mentioned that I hate reverses for that sort of thing.

b00-14/08/2017

o

Halfslashed-14/08/2017

xD

Halfslashed-14/08/2017

Yea so if you look further in pishi's extra here you're going to notice something really weird.

00:18:489 (1,2,3) - this is a pitfall of polarity

b00-14/08/2017

Why does pishi keep changing between a reverse and 2 sliders and a circle for that rhythm you first talked about? Wouldn't it be better to keep it consistent?

Halfslashed-14/08/2017

This is the pishi from 2015, he didn't know what he knows now.
Rhythm consistency is actually a different topic xD

Celektus-14/08/2017

He does it because it's supposed to make the rhythm more interesting with variation.

Mir-14/08/2017

ideally it should be consistent yes

Celektus-14/08/2017

That's at least the intent, he switches every 2nd one

Mir-14/08/2017

Using pattern variety instead to make variation rather than changing the rhythm. Because what you would otherwise have consistently clickable is sometimes skipped and that's lame.

**Halfslashed**-14/08/2017

Mhm, well there's a right and wrong way but yeah I'd prefer to stick to the topic at hand xD

anyways

00:18:632 (2,3) - you're going to notice here that he did something different, in that he added a circle in front of 3, which is the strong blue tick beat. This is another solution for polarity and sometimes its an example overmapping (or additive rhythm).

If you ever hear those terms and think "oh shit this is bad", this is one of the more accepted ways to use it - to fix rhythm gaps. However, the reason I called it a pitfall is because 00:18:918 -is no longer clickable. So he half-assed it.

example 2: https://osu.ppy.sh/s/569335 Lunatic
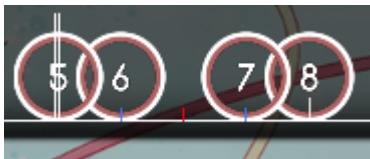
Editors Note: The 3/4 is on these notes
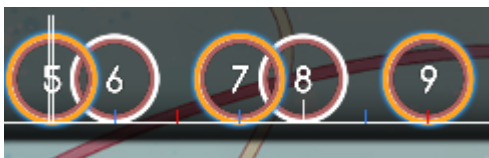
00:18:239 (5,6,7,8) - this is how you use overmapping to fix polarity properly well, I say "properly" but at the end of this discussion I'll mention the flaw to that. But if you were going to overmap to fix polarity, this is how you do it.

so now, one more pitfall

example 3: https://osu.ppy.sh/b/1207948 Extra Stage

00:40:711 (4,5,6) - if I intended to fix polarity here, I did it wrong (no, I didn't).

This is fairly deceptive to most people since on the timeline, it looks like polarity is good here. Rhythm gaps are even.
So what's the problem? A 1/4 slider is short enough that there isn't much time to process that tail so this functions more like

RSA-14/08/2017

Would a triple be better here? Given the slider also ends on the white tick.

Halfslashed-14/08/2017

It would fix polarity, but that has its own issues which we'll go over a bit later.

Mir-14/08/2017

Here's a place where active and passive rhythm comes in. iirc the 4 and 5 are on something wanted clickable. The white tick isn't really prioritized, so covering it with a slider end works fine in this case.

Celektus-14/08/2017

so it's like Kick > hi hat

Mir-14/08/2017

Pretty much, but you can decide as you're mapping what you want to keep clickable and what not.

Halfslashed-14/08/2017

yep

So anyways, if you wanted to fix polarity a triple would work, but you could just as easily make the 1/4 slider a 1/2 slider. That would also "fix polarity".

And then what I will end this off on is :
Polarity is a useful tool to make rhythm predictable, but at what cost?
Sometimes there isn't much of one, but it is a tradeoff.

Anything you want to add Mir?

Mir-14/08/2017

to polarity?

Halfslashed-14/08/2017

yeah

Mir-14/08/2017

Another way to fix polarity is you can actually stack objects (it's not the best way all the time but it works if you're out of options). Because players have time

to read the approach circle without worrying about movement. Which is why stacking 3/4 works and whatnot. Again, it works well if you're out of options (or want to be edgy) because it's really situational lol.

Halfslashed-14/08/2017

Stick to the main 3 techniques though if you want to be on the safe side: repeat > 1/4 gaps from 1/2 sliders > overmapping in order of safety.

Celektus-14/08/2017

I sort of have a question. Is there any reason to ever break polarity?

Mir-14/08/2017

what do you mean

Halfslashed-14/08/2017

Yes there is, polarity is one way to make uneven rhythms more intuitive. There are other ways.

Mir-14/08/2017

If you don't want your map to be boring then you should break polarity in various ways to represent the uniqueness that the song gives you.

Halfslashed-14/08/2017

Not only that, sometimes the song doesn't really support polarity. Or rather, the ways to enforce it. But, that's a discussion for another time

(mapping is deep guys)

Celektus-14/08/2017

Also you said polarity refers to even gaps as far as I remember what about songs with constant 3/4 then? I assume keeping constant gaps there is still good.

Mir-14/08/2017

If it's constant 3/4 the player will be conditioned to it after a while

one sec

Halfslashed-14/08/2017

Songs built around 3/4 don't need polarity to be respected commonly.

Mir-14/08/2017

example here

The song goes on for 3/4 so long that since it's the only rhythm there the player just gets used to it. So you don't have to follow polarity that much, of course since it's the only audible rhythm.

Celektus-14/08/2017

Would I still want to keep gaps consistent?

Mir-14/08/2017

Inconsistent rhythm gaps create awkward rhythm usually.

Halfslashed-14/08/2017

depends on your difficulty level

Mir-14/08/2017

You want to keep it consistent to a degree that makes sense, otherwise you end up with an old style map that uses no filler rhythm :x

Halfslashed-14/08/2017

Hard/Insane probably want to keep it consistent most of the time, feel free to break that sometimes. Extra diffs is where you should stop babying the players unless your map is designed to be really comfortable all around
(so you should probably do it on anime, not Camellia)

Celektus-14/08/2017

ok

Halfslashed-14/08/2017

But again, you need some other way to make the stuff intuitive.

Celektus-14/08/2017

I guess it's like one of those things you should mostly if break in like drum fills and stuff

Halfslashed-14/08/2017

that's an application

Celektus-14/08/2017

ok I guess you can go ahead again

Halfslashed-14/08/2017

alright Mir start us off on layering

Layering

Mir-14/08/2017

Layering oh boy.

Every song has a specific set of instruments and rhythms unique to that song. Some of which play on top of each other, like the drums and the melody. These are both layers (the drum layer, melody layer, bass layer etc)

Layers are meant to be prioritized consistently, if you want to map the drum layer, you should use active rhythm to make sure that the player knows that you're following drums for x section or the whole map even, leaving the vocal/melody layer to land on slider ends or reverses.

If you switch layers randomly between sections of song it becomes difficult for the player to cement in their mind what the map is supposed to be following, which could make them confused.

b00-14/08/2017

So this is basically rhythm prioritisation

Mir-14/08/2017

yeah it's rhythm prioritization

so tl;dr prioritize layer **A**, let layer **B** land on slider ends/reverses, and use emphasis/movement to cover layer **C**

For example if you're mapping a stream to a drumroll, there's only one rhythm you can really use, circles - but if there's a big boom or something you want the player to feel, you'd do something like :
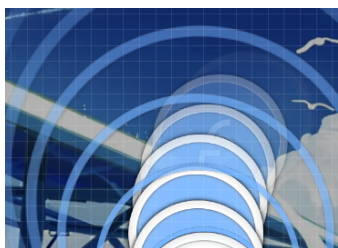
to cover that through emphasis rather than actually clicking it movement can also be rhythmic and some people sometimes forget that :x

Celektus-14/08/2017

Aka some would make this just a simple curve

Mir-14/08/2017

yep

"*the nc gives emphasis!!*"

yeah.. but it's lame

Halfslashed-14/08/2017

So, layers is really short for "instrumental layers".

Generally you want to prioritize one instrumental layer above the rest, but switching between them is fine between sections. Since everyone has kizuato open (or at least off-hand), I'll show an example of switching.

00:34:641 - so most of the kiai is actually vocal based

00:38:630 (5,2) - here however, you'll notice some vocals

and… oh.

00:38:803 (1) - in between is a drum beat mapped. And you'll notice the rest of the measure also follows drums.

This is an example of instrumental switching. The best way switch between instrumental layers seamlessly is by doing it at a place where both instrumental layers peak at intensity.

00:38:630 - is a good place because there is both a prominent vocal and a strong kick.

HOWEVER.

You will also notice the same thing happens at 00:38:283 (4) - . So this is the true spot of the switching, but it will still feel like its following vocals since that's what was being followed before. Only when stuff like 00:38:630 (5,1,2) - starts happening does it become really apparent that drums are being followed instead. The more seamless you can make that transition, the better.

But sometimes, you can't really get that luxury.

00:17:820 (8,1,2) - take a look at this spot

You'll notice a string of clickable objects, but from the timeline, there isn't much of a clear switch. You'll notice that the measure before, rhythm switched to drums at 00:17:127 (3) -

00:18:167 (2) - vocals come in over here

In your mapping you will come across a situation where the layers do not align nicely, so you need to do something else.

Mir-14/08/2017

I think there's an easier way to explain this. What halfy's doing here isn't switching layers at all, he's still following vocals.

00:17:387 (4,5,6,7) - this is some flair stream cuz it exists in the song and spikes at that moment but the entire rhythm is still prioritizing vocals, since it's held it's not really needed to be clickable.

Halfslashed-14/08/2017

flair stream

Mir-14/08/2017

So you can follow something else

00:17:994 (1,2,3,4,5,6,7,8) - the reason this is clearly vocals is the stop on the 1 and 2. The player starts moving when the vocals come in, which allows the player to know "ah this is all circles, but through movement I'm actually playing the vocal layer"

yea

Halfslashed-14/08/2017

yep

but anyways, in terms of switching, if you wanted something to work off of the timeline.

After some more banter and an unnecessary question by me I cut out for cohesion…

Halfslashed-14/08/2017

but anyways

Back to what i was saying.

00:17:820 (8,1,2) - in cases like this where you have two layers that don't align. You need to represent one of them passively. Something that would work here to indicate a cleaner switch from drums to vocals would be changing 1,2 into a slider. Another thing would be changing 8,1 into a slider.
None of them really worked for me though so i just did what you see lol

First one de-prioritize the layer i cared about the most, second deprioritized the layer i was following.

What I have uses some movement to do this, and this covers the last thing which is instrument merging. I don't want to talk too much about the execution since we'd be here for days.

literally days

Mir-14/08/2017

rhythm merging -> reverse sliders

end of discussion

:D

Halfslashed-14/08/2017

But instrument merging is the idea of representing multiple instruments with rhythm alone or rhythm and movement. This instance with the stack? That's a rhythm and movement method of merging instruments.

The reason this is complex is because it's more art than science. Especially with the rhythm part alone, so mastering layers and switching is more important before you start doing the other stuff.

any questions?

Celektus-14/08/2017

What about multiple layers being expressed with spacing? like layer **A** is rhythm **B** gets spacing and **C** gets bigger spacing if it aligns with **B**?

like more than 3 layers

Halfslashed-14/08/2017

Yeah that's a basic way of doing it, sometimes it isn't ideal though.

like uh

Celektus-14/08/2017

16

You could run out of spacing (if you have too many layers)?

Halfslashed-14/08/2017

If you use spacing to represent strong drums and strong vocals, then your emphasis just kinda blurs together. And yes, your shit just looks like a mess and doesn't actually emphasize anything. Because if you emphasize everything, you're emphasizing nothing.
Hence why it's kinda an art.

Celektus-14/08/2017

Since you can also do it through different movement and so on.

Halfslashed-14/08/2017

ya

Celektus-14/08/2017

like the possibilities get endless

Halfslashed-14/08/2017

And that's why i keep saying "not today" to the movement options lol.

anyways, so

A couple loose ends to this and we've got basic rhythm done.

Note Strain

Halfslashed-14/08/2017

So anyways, there exists a concept called "note strain"

This is the idea that the longer you tap, the more strain you're putting on the player.

Again, let's use this in the context of hard+ difficulties. It's obvious in cases like "oh, more 1/2 circles are more straining" or "more 1/4 circles are more straining"

However, what happens when you mix them together?

b00-14/08/2017

Even harder because you have to focus on changing the rhythm?

Halfslashed-14/08/2017

Damn right.

Switching to higher density rhythms is easy, so 1/2 to 1/4 isn't really too much harder on the player. Slowing down is actually harder though.

So switching from 1/4 to 1/2 is harder. This is why triples with a 1/2 gap after them into a circle/sliderhead in hards are bad ideas.
And this is why you need to be careful if you do this in insane/extras. Because if you underestimate how straining this is, you're going to mess up your emphasis. I guess that relates more to spacing though lol.

A consequence of note strain though is that triples/streams always emphasize the last note. Same thing with doubles.

Remember how i kept saying "oh, overmapping for polarity isn't great"? This is why. Because if we go back to the Lasse map, what's getting emphasized here
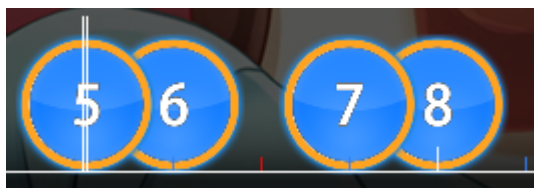
are the first white, and first blue tick. So if you wanted to emphasize the vocals, this is a sub-ideal way to do it.

Celektus-14/08/2017

also 6 is nothing so that emphasizes nothing?

Halfslashed-14/08/2017

Yes, by note strain. However, it's also arguable that it's 2 notes, so that's not really super straining. But rhythmically this is putting emphasis on the 2nd note.

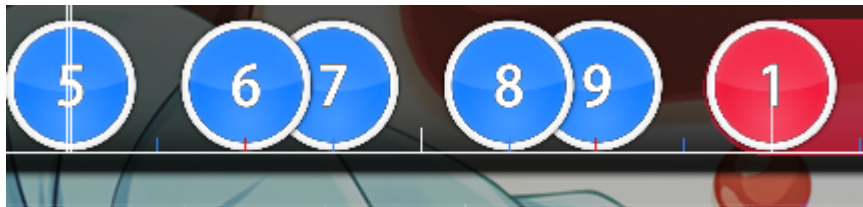So it's incorrect, but this is still the right way to handle this rhythm. For that I'll mess around.

more banter…

Halfslashed-14/08/2017

Let me show you what "corrected emphasis" does here.

00:18:239 - so this is where the doubles start right?

here is corrected emphasis

You guys have all played the game. For this I will reference a famous map

https://osu.ppy.sh/b/257793 extra

01:42:090 (1,2,3,4,5) - does this look familiar?

If you've ever gotten to this part you will know.

after **even more** banter…

Halfslashed-14/08/2017

anyways

01:42:090 (1,2,3,4,5) - this is what i was talking about

and to reiterate
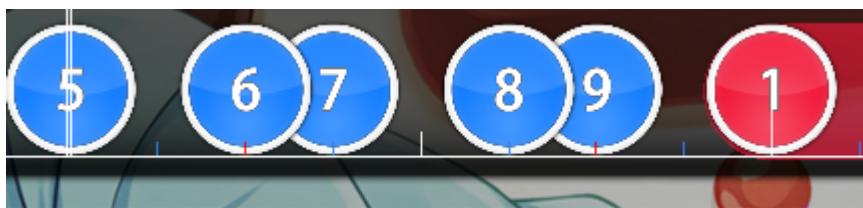
This is what I did to mind reader.

They should look familiar because.. they are the same thing.

If you've ever played this map and gotten to this part, you will know how much this sucks to play. The rhythm itself is awkward as hell, despite polarity.

Anyways, doubles play better when they start from white ticks in general, since similar to the 1/4 slider case. They are fast enough that it's like you're "syncopating" (for lack of a better word) your tapping almost and it works better to do that from the metronome (or the white ticks).

Celektus-14/08/2017

what about into sliders?

Halfslashed-14/08/2017

Like if 01:42:315 (3,4) - was a slider? Would work great.

Anyways, this one is harder to explain without a full wiki article in front of me that musically explains why this is an awkward rhythm in music.

01:42:315 (3,5) - these are the strong sounds here

But if you're clicking strong sounds and this still feels awkward, there's a musical reason for it. But i guess we can go into that another time - that's more of an aside anyways.

I guess this is a tie back to polarity since note strain was pretty simple.

xD

Celektus-14/08/2017

I think I had a question in note strain. Since longer periods of clicking are harder does that mean that patterns which slow decrease spacing are actually constant in emphasis?

Halfslashed-14/08/2017

Depends on the difficulty level.

Right, there was one other thing I wanted to add about note strain.

Depending on the difficulty level and bpm, note strain is negligible, such as extra difficulties. Streams under 10 notes or so are pretty similar in intensity. Unless over an entire section you have a strong lack of breaks. And that's at a normal bpm.

If you drop the bpm by like, 60, the amount of time note strain is negligible is longer, or higher it's shorter, etc.

So to answer your question, it's non-constant emphasis. Since a movement decrease is more noticeable than any effect of note strain for shorter streams. And even in a longer stream section, it's more like a tension build up rather than actual emphasis. Note strain is a very subtle thing in general already.

Celektus-14/08/2017

yea I thought so, that's why people don't decrease their jump patterns

Halfslashed-14/08/2017

Like 1/2 circle sections at 180 bpm for extra difficulties? You need like 100 circles in a row.
No, not even. Maybe more like 200, for that to be straining. Unless your spacing is stupid.

Mir-14/08/2017

Quaver isn't straining, what are you talking about

Halfslashed-14/08/2017

Talking about singlet appears lol

200 bpm at least though

Celektus-14/08/2017

Even then I think making the spacing smaller over time still would rather imply "hey less intensity", not "this is all the same"

Halfslashed-14/08/2017

yep, so anyways

Mir you want to add more to that?

Mir-14/08/2017

to note strain?

Halfslashed-14/08/2017

yeah

Mir-14/08/2017

don't worry about it unless you're mapping a stream map

Comboing

Discussion by Halfslashed

Basic Measure based NC

Halfslashed-17/08/2017

Alright, well it's gonna be pretty short.

So comboing is of course referring to new combos (or NCing) as you're probably aware. There are a couple different ways to use them, but their purpose is emphasis. They clear up followpoints to the NC'd object. Every map you make should have a basic comboing structure depending on the song. The typical NC structure is once every measure for hard+ diffs, and once every two measures for anything lower.

Celektus-17/08/2017

or higher, essentially multiples

cause numbers

Halfslashed-17/08/2017

Ya something like that.

Older maps often used NCs every two measures, even in 2012 when some maps had relatively high note density (so you'd see combos of 10-12 much more often).

Celektus-17/08/2017

Is that nowadays mostly gone just for looks or is there more to it?

Halfslashed-17/08/2017

Mainly for looks lol

Every two measures and every measure are equally valid mechanically. I don't know if you saw the pishi video on hp drain, but they theoretically affect the drain the same

yeah, so that's the standard structure.

Celektus-17/08/2017

What if I don't have objects landing on the start of a measure?

I assume I would then need a more complex NC structure overall, but would it make sense to just NC the next object on the one on the tick?

Halfslashed-17/08/2017

ah yes

So, you're aware of syncopated rhythms right? Do you know what that means?

Celektus-17/08/2017

not sure, explain

Halfslashed-17/08/2017

Well there's some mumbo jumbo musical theory that you could probably get into. But for mapping purposes, what it's referring to is when songs are structured to have the strong beat 1/2 before the big downbeat.

Celektus-17/08/2017

Is it like that objects can technically land on red ticks but still be preserved as 4/4?

Halfslashed-17/08/2017

yeah

Editors Note: here's an in-depth article on syncopation in music
https://en.wikipedia.org/wiki/Syncopation

Halfslashed-17/08/2017

https://osu.ppy.sh/b/1354594 , take a look at this

00:08:103 -

You'll notice the NC is the red tick before the measure start, representing the syncopation. So that's usually how you handle that, and you'll notice the rest of the song does similar stuff.

Sometimes however, there isn't any syncopation going on (and you'll be able to tell), but for some reason you have the measure start skipped. Or on a tail In these cases, it's usually appropriate to just place the NC on the next red or white tick.

But yeah, that's the standard NC structure. There are of course, other ways to organize these, emphasis aside.

Phrase based NC

Halfslashed-17/08/2017

https://osu.ppy.sh/b/1350419 let's look at this (Extra)

this is an example of phrase based NCing

Celektus-17/08/2017

Is it also combined with NCing on measures?

Halfslashed-17/08/2017

correct - because measure starts are usually starts of phrases

Celektus-17/08/2017

What if that's not the case?

I assume you just ignore the downbeats

Halfslashed-17/08/2017

Then you get stuff like this 00:54:166 (1,2) - .

So this one while being a sound way to organize NCs, is a bit hard to handle. Since you have to have a feel for what you consider to be a beat strong enough to be considered a "phrase start".

Celektus-17/08/2017

Do you have any like rule of thumb on when to use this instead of conventional NCing?

Halfslashed-17/08/2017

whenever you want lol

It works really well on vocal songs though.

Halfslashed-17/08/2017

I'm showing it to you so when you mod a map and you see this sort of thing, you're not too caught off guard. I don't recommend you use it until you gain more experience

Celektus-17/08/2017

was referring to if you can say if this always applies to a certain kind of songs

Halfslashed-17/08/2017

Songs that alternate between vocal and instruments, or have phrase starts between measures, are probably your best bet for this sort of system.

Celektus-17/08/2017

good to know

if I do that sort of stuff is there a chance that I maybe NC too often?

Halfslashed-17/08/2017

yeah, but it's not an issue unless you have constant combos of 1 or 2

Celektus-17/08/2017

Like I always understand this for certain parts of a song if there is 2 note combos, but would it be too much if it happens more often?

well I guess I would notice If every 2nd combo I make is a 2 note one

Halfslashed-17/08/2017

I'll get to that in a bit haha, I wanna show you a couple more systems

Transition based NC

Halfslashed-17/08/2017

https://osu.ppy.sh/b/657904 HW's Huge *Editors note: this song is retarded Lmao*

Celektus-17/08/2017

tf is this song

Halfslashed-17/08/2017

I agree.

Anyways, mainly focus on the intro.

You'll notice that there is an NC, and the next NC doesn't happen until halfway through the next measure.

3/2 of a measure, 1/2 of a measure, 3/2 of a measure, 1/2 of a measure, that's how this system works.

Celektus-17/08/2017

why did HW do that?

oh is it because of the vocals later one

00:35:094 (1,2,3,4,5) -

like she wanted those NCd and just did it in the first part too?

Halfslashed-17/08/2017

Mmm, not really.

Basically, you know the idea of finishing a section strong? Like, when switching between musical sections, it makes sense to put strain right before to emphasize the transition in some way.

This NC system does just that. It splits measures into pairs and puts emphasis on the transitions between them. It works better for some songs than others though.

Celektus-17/08/2017

I still don't get why you would do it in this case specifically

Halfslashed-17/08/2017

00:58:350 - look over here

listen to the instrumentals, maybe that will make it more clear

Celektus-17/08/2017

sort of, but still not really

to me it still looks like just for consistency with later parts

Halfslashed-17/08/2017

then i'll explain a new concept

Celektus-17/08/2017

wait

why?

Halfslashed-17/08/2017

it all ties together haha

Celektus-17/08/2017

ok then

Hypermeasures

An Article on Bars of Music including Hypermeasures
https://en.wikipedia.org/wiki/Bar_(music)#Hypermeasure

Halfslashed-17/08/2017

So, i dunno if you've ever read a Naxess mod, but you'll notice the term "hypermeasure" thrown around.

Celektus-17/08/2017

I just thought that it applies to that later part and not the intro really, or only vaguely

well anyway, no I never read heard of that term

Halfslashed-17/08/2017

Well you know how a measure is divided into 4 parts (in 4/4 time signature ofc)

Hypermeasures are basically larger units of that, where 4 measures are grouped together. Was going to get into this next week, but songs are usually set up in musical sections that are divided into pairs of hypermeasures.

Celektus-17/08/2017

oh ok I do know that

Halfslashed-17/08/2017

right

so, for 4/4 time signature, emphasizing the 4th part of the grouping is kind of like a section transition.

and if you listen to the song

00:58:350 (1,2) -
00:59:280 (3) -
01:00:210 (4) -

01:01:141 (1,2,3,4) -

the first part repeats 3 times

the 4th is the only unique one

and this is further shown off by the NCing

Celektus-17/08/2017

I kinda get it, it's emphasizing the way the melody is structured in 2 parts

and most songs do that just in 2/1 intervals

Some talking about the vagueness of the execution I cut out…

Celektus-17/08/2017

I think we can move on

Halfslashed-17/08/2017

yep

So i've just been talking about 4/4, but 3/4 exists too.

Celektus-17/08/2017

or 4/3 (Cele pls)

Halfslashed-17/08/2017

lets not.

lol

Celektus-17/08/2017

ok xD

Odd time signatures and pick up notes

Halfslashed-17/08/2017

I'm gonna show you an old map of mine and the NCing isn't good, but what I'm going to do is look at sections and show you how to handle "pickup notes" or anacrusis.

https://osu.ppy.sh/b/1148265 here it is - I'll later use this an example of how not to do certain things. There isn't much good in the map other than the bg.

Celektus-17/08/2017

nah that one is bad too

Halfslashed-17/08/2017

mute the hitsounds lol

00:37:743 - so let's look at this measure

Here i'm using a 2 measure based system

00:39:979 - but you'll notice here is the start of a new phrase, kinda.

This is a pickup note, and you can tell by the strength of 00:40:352 -. However, this is a pair of sounds. So if you wanted to NC this to group pickup notes, you could do that.

Celektus-17/08/2017

so NC here? 00:40:911 (1) -

and remove on 2

Halfslashed-17/08/2017

Nope - keep both.

For pick up notes, if you're NCing them, you want to both NC the start of the pickup notes and the start of the phrase.

Celektus-17/08/2017

so just a NC on 6

Halfslashed-17/08/2017

yep

Celektus-17/08/2017

like at the start of a song with pick up notes?

Halfslashed-17/08/2017

yeah

though, those are grouped in 3s

01:31:221 -

However, that is still a valid way to group them. Because when you get to groups of 3 it can almost stand as a phrase in its own right.

01:49:482 - however, here's an example of a pickup note by itself, and this is more common.

This is not a phrase, it is a single note that leads into the next phrase

Celektus-17/08/2017

so you NC 01:49:482 (1) - and remove on 01:49:669 (2) - ?

Halfslashed-17/08/2017

Nope, that's a common mistake with this system. But since the actual phrase start is on 01:49:669 - , you have two options.

You either don't NC 01:49:482 (8) - or you NC both

NCing both is actually a valid thing to do, but it will diminish emphasis of 01:49:669 - and depending on how strong you want that to feel… It may not be what you want

But anyways, what i was getting at with the 3/4 signature earlier was, if you wanted to translate the system we went over from 4/4 to 3/4.

Instead of 3/2 1/2 3/2 1/2 like that HW map, here it would be 2/1 1/2 2/1 1/2.

00:40:352 - 00:42:215 (6) - for example, would both be NC'd

And you'd follow that sort of structure for the entire song.

any questions?

Celektus-17/08/2017

do you have an example with something other than 3/4?

like t+pazolite distorted love song?

Halfslashed-17/08/2017

It seems to be a mix of 7/4 3/4 and then syncopation, just a fucking mess lol

But uh, pickup notes aren't exactly common. You see that sort of stuff if you're performing music rather than commonly

anyways

So if you probably looked at more of that Itoushiki map in the NCing, you'll notice I don't always stick to once every 2 measures, but switch it to once per measure, or even twice per measure at times.

Celektus-17/08/2017

which would usually be correct, but not in this song?

Halfslashed-17/08/2017

Well, sorta.

A common thing I do and probably other mappers do as well is try to keep a consistent combo length, by scaling the combo system based on the rhythm density.

Celektus-17/08/2017

yea

my thought was just this is 3/4 so you can't really split by even numbers

well not exactly

Halfslashed-17/08/2017

You can because it's still divided into 4 parts. So, a less intense section like 00:40:352 - is using one per two measures, but more intense parts are using one per measure.

Anyways, what i wanted to get at was, changing NCing systems based on differences in the song works really well. Or rather, variations.

Like you probably don't want to randomly switch to something like the HW system if you're using once per measure, twice per measure, etc. But sometimes it works

Personally i like to use even subdivisions.

anyways *(anyways intensifies) fuck you xD*

34

Emphasis with NC

Halfslashed-17/08/2017

Now we'll move onto emphasis with NCing, or ways you would break your NCing system because the song is doing something different (or other people).

Since you pointed out the 1-2's I'll just start with that, since it's common.

So hilariously enough, it's been degraded from its emphasis purpose a lot of the time. You'll often see it in anime songs that have the snares on white ticks. But sometimes a mapper will just use them anywhere else because they don't know any patterns lol

Anyways, if you see them used on stuff like snares on the white ticks at the end of a map or just strong sounds in general (like building up to something), that's probably a correct usage - beats are arguably strong enough to justify that.

People like the way they look mainly, because since NCs clear up follow points, it helps mappers arrange circles in lines. Rather than individual circles or some zigzagging mess

I think this NCing sort of thing sucks.

https://osu.ppy.sh/b/1354196 flamehaze

01:34:261 -

Look where they're placed, he's still using them on strong sounds but they stand out inappropriately. Because this is the only time he does this sort of NCing.

Celektus-17/08/2017

would they work on? https://osu.ppy.sh/s/40344

I think pattern wise it would, but not song wise

something like this came to my mind
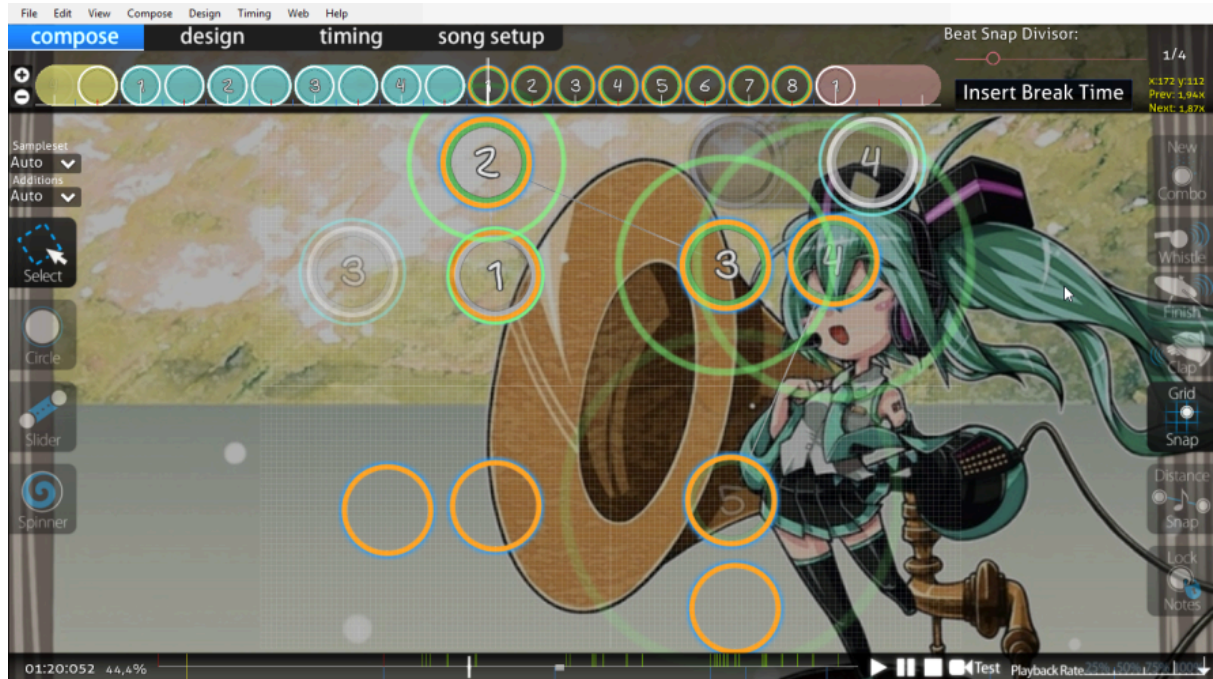
Halfslashed-17/08/2017

02:31:052 - stuff like this though, sections like this, is where it'd be good to use that

Celektus-17/08/2017

02:31:052 (1,2,3,4,1,2,3,4,1,2,3,4,1,2,3,4,1,2,3,4,1,2,3,4) -

would be best, and not doing it anywhere else would make it stand out more

Halfslashed-17/08/2017

pretty much yeah

02:51:052 - here's a cool way to use 1-2 NCing actually

after some joking around…

Halfslashed-17/08/2017

https://osu.ppy.sh/b/858271 top diff

01:11:805 - look at the 1-2 NCing here

He basically did it for the entire section, so it emphasizes that section compared to the previous one. Well, if you look before that, the snares start before that.

But notice there's also a vocal build up, so if anything fits the song in this map, it's the Ncing.

But yeah uh, I still don't really like it. lol

I might be able to find a better example

https://osu.ppy.sh/b/1041727 ah, here this has something more like what i was looking for, top diff

03:31:432 - **THIS** , is how you use 1-2 NCing.

Nowhere else in the kiai except for here, right before the second half. Emphasizing the transition. That is musically correct.

Anyways, the reason i wanted to stress this so much was that you'll likely end up modding lots of maps that do this sort of thing wrong.

I shortly left…

Celektus' Theory on Polyrhythms

An Article on Polyrhythms https://en.wikipedia.org/wiki/Polyrhythm

Celektus-17/08/2017

ok

I wanted to ask something

Since you showed that one Xexxar map I was thinking if Emphasizing Polyrhythms with NCs makes sense since he maps a lot of songs with them like https://osu.ppy.sh/b/972364

you can hear what I mean at 00:10:210 (1) -

It's like that Snare rhythm that's doing it

Halfslashed-17/08/2017

Yeah, it does. You could probably apply phrase based NCing here

00:10:210 - 00:11:157 - 00:12:105 (1) - 00:12:420 (3) -

For that first two measure section, change it so that those points are the only NCs

oh look i think time signature is actually wrong there lol

Celektus-17/08/2017

why?

it's not I think since it's 3:4 Polyrhythm

or something I don't know them well myself

Halfslashed-17/08/2017

lol

I mapped a song like this actually, first map 4/4 does actually work.

Celektus-17/08/2017

Yea it's surprisingly common, like pop music has this a lot

Halfslashed-17/08/2017

But the melody is 3/4 and then has a 2/4 section right after

XD

Celektus-17/08/2017

THAT'S POLY RHYTHM

Halfslashed-17/08/2017

yep

wow

that was my first serious map

anyways yeah, doing your NCing like that is definitely valid

Celektus-17/08/2017

nice

Halfslashed-17/08/2017

anyways, onto some other things

Signaling

Halfslashed-17/08/2017

A common thing that people do is NCing SV changes in wub maps, for "readability". Let me just tell you right now, that shit doesn't really help readability.

Celektus-17/08/2017

yea like 1/3 NC spam

Halfslashed-17/08/2017

For 1/3 it kinda helps if you don't spam NCs anywhere else, but I don't really like the technique. It's just spammy for no reason a lot of the time. I wish i still had an old version, but Mir's hacking code used to basically have an NC on every object due to the SV changes.

Celektus-17/08/2017

yea I mostly heard of them if you do like sudden 0,1x

Halfslashed-17/08/2017

Some people do it in wub maps, for everything.

It's silly, given the fact that they're supposed to be for emphasis. Like, if you used slow sliders rarely and used them for emphasis, then i guess it makes sense? lol

by the way, you can do that

Celektus-17/08/2017

Yea are there other things, like other readability NC concepts than SV signaling and NC spam on 1/3 or 6.

Tbh I think the NC for slider velocity work only if you color hax actually well and even then players can just turn it off, it's visually Signaling and doesn't remove too much emphasis if you don't spam it

Halfslashed-17/08/2017

Right, colorhaxing

See, I don't often think of it since, my combo colors overwrite all others. That shows you how effective colorhax is lol. Like you see these cute maps "1/6 is red", or whatever lol

Celektus-17/08/2017

which is fine

I do like Color haxing with different color pallets since it's just fun, but it's not really something anyone needs to do. Actually Mir color haxed the 1/3 with another color instead of NC spam

lol

Halfslashed-17/08/2017

right.. lol

Well yeah, it's something people do.

Ah yes, I'm gonna check one more thing and then we'll close out the topic.

Mapping Analysis 1 - FELT - Dream in the Night by UndeadCapulet

Halfslashed-17/08/2017

https://osu.ppy.sh/b/1305964

He hasn't finished but let's look at this and the NCing he uses, and tell me if you see anything odd, or that i haven't explained.

Disclaimer: Part of this is supposed to be an analisis so I'd recommend you look at the whole thing for yourself before marking the spoiler text below

After a lot of educated guesses I'm gonna skip to keep this short this was the result..

Halfslashed-17/08/2017

Celektus-17/08/2017

Halfslashed-17/08/2017

Halfslashed-17/08/2017
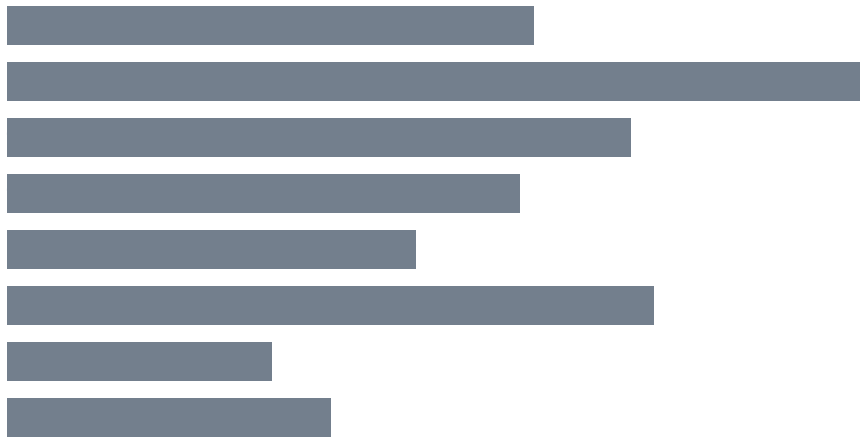
Structure and Intensity

Discussion by Halfslashed

Halfslashed-21/08/2017

Alright, so the lesson is kinda vague, but it's something we need to go over, since you need this to actually make good maps.

This is why I make the distinction between local and global structure, where global structure is what I usually think of (and have always thought of) and local structure is what other people think of. Well, sometimes it's not that

Global Structure

Halfslashed-21/08/2017

Anyways we'll go over local structure a bit later.

But global structure is basically the various concepts that tie your map together. Rhythm concepts, movement concepts, visual concepts, everything.

So i haven't taught you too many rhythm concepts that aren't "plug and play" yet, that comes in a couple weeks. And we haven't started cursor movement either.

Again, I'll start off with things that fit on basically any map, then more advanced things that you have to actually introduce and setup or build your map around.

Celektus-21/08/2017

like 1/2 overlapping in lower diffs or weird rhythms

etc.

Halfslashed-21/08/2017

kinda

Celektus-21/08/2017

also more obscure stuff obviously

Halfslashed-21/08/2017

well lower diffs are weird, but yeah

Anyways, visual concepts would be stuff like usage of geometry, usage of certain overlaps, blankets, etc. An example of a global visual concept would be something like using curved sliders in calm parts, more straight sliders and red node sliders in intense parts.

Another would be always using curves for vocals and straight sliders for everything else (oh i wonder who does that) certain shapes for certain instruments, etc.

Symmetry as well, mirrored sliders, etc.

But the thing is, to make any of these good you need to focus on

contrast.

They need to set apart things in a song, otherwise you're creating a restriction and.. You don't want to do that until you really know what you're doing. It' harder to create contrast if you limit your options too much

But anyways yeah, those are some ideas. And that is pretty much all we will talk about visuals for now (until local structure)

Because to me, they only serve a purpose in needing to be organized to make the map cohesive, but not even for much of a gameplay experience at times because most of the time the visuals don't affect the gameplay.

It's mainly to present your ideas to the rest of the mapping community, since it's easier to see your ideas if everything is organized. And by extension this is why modding for things like blankets or otherwise minor visual things is pretty useless

When you do that, you're modding for other modders rather than improving the map.

Celektus-21/08/2017

I mostly make one overall point on them and move on, cause maybe the mapper does care which is hard to judge.

anyway

Halfslashed-21/08/2017

alright yeah

As far as rhythmic as a global concept, this would be something like which instrument you prioritize Whether or not you're even prioritizing anything for the map etc.

Celektus-21/08/2017

or density?

Halfslashed-21/08/2017

Absolutely, but that ties in more to intensity and cursor movement - like using specific movements for certain sounds you want to emphasize.

anyways, any more questions on that?

Celektus-21/08/2017

what about spacing?

Halfslashed-21/08/2017

Right, that's more of a part on the movement and intensity.

First of all, your spacing should always reflect the intensity of the song. But it's less of a global thing and more of a local thing.

in a global sense

Celektus-21/08/2017

I mean I heard that changing the *kind of* (this is referring to types of visual spacing) spacing can be a thing to utilize too.

like 1/2 stack only in some sections or breaking spacing emphasis maybe?

Halfslashed-21/08/2017

What do you mean by breaking spacing emphasis, like just having everything DSed for certain sections of the song?

1/2 stack only in some sections actually works out and can be used.

Celektus-21/08/2017

Either that or one of those maps pishi talked about in the deetz video, where a mapper breaks spacing since the sound repeated very often. It was introduced with repeats and to jumps and in the end broke spacing concepts.

The Video I referred to: [osu!mapping: mapping style](#)

Halfslashed-21/08/2017

Oh that's what you mean, the Kazumikos thing.

Celektus-21/08/2017

Yea sort of

I guess that can also be applied to jump angles or rotation changes, like one section is circular the other is zig zag.

Halfslashed-21/08/2017

yep

Well the spacing thing wasn't about breaking spacing emphasis, it was about breaking the spacing concept for "readability".

Anyways, as far as the global structure part of spacing emphasis, you basically want to make sure that stuff like

is in a generally less intense section doesn't have the same peak spacing as stuff in the kiai, for example.

So that's about the extent of global spacing management and it's more of a local thing.

Celektus-21/08/2017

just to clarify structure can probably be applied to just about anything?

Halfslashed-21/08/2017

every single map

you make

needs to have structure

to be good

You need to have concepts defined, generic mapping has structure too. It's just the concepts that are defined for those maps are things that fit on literally any map.

Celektus-21/08/2017

I think they are also very open and broad

Halfslashed-21/08/2017

They are.

You don't need strict concepts like what I use. On my mentor listing what I put is that I follow a "rigid structure". This means I try to explicitly define everything I can think of. Well, without sacrificing the song.

Also I think it's kinda implied but to make these concepts work you need to use them consistently. And another thing about rhythm structure in a map is consistency among your rhythms.

Celektus-21/08/2017

yea I think I very much agree on your stance of making everything very rigid

I tried using rhythm variation once, but I came to the conclusion that adding a lot of variation just ends up being not special at all

Halfslashed-21/08/2017

Well, you can add it, you just need to do so consistently.

Also here's a good time to mention that repeating things for any more than a hyper measure (the exact same thing other than playfield maneuvering) is the point where a player **will** probably get bored.

But this mainly refers to patterning rather than rhythm. Though, you can definitely introduce variation in rhythm after a hypermeasure, and it still being reasonable.

Some people will do it sooner - half a hypermeasure, but I think that's messy.

Also remember, one of my favorite mappers is HW and HW uses a rigid structure. Everything is consistent in her maps, pretty much, or has something in the song that leads to that variation.

Celektus-21/08/2017

Yea I think I also have a very strong influence in that direction

most people I really look up to vicariously have HW influences

Halfslashed-21/08/2017

However, there's a danger in that in that you need to vary how strict you are on certain things. The stricter you are on movement for example, the more noticeable it is. Whereas being strict on rhythm, not so much.

But if your movement is so damn interesting that it doesn't even matter how much its spammed, then you can keep that rigid.

aka - HW

lol

Sectioning by Intensity

Halfslashed-21/08/2017

Then there's intensity (which I think you know)

Something very important is to identify differences in intensity between sections of the song, because you know ..

you have two goals as a mapper:

- Represent the song and creating a game level we'll get to the game level part in a second, but to represent the song
- Identifying what's important in it and representing that is important

Celektus-21/08/2017

also doing it clearly?

Halfslashed-21/08/2017

yeah, of course

Anyways, I'm gonna send you something I was starting to work on but didn't actually finish. Or really start actually I didn't even do anything other than prototype a rhythm.

Anyways, don't pay attention to the objects linked, what I'm doing here is just showing you sectioning by intensity

... it will upload

eventually

https://halfslashed.s-ul.eu/iU2W6T9b

anyways, take a look at the bookmarks

Celektus-21/08/2017

already did It increases in intensity

right?

Halfslashed-21/08/2017

pretty much

This song has fairly linear intensity increases, but as you can tell, the song is structured weirdly.

00:20:103 - this is the end of the 2nd hypermeasure in the song. But what you'll notice is that this is a swing song, so measures are grouped in 3s rather than pairs to form sections.

Celektus-21/08/2017

so 4/3?

technically

Halfslashed-21/08/2017

I guess, I'm not a music theory expert - but this is how the song is set up.

A common thing you'll notice is that there are a certain number of hypermeasures that form sections of intensity. So you can usually formulaically determine differences between sections, if you're having trouble doing so by ear

Celektus-21/08/2017

I'm sort of doing that already

Halfslashed-21/08/2017

good stuff

Now let me show you something weird, and this is what this composer does all the damn time.

01:51:884 -

The section should've ended, but it's 1 measure longer. This breaks standard music theory, but otherwise, this is sectioned by intensity somewhat regularly.

This is pretty much what I do to start every map. It's hard to say anything other than "feel for it" to figure out what the sections are but the rule is typically 2 hypermeasures, unless you get something weird like this.

Celektus-21/08/2017

It should be audible

the changes I mean

also I think some songs technically do 1 or 4 hypermeasures, depends on genre

Halfslashed-21/08/2017

yeah, groupings of 4 hypermeasures are common for musical sections.

Celektus-21/08/2017

like EDM usually does shorter early Hypermeasures

Halfslashed-21/08/2017

yeah

But anyways, when you're comparing overall intensity, you want to have an idea of where the sections start and end.

Also, here's where I'll comment about rhythm density.

yes, uhh

So if you look at the first section, you'll notice that there is only one instrumental layer here. And that is the vocals, only the vocals. Nothing else. Not a single guitar or anything, not piano.

nothing

Celektus-21/08/2017

less intense = less dense rhythm

yea and you still undermap it since the section is very calm

Halfslashed-21/08/2017

yep

But you know, it was hard to come up with rhythms. Because unlike most instruments, vocals always have a held feeling to them. Well, most of the time.

But if you used lots of long sliders without rhythm gaps, it wouldn't fit the feeling of the song. But if you used circles, it also wouldn't fit because then you're not capturing the essence of the instrument you're following.

09kami mapped this, and he used long sliders. He didn't want to struggle with this decision, on what rhythms to use here.

Celektus-21/08/2017

or liked it even less dense

but that's meh

Halfslashed-21/08/2017

yeah

So, three components to rhythm density:

- amount of clicks per measure
- amount of hitsounded objects per measure
- gaps between objects

This refers to both clicking gaps and timeline gaps.

Celektus-21/08/2017

Like a lot of 1/4 extended sliders would be shit in that section?

or well too many

Halfslashed-21/08/2017

Well in that first section, one of the rhythms i came up with ended up having continuous 1/3 gaps.

little interruption…

but uh, anyways

Continuous 1/3 gaps ended up creating too dense of a feeling. Obviously, making every vocal clickable also makes for too dense of an experience.

It this is a bit too complex to start with imo, I think we should look at something else.

Celektus-21/08/2017

well I get it quite well I think

Halfslashed-21/08/2017

yes but i want to show you

https://osu.ppy.sh/b/1286303&m=0

Let's look at my normal, since i used such principles. Rather, it's easier to see here

00:09:882 - look at the rhythm density here and compare them to this 01:18:454 -

Well, that's an example of the difference between two sections with really similar rhythmic intensity in terms of clicking.

but different in terms of hitsounded objects

02:07:433 - compare these as well

to this 02:17:229 -

sorry

Basically an instrumental layer became more prominent, so I increased the rhythm density in terms of clickable objects.

Well anyways, again pretty vague but the best way for me to actually show you that is by looking at a map you make.

So the takeaway right now is : try to have your rhythm density match the intensity of the song, and make sure your rhythm in a less intense section isn't more intense than that of another section.

Concept Introduction

So concept introduction

This is the part of mapping where you think of making a map as a game level.

So, any map is linear, there is a start and there is an end. It is natural to expect an increase in difficulty towards the end, but you need to have a gradual increase to it.

Celektus-21/08/2017

And you shouldn't use 1/4 jumps very late into the map for no reason.

Halfslashed-21/08/2017

So actually, for this i will show you something I helped with Shani with a loooong time ago.
Hatsuki_Yura_-_Diabolikha.osz

Soo, Shani posted in the mentorship program, that he wanted to know if 00:19:724 (1,2,3,4,1,2,3,4) - was okay. The channel then got into a conversation that basically resulted in "this is okay but it needs context".

Alright, so in terms of gameplay elements that are out of the ordinary here, what do you think they are?

Celektus-21/08/2017

well I think the ones that matter would be the sharp angle from 4 into 1 and the overlapping

Halfslashed-21/08/2017

perfect

anyways

the perfect overlapping and the sharp angle

So, initially. these components were just put in there. Nothing lead up to it. So I explained to shani that those things you just mentioned needed to be introduced earlier.

So that pattern is expected and a fair challenge

00:07:137 (1,2,3) - so look what gets introduced here 7 seconds into the map the first sharp angle within 1/4 stuff.

00:09:235 (5,6,7) - here it appears mid stream

00:10:493 (1,2,3) - then as far as the perfect overlapping

this gets introduced, uhh

00:10:493 (1,2,3,4) -

that, yeah

The key here is that these weren't introduced together, but instead later combined

00:13:011 (1,2,3,4) - into that.

Now basically every component of that stream I linked to start this off has been set up properly. The perfect overlapping was introduced by itself. The sharp angle was introduced in a relatively harmless place.

Celektus-21/08/2017

he could've also changed it up a bit

Halfslashed-21/08/2017

yeap

They were introduced together in a less strenuous place and then finally introduced mid stream.

Celektus-21/08/2017

mhm

reminds me of Nobore

Halfslashed-21/08/2017

yep, such a pattern was introduced at the last second

err, last stream

it was unfair *Editors note: or at least it was deemed unfair by the ranking process*

Anyways, that's an example of introducing concepts.

One day i'll walk you through "The Anonymous" in full detail, though I think I explained about half of it to you already.

But it's also important to do that, you basically want to introduce things as early as you can, if possible.

And in steps. The purpose is so that there is to keep a linear difficulty increase throughout the map, but also to have fair challenges.

Celektus-21/08/2017

I have a question regarding that

what should be introduced always under any circumstances and what is ok to be hidden until later as sort of a moment of surprise or subversion?

I'm looking for an example

Halfslashed-21/08/2017

Those are some general suggestions

err, general questions

And almost always map specific. but I've kinda been putting emphasis on "the norm". Things that you can put on any map

Celektus-21/08/2017

I guess visuals are mostly fine unless the affect reading too much, like changin up visual styles

Halfslashed-21/08/2017

Right, like perfect overlaps mid-streams

Those are things that actually affect gameplay so you want to introduce them. Any sort of harsh movement you want to set up properly. If you have a 1/4 heavy map, it

makes no sense to always use repeats then suddenly 32 note stream. That sort of thing.

Sometimes rhythm spikes and you can't do anything about it (like how anonymous has a 1/8 snare roll), or Kizuato's 17 note stream.

Celektus-21/08/2017

well there are ways you can try to show that something might appear in subtle ways

but I get what you mean

if the song is all 1/1 rhythm and the ending is 1/8 it gets weird

Halfslashed-21/08/2017

yeah, that's definitely true

You don't want to have what is basically an anime map and then have a 1/8 burst at the end.

I dunno, sorry i can't give you a more specific guidance on this. But, the thing I want you to get from this is that you want to design your map fairly. And the way you do that is by setting up things as well as you can.

If something sudden gets introduced, like uhh, that 1/8 burst. It doesn't make sense to make it a spaced stream. Nor does it make sense for use of uncomfortable movement leading into it. Or even less, you don't want a note with a 1/4 gap after it

Celektus-21/08/2017

what about really slow sliders?

Halfslashed-21/08/2017

oh, like after a kiai? Those are silly.

you remember uh, that Jenny Dragonforce map

Celektus-21/08/2017

yea, the loop

Halfslashed-21/08/2017

https://osu.ppy.sh/b/680394

mhm

To introduce the slow slider more appropriately, a loop was added, so player can adjust to it. That's good design.

Another example is Fort's Ooi. You know that super slow slider? It used to have a big jump into it, then a rhythm gap was added. And a stack, no less

Local Structure

So, local structure.

This is the practice of making sure sounds are represented with proper intensity within a pattern. Musical patterns are separated by intense sounds, people usually want these visually organized as well.

This can be through any of the techniques I mentioned before, but with the addition of "equal visual distance". Which is the idea that you should have the same amount of negative space between objects.

This is why equilateral triangles are so popular and the same logic would apply to your blankets, or any relationship with your sliders, etc.

Celektus-21/08/2017

So it's organizing objects related to other objects close to them

Probably also close in time

Halfslashed-21/08/2017

pretty much, lemme pull up one of Mir's maps

Celektus-21/08/2017

Cause he uses grid mapping like I do

Halfslashed-21/08/2017

he uses hexgrids, yeah
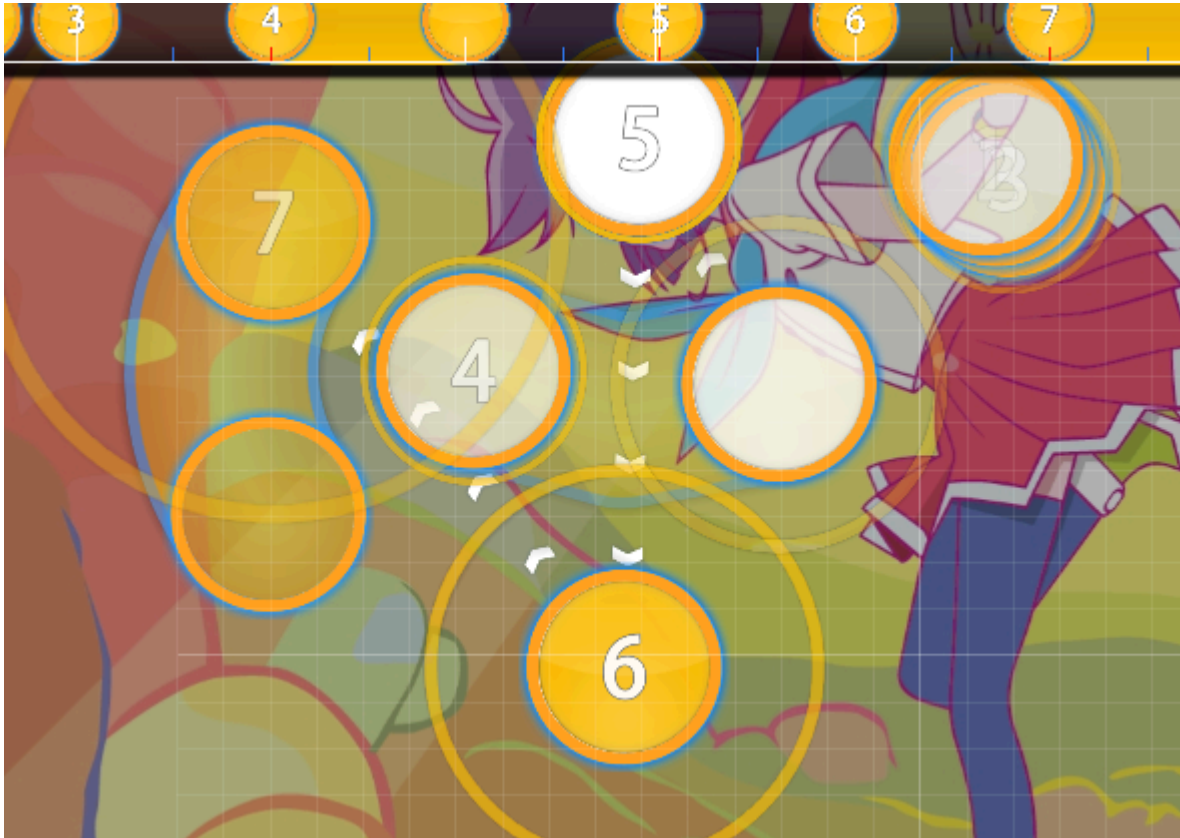
Maybe not the greatest example, but spacing is really similar between basically everything here.

Anyways, making sure that intensity is properly conveyed within your patterns and then between patterns, is important based on spacing or movement ideas.

Which we'll go into next week.

How many of the things have you read in the uh #sticky

some recommended reading:

Discussion 1: Pressure (Tess) *"pressure" or emphasis*

Discussion 2: View of mapping as a form of level design

Discussion 3: Consistency, variation and progression

When it comes to something as vague as structure and intensity, you want as many viewpoints as possible. Since you'll eventually figure out your own habits on how you want to handle them.

Visuals and Aesthetic 沿ク宴

Discussion by Mir and Halfslashed with RSA, b00 and Me

Mir-28/08/2017

plops down a -Mo- video

ok no

So essentially aesthetics are what makes your map look presentable to your audience, and basically makes up your "style" because that's what they see in the map - your object placement and aesthetic style.

I'm sure you've noticed lots of different people have different styles.

They're important mainly because they set up the map in terms of concept and any visual gimmicks.

Since if you can't show the player your concept you have to rely through rhythm and flow and that's not always massively obvious, and those have effects on your aesthetics anyways so merging them is useful to begin with.

Oh uh, I'll also be going into some basic patterning stuff I think I talked with RSA about this somewhat extensively so I'll probably tl;dr the shit that was actually useful lol

So what exactly constitutes good aesthetics you might ask

Well, there's no "good aesthetic". It's all subjective.

The only important thing about it is to know a couple of really basic rules and throw in some consistency.

These rules can be summed up into about 3 concepts if I can count correctly and those are:

- overlap consistency
- angular consistency
- visual spacing

yeah I can count woo

We'll talk about these in order of overlap consistency->visual spacing->angular consistency. Because angular consistency is a bitch not many people even follow sometimes.

So overlaps are something a lot of people use without really knowing how to use them, or they just don't know they used them until they're pointed out.

Overlap Consistency

If you overlap inconsistently that also makes your map look untidy so that's something to avoid too.

lemme fish some examples

For example if you have both of these close to each other timeline-wise on the map
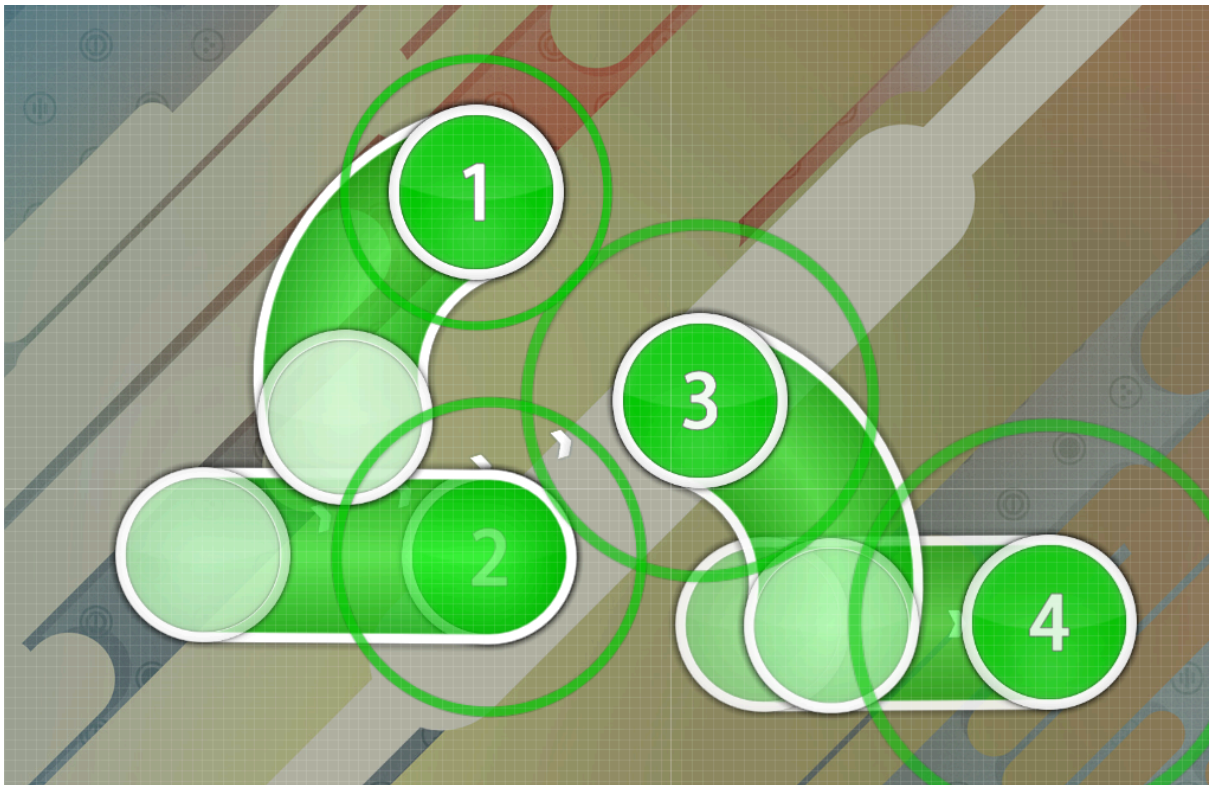
The first one has a specific rule to it, to overlap a specific distance from the center of the straight slider

The second one has rule to completely cover the straight slider except for a bit of the end

That should be done consistently for those patterns in order to build up a visual structure that's meaningful. If you put both of them together like that it looks inconsistent.

god forbid you do something like
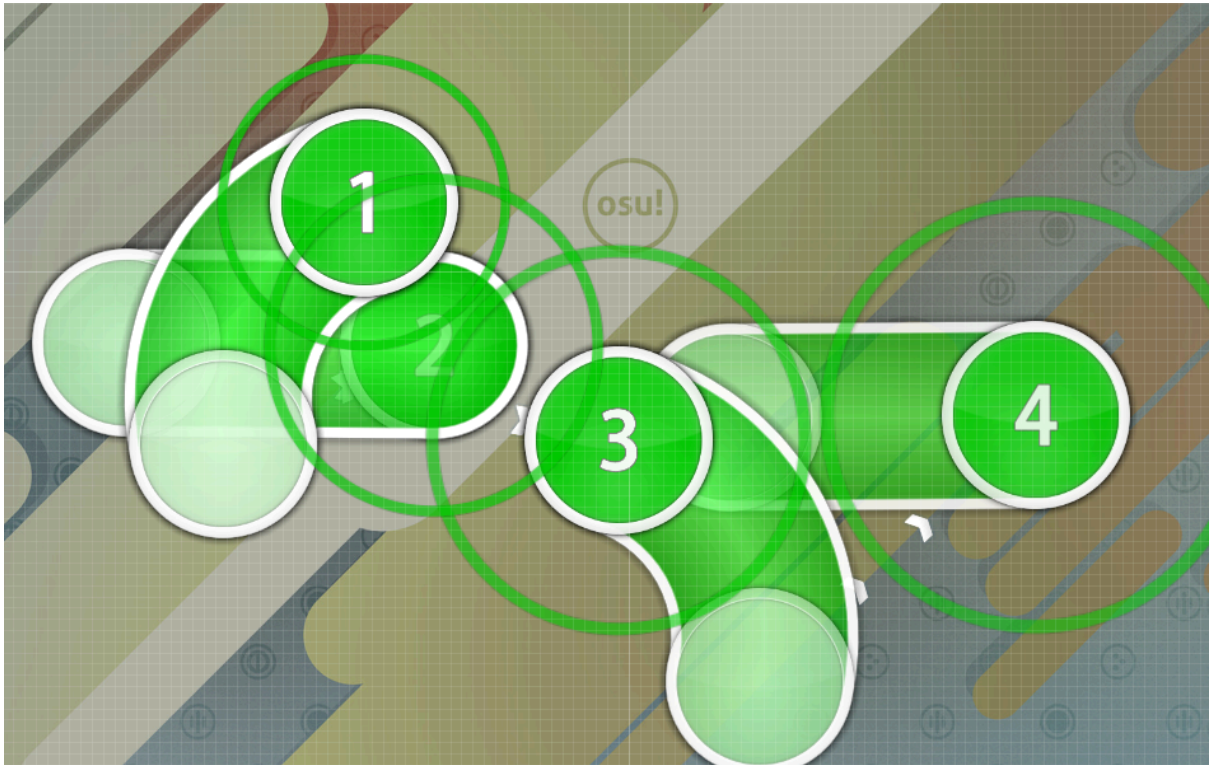
Because that just screams "I was on crack when i put this down", there's no consistency in these overlaps at all.

Even without the blanket if you did
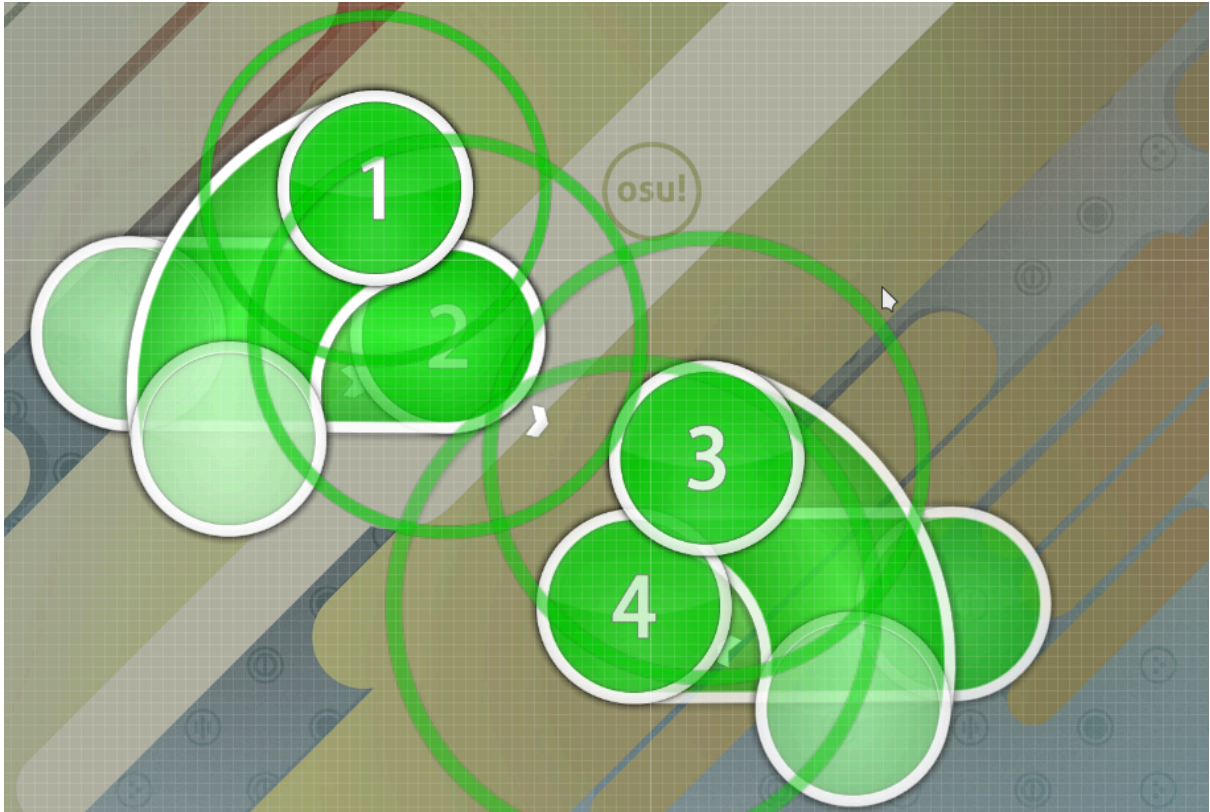
it would still look more structured.

Because at least there's that rule of overlapping the same way. and technically could be what, consistency?

This would work still as a variation while still holding the same rule so that would work consistency-wise.

You can swap between those if you want over time too but note they play differently which is another cool thing about patterning, you can have things that play completely differently but look the same.

Anyways moving on

Jumps are hard.

I struggle with overlapping jumps because I can't stand not structuring them in some sort of grid. Which is why I default to hexgrid 99% of the time and I get bit in the ass by Halfy about it.

Celektus-28/08/2017

you mean like this?
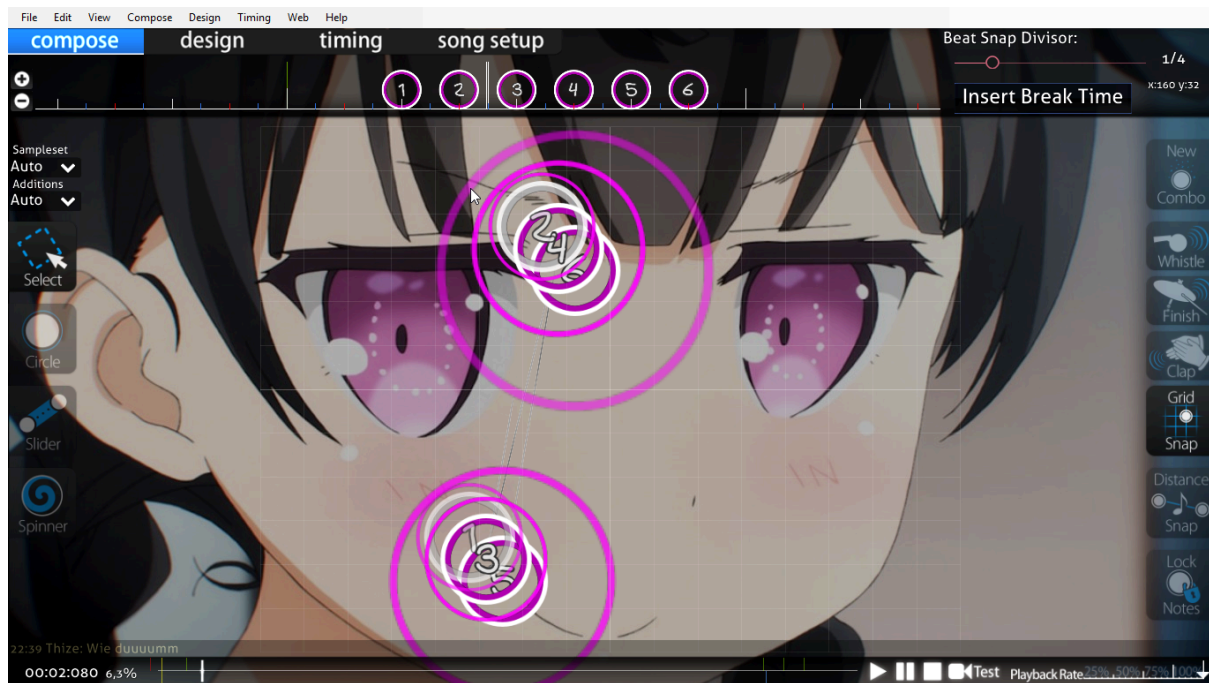
Mir-28/08/2017

yeah essentially that's what im talking about

b00-28/08/2017

Thing that I don't really get tho. Is when it's appropriate to stack 1/2 circles with jumps. To emphasize the note after right? But only if you have done that consistently

Mir-28/08/2017

You can stack 1/2 circles in jumps whenever you want. But you have to note it will have the same position as the note you overlapped it with.

So if you did like what celektus screenshotted, you basically have perpetual back and forth. And any deviation from that stands out a lot, because it breaks the rule of overlapping in that specific way.

even a jump pattern like this

where 1 and 6 are overlapped does matter despite 1 fading away well before 6 enters

I just noticed that's 1/4 on 174 bpm

why am i using 1/8 snap divisor

it looks the same shhhhh

Well whatever but you get the idea yea?

If you overlap jumps overlap the same distance.

If i wanted to add a 7 that overlapped I'd probably do
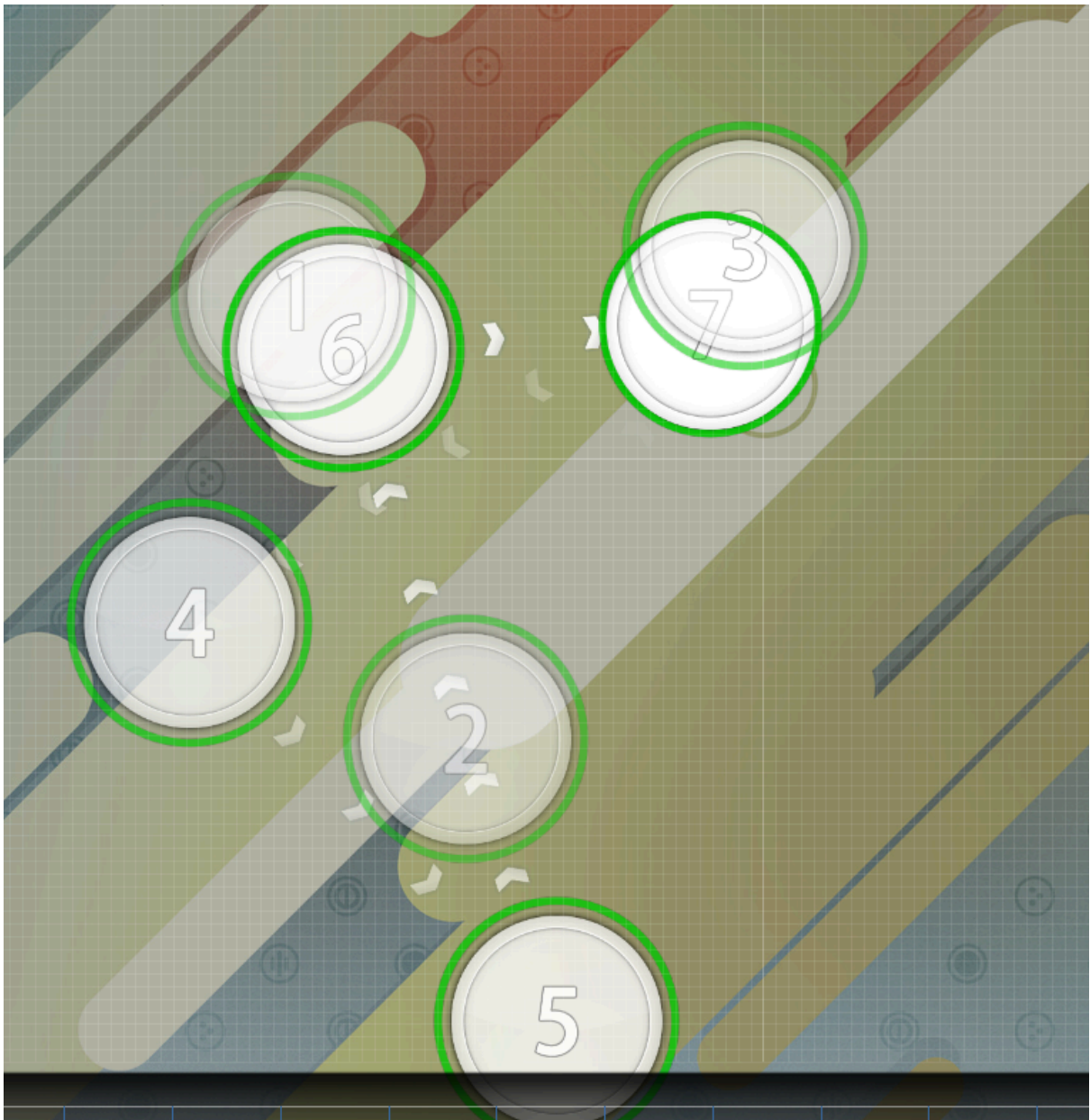
Not regarding playability at all, you can apply this overlap consistency rule to everything if you wanted to.

Example this looks better than if i did
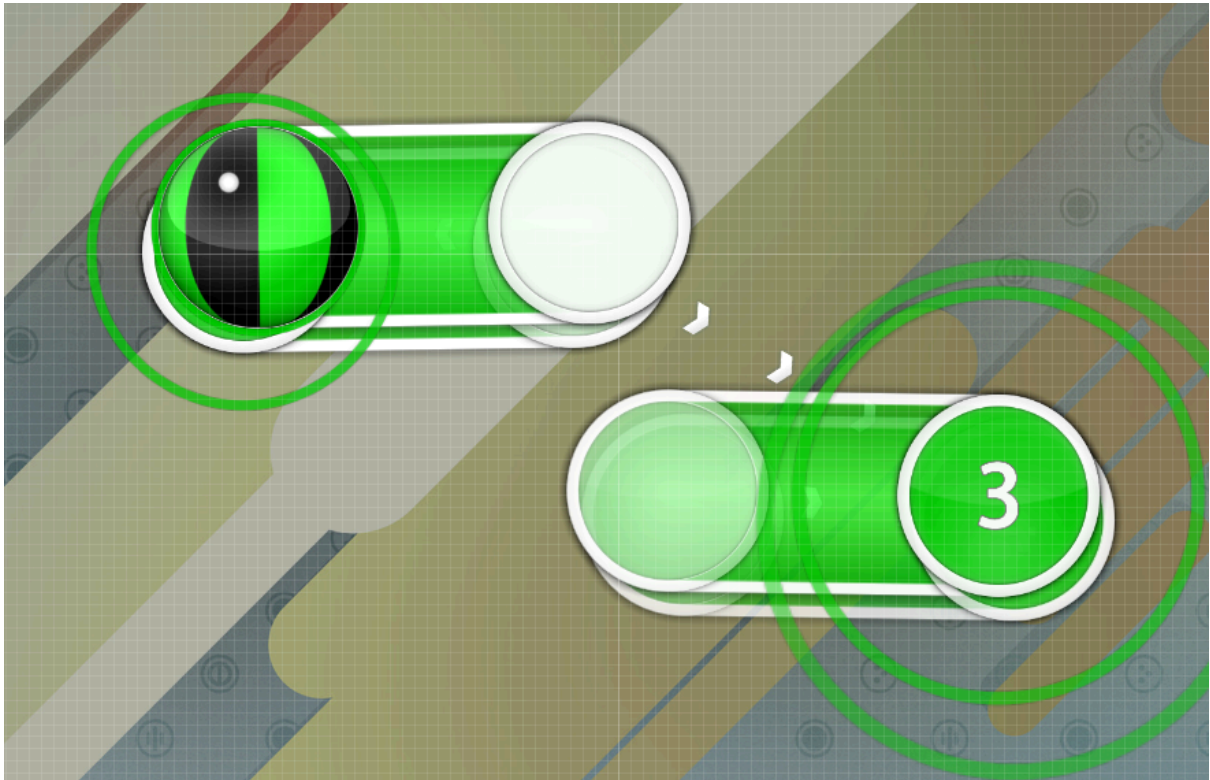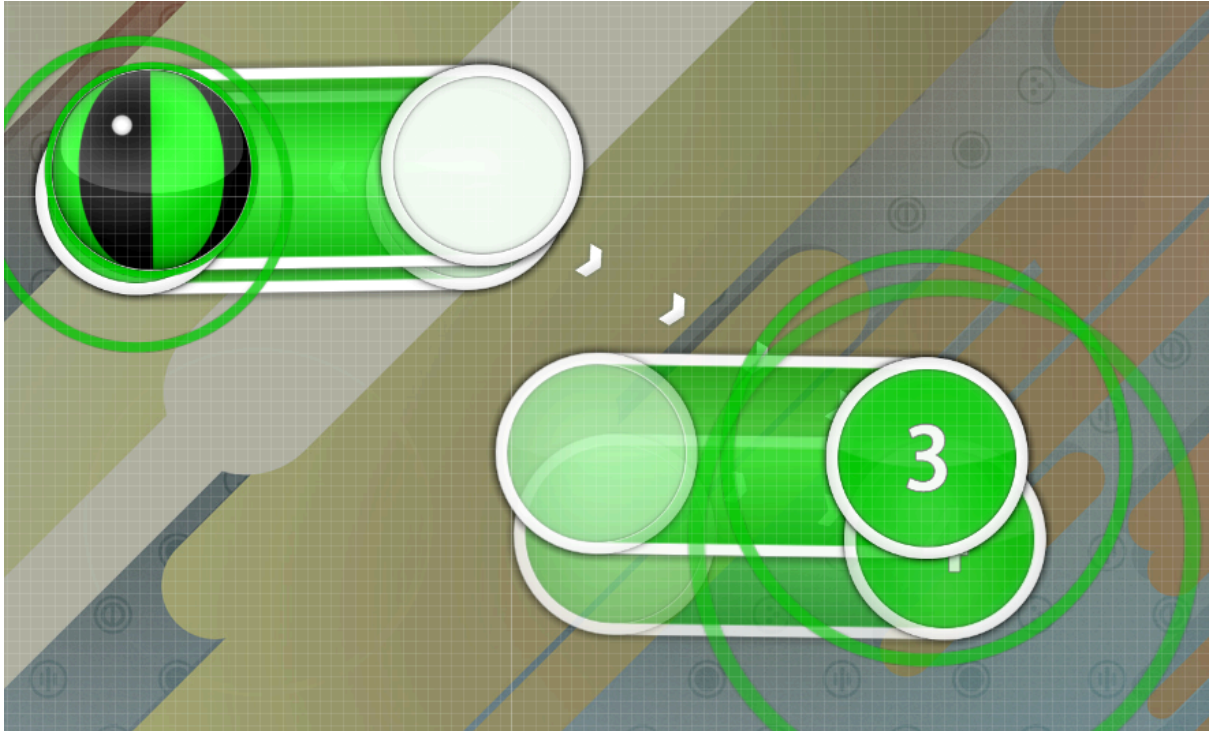
Because there's a measure of consistent distancing. Apply this to circles and even whole patterns if you want and you're g

@Halfslashed anything to add i know you have an overlap fetish

Halfslashed-28/08/2017

I want to clarify that making sure you have a rule for overlapping and strictly sticking to that allows for some otherwise retarded combinations. I'm just gonna screenshot stuff in my qualified map

so the visual rule here is
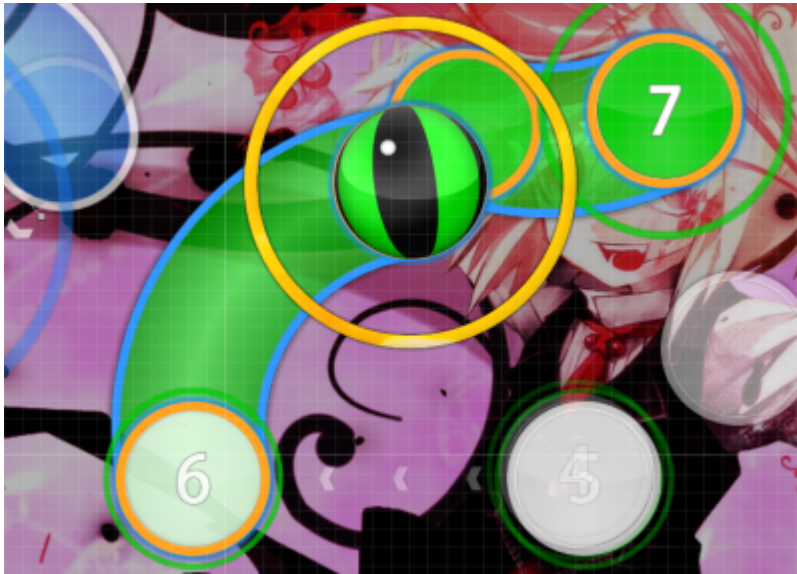
slider tails overlap

alright, not ugly yet…
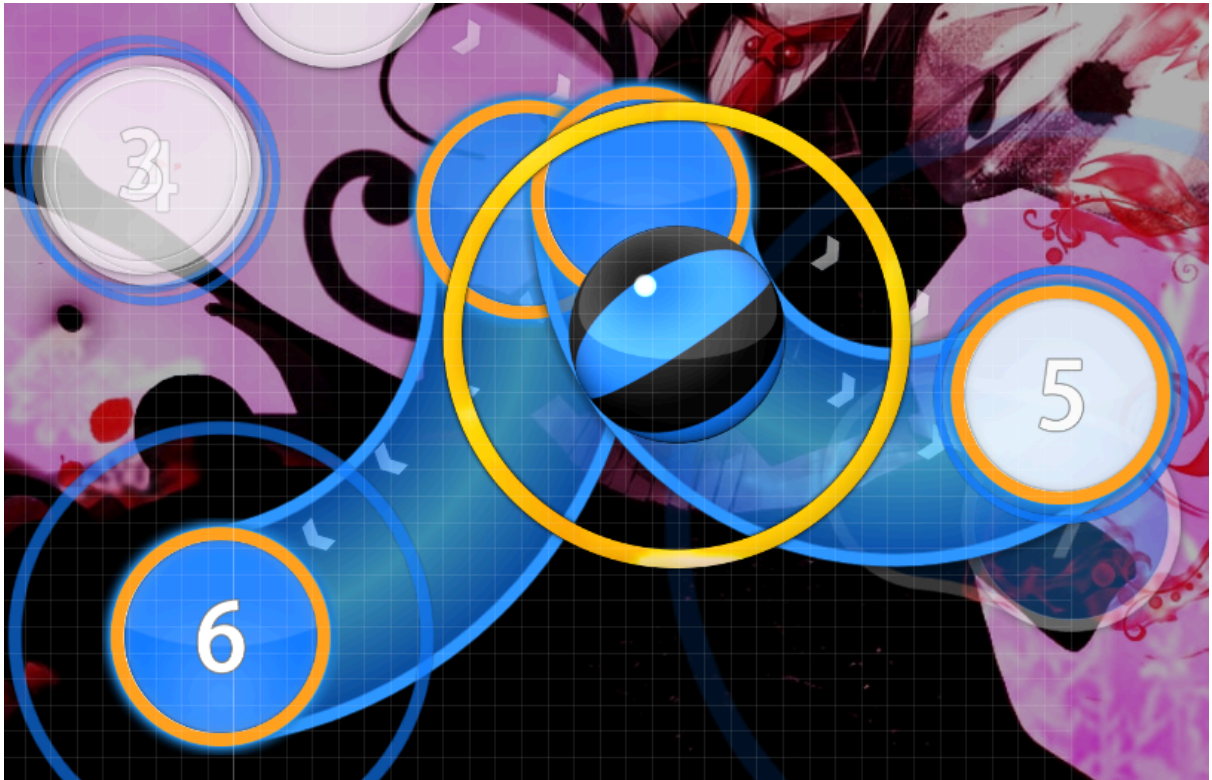
o-oh
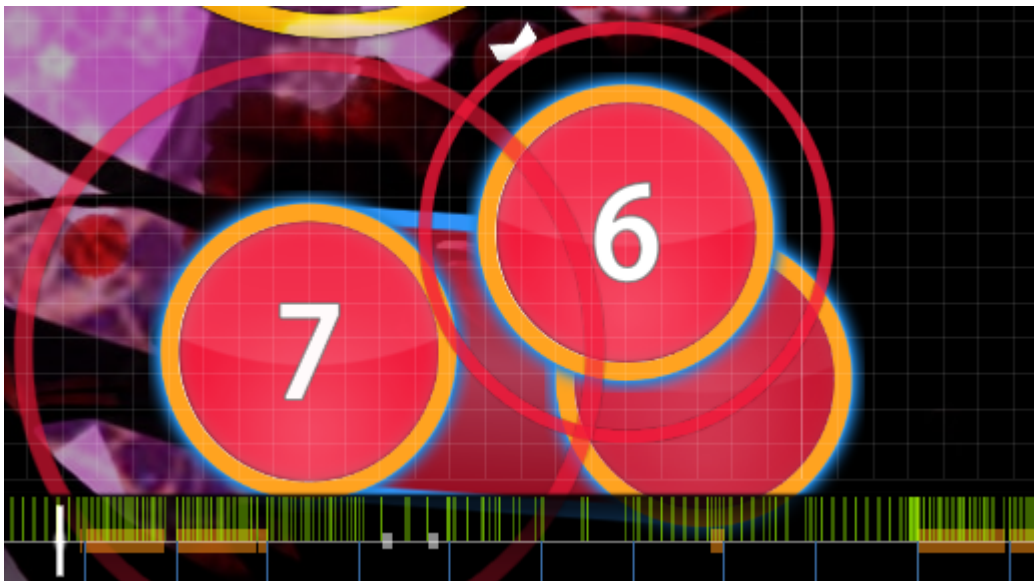
uhh....

...
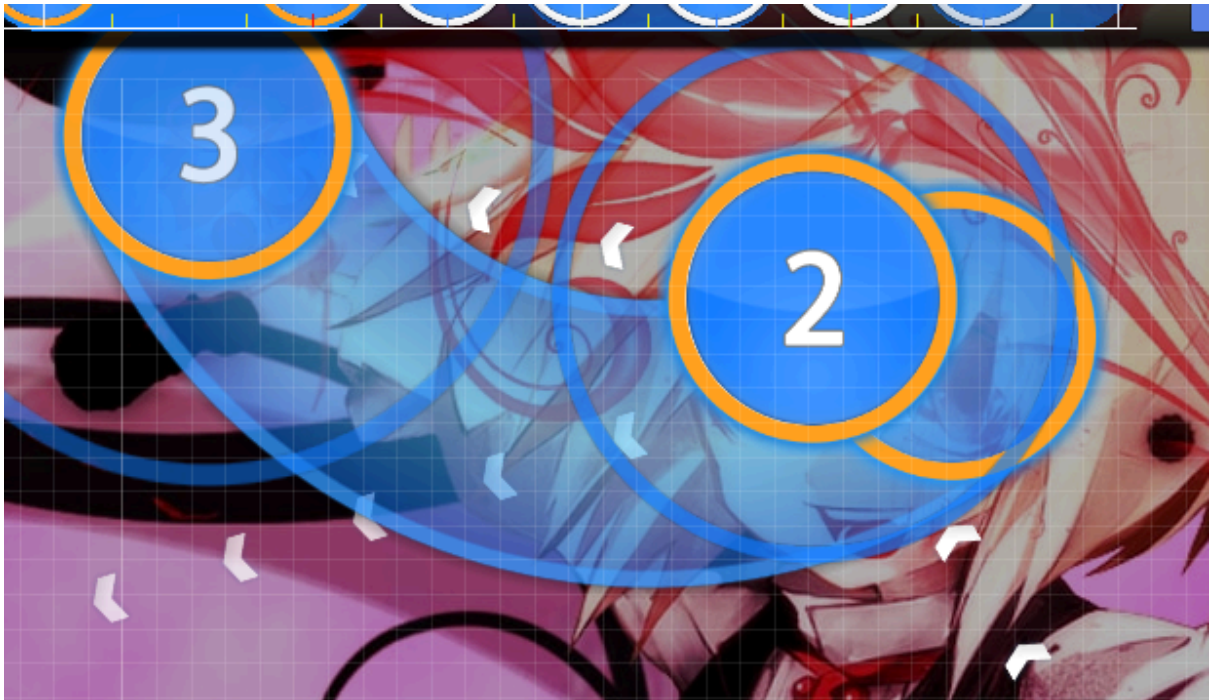
Celektus-28/08/2017

aren't they still always inside the slider the same amount?

Mir-28/08/2017

mhm

that's the rule

Halfslashed-28/08/2017

gore
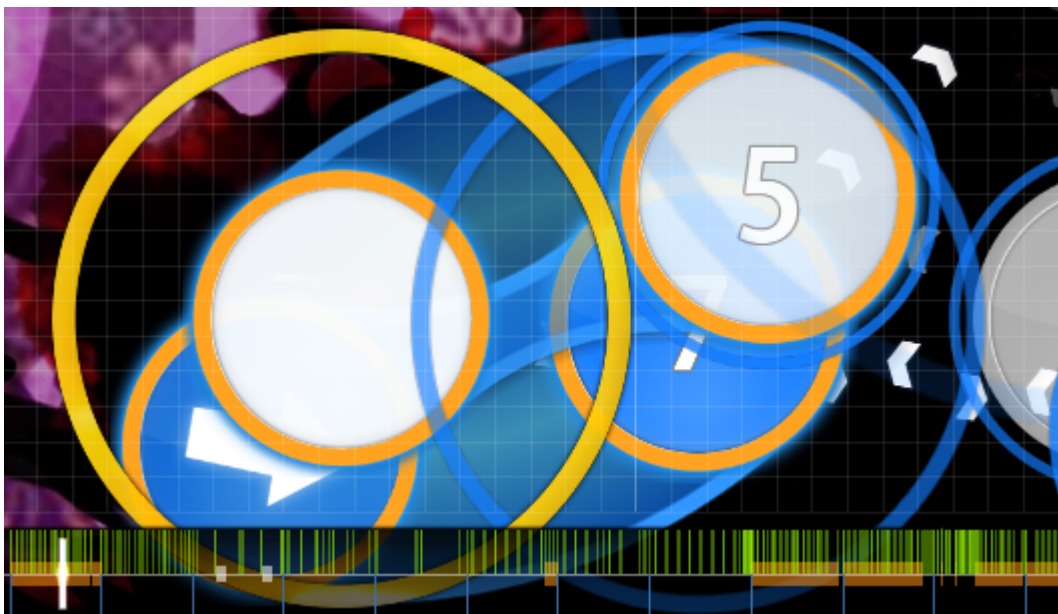
but yeah

i personally consider organization to be the most important thing here

even stuff like what mir linked could be acceptable

Celektus-28/08/2017

yea but only for edgy bois

some short talk later...

Mir-28/08/2017

fine here

Press 'H' to bring up

Mir-28/08/2017

This works as an overlap pattern because the distances increase exponentially as a rule

Halfslashed-28/08/2017

but yeah

I'll also add my disclaimer that you shouldn't use overlaps without some sort of a rule, since they are context dependent most of the time.

Mir-28/08/2017

if you want a good map to learn overlaps

https://osu.ppy.sh/b/1309336

have fun

okay what was i gonna talk about next?

…

Visual Spacing

Visual spacing oh boy this one is easy

top looks more organized than bottom
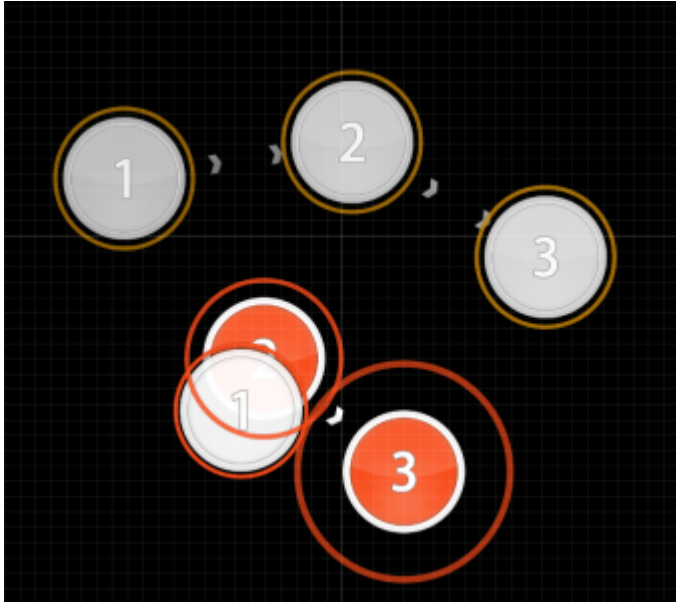
Why? Because visual spacing

1>2's spacing is equal to 2>3's spacing

actually that doesn't look that bad

How do i make ugly patterns? help! @Halfslashed

ok how about this
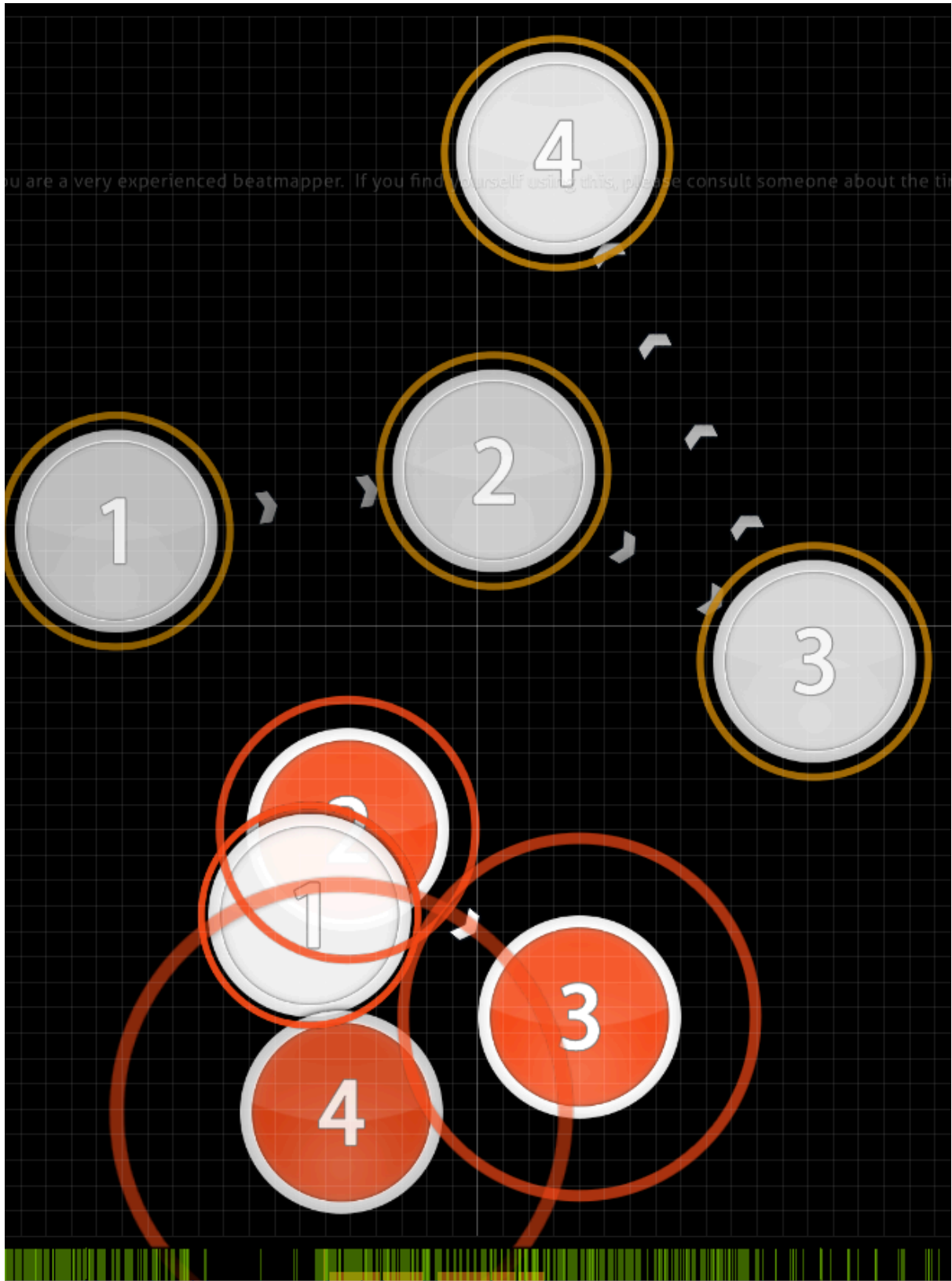
that triangle fucking sucks but it gets the point across

Halfslashed-28/08/2017

Mir c'mon

Mir-28/08/2017

come on, give me some legit ugly shit
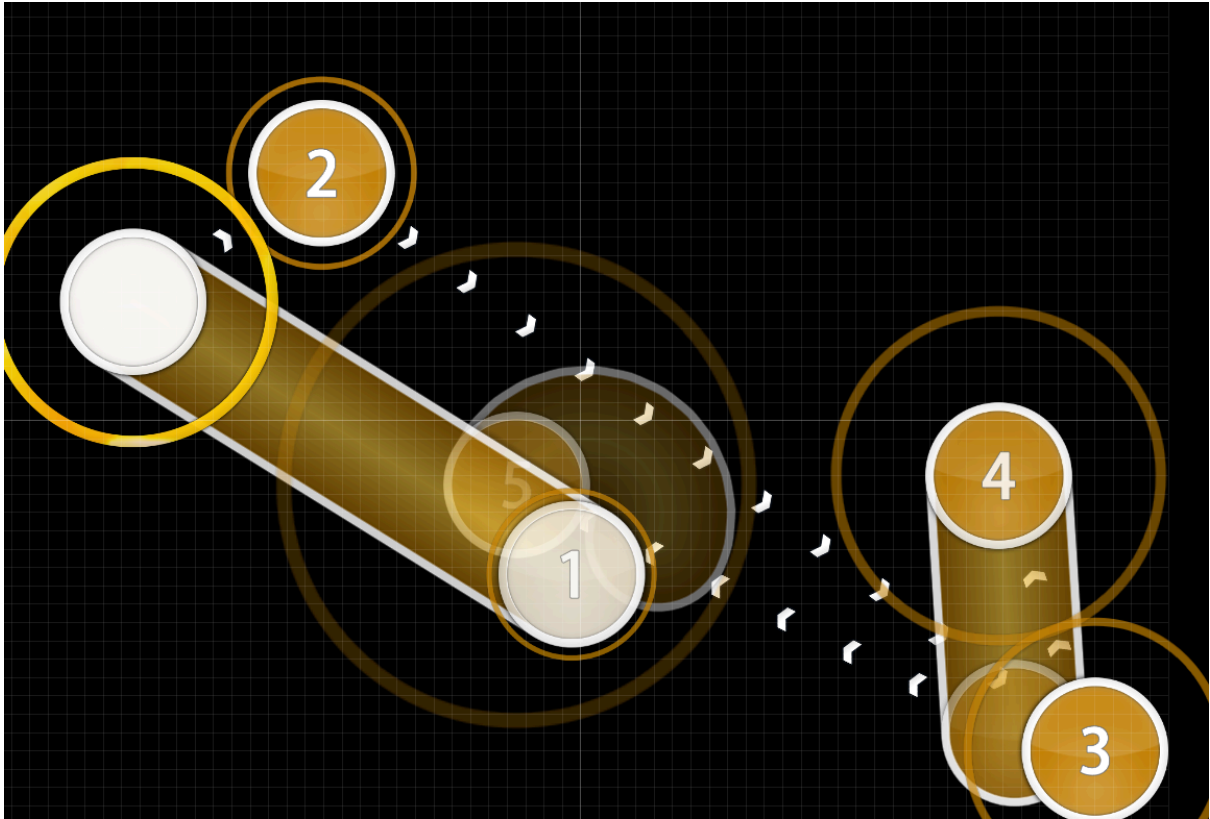
come on, I can't do this dude

It's against my entire fabric of being

Celektus-28/08/2017
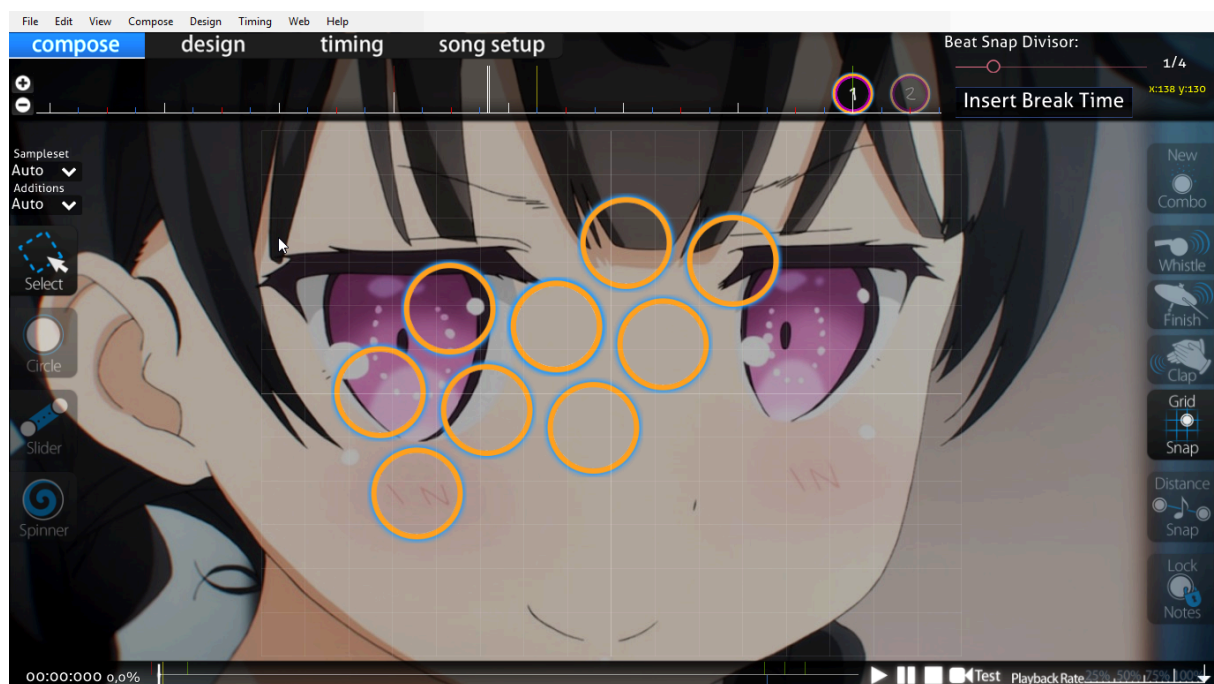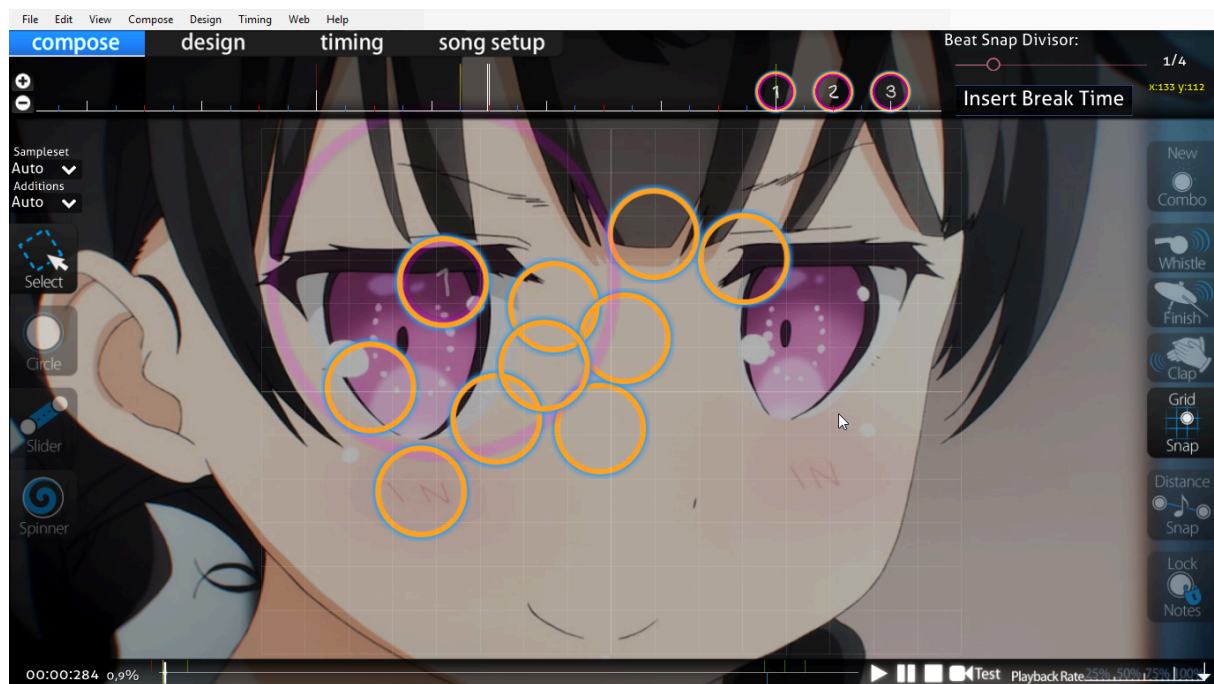
Mir-28/08/2017

Essentially the bottom pick has more visual spacing and looks more like a solid pattern. The top idk about context but could work depending. What I see there is just random overlapping
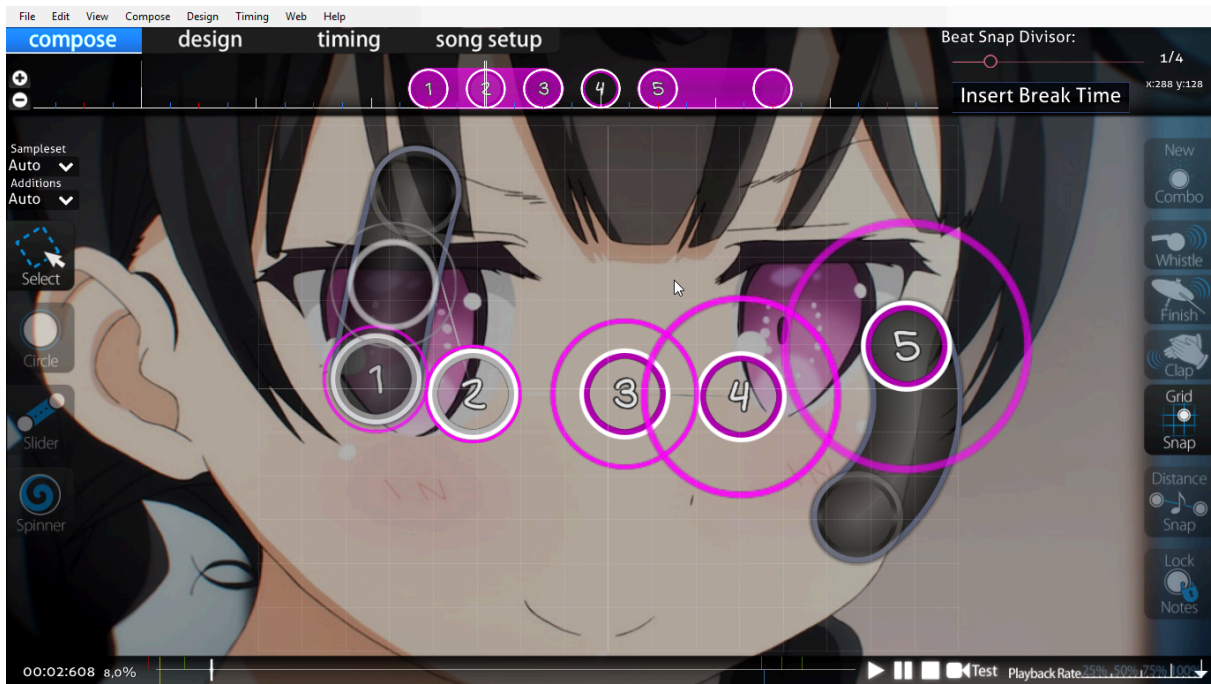
Mir-28/08/2017

ok here

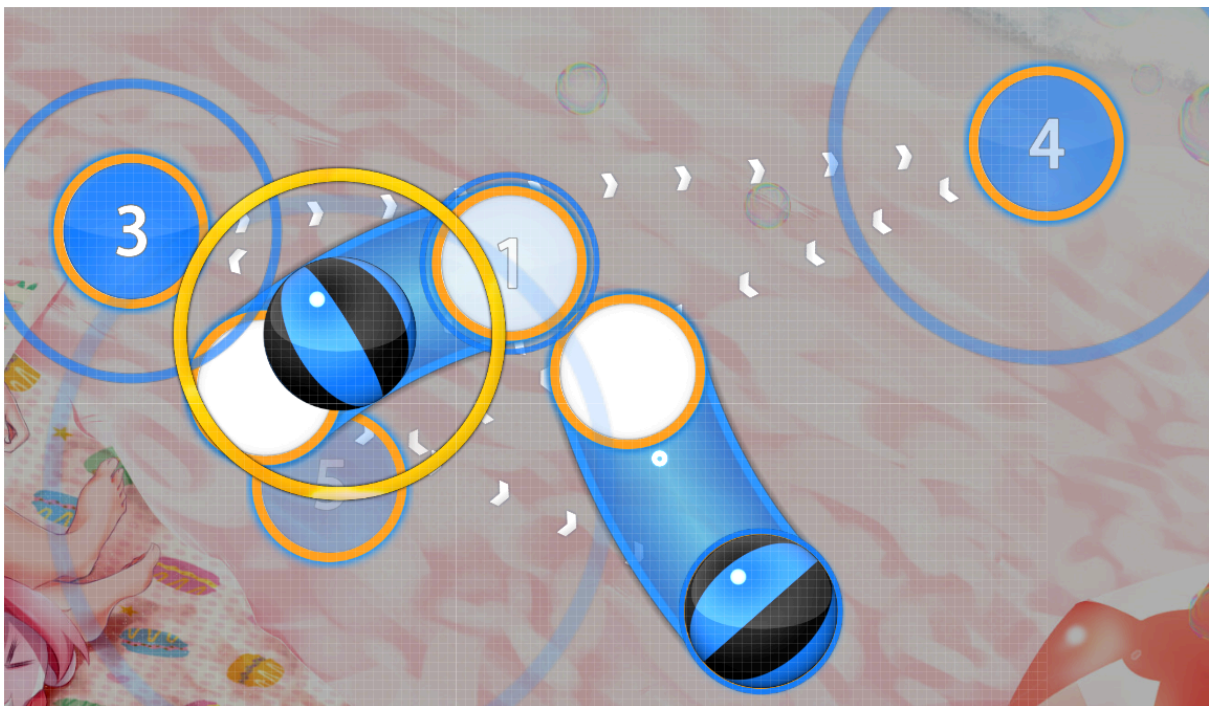I actually just threw up a little

Celektus-28/08/2017

Mir-28/08/2017

That is also a bad example of visual spacing

Halfslashed-28/08/2017

you happy?

Mir-28/08/2017

yes.

That pixel overlap with 1 and 2 is not ok compared to 1 and 5. 4 is just somewhere else and 3 is kinda trying to relate but the pixel overlap doesn't let it.
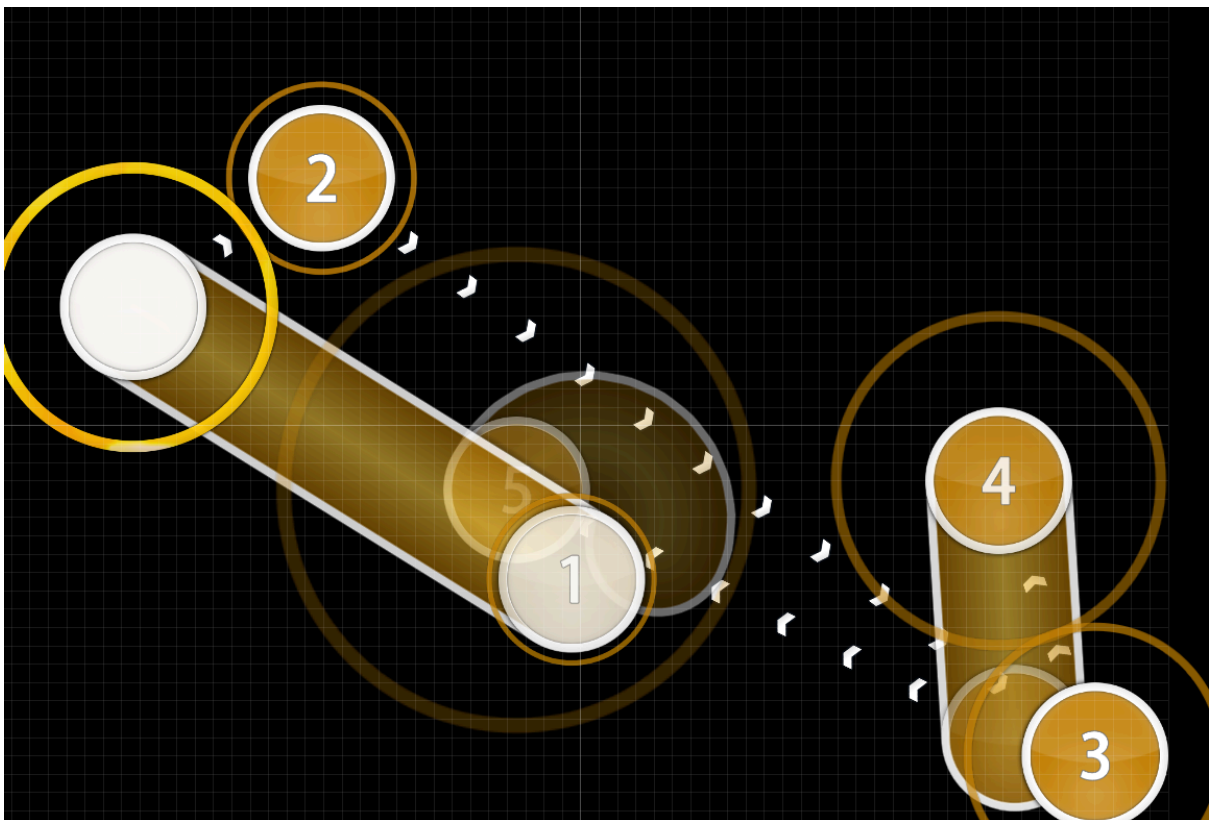
Celektus-28/08/2017

this devolved into a who can make the ugliest shit contest real quick
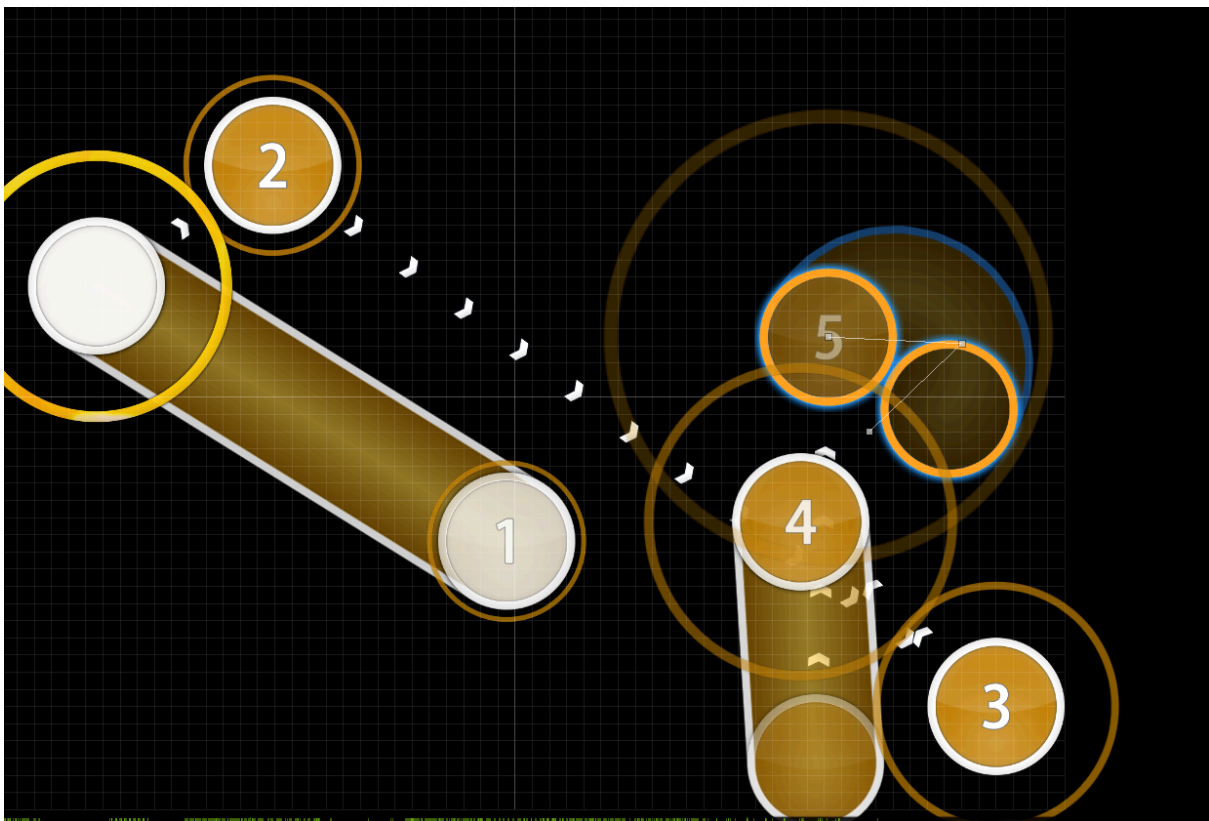
Mir-28/08/2017

essentially yea lol

with

2 is somewhat close to 1 and sets up the base "relationship spacing"

3 and 4 don't follow that

and 5 is just ??
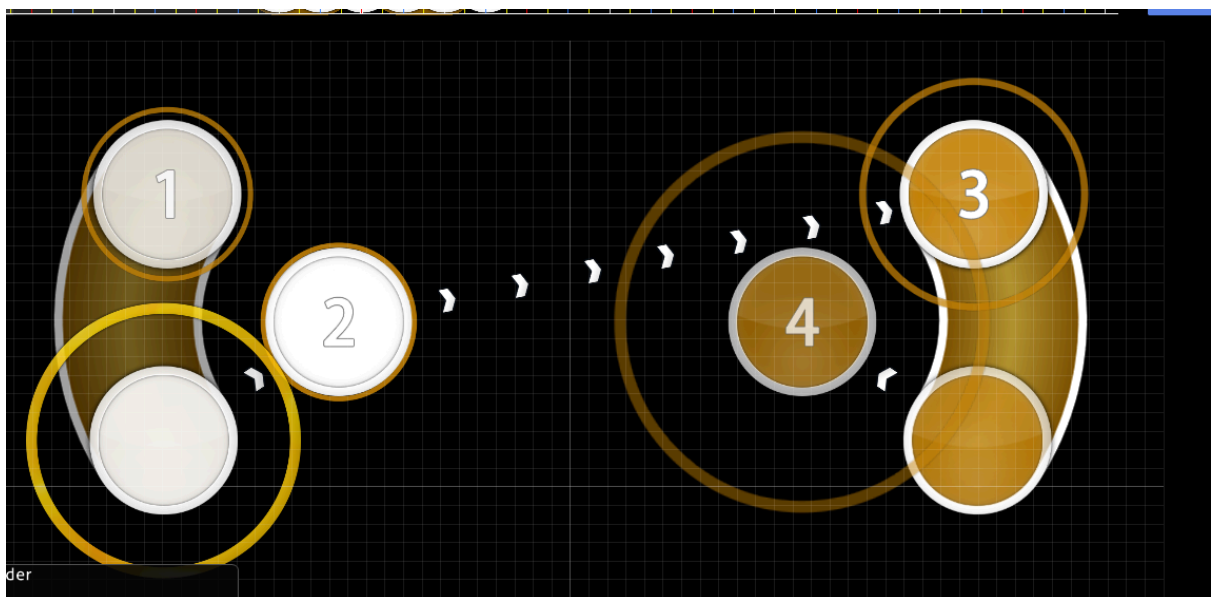
Mir-28/08/2017

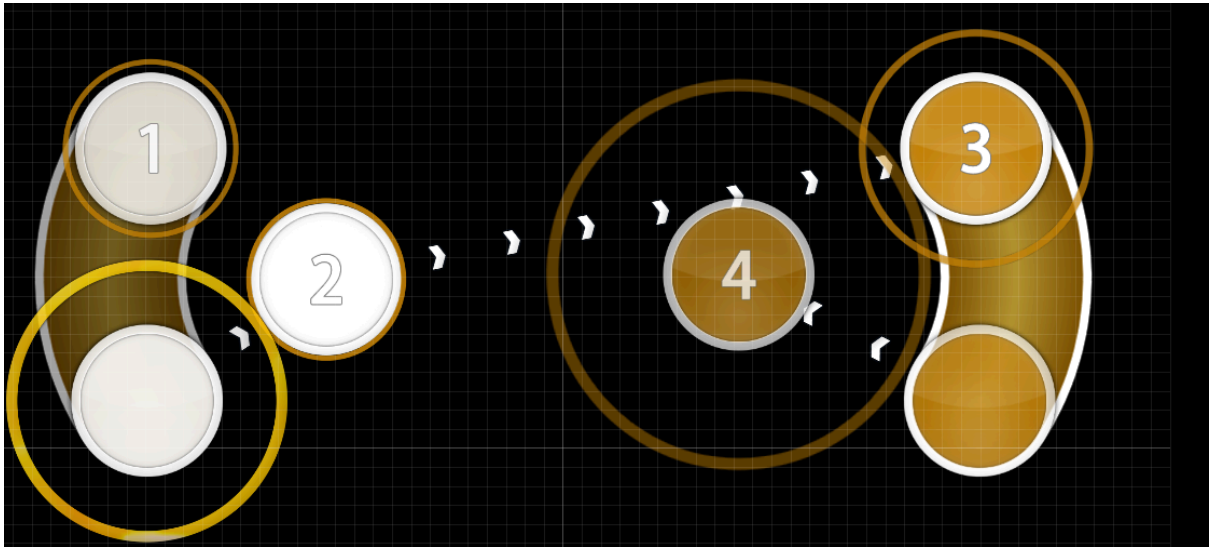so if you did

this would make more sense#

Mir-28/08/2017

yeah 1 to 4 is double the rest but that doesn't matter since all that really matters is the visual spacing relative to things around it

Like, this still looks good visual-spacing wise even tho they're on other sides of the screen

Mir-28/08/2017

this does not

Because visual spacing is less prominent and the blankets are further. Yea so essentially if you have a large enough space it doesn't matter as long as the stuff on the other side follows the same base spacing as before. That's why symmetry works and why the top works and the bottom is yuck.

Angular Consistency

Ok so last thing is angular consistency and just angles in general so as you probably have heard me or some other aesthetic-minded people say this looks like ass
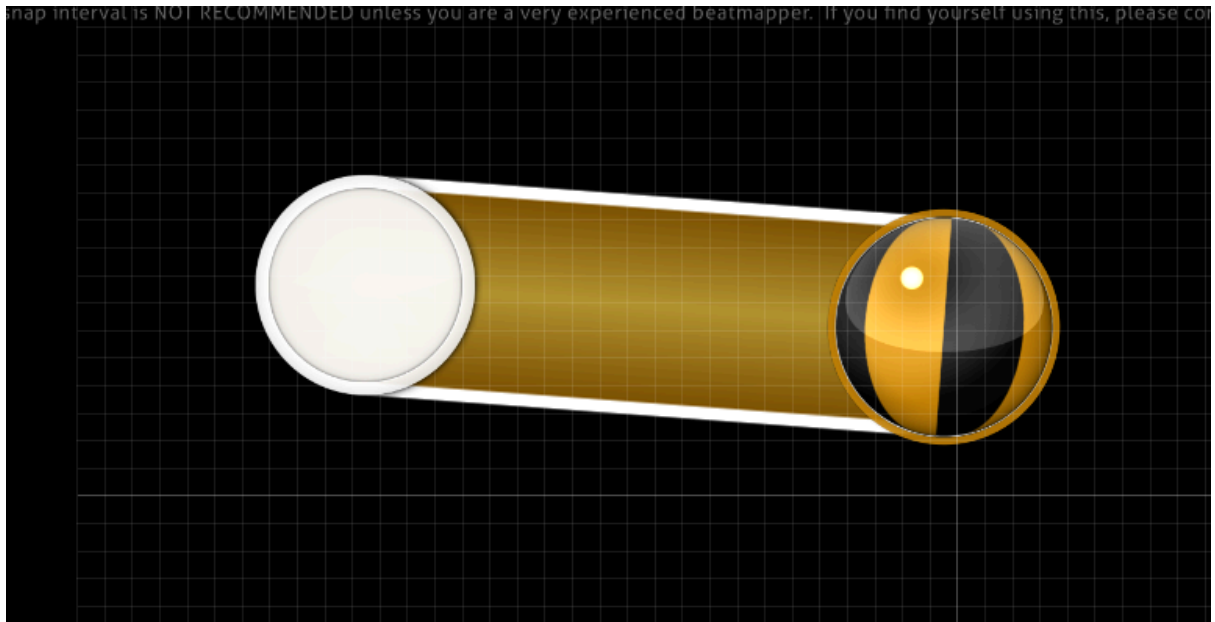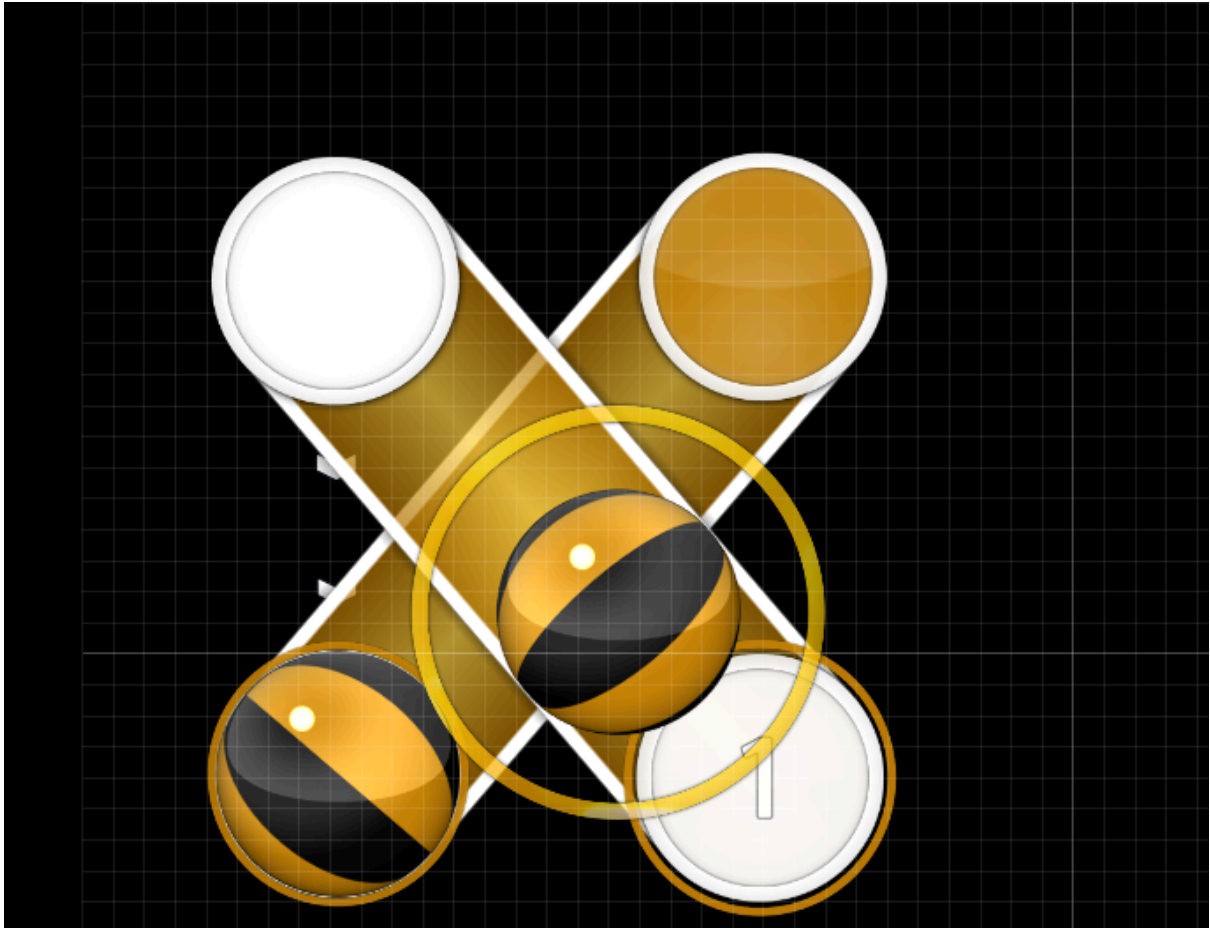
is 😩

why is this though?

Well it has to do with the nature of straight things. A lot of straight stuff is either horizontal or vertical.

because that's.. straight.. usually

But, when you have something at 45°, usually there's a reason for it. Like some other component for it to make sense.

for example

Like this is fine since there's a reason for it to be at that angle. But 45° on its own just has no relevance.

It's made even worse because the grid you place your objects on is x-y based. So you're constantly exposed to either it's perfectly up or perfectly left/right and nothing else goes

!!

So this is why people hate 45 degree stuff for no reason, and why you shouldn't do it unless it's part of some pattern.

Celektus-28/08/2017

question!

Mir-28/08/2017

yes!

Celektus-28/08/2017

A map with 100% 45° sliders would still technically be good right? Since it would just classify as a different aesthetic.

Mir-28/08/2017

Essentially yeah, since it'd be consistent.

There's a structure in that angle so there's no problem in my eyes if the whole map used variations of 45°. But then again if you think about it,

45° + 45° = 90°

perfectly straight up

45 - 45 = 0

perfectly straight left/right

so

Celektus-28/08/2017

50?

Mir-28/08/2017

.

50 is just a weird angle and doesn't really fit anything

like think of geometric shapes

you have triangles = 120
squares = 90
pentagons = 72
hexagons = 60

etc.

those angles work because they turn into stuff

If i used like 56° its ??? because nothing builds off of that

Celektus-28/08/2017

ok another question if you don't mind *(took me some time to prepare this one, hence the other questions in between)*

RSA-28/08/2017

so....if I got this right....basically using straight sliders for anything that isn't literally horizontal or vertical, or part of some special pattern is a bad idea?
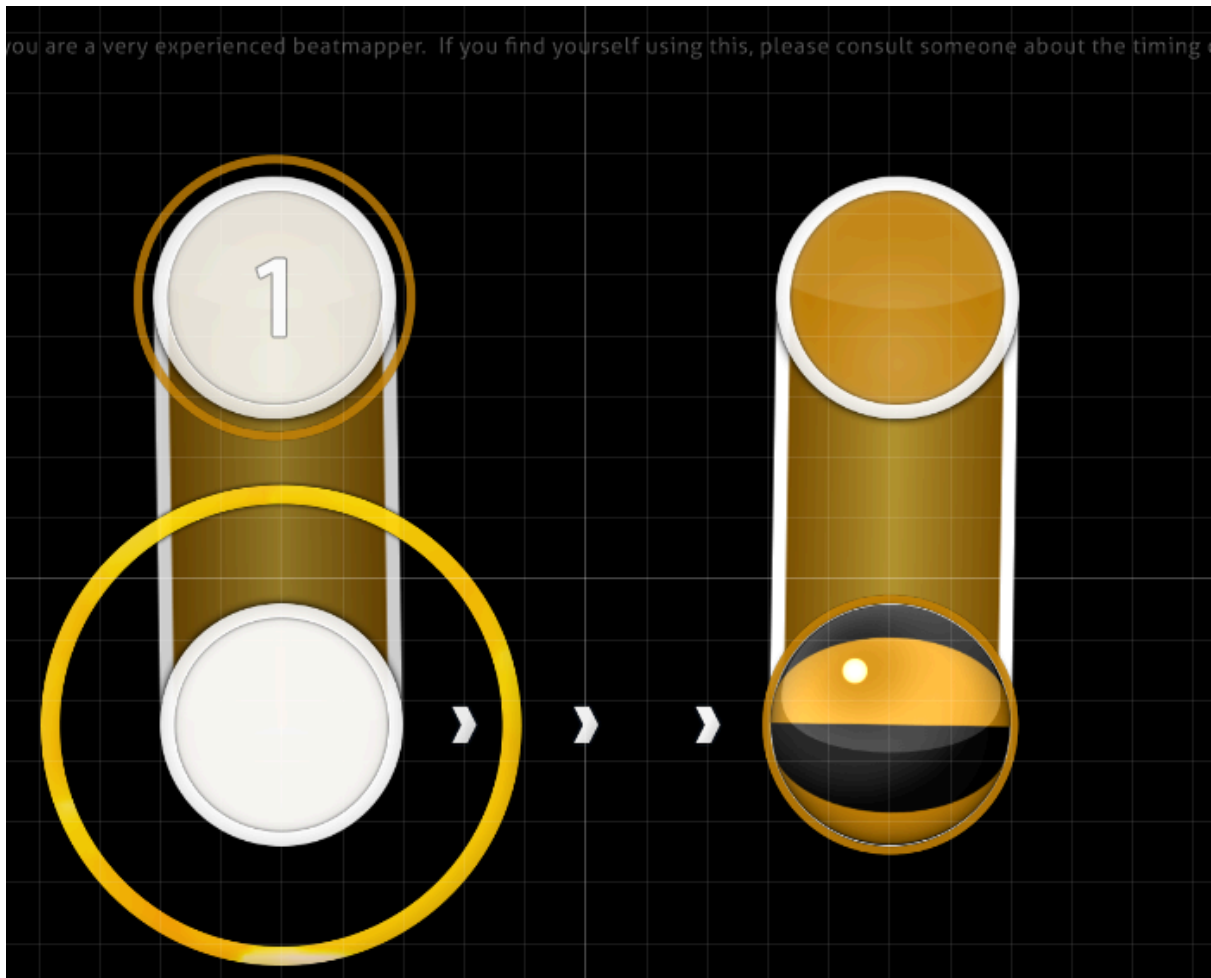
Mir-28/08/2017

If you're not building it into anything yeah, it just looks really random.

You have like +-10° leniency though. When you hit 10° the tilt starts to show, so people tend not to go further than that.

It also helps to have a slight tilt because you can do things like
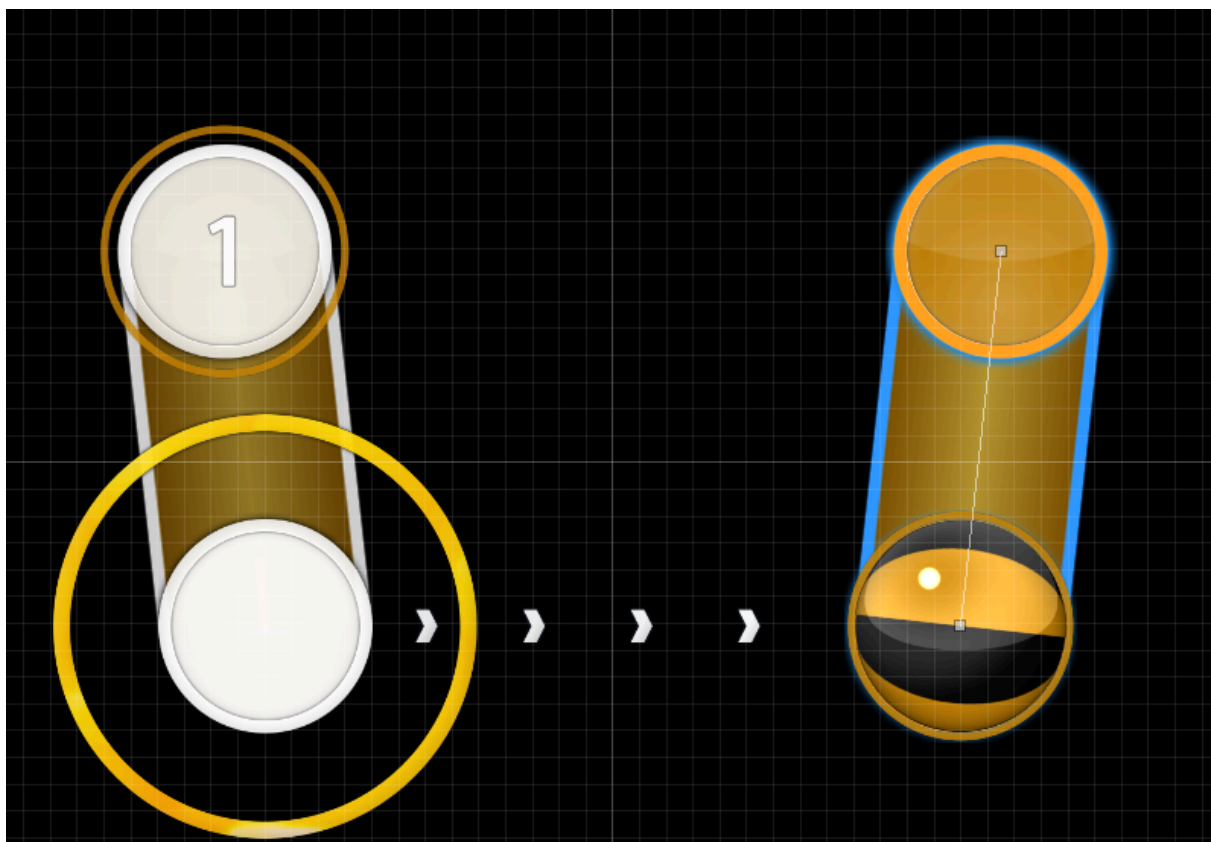
if you didn't tilt it slightly

booooring

Celektus-28/08/2017

Ok my question was... does that also apply to the use of multiple angles in a map? Cause I know it's good to keep all sliders the same amount of angle right like all 5° +/- so on... would that also apply to if I made all my angles centre around specific ratios like 36° 72° 144°?

Mir-28/08/2017

If those ratios are mathematically sound and turn into shapes then chances are it'll look good.

72° would work because essentially 36 is just half that. So you'd be doing a decagon-based pattern instead of a pentagon-based pattern

and 144 is double that, so it checks out essentially.

Mir-28/08/2017

The tilted straight sliders is hardly just a "convention" it does have reasoning, so do keep that in mind :D

Because lots of people just do it because it looks nice and don't know why it does.

anyways, pattern-based angular consistency

We talked about 120/72/60 etc stuff. Now you can apply this to whole patterns, or even jumps if you wanted. The best part is it doesn't really matter where you start.

looks equally fine as
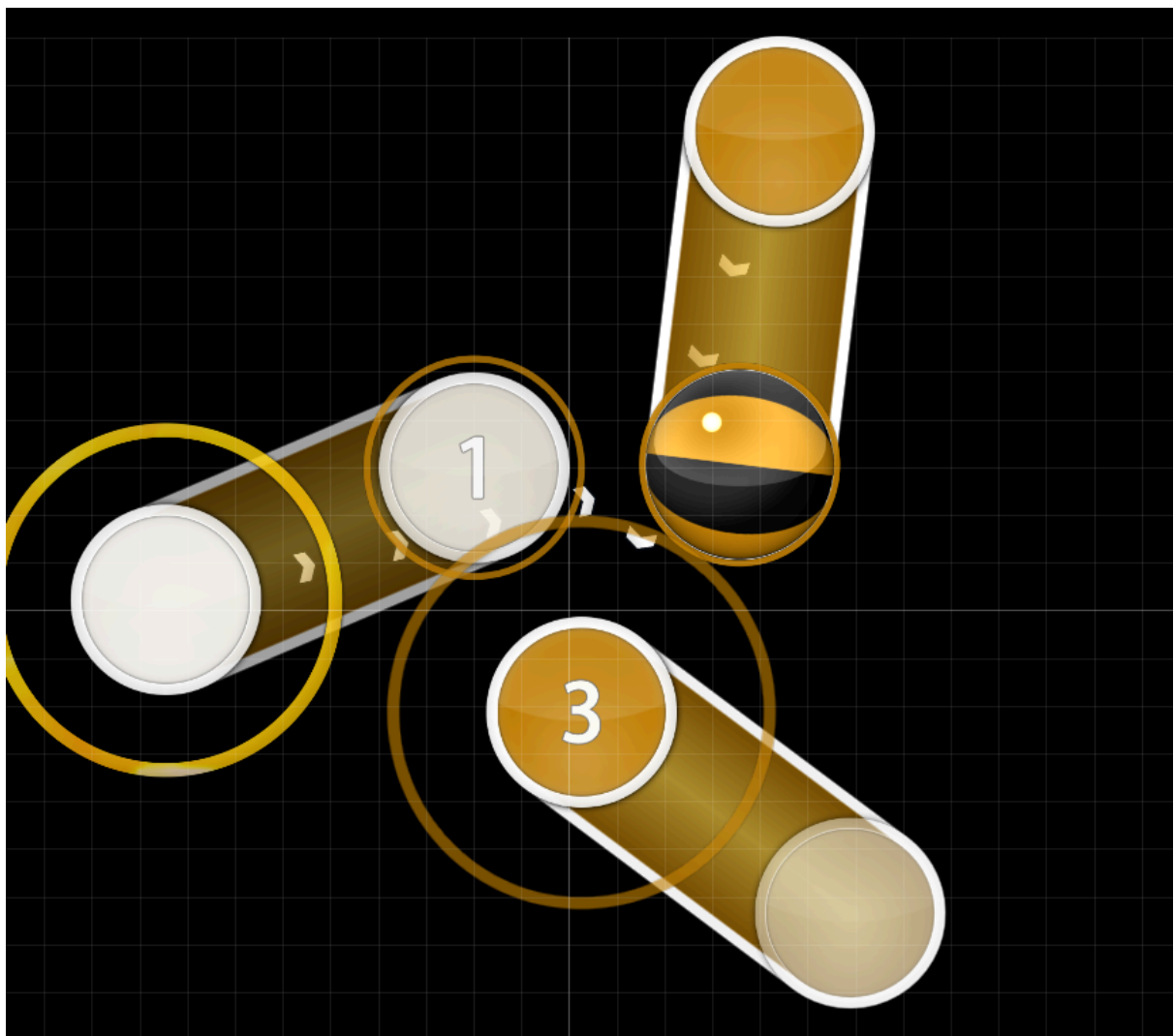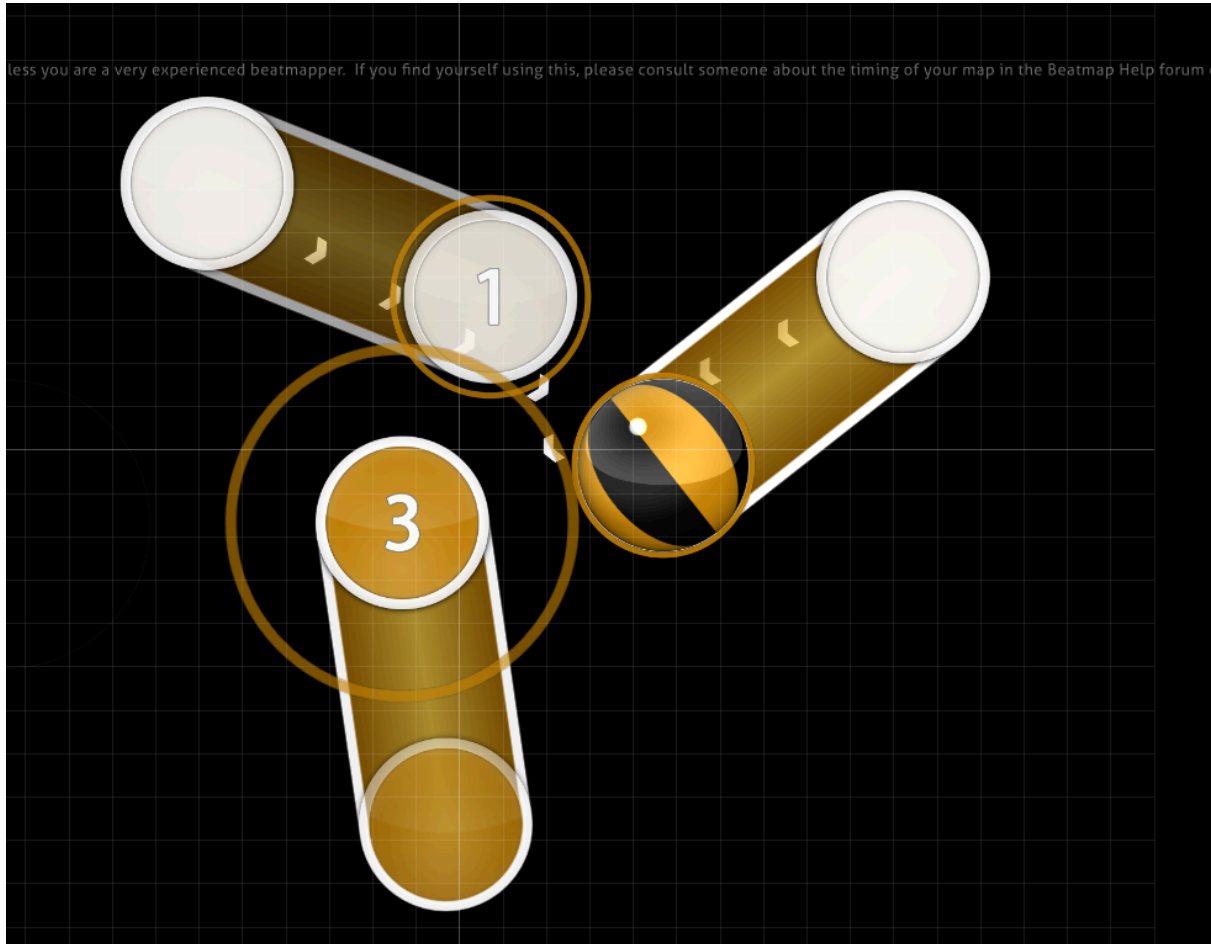
well I messed up the order but they both are acceptable.

Even though i eyeballed the first then rotated it by **GASP** 45°, they still are fine because one of the sliders is at a slight tilt.

Well, that's where angular consistency comes in. As much as this looks really horrible because of tilt.
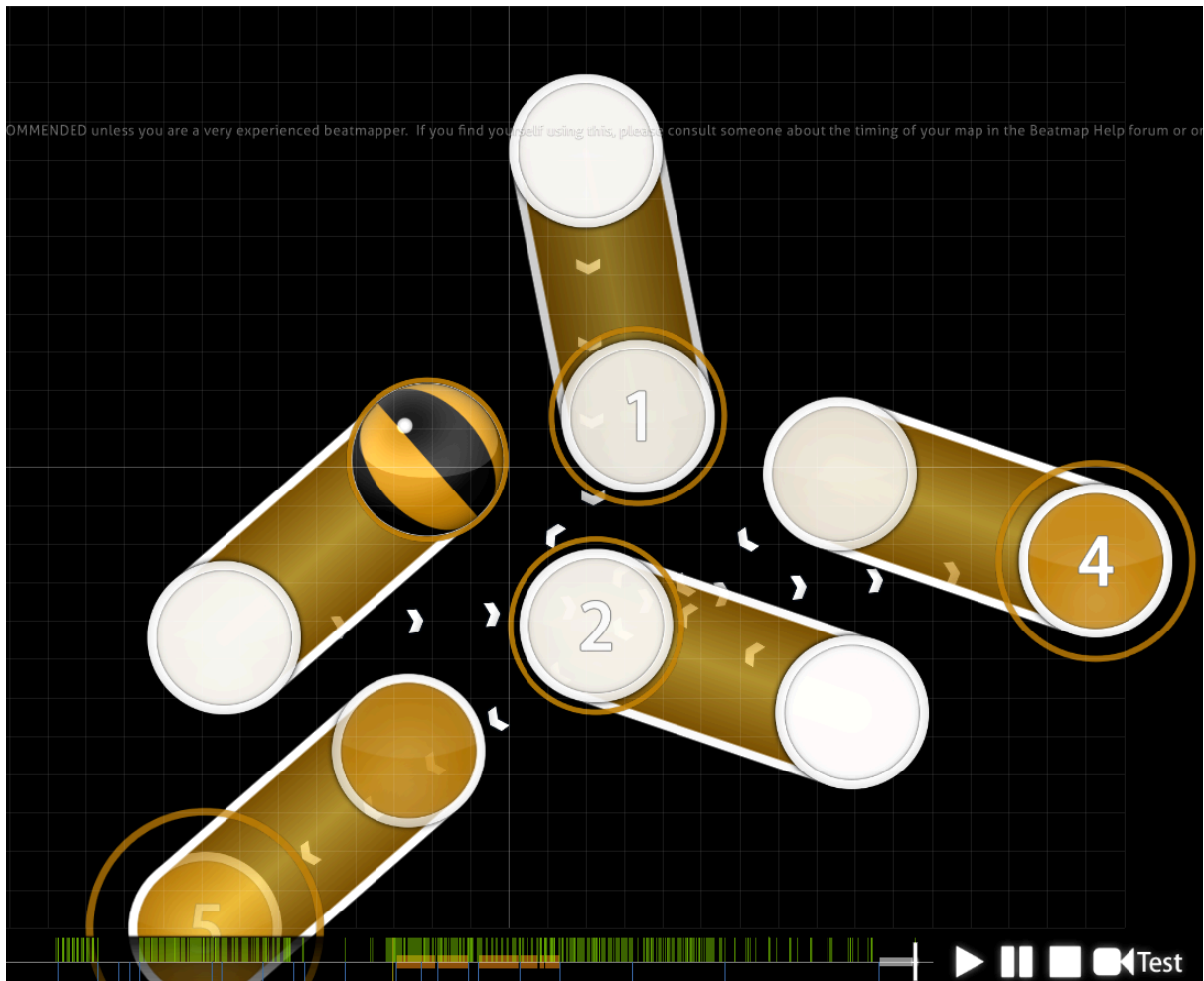
It kinda makes sense, because the angles are still the same.

In fact if I had more space to do the top one it wouldn't look as bad.
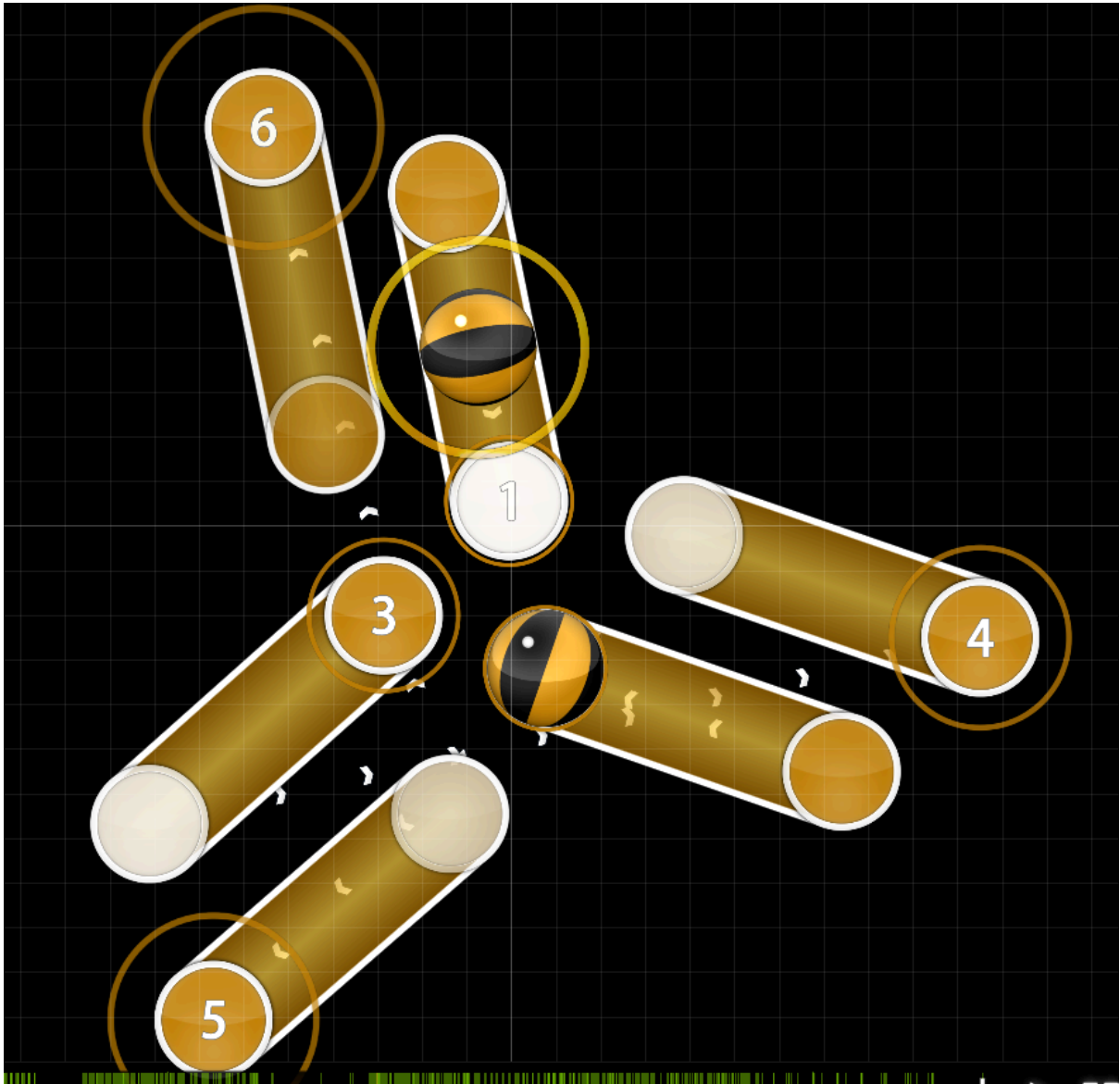
Celektus-28/08/2017

would you say geometry even justifies this sort of stuff a bit more?

Mir-28/08/2017

yeah that actually works pretty well actually if you disregard like the actual order of objects. Because the overlaps have that center-slider rule, circles too.

You have the 120° thing, it all structures itself into a triangle. Pretty damn solid pattern.

The more complex the pattern the more relations it's gonna have, so keep that in mind.

this is kinda meh because
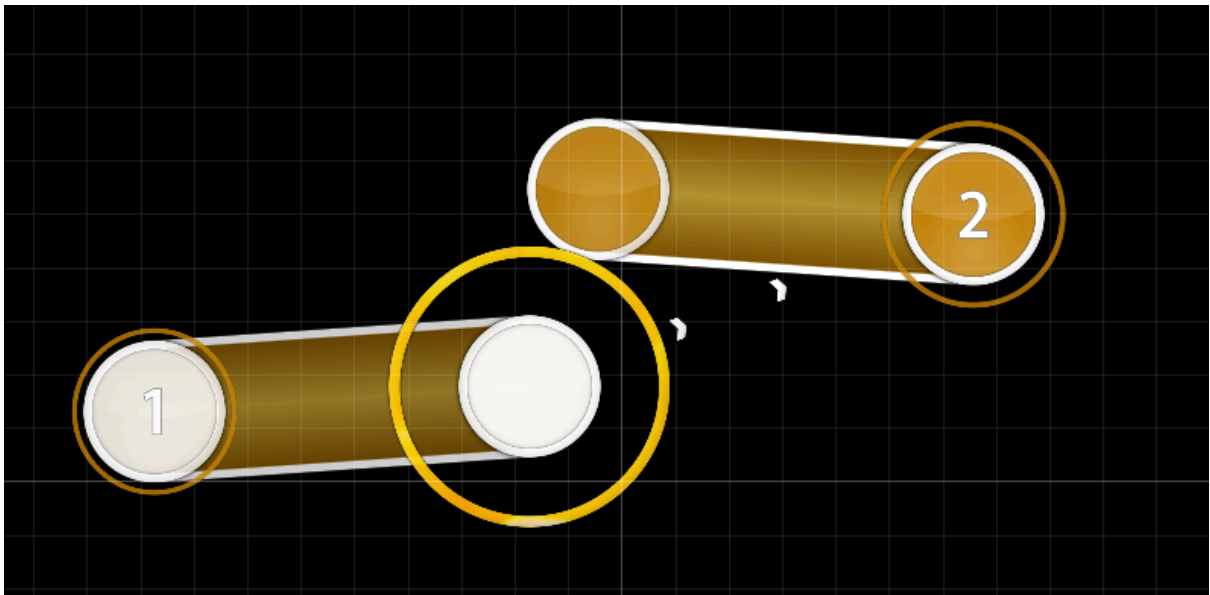
you only have the symmetry the visual spacing and the tilt being mirrored

but the more stuff you add…
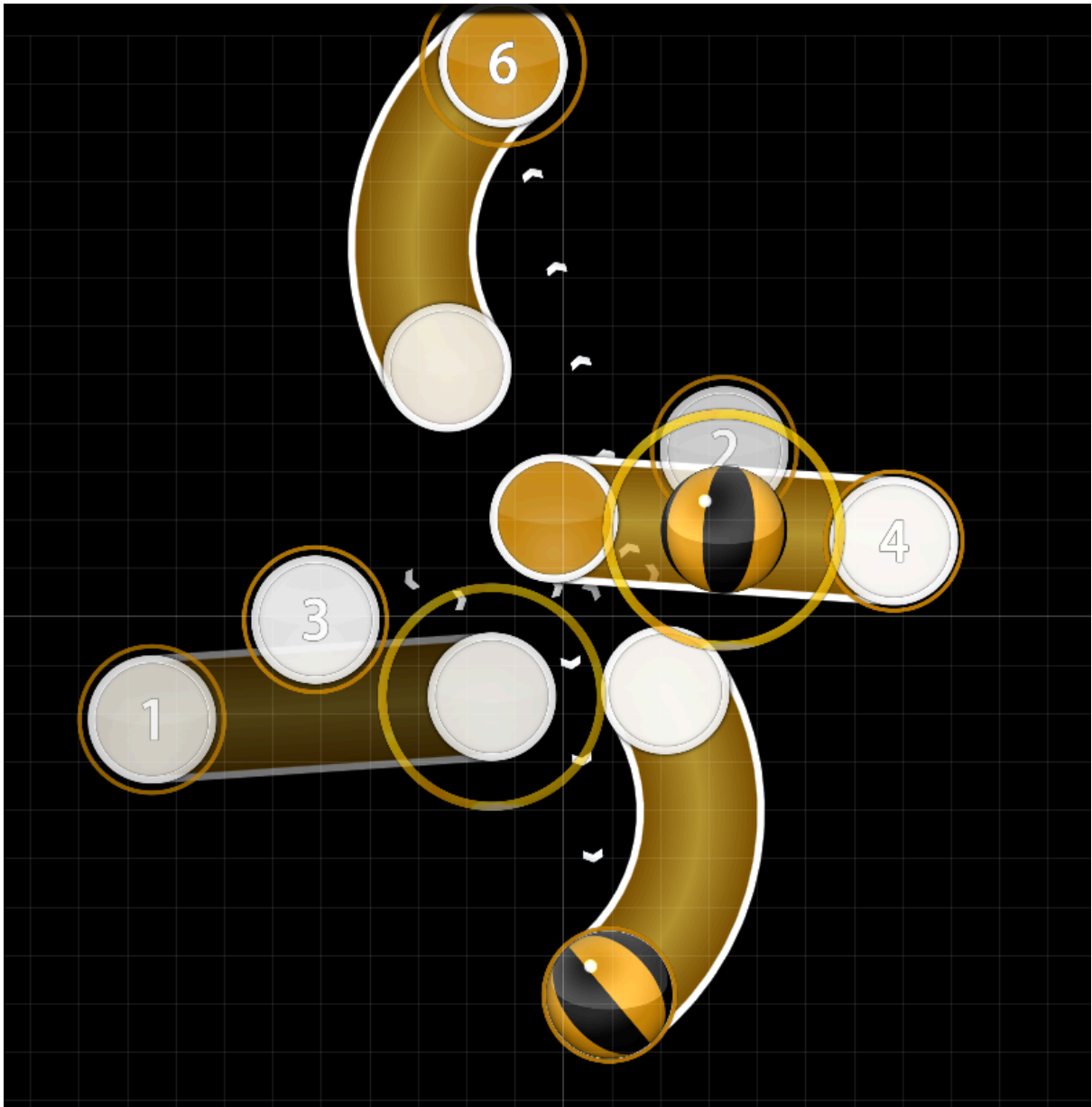
The more relationships you need to create, so it all sticks together

Probably isn't the best pattern left like that actually sec

i swear the 2 is above the 3
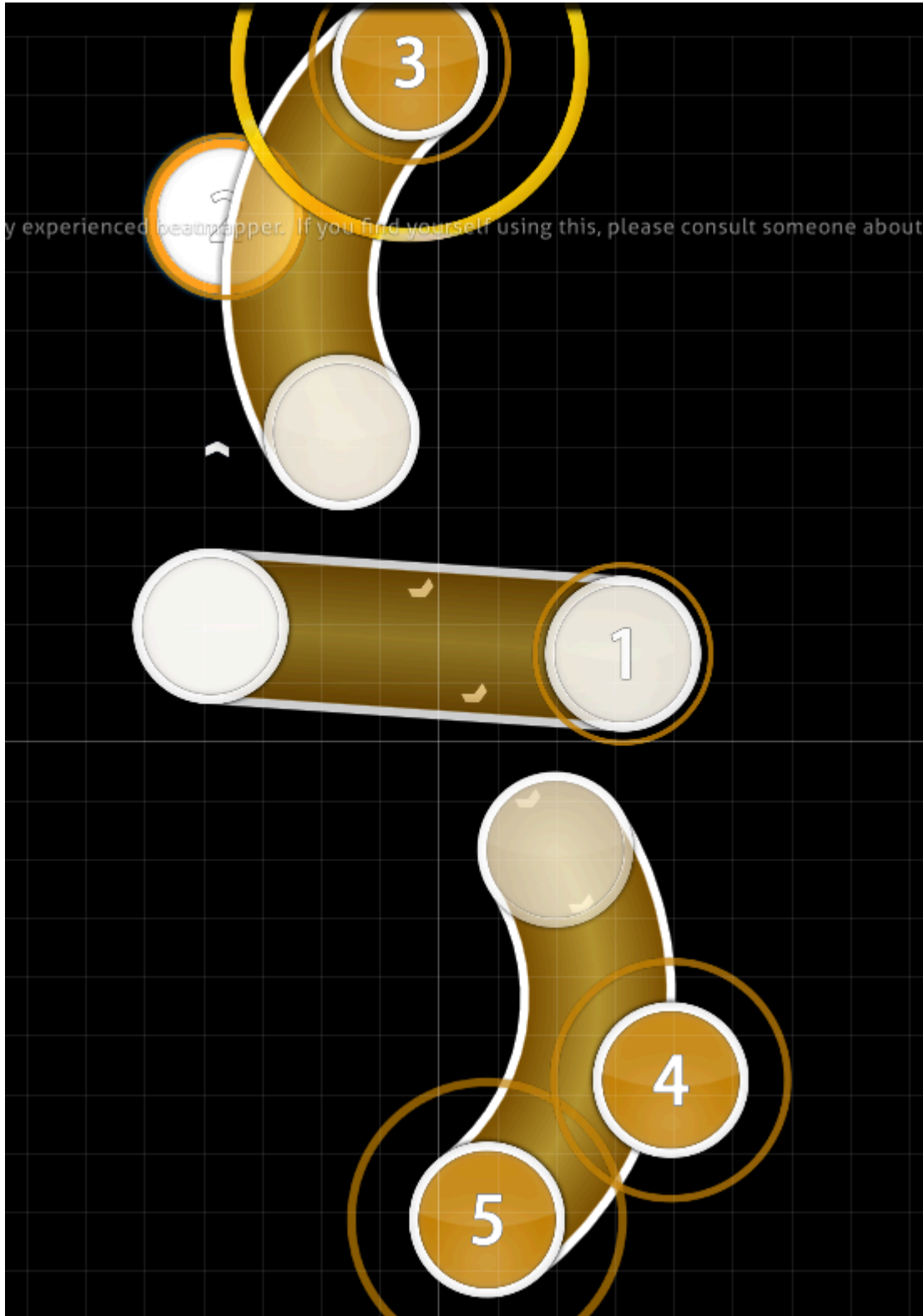
There's better relationships here since there's symmetry and overlaps that are consistent and the tilt isn't a damning 45° in the middle for no reason, the visual spacing all makes sense relatively etc.

It takes what I've been talking about since the beginning and shoving it into one pattern that makes sense

any questions?

We went from little parts of a pattern to "lets structure an entire pattern with everything so far" so im kinda throwing you into the deep end.

Celektus-28/08/2017

I think I sort of have a question

would you say that still looks fine or not? and if not why?

Mir-28/08/2017

uh playability wise what are you doing

aesthetically yeah, it's pretty good

Celektus-28/08/2017

because it all disappears overtime?

Mir-28/08/2017

The player still has the lingering overall image in their head, they'll feel it through play too. If you force a 120 degree pattern the player will move their cursor in 120° usually so even if they can't see the whole thing, they'll still know it's there.

Celektus-28/08/2017

Because I thought there would be a point where too many objects breaks the overall thing by having too many inconsistencies

Mir-28/08/2017

Doesn't look like many inconsistencies there, you took one part and copy-pasted it + rotated 120 degrees twice. Any imperfections become intentional, because consistently done through that type of thing makes it look like it was made like that to start with.

so, anything else?

@Halfslashed any comments?

do my cute mentees have anything to say

Celektus-28/08/2017

what about jumps?

Mir-28/08/2017

so silent

Jumps go about it the same way essentially, just you can be more lenient on the angles. Since it's not so apparent when you have a 45° jump nobody really cares cuz there's no slider there to show that.
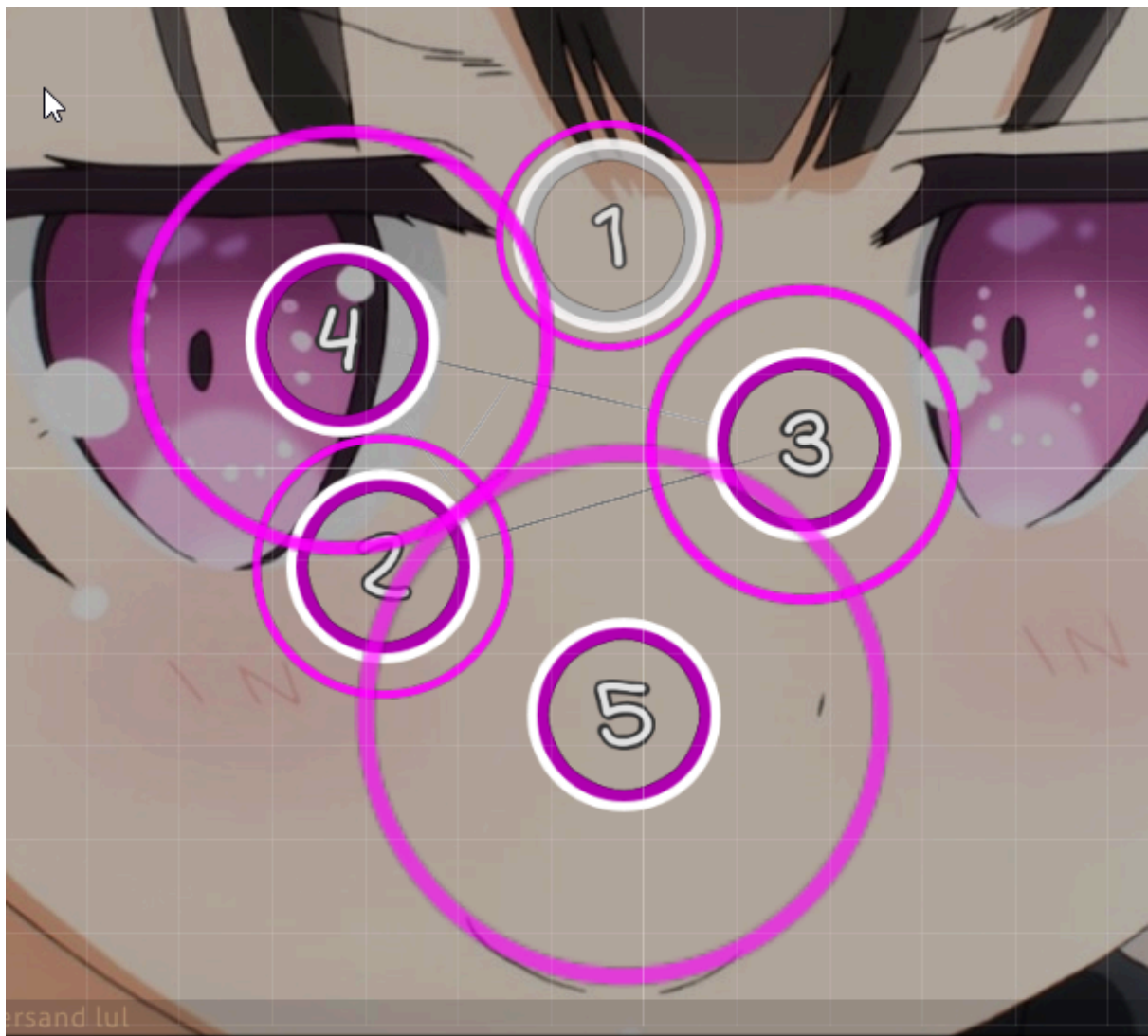
Mir-28/08/2017

that's a changing of visual spacing

Celektus-28/08/2017

also angles mir

Mir-28/08/2017

ehhh, really slightly

yeah

It'll play roughly the same though slight deviation due to not being correctly spaced.

While I asked about that Halfy pointed something out…

Halfslashed-28/08/2017

uhhh, you can kinda say "fuck angles" with curved sliders to some extent. Straight sliders look bad for a mathematical reason though:

err, off-angled straight sliders is what i meant

arctan (9/16)

Mir-28/08/2017

off-angled meaning not geometrically aligned meaning 69 degrees is not aesthetic. Don't do it.

I should make a map with sliders all at 69 degrees to some shitty pop song about ass

oh wait..

Halfslashed-28/08/2017

that will give you uh

Halfslashed-28/08/2017

29 degrees

So if you rotate an object more than 29 degrees from the x axis, it will look jarring to many people due to them playing on a 16:9 ratio screen.

As far as the y axis, your best bet is to stick less than...

Celektus-28/08/2017

can you show an example?

b00-28/08/2017

But do you guys actually rotate sliders at exact degrees. I just kinda use the rotation tool and eyeball if its the right angle or not. But thats why my maps are bad. Btw, what's wrong with something like 85 degrees, or 95 degrees straight sliders.

Mir-28/08/2017

there's nothing wrong with those

those are tilted +-5 from 90

so they're fine

Mir-28/08/2017

What Halfy's saying is there's a mathematical leniency

that I didn't know about lol

Celektus-28/08/2017

I didn't really get if you mean the rotation or the curve of sliders?

Halfslashed-28/08/2017

i'll screenie 1 sec…

well even math isn't perfect lol
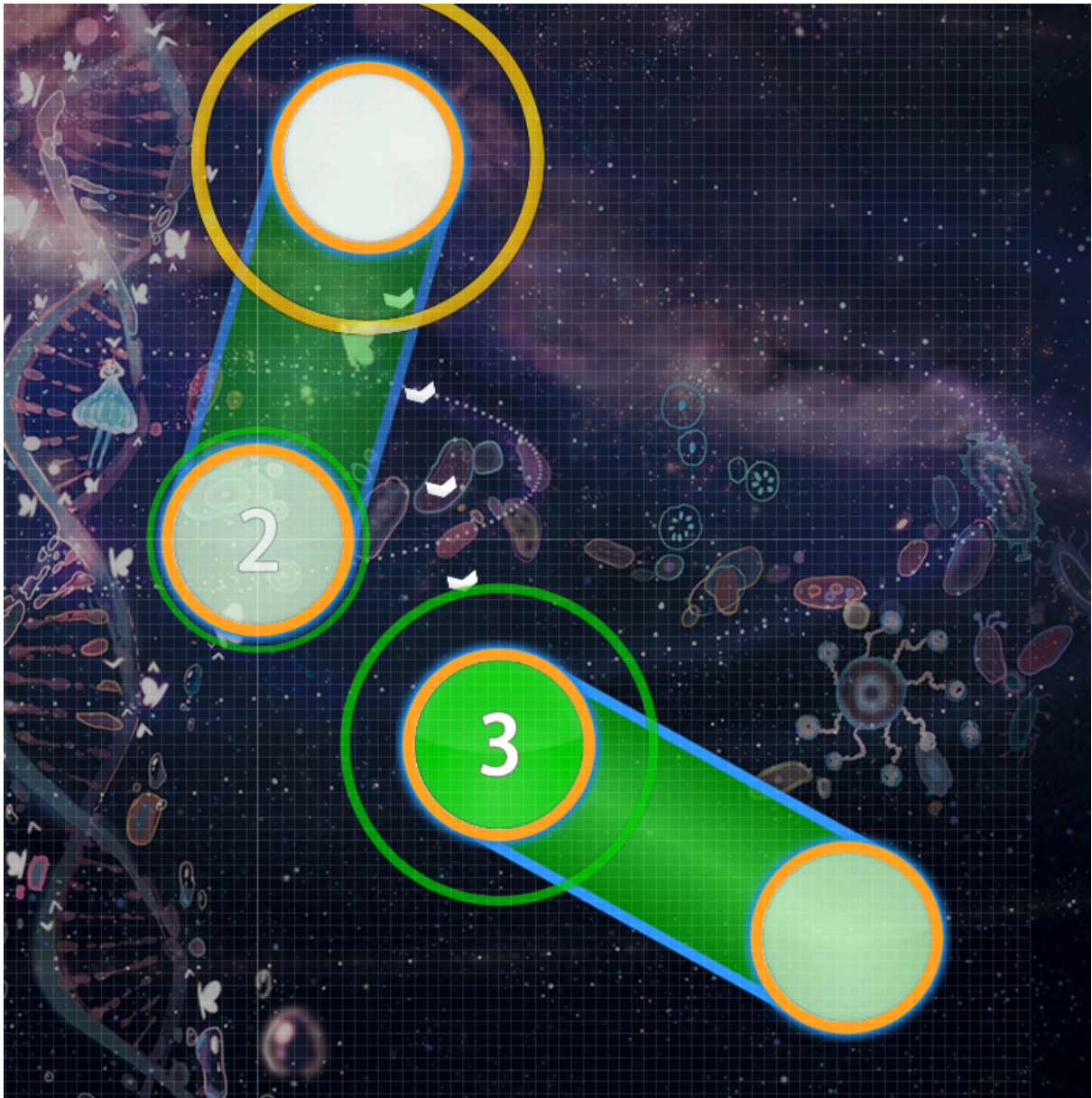
Also using a rotation relationship between objects like 45 degrees is acceptable, or pretty much any angle. But yeah that's pretty much all from me then.

Mir-28/08/2017

That's all from me too

As a closing word just practice, aesthetic isn't easy. So your maps won't look like cute cakes with sugar and glitter after this lecture.. thing. But you'll at least know some basic to help you get started.

after some talk on priorities of Visuals vs. Gameplay…

Mir-28/08/2017

You should try to weave your patterns around into your map to follow these "rules" and make them playable . You should base your patterns on the song, not vice-versa, some patterns only work on certain songs.

I think it'd be better to map a song with aesthetics in mind while adapting the aesthetic style to its musical structure, and see what you end up with.

Discussion ended with some privat talk and shitposting of some

Aesthetic   *looking examples*

Movement Part 1.

Discussion by Halfslashed

Spacing Emphasis

Halfslashed-27/08/2017

alright, so we'll start with spacing emphasis

That serotonin map was your best usage of spacing emphasis, right?

Celektus-27/08/2017

not really, I'll get my newest example

the map https://osu.ppy.sh/s/656954
my diff: https://puu.sh/xkU4x.osu

Halfslashed-27/08/2017

This is spaced more like a Hard difficulty than an Insane. The low frequency of jumps indicates an overall lack of spacing emphasis.

So tell me, what do you want to emphasize for uh

00:21:504 -

drums or guitar? or vocals even

Celektus-27/08/2017

guitar > Drums > Vocals

Drums and Vocals get sort of the same spacing while the guitar should have the most spacing

also it was originally meant as a light Insane

Halfslashed-27/08/2017

doesn't matter

anyways, I've got some issues with the rhythm but that's not the focus here. Only using spacing emphasis on guitar is leading the rest of the map to feel really slow paced.

Celektus-27/08/2017

I thought that was more fitting for that section, since it's not really intense in my opinion

Halfslashed-27/08/2017

You have to think of it in terms of how many instrumental layers there are. That not only affects your rhythm density, but it also affects the amount of movement you've got going on. I'm not saying use jump spam but you probably want to space to an additional instrument as well.

Celektus-27/08/2017

like Drums?

then different movement for guitar or bigger jumps?

Halfslashed-27/08/2017

pretty much - ideally *different* movement

Celektus-27/08/2017

makes sense but I tried to keep it deliberately down

sort of didn't go well

Halfslashed-27/08/2017

alright, well, let's take a look at the kiai then

01:10:802 (1,2,3,4,5,6,7,8) - what's going on here

Celektus-27/08/2017

I think I wanted to make this more spaced, but maybe should've done that at 01:11:288 (4,5,6,7,8) -

since that's the actual climax

Halfslashed-27/08/2017

If you wanted guitar emphasis yeah, that also fits with the idea that you should be emphasizing section transitions too.

Alright, so the overall issue here is that you're not spacing to enough different beats and this was one of the issues in the uh Itoshiki map we talked about.

So, how you handle this (with spacing emphasis only), is you come up with about 3 different spacings. Or rather..

Yeah, 3 different spacings

let's look at 00:21:504 -

00:22:315 (3,4,1) - this could be your "base" spacing"

Or you could use a spacing a bit larger. The idea here is you want to have a basic level of spacing so when you raise it beyond that, the player can recognize the beats as being stronger.

Celektus-27/08/2017

that was supposed to be 00:22:315 (3,4) -

Halfslashed-27/08/2017

yeah it was

00:22:477 (4,1) - this however, could easily be considered a "medium" emphasis or think of it in any way you wish

This is for beats that are somewhat strong but aren't absolutely dominant even in the section. Downbeats, strong notes within measures, etc.

Celektus-27/08/2017

Essentially my base jump spacing was too small, it's not like actual jumps.

Halfslashed-27/08/2017

yeah, that is a problem

Then, you'd want to have a "high" spacing as well, one that you use for really strong stuff. I think usage is pretty obvious there.

Celektus-27/08/2017

yea I already tried to do that obviously, but too small

Halfslashed-27/08/2017

Mhm, be careful with light Insanes though. If you make it too much it won't be as much of a light one lol

Celektus-27/08/2017

it's already too hard actually

Halfslashed-27/08/2017

yeah, this is more of an actual Insane. Well, what the light Insane should be really depends on what the hard and the insane are like

Celektus-27/08/2017

so I'm confused I don't get how I'm supposed to space them further

Halfslashed-27/08/2017

Well since we already established that this isn't a light Insane (though it was supposed to be one), I treated it as such when I mentioned that. To get this to be a light insane you'd likely have to use a combination of reducing overall rhythm density, and you'd only use two levels of spacing. As well as limited consecutive jumps, etc.

But that's a lesson for another time.

What spacing emphasis comes down to is basically, over the course of each musical section you want to have a level of spacing per active instrument, and reduce or increase that depending on the intensity. As a rule of thumb.

Celektus-27/08/2017

so that you can relate it to the song etc.

Halfslashed-27/08/2017

yeah, this is Insane+ logic

Now, this brings up a point. What the hell is the point of Extras? If Insanes are what I described.

Celektus-27/08/2017

to break visual consistency of spacing further?

Halfslashed-27/08/2017

nah, most Extras build upon Insanes by having higher base spacings .and more consecutive jumps. In terms of gameplay elements, these are usually not progressions of difficulty.

Celektus-27/08/2017

yea but they also have more free room for 1/4 spacing and 1/2 stacking

Halfslashed-27/08/2017

Ofcourse they have more options, I'm talking about typical Extras here. They are made to satisfy the higher bracket of players.

So, with spacing emphasis alone, Extras are redundant. If there is a harder rhythm in the Extra, that isn't the case though.

or...

You can increase difficulty with movement related options.

Celektus-27/08/2017

or more difficult rhythms

Halfslashed-27/08/2017

yeah, so anyways

Before i talk about angles

00:22:315 (3,4,1) - this pattern is a good example of contrast

the difference in spacing between 3,4 and 4,1 is large enough to provide contrast

00:28:154 (1,2) - hypothetically though

if these notes were connected with

00:28:802 (3,4) -

there wouldn't be sufficient contrast

Celektus-27/08/2017

how do you mean?

Halfslashed-27/08/2017

3 hardly gets any emphasis from the spacing

Well, actually this is a bad example of it. This is probably the minimum for any sort of emphasis you would want to provide in terms of spacing.

It is basically a reminder that when you are using spacing emphasis, make sure there is actual contrast between strong beats and weak ones. Finding that actual contrast will come mostly from practice. But if you are not very self aware, you will end up like most anime mappers.

Celektus-27/08/2017

I still don't get how 00:27:829 (1,1,2) - lacks contrast

because It's the same spacing as 00:22:315 (3,4,1) -

Halfslashed-27/08/2017

I didn't say it does

Celektus-27/08/2017

well I get the overall idea of contrast so it's fine I guess

Halfslashed-27/08/2017

Right, actually instead of moving onto angles

since you brought up 00:27:829 (1,1,2) -

I will mention that in if you wanted contrast to 1 this is still weak

Celektus-27/08/2017

I don't get what you mean by connected

Halfslashed-27/08/2017

Alright - when I said "connected", I meant like what I showed you in the screenshot.

But anyways for the contrast. When considering spacing emphasis you need to think of it with regards to the clicking gap between objects.

00:27:829 (1,1) - spacing between these is really weak because it feels like moving between two circles with a 1/1 gap.

so 00:27:829 (1,1,2) - feels more or less like distance snap

Angles between circles

you pretty much know the basics, but yeah let me classify them

- back and forth,
- sharp,
- right,
- wide (obtuse),
- linear

those are the 5 categories of angles

that is also in order of comfort

Back and Forth

so back and forths are the most comfortable you can even have up to a 10 degree angle and it will have the same effect it's intuitive for this to be used for really strong sounds because there is so much momentum conserved between jumps

Celektus-27/08/2017

just to clarify by back and forth you also mean constant rotation changes?

or do you just mean REALLY sharp?

Halfslashed-27/08/2017

this is a back and forth

this is also a back and forth

but anyways yeah

Due to the freedom of motion you have it can make sense to use these for emphasis

but of course, as I said before.

emphasis is contrast

Did I ever say that? Well I'm saying that now.

Anyways, these also have a side effect of being increasingly stressful. When you repeatedly move back and forth, each successive jump will get stronger - this applies to all jumps, but is more true in the case of back and forths, until a certain point.

If you spam them for too long (more than a measure) you'll notice that it starts to play circularly. The "snappy motions" start to blur into an oval. That's something to keep in mind - so don't spam them .

Celektus-27/08/2017

like this?
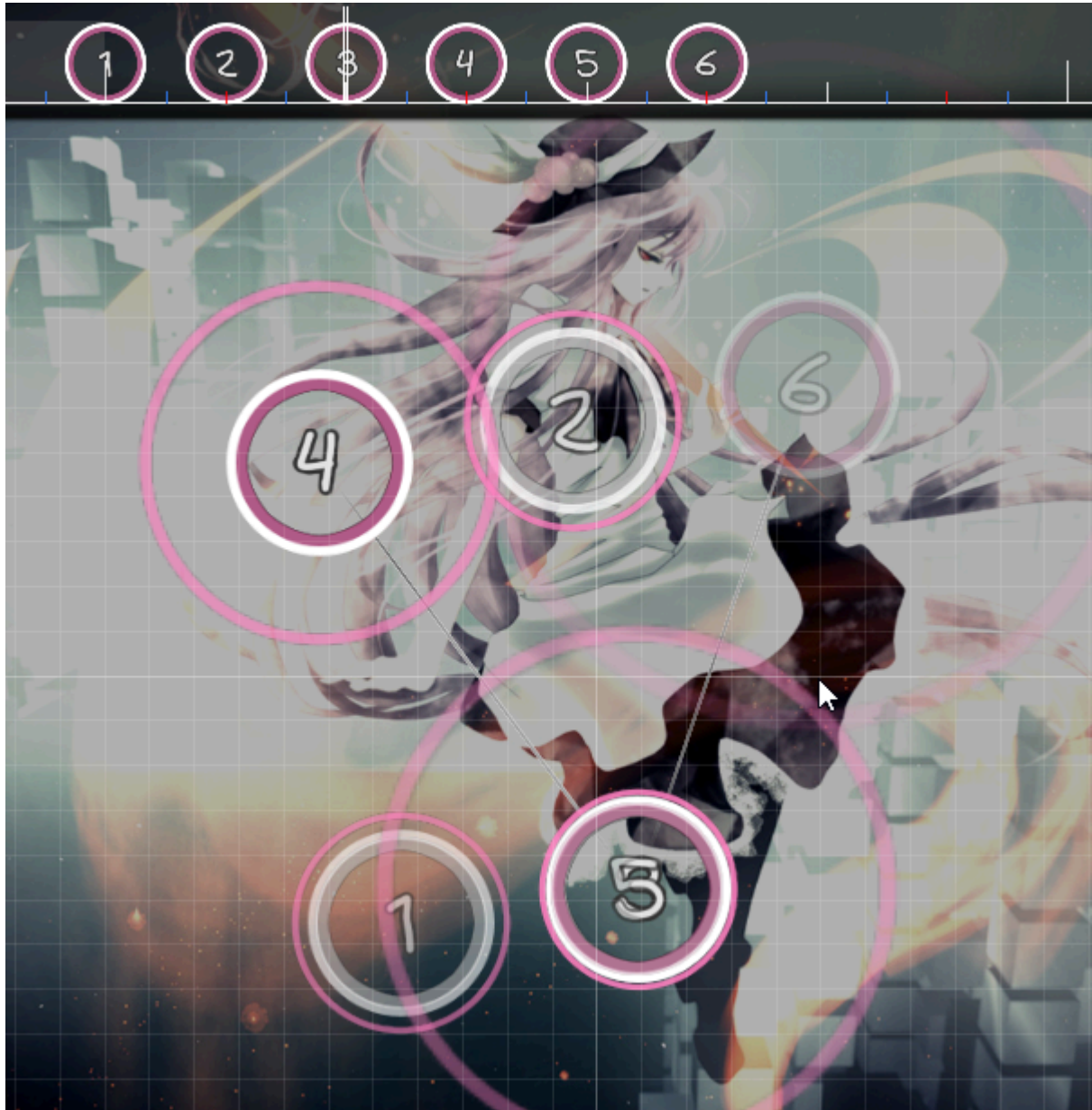
it becomes harder because of the constant change in rotation technically

Halfslashed-27/08/2017

well, that actually

has only one direction change

after some unnecessary talk…

Sharp Angles

Halfslashed-27/08/2017

yeah, repeating complex sequences get increasingly hard

without breaks

These aren't actually back and forths, these are sharp angled jumps. Which are close, but not the same. So, they don't have the repeated stress effect that back and forths have. They are still very comfortable though

Oh right, I should've mentioned this when I started but, all of these angles assume that the player is snapping. Since that is the most reliable way to hit jumps. The

reason that the higher the angle, the harder it is is because players who aren't actually proficient at snapping (the target audience)

wait, lemme go back a step

and ask you: how does snapping between objects work?

Celektus-27/08/2017

You accelerate towards the fist object then decelerate to stop and hit reliably... or in other words you move in one direction slow down by apply force the other way.

So it's the easiest to use the force in the other direction of where you started to move next to.

Halfslashed-27/08/2017

and that is what I mean by lacking proficiency in snapping.

Thank you!

Anyways, the original way to snap, and the proper way,

is to start moving - stop on the object as soon as you can - and wait for the approach circle

This method makes all angles play the same.

Celektus-27/08/2017

well if you would instantly stop

with no motion

Halfslashed-27/08/2017

Yep, and that's how you're pretty much supposed to do it.

However, human error makes this difficult, thus in trying to do this, or without recognizing that you actually need to .. You know, stop and read.

Means that you do what you described in said. So modern mapping takes advantage of the pitfall you mentioned. And that's how players will play maps, because it is immediately intuitive to use the momentum.

So rather than doing proper snapping on every angle (which is harder, but more reliable), they'd rather do this. And when combined with filler rhythm there's no real reason to read the approach circle is there, lol.

Celektus-27/08/2017

especially if you can rely on your internal metronom to always use 1/2

Halfslashed-27/08/2017

yep

Right Angles

Halfslashed-27/08/2017

anyways, so

That's what angles in this regard really mean xD

uhh

Anything under 90 degrees is comfortable, because snapping to the next object.

Celektus-27/08/2017

Pishi would say to not go over 75° also

if you want to go full sharp I think he means

Halfslashed-27/08/2017

Yep. I would say 80 but yeah, snapping to the next object still conserves enough momentum to feel comfortable.

So when you get to 90° or +- 15° if you wish. You get the right angle - which is where no momentum is conserved in going to the next object, this forces actual snapping behavior. Since the player has to come to a full stop and then start up and go on in a completely different axis of motion.

Celektus-27/08/2017

I have a question regarding that

You say it forces actual snapping, but I think some mappers actual intend to use wide angles (at high spacing) as a non snapping motion, would you say that's reasonable through like constant use or not?

Halfslashed-27/08/2017

We're not on wide angles yet, gimme a sec lol

I'll answer that. On right angles, you basically want to use them on sounds that are somewhat harsh. 90° and lower are pretty much what you want to use for most maps, and are the least context dependent.

Celektus-27/08/2017

or just should have different more emphasized movement

Halfslashed-27/08/2017

right

Wide Angles

Halfslashed-27/08/2017

However, wide and linear motions are much more context dependent. Since they are much more uncomfortable with the most reliable way of hitting notes for most players - which is this half assed snapping method we discussed earlier.

Consistent in terms of what sounds you use them for. yeah

But anyways, wide angles effectively force the cursor under three axes of motion.

(you can watch the -Mo- video for more explanation on that)

The Videos mentioned:
- *osu! Mapping Theory | Charles's physical response (Linear Momentum)*
- *osu! Mapping Theory | Clearing inconsistencies (Linear Momentum 2)*

There is less of a definitive transition between objects and this is better suited for a weaker emphasis angle wise. However, they definitely create a contrast, we'll talk about this more next week but..

Celektus-27/08/2017

with weaker do you mean sub spacing emphasis?

Halfslashed-27/08/2017

No, I'm talking about, if you were using jumps. All of these things I'm talking about are accounting for you using them for jumps.

Celektus-27/08/2017

would this only be the case if I'd use only 90°+ or also on a map with all angles?

Halfslashed-27/08/2017

The "less definitive" feeling"?

Yeah, that's a property of how the angle works. It's less definitive because of all of the different axes of motion. The angle itself forces more control from players using this half assed method of snapping.

Linear Angles

Halfslashed-27/08/2017

Then, linear. This one is the most harsh because it not only forces a full stop on the second note. But since the player wants to pull back to stop sharply, they then have to abruptly start their motion again to hit the third note. This takes away emphasis from the second note and places it on the third.

Now, as for the consecutive usage of right, wide, and linear angles. All of them function the same in that the more you use these, the more stressful it becomes.

Celektus-27/08/2017

Question, what about consecutive linear angles?

Halfslashed-27/08/2017

The last note of the linear sequence (assuming you have high enough spacing) will be the strongest.

Celektus-27/08/2017

But what about the ones until the last?

I assume the last will be **really** strong, but the few before it aren't really that weak either are they?

Halfslashed-27/08/2017

They have an increasing intensity because you realize, it gets harder to maintain control over each object. However, this really only applies to sets of 4, for linear.
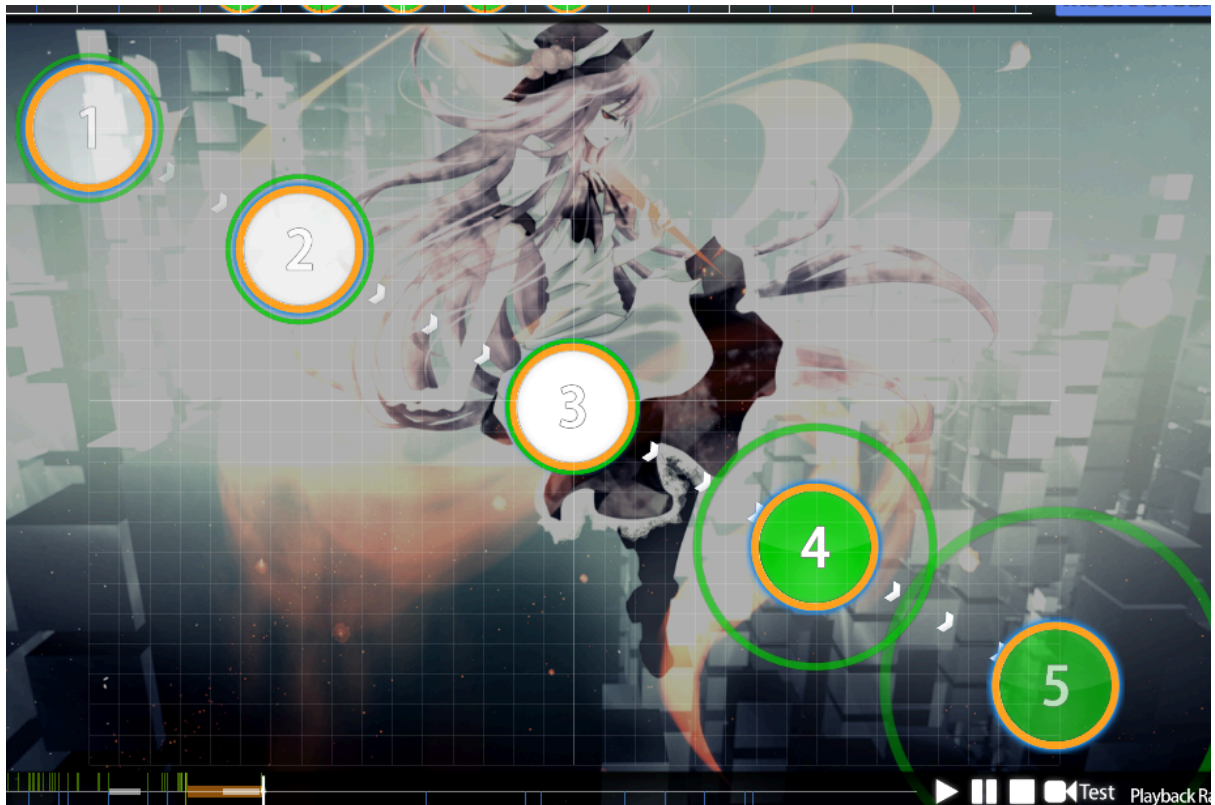
Celektus-27/08/2017

5?

Halfslashed-27/08/2017

Because there's something called "gliding distance", and that distance would be the largest distance that the player wants to not-snap. Or "flow" through objects, if you will.

alright, actually

sets of 5 as well

but as you can see

(this is unevenly spaced i know)

Celektus-27/08/2017

also works this way
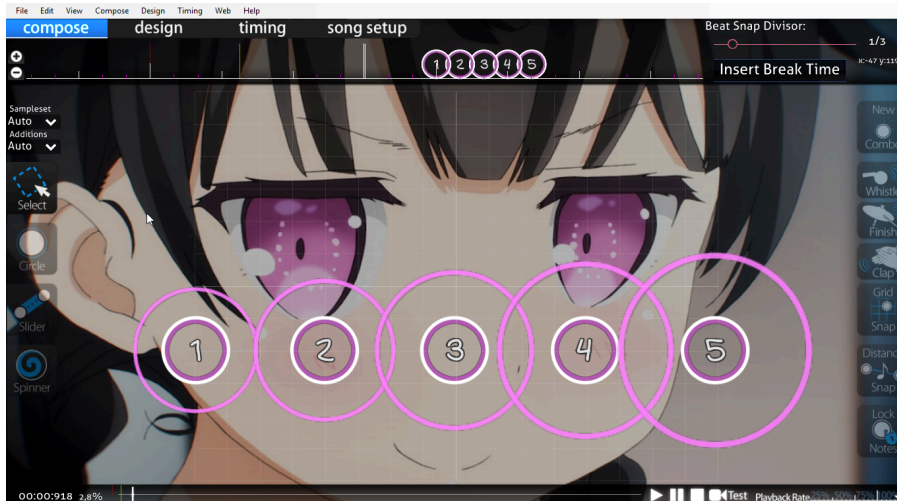
maybe even more depending on CS?

Halfslashed-27/08/2017

CS definitely is a factor, yeah

But basically, lines that are too long won't feel like actually moving.

err, they won't force snapping.

Celektus-27/08/2017

that sounds weird

Halfslashed-27/08/2017

it is right?

Celektus-27/08/2017

"won't feel like actually moving"

Halfslashed-27/08/2017

oh yeah, lol, it was

But yeah, that gliding distance is what influences that, and it does depend on CS.

So the takeaway here is that after certain distances most players will switch between snapping and "flow"ing. Because it's more comfortable to not snap for lower distances finding that actual distance will again be kinda hard to be precise, anyways.

but basically there's a difference between this (player won't snap this)
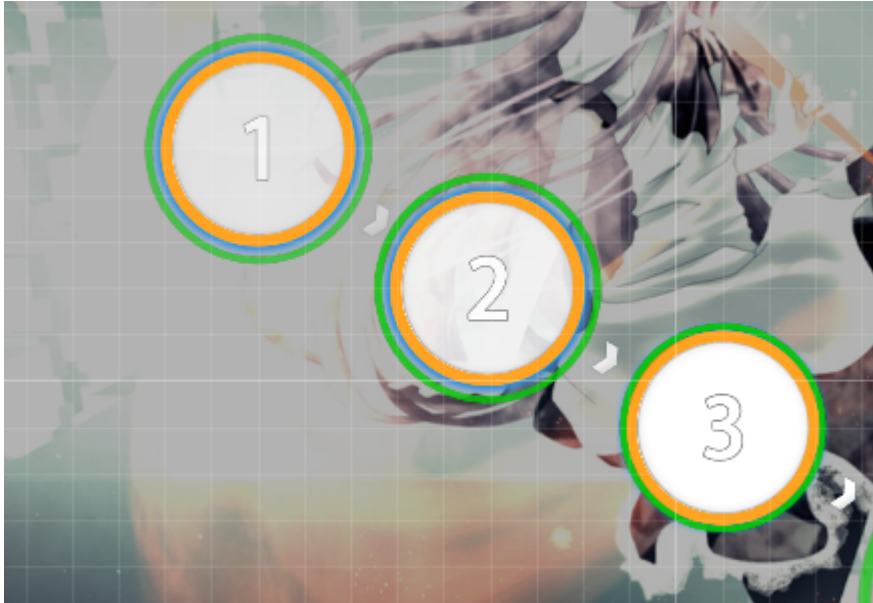
and this

Player will snap the second

btw, after a certain point of forcing strenuous snapping it becomes increasingly "rng" based due to the amount of fine tuning you need to hit something like, say 8 wide angles consecutively.

Celektus-27/08/2017

is it actually rng tho? cause it seems like it just takes absurd amounts of skill

Halfslashed-27/08/2017

Absurd amounts of skill, but with the half-assed snapping

no one has that skill, not even cookiezi (because he actually snaps properly lol)
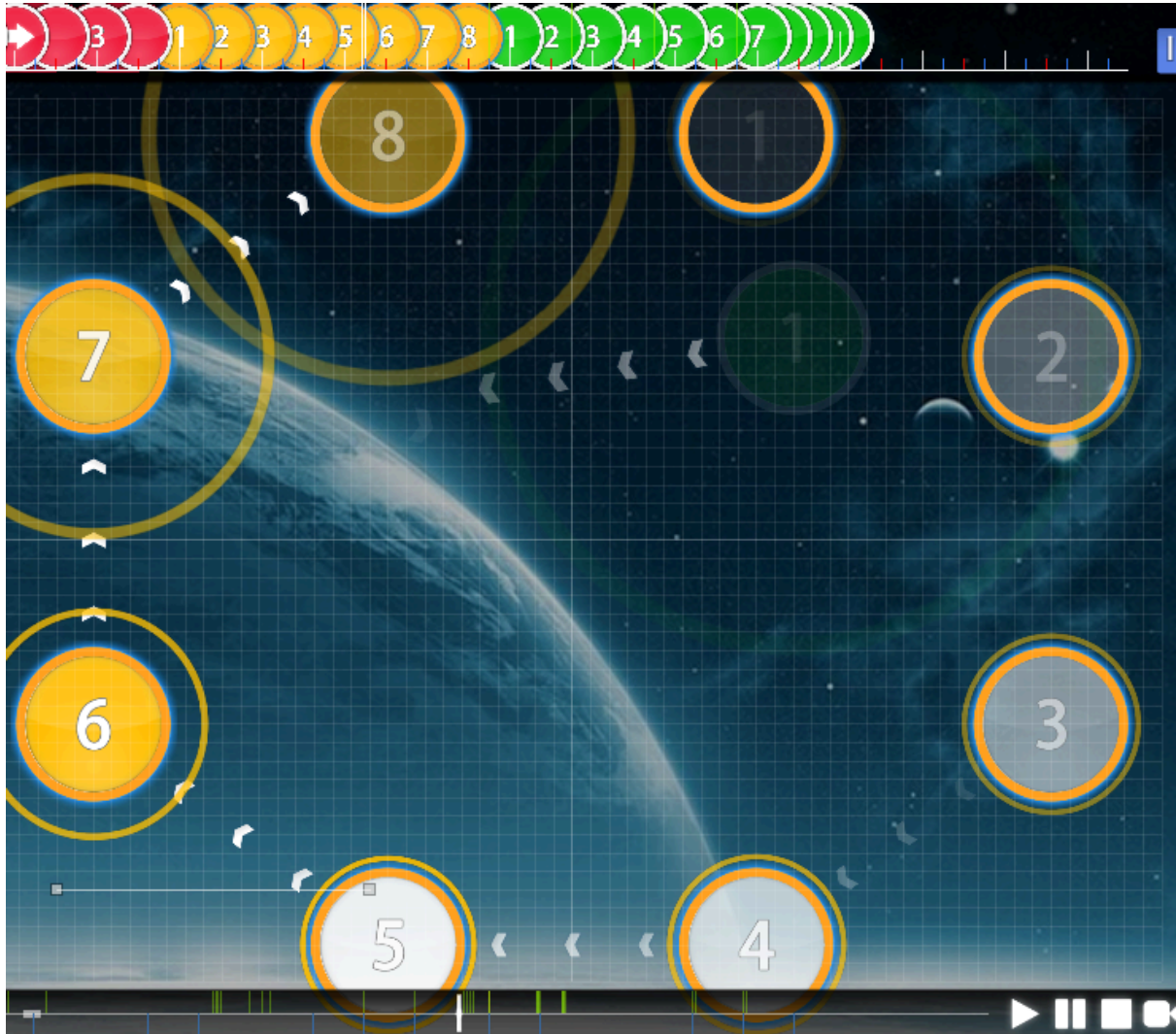
This is pretty unfair. But going up to about 5-6 is challenging, but not unfair imo

Celektus-27/08/2017

other people might already cry at 3

Halfslashed-27/08/2017

yeah but you know, players suck, if you're not convinced of that already.

anyways now I'll answer your question about uh, snapping and non-snapping at lower distances.

This stuff reverses. Wide angles are usually smooth curves, so its more natural to hit a low distance curve than it would be to snap it. So the order of comfort actually reverses below the gliding distance. Back and forths end up being the most stressful, err, uncomfortable. Linear ends up being the most comfortable.

brb - ask any questions you need to

Angles into Sliders

Celektus-27/08/2017

were we going to talk about sliders too?

Halfslashed-27/08/2017

yeah but just entry angles. It's basically because I don't want to talk about streams next week.

Celektus-27/08/2017

The head is a circle, so heads are essentially the same

Halfslashed-27/08/2017
lol mmmm not really

Celektus-27/08/2017

well wide angles into sliders are easier, but sharp is still more comfortable

Halfslashed-27/08/2017

sharp angle on the sliderhead
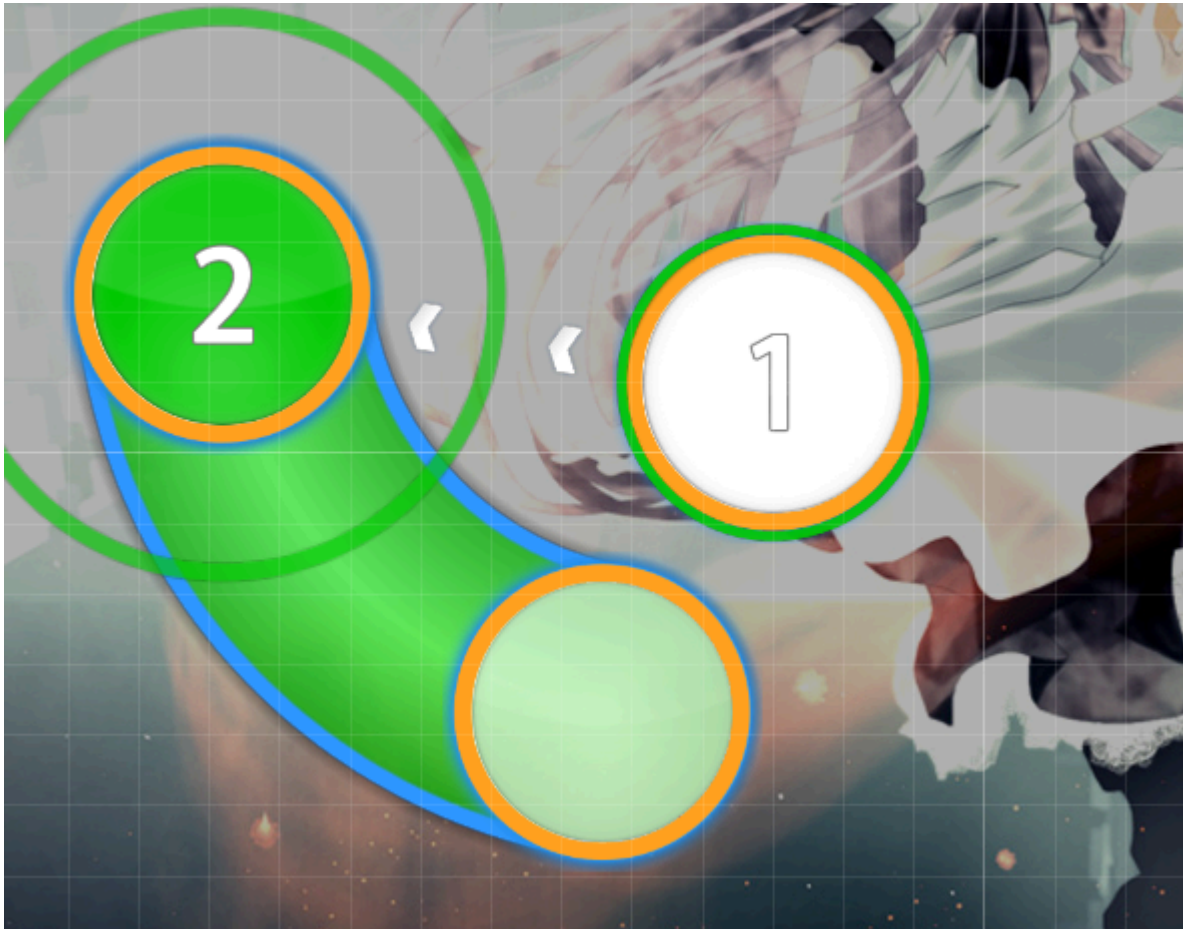
any sort of sharp angle on the slider head forces you to stop on it

whereas
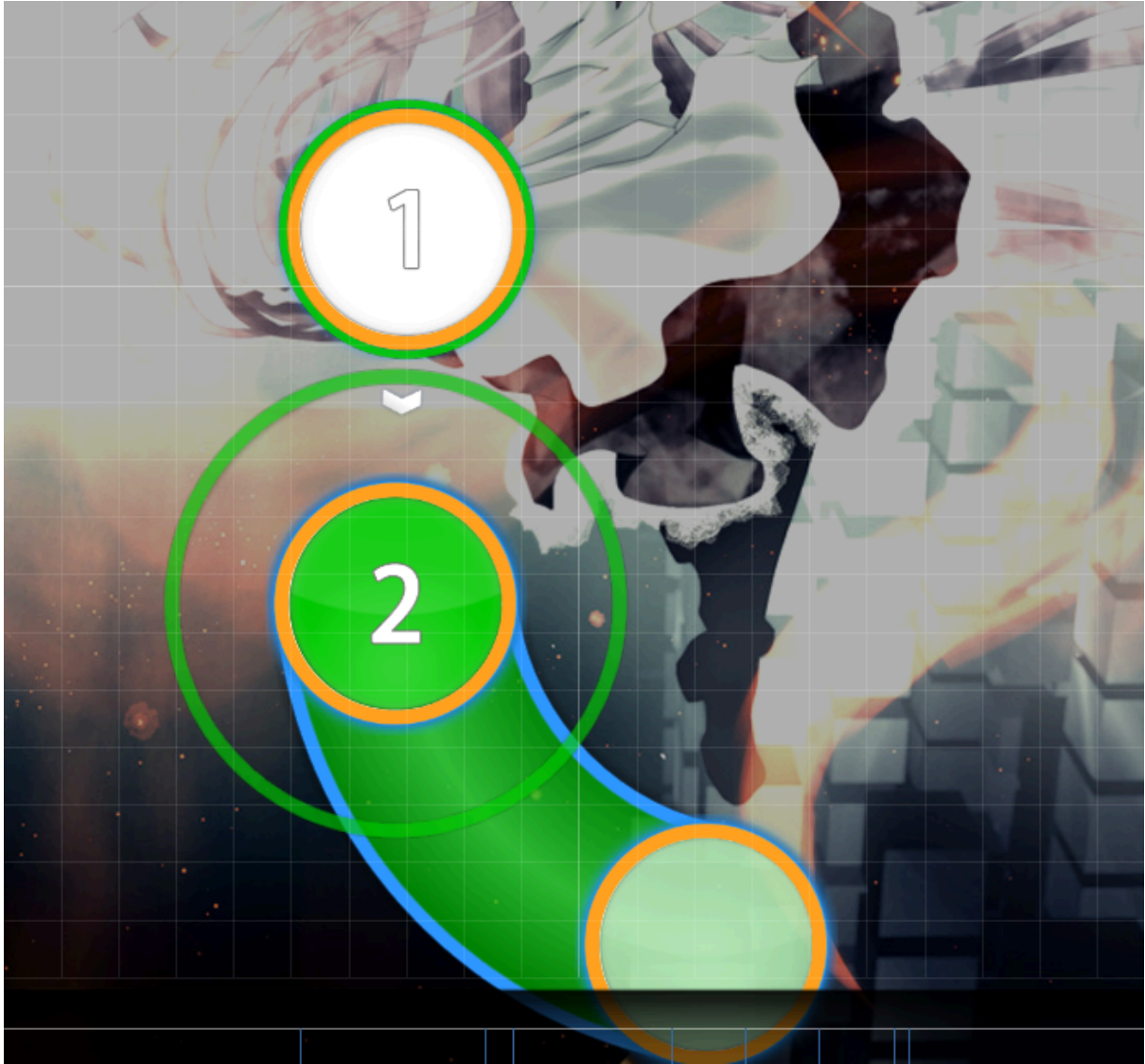
because a slider has its own speed associated with it

Celektus-27/08/2017

don't you need to show a object previos to 1?

Halfslashed-27/08/2017

nope - because a slider is effectively... 1.5 circles. It's kinda weird to think about it so I won't get too into that.

But essentially, whereas with circles we needed 3 of them to have any sort of movement difference..

Celektus-27/08/2017

when I say head I mean this
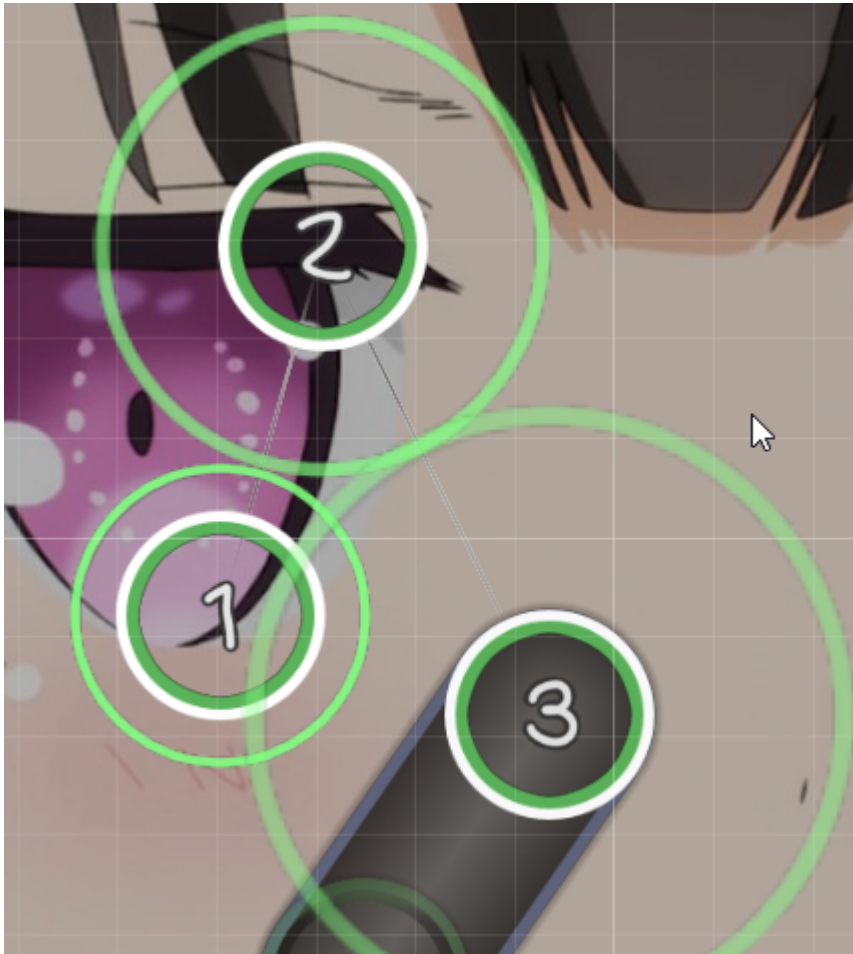
Celektus-27/08/2017

it's sharp jump to the head, I'm not referring to the body in any way

Halfslashed-27/08/2017

Tight, well you're correct.

I'm talking about the body though lol

When you involve the slider body and tail, only a circle and a slider are necessary to show a movement effect. Since sliders move at their own speed normally a player has to adjust their cursor to move at the slider's speed as opposed to speed between circles.

So anyways, the second image is more comfortable because all the player has to do is adjust their speed. The first one is less comfortable since it requires the player to stop regardless for the other he has to adjust angle too.

yep, so use those however you will

Onto streams. I mentioned we'd go over slider angles because streams and sliders are very similar.

Stream Movement

Stream Corners and Direction Changes

Halfslashed-27/08/2017

They both force the player to move at a constant speed, more or less (not always)

So, you know I like to use bends to accentuate objects mid-stream.

the first bend - the least definitive

all this is is an angle change, direction doesn't change. It's weak.

my favorite

This one is stronger since it also changes direction, but it's very natural to play. Since its natural to expect to change direction on a strong beat.

Celektus-27/08/2017

question would you say a S shape stream is then harder than your first example?

Halfslashed-27/08/2017

hell no, that's as easy as it gets lol

Celektus-27/08/2017

it changes direction that's why I ask

Halfslashed-27/08/2017

fair

then there's this.

This is the strongest type of bend, because although you end up going the same direction before and after the bend. You're basically forced to stop on this strong beat, as opposed to the first example where you can basically continue motion wise.

Celektus-27/08/2017

well can you explain at what point a direction change becomes hard?

Halfslashed-27/08/2017

In a stream? they really don't. Direction changes at low distances don't affect much. The inverse to that is (back to jumps for a sec)..

Celektus-27/08/2017

you mean they do in conjunction with angle changes

Halfslashed-27/08/2017

yeash

For jumps - direction changes are effective in showing emphasis, but not so much for streams. Angle change matters more, just like it does for lower spacing 1/2. And it's actually the same for sliders. That's why I went over slider entry stuff. because sliders and streams are very similar.

Curvature and Traveling Speed

Halfslashed-27/08/2017

now, there's only one more thing, err

Nah not only one more. But basically, something that often isn't mentioned with regards to streams is the effect of curvature. The sharper the curves (closer to circular), the more control necessary to hit the stream and the harder it is. The less curvature, the easier.

Celektus-27/08/2017

similar for really fast sliders

Halfslashed-27/08/2017

yep, but we'll talk about that more next week

Celektus-27/08/2017

also for really slow streams?

like super dense

Halfslashed-27/08/2017

Still applies, unless spacing is so low you don't have to move your cursor.

Celektus-27/08/2017

I mean that, because low spacing = low traveling speed

less speed = movement has less effect

Halfslashed-27/08/2017

yep

Also, a note about those angles, the wider the angle, the weaker it is. Those bends, that is

Celektus-27/08/2017

what about difference?

like...

what's harder really sharp a stream into another really sharp stream or a really sharp stream into a really wide one?

After a corner, actually whatever transition

Halfslashed-27/08/2017

Equally hard, but the emphasis they provide is different.

we'll talk about that next week

after some talking on complexity of lessons…

Halfslashed-27/08/2017

oh before I forget

You asked about wide angles that were intended by the mapper to be played by "flowing" through them? I think I've already made it clear that you shouldn't assume that the player will play like that but that is a method playing of playing. And some people will play it like that.

So all of the sharp angle stuff will be reversed like it would for lower spacing. The reason people don't do this though is, it's harder to predict the cursor path between objects for higher spacings.

Because you know, how it works at lower spacings is that since spacing is low you have room for error to adjust your cursor. But when that spacing increases, you have less room for error. So if you "flow" through high spacing wide angle jumps, it takes a lot more experience to know how your hand moves to consistently hit those.

By the way, that's how i play those lol

after more talking…

Halfslashed-27/08/2017

https://osu.ppy.sh/b/1184609

…but yeah, that map is a good idea why any player should learn how to aim by snapping and flowing

After some short questioning on Russian mapping…

Spacing within streams

Halfslashed-27/08/2017

anyways, onto streams, err

spacing within streams

That'll be the last topic, but basically streams are mostly constant spacing. However, increasing spacing after strong sounds to show overall intensity increase works.

you know this

- accelerating streams (increasing spacing incrementally between each note),
- deaccelerating streams are used to emphasis a more sudden increase or decrease
- split streams (or jumps within a stream) anglewise they follow the same rules as jumps a sharp angle to the next 1/4 will be more comfortable than a wide angle etc.

Celektus-27/08/2017

aren't split streams the HanzeR stream thing? I always thought people just call them Jumpstreams

Halfslashed-27/08/2017

I call them split streams. Jump streams is the same but yeah, Hanzer streams are a more cancerous version. Split streams are typically every white tick, Hanzer streams are every red tick, typically.

Celektus-27/08/2017

why cancerous? because of how people use them?

Halfslashed-27/08/2017

Alright, now that I've mentioned to you what they are, I will explain why i hate split streams. And by extension hanzer streams.

Basically, they are often misused to represent increases in the song based on its musical structure rather than actual strong sounds. When you think of a jump, you think of a strong sound. Rather you should be jumping to a strong sound rather than a weak one, or one of the same intensity.

Often cases the sounds aren't strong though. they're often equal intensity but appear a stronger based on how songs usually work. But yeah, that's why.

Hanzer streams, same deal. Except these are more often misused lol

Celektus-27/08/2017

is Miss You actually a good example of how to introduce them?

Halfslashed-27/08/2017

yes, if you can understand what he's doing. But yeah that map is excellent, we can walk through that someday.

But anyways I'm starving and we've gone through a solid 2 1/2 hours of information

Xd

hopefully you did learn something new

↓¶

Movement Part 2.

Discussion by Halfslashed

Angle usage effects on the playfield

Halfslashed-04/09/2017

okay

Anyways, so this is the first lesson where you might learn some new stuff.

So we'll start with the effects of angle usage on the playfield. Often times you'll be encouraged to use sharp angles due to being more comfortable. However, the side effect of using sharp angles is that you end up using less of the playfield.

The reason I mention this is because this can be combined with high overall motion around the playfield to create some good emphasis. Likewise, the reverse is also true - wide angles can do the same thing, except they use more of the playfield and linear angles, etc.

This is a commonly ignored factor when it comes to most maps.

Celektus-04/09/2017

well except most people use wide angles out of sliders

Halfslashed-04/09/2017

that too, yes, which are natural

it's not snapping, afterall

[Reol - Gokusaishiki [HW's Another]](#) take a look this - this an example of using the playfield to provide emphasis, though not necessarily through angles

It employs a quadrant based design for most of it.

03:30:303 - here's a part where it's really stressed that transitions between the quadrants are providing emphasis

The spacing alone is not the only factor here, this is 1/2 on a really slow song, after all.

Celektus-04/09/2017

and it works even without sliders?

Halfslashed-04/09/2017

correct

quadrant based design, yes

The reason it provides so much emphasis is because of the overall cramped motion

You often hear "spread your placements across the playfield" to avoid cramped motion. But if you think of it, you can use cramped motions to effectively express a part of the song. However, you need to be extremely deliberate about it.

Celektus-04/09/2017

what would be something unjustifiable through quadrant based design?

Halfslashed-04/09/2017

changing quadrants too frequently

Celektus-04/09/2017

that's it?

Halfslashed-04/09/2017

pretty much, yeah

The trade off is it limits your spacing options heavily since you have to use really big spacing for most emphasis.

Celektus-04/09/2017

does this also apply to some other kind of symmetrical quadrant?

ehh, geometric

Halfslashed-04/09/2017

I mean, I guess it does but I wouldn't try that.

It'd be a less obvious design choice

Celektus-04/09/2017

not symmetric

Halfslashed-04/09/2017

oh you mean like, hexgrids?

Celektus-04/09/2017

not really

more like 3 triangle quadrants?

like 3 big sections of the playfield

Halfslashed-04/09/2017

Three triangle quadrants… what the fuck lol

I mean, the big idea here is just using lots of movement across the screen to contrast with overall smaller movement, to provide a different way of emphasizing stuff that can work with lots of different designs but..

Celektus-04/09/2017

I assume doing it on sections starts would be the best

Halfslashed-04/09/2017

yeah, probably for the better

Celektus-04/09/2017

interesting that would also clearly fill the playfield always consistently

Halfslashed-04/09/2017

yep, so it's just an idea to think about

Any other questions regarding using the playfield as emphasis?

Rather using motion across the playfield to create emphasis*, other than the obvious one of "how can I do that without just using stupidly large 1/2 spacing"

after some joking about big 1/2 jumps…

Spacing of non-1/2

Halfslashed-04/09/2017

The natural step would be to use things that aren't as stressful as 1/2

notably, 1/1 spacing

Celektus-04/09/2017

or 1/2 sliders?

Halfslashed-04/09/2017

yep, the most common way that people represent 1/1 nowadays is through a stack. This is to create a visually different spacing from the highly variable 1/2

However, due to how people SHOULD be snapping,

Celektus-04/09/2017

that's more for Hard diffs I guess

Halfslashed-04/09/2017

actually no, stacking for 1/1 is done for up to Extra lol

including Extra actually

Celektus-04/09/2017

I know I mean it would be more appropriate

Halfslashed-04/09/2017

right

Well maybe not due to uh, distance snapping in Hard. Probably most appropriate in an Insane if anything

Celektus-04/09/2017

since Hard is where you learn how to rhythm through visuals

Halfslashed-04/09/2017

But yeah I guess that case could be made

Anyways, they can read the approach circle for 1/1 spacings, or judge 1/1 based on note fade. It's of course, not as easy as giving them more than 1/1 to read the approach circle but it can be done if the skill is developed.

So, how this tends to work is, if they're snapping, they will snap to the circle and wait.

They'll be waiting for twice as long as they would be for ½, which is usually a long time.

Celektus-04/09/2017

can the case be made that it's also more appropriate the lower the BPM is relative to the intended difficulty?

since I imagine a 5,8* 280 BPM map would be a bad case to use that

Halfslashed-04/09/2017

probably yeah

well, that's double bpm territory, so 1/2 would be the 1/1 i'm talking about right now

err, 2/1, sorry

Celektus-04/09/2017

yea

Halfslashed-04/09/2017

So normally, 1/1 gaps create a pace drop and such is true for when people stack. Except it's often misused in places where the song doesn't actually indicate a stop but rather just for "visually different spacing".

Often instruments are playing, usually with held sounds.

Celektus-04/09/2017

ok so you wanted to talk about it being spaced, in case my interruption made you lose track

Halfslashed-04/09/2017

or maybe you just wanted to skip something unimportant

right, it's all good

So, when you want to keep cursor pacing moving during these parts, it makes sense to use some big 1/1 spacing. We're talking cross screen or a bit under that, at least 2/3 of the screen.

Because 1/1 is a large amount of time, the player effectively crawls across the screen, since they don't have to do it quickly. You'll often see people having issues handling this (I know I did). Because they aren't used to moving across the playfield like that without snapping really hard. And if they try snapping really hard, it will feel out of place.

However, because of the amount of motion across the playfield

Celektus-04/09/2017

oh it's also possible on that HW map since it's so slow right?

ohhh

Halfslashed-04/09/2017

which HW map, HW does this a lot

Celektus-04/09/2017

the example you showed

Halfslashed-04/09/2017

yeap, exactly

It's a bit of a middle ground, but more or less yes. That's why it works

[Fear, and Loathing in Las Vegas - Let Me Hear [Extra]](#) let's look at this

00:20:746 (1) - particularly this measure

this is some of the best 1/1 spacing usage you'll see, ever

Vertical cross screen into horizontal cross screen into a 1/4 stream with low 1/1 spacing following it

1-2 is good for keeping the pacing

2-3 is large enough to provide emphasis

7-1 is interesting

Because there's a held sound there but it's not expressed with a slider or a stack. The reason a stack wouldn't work is due to there still being an instrument playing through that, despite it being a background one. However, large 1/1 spacing wouldn't work either.

Celektus-04/09/2017

cause it wouldn't emphasize the sounds well

Halfslashed-04/09/2017

correct, it's not exactly an intense transition. And this shows that you can actually use 1/1 spacing like this to express held sounds in the case that you don't want to use a slider. There's also a rhythmic reason that this works but we'll go over that on friday.

Celektus-04/09/2017

would a extended slider "work" too?

Halfslashed-04/09/2017

no

Celektus-04/09/2017

on 7

Halfslashed-04/09/2017

no

Celektus-04/09/2017

ok explain

Halfslashed-04/09/2017

friday

XD

Celektus-04/09/2017

poisadhgaüsg

Halfslashed-04/09/2017

but for now, it basically creates too dense of a feeling

Celektus-04/09/2017

that's enough for now

Halfslashed-04/09/2017

The idea is that there is a small amount of motion so the player can snap and hold, but it won't be overbearing, or they can slowly crawl over to hit it.

3/4 spacing, it's honestly really context dependent, so we'll probably talk about that more in 2 weeks.

Celektus-04/09/2017

how many contexts are we potentially talking about?

Halfslashed-04/09/2017

at least 3

probably 4

- spacing it like 1/2,
- stacking it,
- cross screen,
- etc.

so probably 3, but yeah that's for later

Halfslashed-04/09/2017

as far as 1/4 spacing we kinda talked about it already but yeah

so really this was just a 1/1 spacing topic lol

any questions though?

Celektus-04/09/2017

about 1/1 spacing?

Halfslashed-04/09/2017

yeah

or anything related to spacing, really

Celektus-04/09/2017

ehmm, so we talked about spacing on non strong sounds 1/1 right?

Halfslashed-04/09/2017

Well you can apply the logic to strong and non strong, but again it really depends on

Celektus-04/09/2017

but not to contrasted without anti jumps or something?

Halfslashed-04/09/2017

right

Celektus-04/09/2017

in what cases would that be a thing instead of 1/2 sliders for the sake of filler?

I mean did you mention when to use 1/1 and when not?

Halfslashed-04/09/2017

that's more of a rhythm question

Celektus-04/09/2017

it's about rhythm density?

or staccato legato stuff right?

Halfslashed-04/09/2017

yeah, like, really strong

Spacing wise what I want you to get from this is, don't stack all of your 1/1

oh right, spacing over 1/1 movement wise. Usually the snaps are large enough that the player will watch them fade in. So the player snaps to it and holds on. But let me just say sitting around for 2/1 doing nothing is boring as fuck

Celektus-04/09/2017

yea

unless that's intentional, like really calm

maybe even easy map calm section calm

Halfslashed-04/09/2017

Spacing that though is more of an art, I don't think I can teach that xD

You'll just know when it's too much or too little in play, or through experience.

Celektus-04/09/2017

it's context dependant

not sure If I have anything to ask about 1/1

Halfslashed-04/09/2017

okay

alright, now the fun part of slider leniency

↳¶

Slider Leniency

Halfslashed-04/09/2017

So, as you're already aware, the stress of motion from a sliderhead is dependent on the clicking gap between the head and the next object.

This is why rules for 1/1 spacing apply to 1/2 sliders with 1/2 gaps after it, and why 1/4 sliders with 1/4 gaps work like 1/2 jumps, etc.

Celektus-04/09/2017

question regarding that

After this part the discussion got a bit convoluted with my questions about slider leniency overlapping examples about the next topic so I decided to move things related to the question out of order...

is DS reliable when talking about that? like if my 1/2 circle jumps are 1,7x DS should my slider jumps into the same sound be 2,7x DS?

Halfslashed-04/09/2017

no

Something people often forget, is that since 1/2 sliders with 1/2 gaps often feel like 1/1 gaps in terms of aim. If you want to emphasize something after a slider with a jump ,you need really big spacing for it.

Celektus-04/09/2017

well regarding DS what does that mean?

double the 1/2 spacing?

Halfslashed-04/09/2017

ignore DS

There isn't a fixed rule that relates to DS for this. But like, if you want a big jump for example you'd be doing 2/3 of the screen or more. Just like 1/1 spacing that you want to emphasize

Again, this distance is between the head and the next circle, this is why you can't rely on DS because we're not even including the tail.

Celektus-04/09/2017

I just think it's hard to relate that to sections of music without thinking about DS according to SV, because I think I'm sort of doing it.
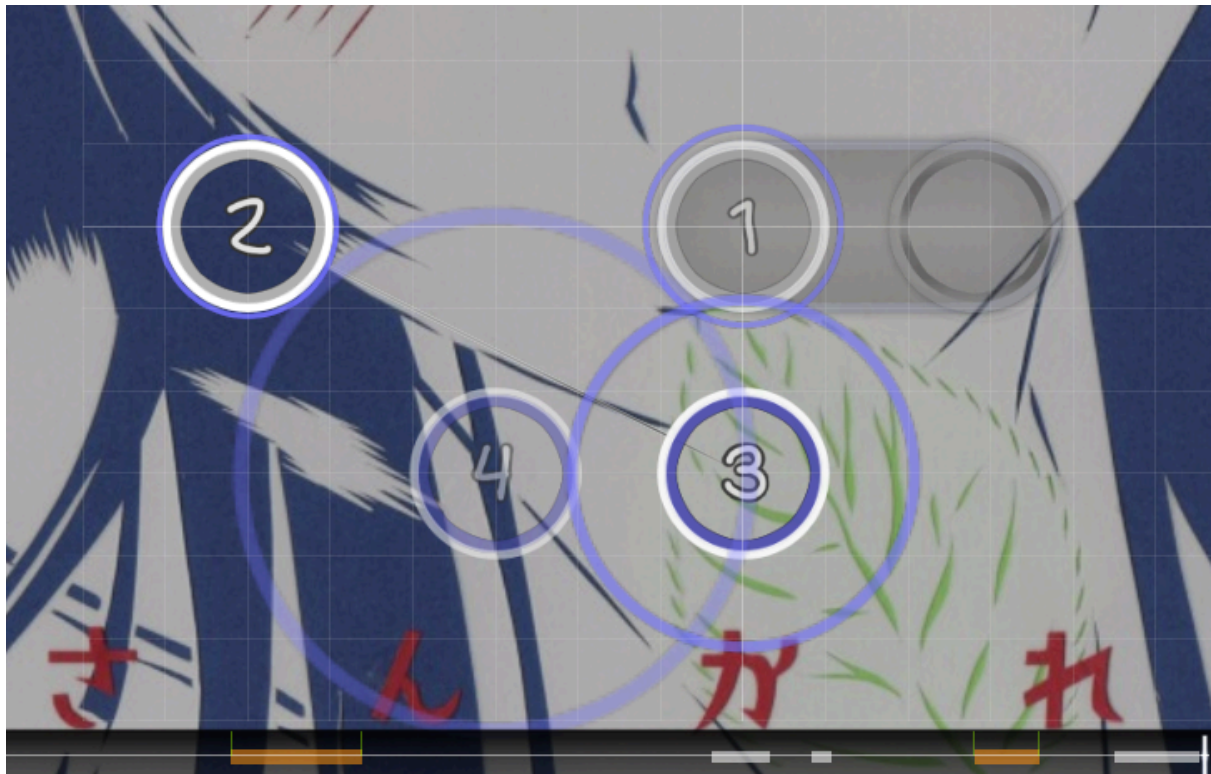
Is the tail really irrelevant? Because then I think I get it.

Halfslashed-04/09/2017

With regards to how the feel of the spacing, yes. However now we'll get into the next part of this.

Celektus-04/09/2017

so is this the same sort of?

Halfslashed-04/09/2017

no

Talk about the next topic...

Celektus-04/09/2017

I still don't feel like I get the relation in spacing so again.. I this sort of the same spacing?

Halfslashed-04/09/2017

oh

Kinda, but they have different feelings. The first will be more of the player dragging their cursor, the second is more snappy.

Celektus-04/09/2017

since 4 and 3 aren't a jump?

let's just pretend they are

Halfslashed-04/09/2017

more like

Halfslashed-04/09/2017

because it's all 1/2

But in terms of emphasis, they're roughly the same

Celektus-04/09/2017

how about this?

cause I kinda think it's technically correct.. but the slider jump is out of proportion

Halfslashed-04/09/2017

3/4 is a 1/2 gap?

err

3 to 4 is a 1/2 gap

Celektus-04/09/2017

1/2

both

it's supposed to be 4 into 3, I f*cked up

Halfslashed-04/09/2017

uhh, yeah that's a massive jump

Celektus-04/09/2017

I'm asking if the above is the same as below

Halfslashed-04/09/2017

not even close, it would be closer if uh

the slider was 3 and the circle was 4

Celektus-04/09/2017

it's out of order

let's just ignore that

Halfslashed-04/09/2017

alright, it'd basically be

a bit too big actually

very similar, but a bit too big

Celektus-04/09/2017

again I was also thinking "this is technically correct but the slider jump seems to big"

so I'm assuming those overall might be better to be not 100% 1/1 jump spacing

Halfslashed-04/09/2017

pls lol

Again, will stress that jumps are big changes in spacing, and you don't want to spam them. Not every spacing increase is a jump. A jump is a massive contrast, or rather, big contrast at least

anyways

So for 1/4 gaps after sliders (assuming normal bpms and SVs), you have less room to work with. Whereas with 1/2 and larger gaps you have way more leniency. 1/4 gaps after sliders roughly have the range of uh… 1 and 2 in your most recent screenshot, or slightly bigger.

Celektus-04/09/2017

stuff like this should be fine if introduced correctly right?

Halfslashed-04/09/2017

yep, and this spacing for leniency is determined by the tail and the next object as opposed to the head and the next object.

So basically what I'm saying is: leniency to hit the next object is determined from where the tail is calculated and the next object. But overall emphasis is determined by the distance from the head to the next object

And as snaps get more dense (1/4 to 1/8) you have much less room for error this is why these 1/8 slider streams in Miss You are so hard to hit.

Celektus-04/09/2017

does that also make 1/4 jumps after longer sliders more stressed again?

Halfslashed-04/09/2017

yep, absolutely

However, this also means that if you make them too big, you're forcing the player to actually over-follow the slider. Or forcing the player to carefully follow a slider and then snap to the next object, basically.

Which creates less comfortable movement so I guess you can use that for emphasis but.. This is one of those things that can make your map play clunky rather than just "uncomfortable"

Celektus-04/09/2017

what about SV?

like fast vs. slow

Halfslashed-04/09/2017

Well as anything, you use fast/slow SVs for contrast. You can make the player feel the SV change more with a sharp entry angle like we discussed last week. Since the player has to stop on the head of the slider and then resume, this is especially good for fast SVs.

Celektus-04/09/2017

I think I'm understanding that more than before now

Halfslashed-04/09/2017

see, it all ties together, haha

Slow sliders however, you want the opposite ofc you want more motion into them since they are supposed to… Slow you down. You also want more motion after them.

Celektus-04/09/2017

makes me think of patterns like this (assuming the 2nd slider is drastically slower)

Halfslashed-04/09/2017

https://osu.ppy.sh/b/1118988
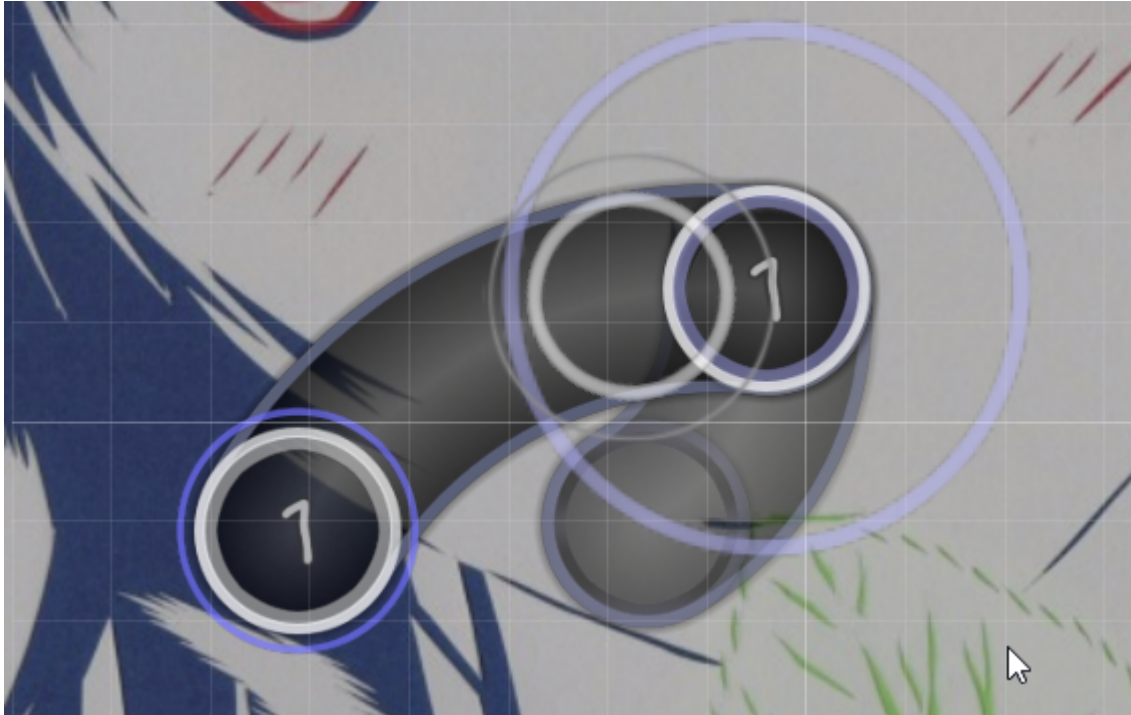
I honestly suggest you look at the whole thing quickly lol, this map has actual emphasis

00:28:170 - here are the slow sliders btw

Celektus-04/09/2017

00:25:370 (1) - is interesting

since it's not really sharp, so it's very different

Slider Tail/Reverse Arrow Emphasis

Let's go a bit back in the discussion to an example we skipped earlier…

Slider Tails

Halfslashed-04/09/2017

[nano.RIPE - Esoragoto [Bloom]](#) so let's look at a map

00:24:477 -

and this Cele is one of the methods of how you emphasize a slider tail

A method of emphasis is making something harder to hit than normal

00:24:477 - look at this measure and compare the difficulty of hitting the slider tails

00:24:477 (1,2,3) - between these

00:25:129 (3,4) - this

00:25:129 (3,4,5) - and this

arguably not the best example, however

00:25:455 (4,5) - due to the direction change 5 causes

and being placed directly behind 4, the player has to exert additional effort to hit the tail here

actually, no direction change here, that comes after

00:28:064 (5,6) - here's a better example

The idea is, the tail is emphasized due to additional pressure to reach it, and you do that by increasing spacing to the next object.

Celektus-04/09/2017

so harder movement out of sliders make the tail strong?

Halfslashed-04/09/2017

yep, however

It cannot replace the feeling of a click and due to increasing the spacing to the next object you're also increasing the stress on the next object with this method.

That's why it works so well with

as such, it works better, notice how it's raising in intensity

but yeah

Now Let's Jump to where we technically left off…

Reverse Arrows

Halfslashed-04/09/2017

so open up Let Me Hear again

[Fear, and Loathing in Las Vegas - Let Me Hear [Extra]](#)

00:01:833 (3,4,1) - we're gonna study this pattern

Celektus-04/09/2017

I think I sort of heard UC talk about this on one of his streams

Halfslashed-04/09/2017

yeah, he loves it

But anyways, this is the most uncomfortable way you can arrange entry and exit into a reverse arrow because it forces you to follow the reverse twice. From 3, you have to stop on 4, move to hit the reverse, then are encouraged to follow it through to the tail and snap to the next note, with little leniency due to a short length.

Celektus-04/09/2017

it also doesn't change direction right?

which is unexpected theoretically

Halfslashed-04/09/2017

Well actually, a reverse inherently changes direction. Like, that's one of the properties of a reverse. But the way 1 is placed .. Cele stop interupting Halfy >:(

Celektus-04/09/2017

I mean if 1 was on the side of 3 it would be inherently easier

Halfslashed-04/09/2017

.. you "changed direction" and then have to change direction AGAIN

Celektus-04/09/2017

yea that's what I mean, the direction isn't kept

Halfslashed-04/09/2017

mhm, sound familiar?

Celektus-04/09/2017

sort of?

Halfslashed-04/09/2017

The direction is kept but you have to do it twice in a short succession. This is similar to the harshest stream bend, conceptually.

Celektus-04/09/2017

or like zig zag jumps

Halfslashed-04/09/2017

kinda yeah

Zigzag jumps suffer though, from too many direction changes to provide emphasis. Because all of them have the same direction changes. Best way to provide emphasis with a direction change is to establish a continuous direction first, then break it

but yeah uh

Celektus-04/09/2017

I mean it might also be good if you don't want unnecessary emphasis

Halfslashed-04/09/2017

yep, but it is still stressful so be mindful of that. This arrangement has the player feel the motion of the slider before the reverse and after the reverse. However, it also stresses the tail.

Celektus-04/09/2017

btw what about? 00:07:050 (1,2) - is that then also more emphasized since it doesn't change direction as much?

Halfslashed-04/09/2017

Due to what we talked about a bit ago

nah, the thing about uncomfortable vs comfortable, is that uncomfortable is harder to play. Going from harder to play to easier doesn't make it stand out much more. But too much uncomfortable will reduce emphasis. Because if it's all uncomfortable then you're just making a map hard for the sake of being hard, rather than emphasis purposes.

Celektus-04/09/2017

unless you reverse ideas about them?

I mean it's then purposefully harder

Halfslashed-04/09/2017

Theoretically that could work but in practice I doubt it, and I doubt it would be received as such.

00:02:485 (1,2,3) - but anyways, let's take a look at this

This puts emphasis on the reverse but doesn't put it on the tail. The reason for this is you have to go out of your way to hit that reverse, but nowhere to hit the tail basically.

The first arrange on the other hand pretty much stressed every object with movement. Rather, the head, reverse, and the tail.

This one just stresses the head and the reverse so now what if you wanted to… stress the reverse without stressing the head?

sec

Celektus-04/09/2017

my first though would be to ctrl + G 2

moving it also up so it has no movement emphasizing the head

Halfslashed-04/09/2017

nope

Celektus-04/09/2017

oh wait I forgot to stress the reverse

Halfslashed-04/09/2017

yes, with what you posted you stress nothing

Celektus-04/09/2017

exactly

I tried to do that xd

Halfslashed-04/09/2017

00:05:094 (1,2,3) -

ctrl+g 2 here and you will see, the reverse is the only thing being stressed.

Celektus-04/09/2017

what about ctrl + g here? 00:02:648 (2) -

Halfslashed-04/09/2017

that one stresses the reverse and the tail

Celektus-04/09/2017

yea so I would need to move 3 up

on the other side of the slider than on but still upwards

Halfslashed-04/09/2017

I guess lol

Celektus-04/09/2017

like this?
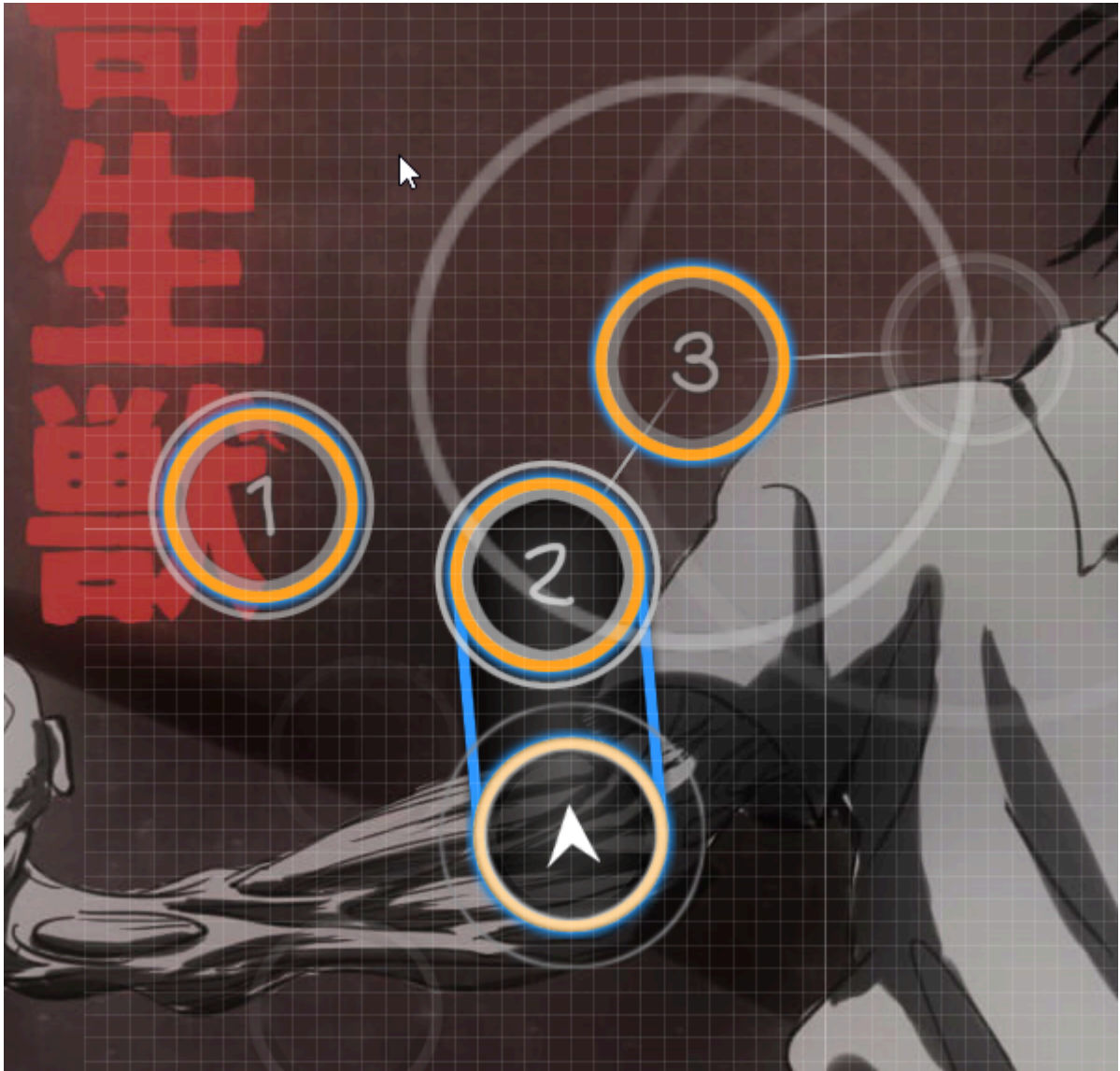
Halfslashed-04/09/2017

that stresses nothing

so anyways

There is a difference between ctrl+ging those reverses in both examples. The first one has a direction change, the second one does not

I dunno about the picture you just posted but, here the reverse and the tail are emphasized

here only the reverse is emphasized
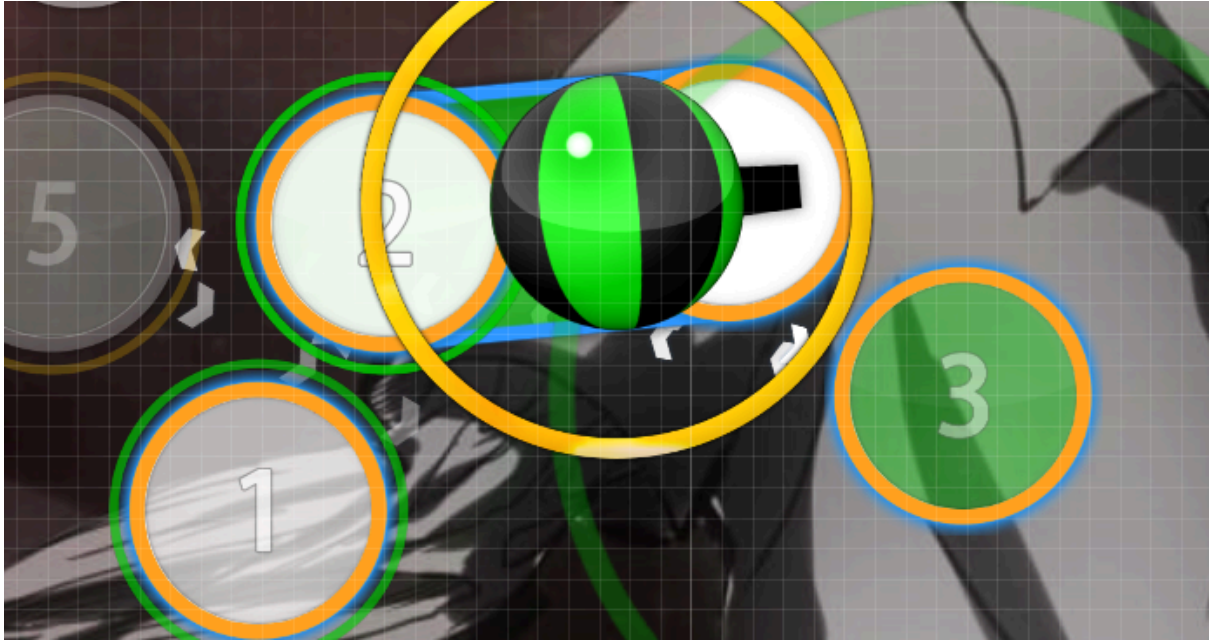
The direction change is causing this difference. But the other thing I want to mention here is that you reduce tail emphasis by having the third note closer to the reverse.

that pattern was made with that in mind
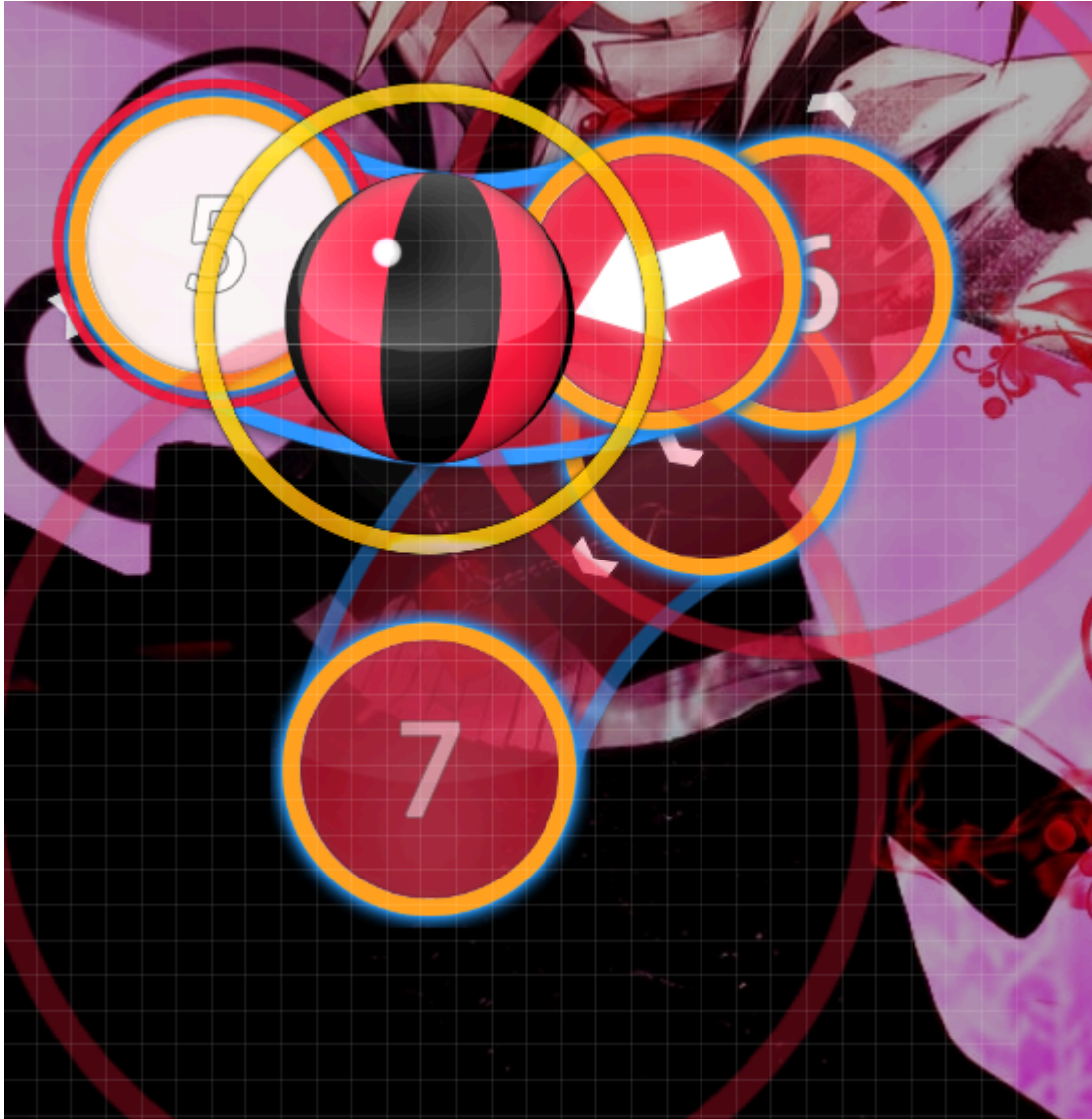
Celektus-04/09/2017

hmm, hard concept to grasp

Halfslashed-04/09/2017

Think of it like this: the harder it you make it for the player to get to the tail, the more emphasis you place on it. The inverse is true, the easier you make it for the player to get to the tail the less emphasis you place on it. But while you keep the emphasis on the reverse the same.

Celektus-04/09/2017

the sort of important part about all this is to differentiate filler from non filler if I'm not mistaken? + overall contrast

Halfslashed-04/09/2017

Well the thing i'm trying to stress here is, the harder you make it to do something the more emphasis you provide to it. The reverse is an application of that

alright let's see, anything else?

on that topic

Celektus-04/09/2017

I'm probably just unsure about when to utilize reverse specifically in conjunction with that

Halfslashed-04/09/2017

Most of the time you're not going to have a situation where you will want to emphasize the reverse but not the tail

Effects of Slider Shapes on Motion

Halfslashed-04/09/2017

anyways, the last component of the slider we haven't talked about is the leniency of following it. We've mainly talked about things dealing with the exit factor

So slider tails are actually processed 30 ms before they are snapped in the editor. This is only more noticeable at higher SVs. And that is where the player needs to be registered to be located to not get a 100 on the tail.

Additionally, there is a yellow circle around the slider ball in the editor (with default skin). As long as the player is within the circle, they won't break. This is the leniency associated with following a slider, and it interacts with all of that slider exit stuff we talked about.

Now, have I told you about

wave sliders?

we're not really on about shapes yet, but this is a good time to bring up an issue that comes as a result of focusing aesthetics
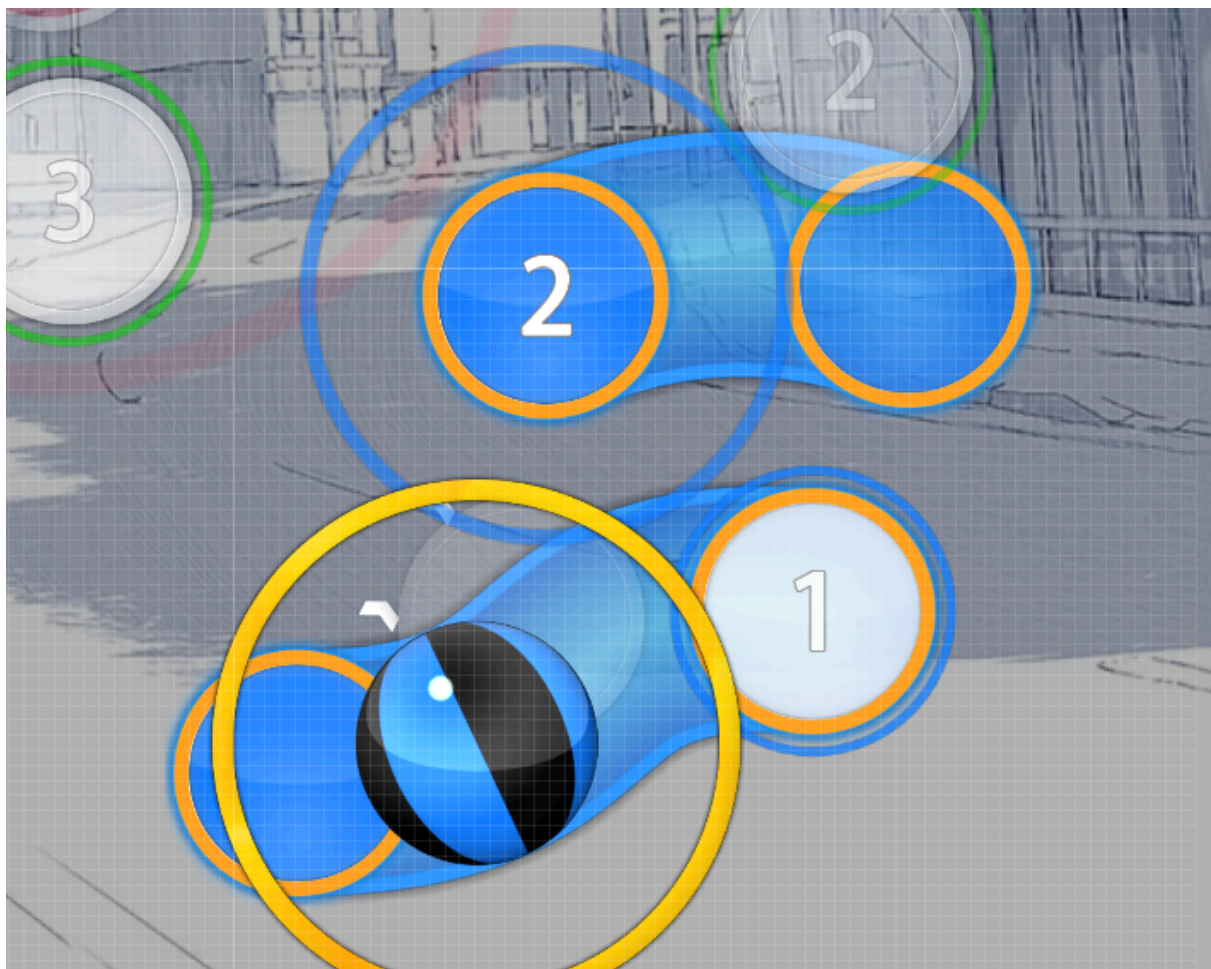
due to slider leniency the player doesn't follow the slider to the end. So the player goes basically up to the tip of where the ball is, then waits and hits 2. This creates a pacing drop.
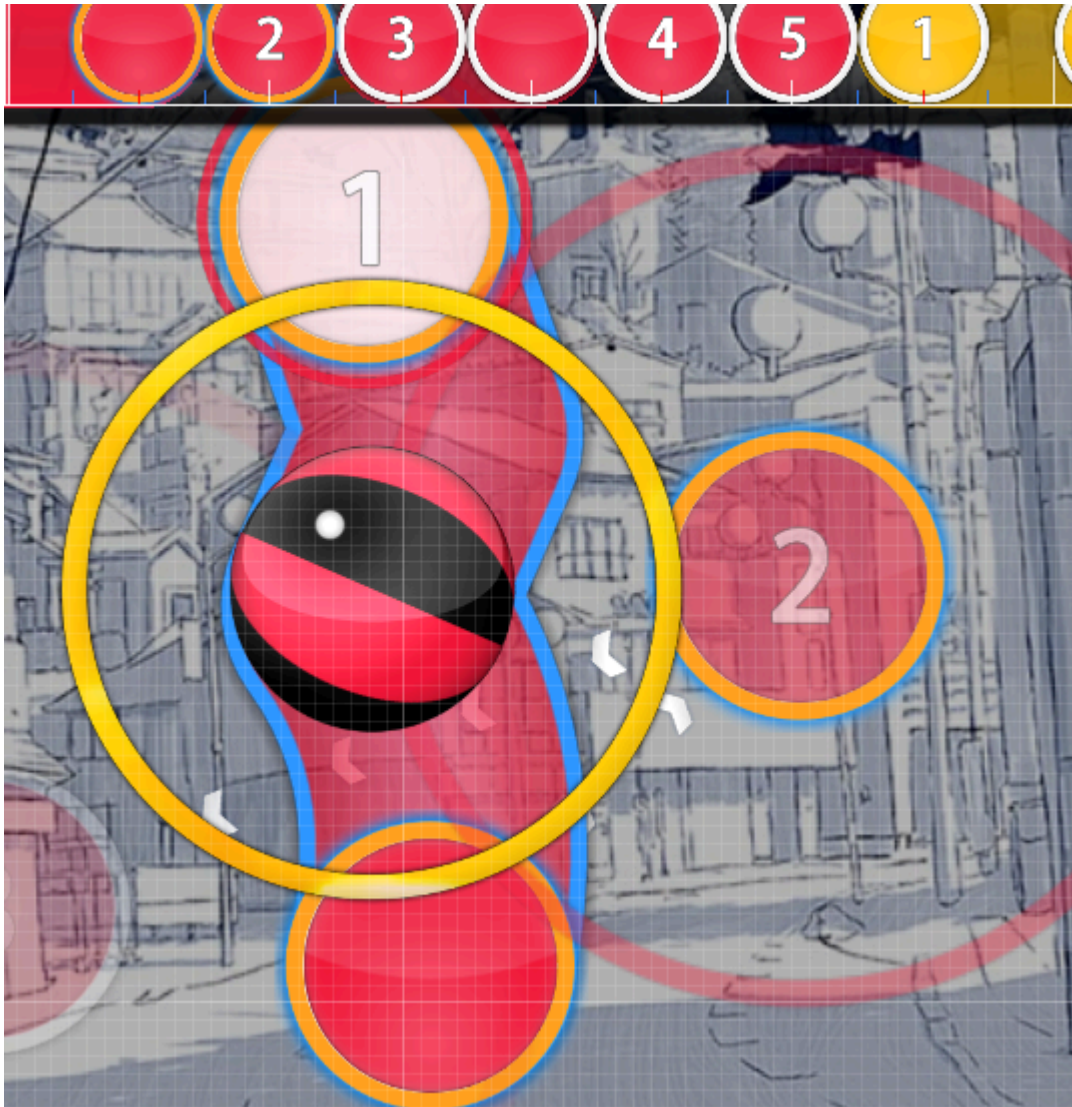
Even worse.

Basically this is making the player wait to hit the next circle due to the amount of leniency they have and creates an effect similar to a slow slider. This can be used to your advantage, but it is often an unintentional consequence.

Also worth noting that the amount of slider that is followed can express how held a sound is. And you manipulate this by placing the next object in the path of the slider.

so, this screenshot would be an example of expressing a cutoff sound... if the spacing was much bigger to 2. But if it's a long held sound, you generally want the player following the whole thing.

I guess we're already talking about shapes lol

Celektus-04/09/2017

This also seems related to emphasizing strong held sound with not implied direction, since the effectively does that too

Halfslashed-04/09/2017

mmm, that screenshot doesn't

Again, the player isn't moving, but you can do it without implied direction

for example
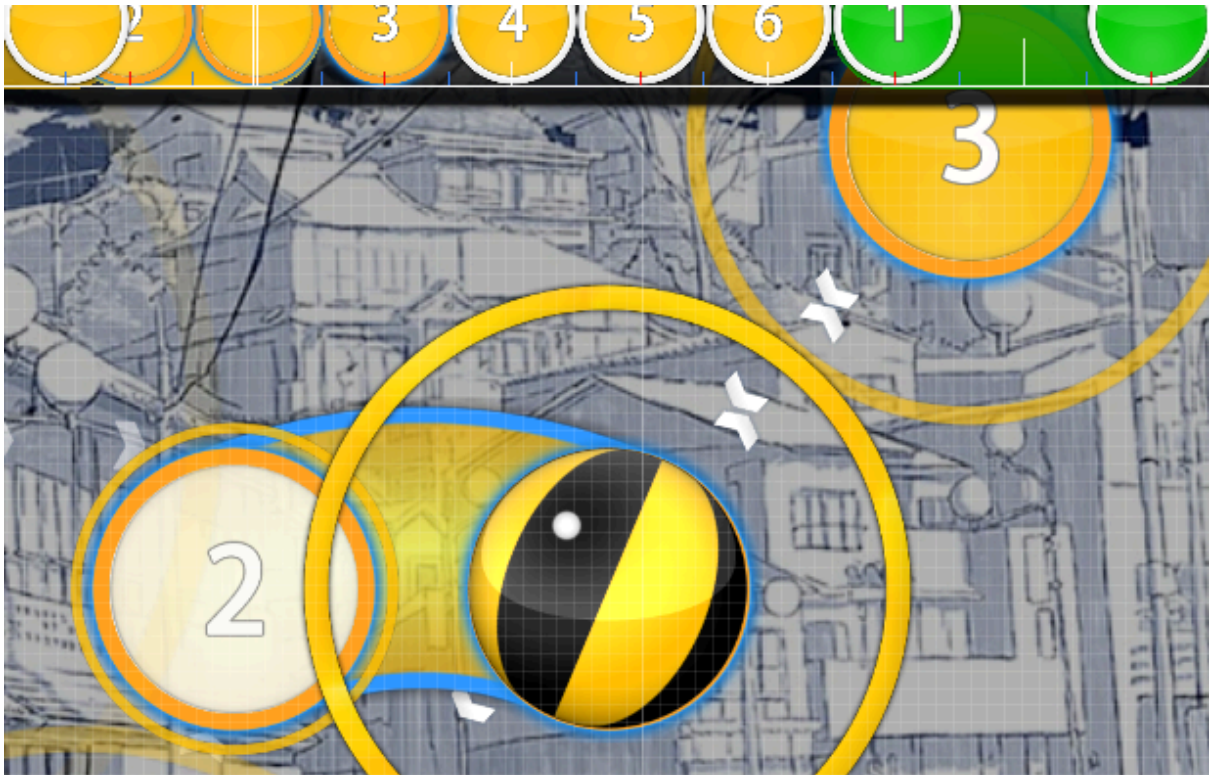
player still follows most of that slider

but not here
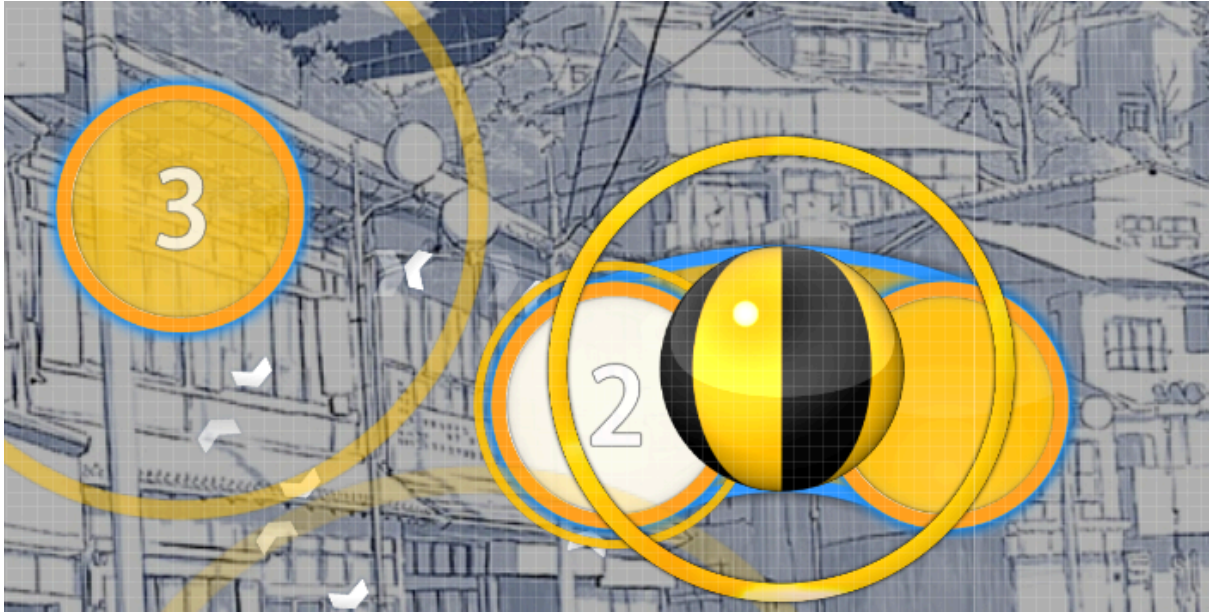
so yeah uh

shapes, right

So, this is pretty easy in that curved sliders imply circular flow. Straight sliders have the most motion to them but they are linear.

Celektus-04/09/2017

so the more curve the less motion?

Halfslashed-04/09/2017

yep, stuff like this can easily be abused by slider leniency to have barely any motion. And at a smaller scale is used mainly for a hold.
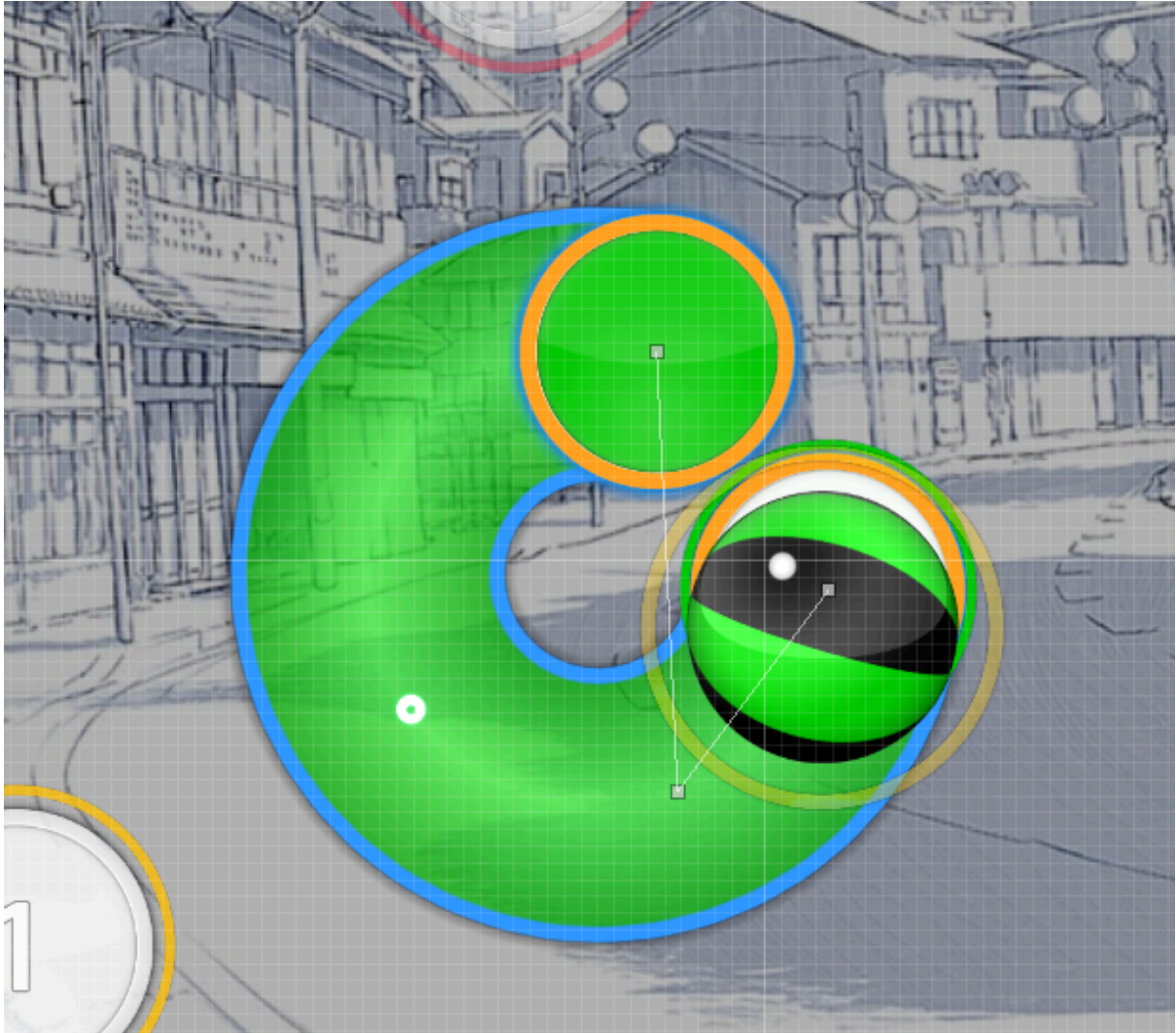
Celektus-04/09/2017

the disconnect I guess is that sharper shapes seem more intense in a way

even though the inverse is true

Halfslashed-04/09/2017

indeed, especially when we talked about streams

well, remember, this is easier when you consider slider leniency

but… at an easy level… players are following these sliders. Just keep that in mind.

And actually, when the SV is high enough, the player is more encouraged to follow the slider.

Celektus-04/09/2017

also relative to CS

weird how technically more complicated aesthetics would work better on high CS but on that it would also look shit

Halfslashed-04/09/2017

for motion purposes, yeah I guess lol

But yeah, so, the important thing to keep in mind is where the slider end is on all of these things. So this is approximately where the slider end is for this slider.
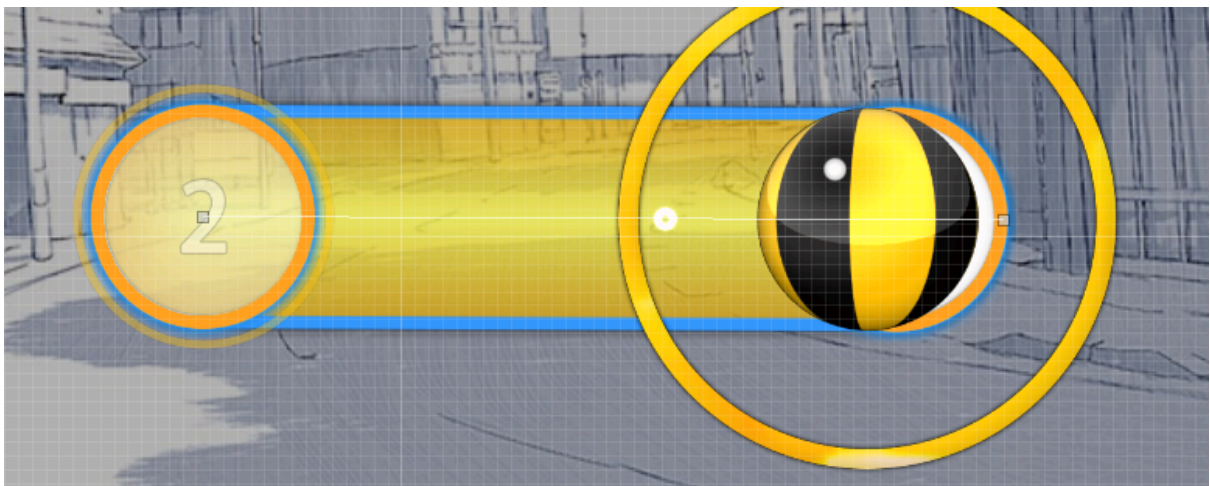
Give or take, it's not exactly 30 ms or whatever that value was.

btw, you can get that value from Mo's video

Then there's this
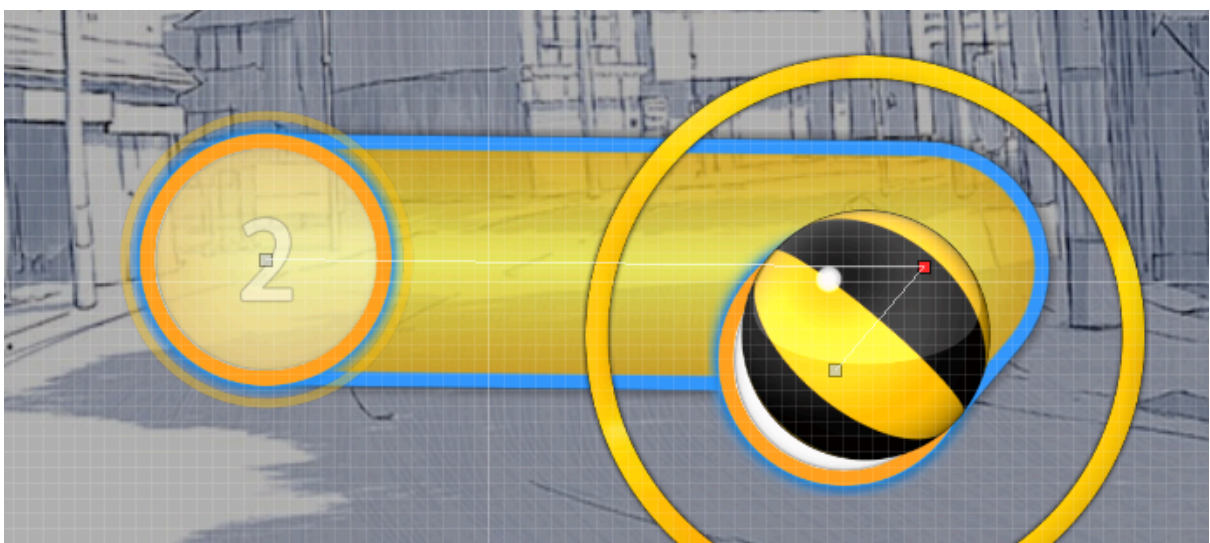
The idea i'm trying to get at here is: variations in the shape usually just decrease motion, unless there are slider ticks. Because you have to hit the ticks

Celektus-04/09/2017

wait is that why HW uses those red anchors so often?

Halfslashed-04/09/2017

in which map

Celektus-04/09/2017

her new one, for example UC also does that

Halfslashed-04/09/2017

yeah, red anchors end up decreasing the motion

The problem with that is that it adds reading complexity, but it's usually not a big issue

Celektus-04/09/2017

I was always wondering why he would do that sort of shit
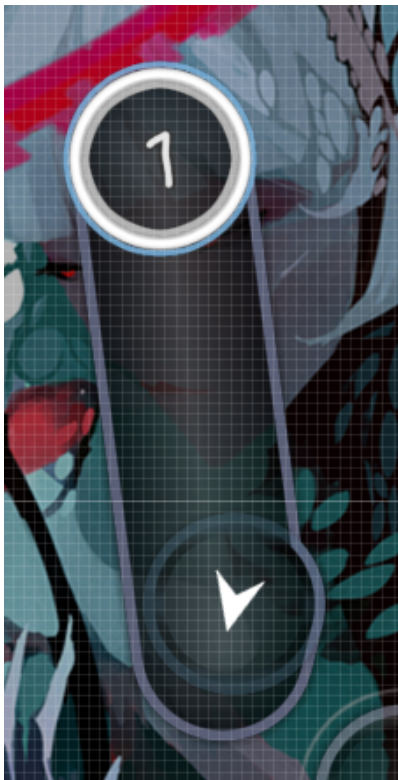
Halfslashed-04/09/2017

he might have some reason but yeh

see he likes to uh, fine tune his cursor motion to the point of making lots of triggering visuals.

Celektus-04/09/2017

does that also abuse that?

it's a 1/1 slider
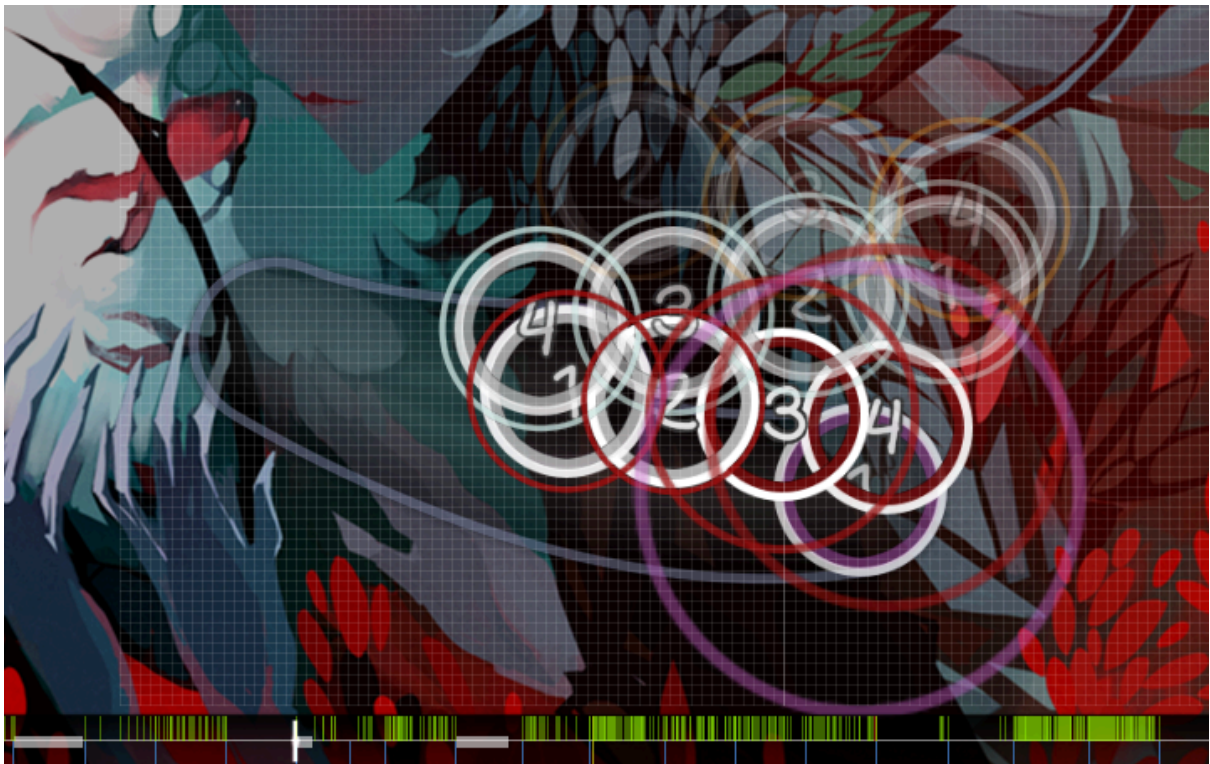
Halfslashed-04/09/2017

ah, the V sliders

remember when i said you have to stay inside the yellow follow circle?

Yeah, this will make you follow that. Rather, it's intuitive to want to follow it.

If I'm gonna be honest, I'm not a mechanical expert with slider leniency. So I'm sure someone that's actually done research on the technicalities could give a more in depth analysis but basically the player would want to follow that. They'd probably cheese it though.

↓¶

Advanced Rhythm

Discussion by Halfslashed

Finger Positioning

Halfslashed-08/09/2017

okay there we go

So anyways that's basically what we're going to be talking about, the more advanced ideas regarding rhythm.

We'll start with finger positioning. Remember our discussion on polarity, when I showed that this was a way to enforce polarity on 3/4
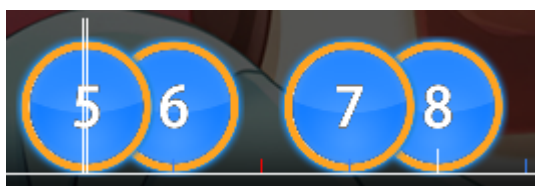
and I always said it was sub-ideal

Well, in terms of emphasis by note strain, yes it is sub ideal but pay attention to how most players will play this: zx zx

The average player single taps starting doubles on their strongest finger and ending on their other finger. So it will be more natural for them to actually consider 5 and 7 as the stronger beats rather than 6 and 8. So in one way it is more appropriate to emphasize 3/4 beats like that (by finger positioning)

but like this…
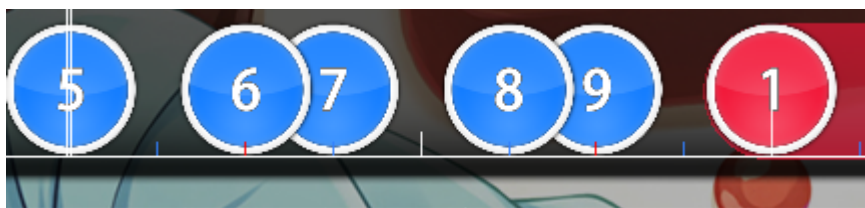
is less natural to play than the above.

But has "proper" emphasis by note strain

So both of them actually end up having similar emphasis by one theory or another, but the more natural one would be the first one I linked.

There actually isn't an advantage to abiding by note strain for doubles used to emphasize 3/4

So this is one of the times where "less comfortable is actually worse", since there isn't a reason for it. That is my opinion. However, you can represent these however you like as long as you're doing it consistently.

so that's one example

The next example would be a slider into a stream, here's one way of doing it

However, by active/passive rhythm theory this is wrong. If the strong beat is on the white tick that is currently highlighted

so the right way would instead be...

right?

no.

The thing about patterns that singletappers will alternate is that they would prefer to end the patterns on their dominant finger.

Celektus-08/09/2017

and since the slider is already being held by that makes it different

Halfslashed-08/09/2017

correct, the first rhythm I linked will play like

zxzxz

while the second rhythm I linked will play like

zxzxzx

Therefore being less natural to play.

Also you are introducing an extended slider, which I almost forgot today is the day we also talk about over and undermapping.

but yeah, any questions so far?

those are the two simple examples

Celektus-08/09/2017

not really

Halfslashed-08/09/2017

great, so let me show you an extension of that

a common way to simplify a triple, usually used in hard difficulties
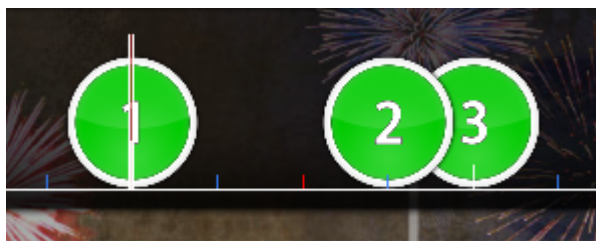
and that is the second way you now know of how to make 3/4 gaps intuitive

The reason this works is, in terms of finger positioning, they want to end on their dominant finger. So players are actually more inclined to start this double on their non dominant finger, as opposed to
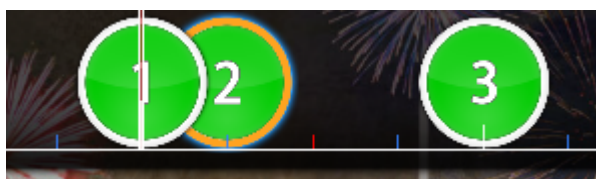
Now, I think we already talked about how in a typical bpm 1/4 sliders don't have enough lift, err, enough hold on them, so you can almost treat them like circles.

So this would actually be more like 2 circles separated by a 1/2 gap

hmm I'm trying to find an example but uh, I don't have one.

Basically with this knowledge though, you should be figuring out how something plays. Because the amount of holding from sliders may make a rhythm play more unnaturally than necessary

so yeah that's that

↓¶

Slider vs. Circle

Halfslashed-08/09/2017

anyways, now on the whole "slider vs circle" thing

so a circle is really simple

you click it.

Celektus-08/09/2017

and get 50s

Halfslashed-08/09/2017

yeah accuracy is a component

A slider is more complicated in that you have to click, hold, lift. By this point you should know how the clicking works, but the holding is a bit interesting. It separates 1/4 sliders from circles in that they are not tapped in the same fashion, but 1/4 sliders and shorter always have a slight hold to them.

You can use this to your advantage in representing say a vocal layer while you're trying to emphasize some sort of drums, because the hold isn't very long but there is still a hold component.

And just like the amount of clicking makes a section feel dense, so can the amount of holding being done when coupled with the amount of lifting being done. By extension 1/4 and 1/8 sliders work similarly except 1/8 sliders are obviously for much quicker sounds

Celektus-08/09/2017

depends on SV and BPM yadda yadda

Halfslashed-08/09/2017

mhm, so holding and lifting can provide a decent amount of emphasis rhythmically in the appropriate circumstances

For example in slow sections with long sliders, or when combined with a method of slider tail emphasis it can also provide emphasis in streamier sections
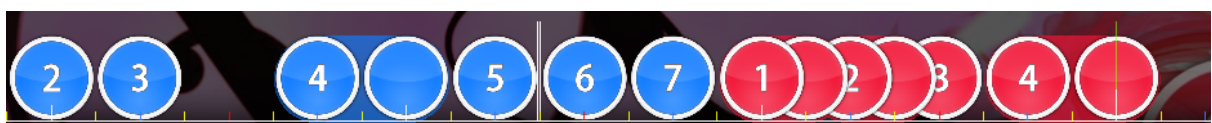
and this actually one way of merging instruments rhythmically

It works really well for vocals, go look at itoushiki

00:52:650 -

It's one of the few good things in that map. Though, it can obviously be improved with different spacings. Rhythmically that works fairly well.

I guess this leads into the methods of merging instruments rhythmically. The reason this part was more advanced is because you're effectively trying to represent two different instruments with just one input method of clicking.

And in actuality, you need to rely on a different method - such as, acknowledging holding/lifting as well you can also do that with movement but I decided we should actually do that next week

Celektus-08/09/2017

well I'm assuming the core idea is to separate them in some way

Halfslashed-08/09/2017

yeah, making it identifiable that you're representing both things. Rhythmically though as you can see, you're pretty much only able to do that by just using clicks, holds, and lifts.

↧¶

Fake represent Held Sounds

The Origin of the "Emphasis Faking" meme

Halfslashed-08/09/2017

Another application for example is having your clicks on an instrumental layer and utilizing sliders fairly often to "fake" representing held sounds.

So, that's the general idea for it - sadly it's hard to be too specific with it. I don't recommend you try to do this yet. I'm telling you about it right now more for when you see it in maps

Celektus-08/09/2017

yea it's not very common I assume

Halfslashed-08/09/2017

I mean, I've used it... once. UC does this all the time but he also does a bunch of other things

Celektus-08/09/2017

yea you need like a really hard song for that

or just knawlege

Halfslashed-08/09/2017

yeah, it's also relatively convoluted since its a more obscure topic. So if you put it in your maps you will likely have to explain it

01:22:815 (2,3,4,5) - 01:22:815 (2,3,4,5) - 01:26:102 (3,4,5,6,7) - i think this is far too much rhythmic variation as it bears almost no structural resemblance to 01:16:033 (2,3,4,5,6,7,8) - (etc). all that has changed in the music is that the drummer is playing the red tick hi hat open/louder.
Well I'm still following the piano, but I introduced more sliders and overall reduced the rhythm density in order to reflect the change in the vocals, since they are building up here, and this leads to a nice effect when the next musical section starts.

:p

anyways

Emphasizing by Rhythms Gaps

Halfslashed-08/09/2017

So then comes the concept of emphasizing by rhythm gaps. This is something more commonly done in older maps. But basically how this works is you use a long gap on the timeline (1/1 or longer) to emphasize the beat BEFORE it. This is an example of delayed emphasis.

Celektus-08/09/2017

so is is like undermapping or overmapping for contrast of something delayed?

Halfslashed-08/09/2017

Well, it can be used to undermap yes but usually it doesn't work too well if you're undermapping.

Celektus-08/09/2017

so like if you use a 1/1 gap the next 1/2 will be more intense

does that also mean if I use 1/4 rhythm that the next 1/2 or longer rhythm might be less intense?

Halfslashed-08/09/2017

not on a normal bpm, no

This is why I specified the length of the gap. If it's any shorter it will not be perceived to emphasize the previous note. Since the reason why this works is 1/1 is a sufficient time pause for the player to realize that the beat before was stronger

Normally emphasis works by pressuring the players before they actually reach the note that is being emphasized.

here's a rhythm
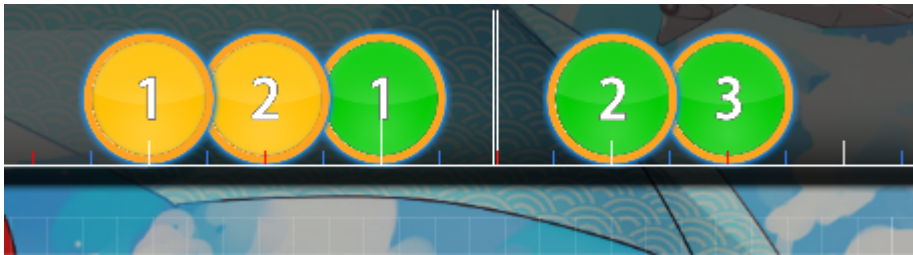
what beat is emphasized?

Celektus-08/09/2017

green 2?

Halfslashed-08/09/2017

nope

Green 1.

I wanted to clarify that, this is **delayed** emphasis. Now, something else I've noticed is, it has less of an effect if the note before the gap is a click. So something like this would make it more apparent.
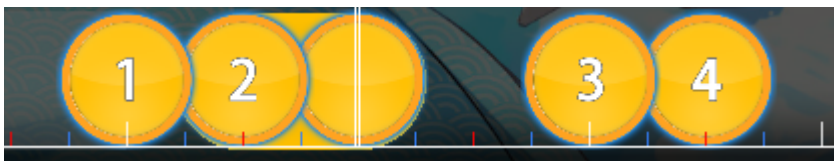
and here is the second thing you can do to emphasize slider tails

Celektus-08/09/2017

does this have spacing in mind?

Halfslashed-08/09/2017

nope, we're talking only about rhythm today

Celektus-08/09/2017

what If 3 was like a anti jump?

Halfslashed-08/09/2017

would still work

Celektus-08/09/2017

ok

and would it add up with slider end emphasis through movement?

Halfslashed-08/09/2017

Nope, because if you remember that requires you to make the end difficult to reach. Which, due to slider leniency and the long clicking gap you will not be able to achieve. Even if you put the end and the next circle in opposite corners it would not emphasize the end.

Recall our talk on slider leniency and how the clicking gap affects the amount of spacing you need to make it stressful to reach the slider end.

Celektus-08/09/2017

yea but isn't full-screen spacing enough?

Halfslashed-08/09/2017

nope lol

At least, I don't think so. You're welcome to try it out at one point but then you'd also have to justify how strong the next note is.

Celektus-08/09/2017

well the rhythm might also just be that slow that it won't matter, the gap still gives emphasis

Halfslashed-08/09/2017

mhm

But I'm just telling you that the two methods for emphasizing beats on slider tails do not work together.

also, combine this logic with, say.. a 1/4 slider

The gap is not actually affecting the tail anymore, because now the slider is too short.

after some talking...

Undermapping

Halfslashed-08/09/2017

So you mentioned undermapping

I assume you get the idea of it, you use a less dense rhythm to put emphasis on it

[Meramipop - Cruel CRuEL [Tormented Self]](#)

02:32:995 (1) - look at the section before this

that's a simpler example of it

Celektus-08/09/2017

yeah, the part was shortly less intense and outstanding

so it's emphasized

Halfslashed-08/09/2017

mhm

↡¶

Mapping Analysis 2 - Feryquitous - Central Nucleus by Shiirn

Halfslashed-08/09/2017

I just modded this yesterday

Feryquitous - Central Nucleus [Sanctus Nexum]

let's have some fun with this one

This map is basically how to use undermapping very well. From the intro section it should be really obvious what kind of undermapping he's doing

Halfslashed-08/09/2017

actually here, have a fun with this one

Look through this one and tell me what kinds of examples of undermapping you can find. I think that's better than me trying to explain this.

Disclaimer: Part of this is supposed to be an analisis so I'd recommend you look at the whole thing for yourself before marking the spoiler text below

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus -08/09/2017

Halfslashed -08/09/2017

Celektus -08/09/2017

Halfslashed -08/09/2017

Celektus -08/09/2017

Halfslashed -08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Celektus-08/09/2017

Halfslashed-08/09/2017

Overmapping

Halfslashed-08/09/2017

So then there's overmapping, this one is pretty self explanatory.

But from now on we'll call it

additive rhythm

Anyways, this is the practice of placing objects where there are no sounds. Not placing objects in a way that makes it less clear what is being prioritized by clicks, not having ridiculously spaced objects, not having higher density than the music suggests

if anyone tells you otherwise

they're wrong.

overmapping has lots of negative connotations with it such as the ones I said overmapping isn't. But in reality it's just placing objects where there are no sounds, this includes slider ends

after some joking around…

Halfslashed-08/09/2017

anyways so, it's heavily frowned upon by a lot of people. But you can still use it effectively. Overmapping a slider end usually isn't an issue in case you want a slight hold to represent something.

Celektus-08/09/2017

my first guess would be that consistent triples are sort of acceptable in some songs

Halfslashed-08/09/2017

The big issue becomes when you do it too much, you lose contrast if you overmap too much.

Celektus-08/09/2017

anything like a actual stream might be really hard to justify

Halfslashed-08/09/2017

And that's when people get pissed really. It's actually not too hard to justify but people don't like it anyways. A good place to overmap stream would be transitions between hypermeasures for example. But not too long of one.

Celektus-08/09/2017

can you show a good example of additive triples?

Halfslashed-08/09/2017

Cele, I'm about to do more than just that.

I'm about to show you the best example overmapping I have ever seen

w

https://osu.ppy.sh/b/1384821

(new version GoldenWolf - Harumachi Clover -METAL MIX- [Wolf's Extra Stage]) I feel like I really need to emphasize almost ALL of the drums in this song were added after GoldenWolf created his overmapped diff

Yeah, this mp3 was recently edited but before, none of the 1/4 1/6 or 1/8 was in the mp3.

anyways

Here he's using the differences in strain between the various snapped streams to create emphasis. He creates an artificial density layer with a 1/4 base and uses 1/6 streams for "normal" emphasis. And then 1/8 for really strong emphasis.

I mean, he uses 1/4 as well, but its for weaker stuff.

00:04:059 (3,4,1) -

like that

Anyways, this stuff is an art but uh point stuff out and I'll answer questions.

Celektus-08/09/2017

well what am I supposed to say?

Halfslashed-08/09/2017

do you have any questions on the intent of the streams used to emphasize?

or are the concepts that evident

Celektus-08/09/2017

.... I can't really understand how it's ok to use?

like I can't really point to any single thing

since I get how it's done sort of

Halfslashed-08/09/2017

alright

Well yeah, the reason why this is good overmapping is because it still emphasizes the song, really well.

Celektus-08/09/2017

yea it's like a drum solo on top of it

with all the knowledge behind how rhythms affect the song

Halfslashed-08/09/2017

mhm, the main thing I wanted you to get from this though is that all of this emphasis has roots in note strain and transitions between musical sections. Further reiterating that to overmap well you need to use the music and understand the mechanics of what you are doing.

Celektus-08/09/2017

can you show both some questionable and very bad example of it?

well maybe not very bad

He mentioned a map I recently modded anyway which I rather not mention in here for the sake of the mapper…

Halfslashed-08/09/2017

So yeah, overmapping can fuck you up.

Also, most double bpm maps are overmapped. That's another commonly accepted way to do things, the practice of using filler circles to preserve the rhythmic intensity. We can talk more about that later, I guess.

anyways

Gameplay compromises are also acceptable, but try to avoid it if you can. There's also improvisational rhythm which is what shiirn was doing to some extent with his central nucleus map. Which involves the "making rhythm unclear" part in order to represent the song differently.

Which is basically a combination of rhythms that involve heavy instrument switching, instrument merging, and over/undermapping. They exist but they're very rare.

And you should be able to by this point tell when they're bad. It's hard to mod them but you likely won't see them. And the only way to mod them is to figure out what exactly they're going for, as anything else.

So then there's avoiding polarity but uh, I pretty much mentioned the case for 3/4 and that's usually the case when it applies. If you can think of any others, I can answer those questions but otherwise I think we're done.

Next week we'll focus on miscellaneous topics relating to movement and rhythm and I guess "readability" if you want.

Miscellaneous Topics

Discussion by Halfslashed

Cursor Pacing

Halfslashed-15/09/2017

cool so

we'll start on cursor pacing

i've probably mentioned this before but it's probably the single most important thing

in separating a good map from a great map

most people don't actually think about this and it shows

but it hurts song expression

if you're ignoring it

the idea here is that you keep a certain base level of cursor motion for a section of the song

similar to how you keep a certain base rhythm density

now, you still need to of course have a way to keep proper emphasis

but i mean, as you know about with rhythm that's not really an issue

if you you know

acknowledge it

a common error in maps is that

they think that having a base level of spacing is enough

but due to sliders, that isn't necessarily the case

and i think i've ranted about it before but stacking also

creates a big issue a lot of the time

so yeah

now, if you combine cursor pacing and rhythm density

you achieve a total sum of intensity of sorts

and this sum is what you should be using to determine how intense a section is

so let's go look at something controversial

https://osu.ppy.sh/b/934012

it's a good example of how cursor pacing and rhythm density are summed

well, it also does a lot of other things

but you should know what most of those are by now

any questions on the map?

Celektus-15/09/2017

I'll look if I find something I don't get at all

are these like faking? 00:16:243 (4,5,1) -

or why is the red tick not mapped?

Halfslashed-15/09/2017

he's improvising his rhythm there

Celektus-15/09/2017

that's all you can say?

Halfslashed-15/09/2017

there's another thing he's doing for

but i'm verifying to make sure it's all consistent

00:13:886 - alright, he does this a bit weirdly but

look at the 4 measures before this and look at the blue tick before each downbeat

then do the same for the next measure

next 4 measures*

if you look before it and after you'll notice that the blue tick before the downbeat is mapped twice before that point

and then the next 4 are all mapped

he interprets the piano part as building a sort of tension

as for why the red tick is skipped, he's preserving a certain level of density

his piano rhythm is one of the more controversial aspects of the map

Celektus-15/09/2017

btw is there a specific reason why he switches between fully and not fully stacked?

Halfslashed-15/09/2017

he says it's for a certain level of cursor movement

personally i don't really buy into fine tuning movement to that extent

Celektus-15/09/2017

yea, it's subjective how for that needs to go I guess

Halfslashed-15/09/2017

right, anyways

i forgot to add to the list the idea of

reverse emphasis

because we haven't talked about that

well... we kinda did

for emphasizing beats on slider tails

Celektus-15/09/2017

and for emphasis with rhythm gaps in some way?

Halfslashed-15/09/2017

yeah

but we didn't talk about anti jumps

Celektus-15/09/2017

not really yea

Anti-Jumps

Halfslashed-15/09/2017

well, like you would expect it's just

the opposite of a jump

you reduce spacing to a strong beat instead of

increasing spacing to one

Celektus-15/09/2017

when is that a good idea?

Halfslashed-15/09/2017

personally i like using it for bass drums/kicks(edited)

or particularly awkward sounds

because i mean

it's a reversal of a common idea

so it makes sense to do it for awkward stuff

you do need to be careful about how you use them though

aka

extremely deliberate

Celektus-15/09/2017

as long as I introduce them not too late?

Halfslashed-15/09/2017

not really but more like

you need to make it obvious as day that

it is intentional

meaning you shouldn't overuse them

Celektus-15/09/2017

100% anti emphasis mapping isn't really a good idea I assume

would just end up with no movement

Halfslashed-15/09/2017

correct

well, 100% of anything other than the basic concepts isn't really a good idea

because if they aren't basic they're devalued by overuse

and if they aren't sued consistently enough

then they aren't concepts and are instead

mistakes

but anyways

spacing increases, provided they are large enough in comparison to previous spacings

can provide emphasis

anti emphasis however

needs larger spacing because inherently

it is easier to aim lower spacing

since it's less movement

so you need to establish a relatively large spacing to be able to use anti emphasis effectively

you can compensate for this though by using

a linear anti jump

02:11:727 (4,5,1) -
look at that
that is
a linear anti jump
that's in after rain btw

https://osu.ppy.sh/b/1306493

did you look at this?

this map also uses anti jumps

relatively well

Celektus-15/09/2017

I once played it

something like this? 02:43:996 (1,2,1,1,1) -

well not all notes
or 02:47:485 (3,4,1) -

Halfslashed-15/09/2017

the second yes

the first is just regular spacing decreases

02:28:298 (2,1,2) - here's a linear anti jump at work btw

this guitar section tilts many off the planet

"oh i've never seen this concept in the map before":

is what a lot of people say

00:50:275 (2,3,1) -

but what do you think about that

Celektus-15/09/2017

that's wide now? gonna assume it's still really good

Halfslashed-15/09/2017

indeed it is wide

Celektus-15/09/2017

also the S slider isn't used badly

Halfslashed-15/09/2017

yay!

yeah

this map was relatively well designed

it's an example of

pre-2015 mapping

Celektus-15/09/2017

that's pre 2015?

Halfslashed-15/09/2017

it was designed like that

emphasis wasn't always perfect

spacing emphasis didn't dominate means of expression

ect.

so, this map isn't the most consistent but

as you can see it's still coherent and

frankly very fun

Celektus-15/09/2017

yea it uses a lot of different angles and movements

to contrast things

Halfslashed-15/09/2017

did i ever tell you about how

maintaining difficulty consistency

was the most important?

this is what this map does

all of the movements were introduced before it

Celektus-15/09/2017

yea

"...**isn't** unfair"

Halfslashed-15/09/2017

lol

anyways

Stacking

Halfslashed-15/09/2017

so, stacking

this is where we get into a bit of stuff about readability

but anyways, let's start off with the vanilla case of stacking

more general than that

all of them are of the same snap and it stands out from other stacks in the area

so, like in an entire measure before and after

you will only see one type of stack

example: the triple

this is the easiest form of a stack

complexity increases when you introduce more stacks of the same snap right? rright? right?!!?!?

no.

you can throw in

1/1 stacks, 1/2 stacks, 1/4 stacks, whatever your heart desires

if it is even

because the player can read the approach circle

Celektus-15/09/2017

1/4 overall will always be easy no matter what I think too

since it's very similar to overlapping

Halfslashed-15/09/2017

yes and

all of the snaps i mentioned were even

now, what happens with an odd snap say

3/4, 1/6

gets thrown in

the player can still read it.

it will be a bit harder though

Celektus-15/09/2017

it doesn't matter cause

it will be hard cause 1/3 is hard

and uncommon

if introduced it will be easy

Halfslashed-15/09/2017

well, more like

the player won't expect it

the player is expecting even rhythm gaps

so, you can still use stacks to introduce uncommon snaps though

it is harder than say

a repeat slider

Celektus-15/09/2017

yea

Halfslashed-15/09/2017

but it's feasible

additionally

you can extend the concept to a spacing that does not involve

overlapping

but is still really close together

Celektus-15/09/2017

yea it's related to visual consistency in spacing

if all 1/1 is spaced and 1/2 is stacked it's understandable that both are distinct

for noobs

Halfslashed-15/09/2017

yeah like if i used this spacing for 1/3 though

notice how close together the objects are

this allows players to read the approach circle and have plenty of time to reach the next object

combine that with making it distinct from other spacings...

and you've suddenly now got a way to introduce 1/3 while keeping it clickable

Celektus-15/09/2017

what else?

Halfslashed-15/09/2017

right, back to stacking

then there is the case of

mixed snaps in stacks

the expectation is that everything in a stack is the same snap

Celektus-15/09/2017

so we are talking about inside a single stack or stacks in a map as a whole?

Halfslashed-15/09/2017

inside a single stack

like if i stacked say

1/4 and 1/2

into a stack

this is again still readable due to the approach circle but it requires the player actively paying attention

since you're removing the visual distinction

of different snaps

i do this in kizuato btw

Celektus-15/09/2017

it's just not something you shouldn't do in a Hard diff (without introduction)

Halfslashed-15/09/2017

well it's a guideline for a reason

it's reserved for insane diffs and higher

Celektus-15/09/2017

it can be done though!

Halfslashed-15/09/2017

yes but you'll have a hard time convincing people that it's the most effective thing to do

we'll talk about that more when we get to low diffs

since there is a very good reason for why you wouldn't want to do this

in a hard diff

Celektus-15/09/2017

yea unless my diff is full of weird stacking to simplify something

Halfslashed-15/09/2017

and not just "readability"

but anyways

so if your map revolves around various things you can do with stacking

it's fine to introduce mixed snaps in a stack

just try not to make it too complex, since the complexity of doing so

scales up very quickly

and if you mix uneven snaps in a stack

you're just trying to fuck the player over at that point

like i'm talking

3/4 into 1/4

or some shit

Celektus-15/09/2017

also it shouldn't be a too big stack right?

like that depending on the context might just be boring

Halfslashed-15/09/2017

from a movement perspective absolutely

but you can also use a stack to build tension

since the last note of the stack is the strongest

https://osu.ppy.sh/b/259306 let's look at a mixed snap stack

go to the highest difficulty

01:35:204 -

since we're here i'll talk about the other form of stacking

00:13:694 (1,2,3,4,1,2,3,4,1) -

stacking with movement in between

this is how you scale up complexity

mixing in different motions in between stacks

puts emphasis on the last note of the stack still

so this type of stack isn't bad by itself, though it's harder than if you just

didn't have them stacked at all

because you know

forcing approach circle reading and what not

Celektus-15/09/2017

does overlapping imply that too?

Halfslashed-15/09/2017

nope

overlapping you can clearly tell

visually

where the next note is

you can still do it with imperfect stacks as well but it is still mostly approach circle

Celektus-15/09/2017

also is this a good example of tension building with stacks? 00:57:279 (10,1,1) -

Halfslashed-15/09/2017

nah

well, i don't like it but it is

expressive i guess

the reason i don't like it btw is

because it's a larger pace drop than necessary

00:12:279 (1) - like i'd prefer this being at the bottom left corner

oh wait

wrong instance but

lol

it applies just the same

now, the difference between imperfect and perfect stacking

is imperfect has some visual distinction

and perfect requires approach circle reading exclusively

and when you combine too many stacking tricks in one place...

https://osu.ppy.sh/b/1266404

you get something fairly difficult

01:23:401 -

so anyways

i should've mentioned most of the components of that by this point

if not all of them

when to use?

when your map is based around it.

like, bor's map here introduces stacking shit earlier on

00:30:575 (4,5,6,7) -

00:59:923 (1,2,3,4) - he even introduces another component here

last thing i want to mention on stacking is

stacking before/after streams

this is something my favorite mapper angelhoney does a fuckton of but uh

my friend does it even more.

Mapping Analysis 3 - Hatsuki Yura - WICKED by Deramok

[Hatsuki Yura [..!]](#)

this map btw

is an example of lots of interesting things

not used together

while we're here why don't you tell me the core issues of the map

Disclaimer: Part of this is supposed to be an analisis so I'd recommend you look at the whole thing for yourself before marking the spoiler text below

Celektus 15/09/2017

Halfslashed 15/09/2017

Celektus 15/09/2017

Halfslashed 15/09/2017

Celektus 15/09/2017

Halfslashed 15/09/2017

Celektus-15/09/2017

Halfslashed-15/09/2017

Celektus-15/09/2017

Halfslashed-15/09/2017

Celektus-15/09/2017

Halfslashed-15/09/2017

Celektus-15/09/2017

(edited)

Halfslashed-15/09/2017

Celektus-15/09/2017

Halfslashed-15/09/2017

Celektus-15/09/2017

Halfslashed-15/09/2017

Halfslashed-15/09/2017

00:43:416 (6,7,8,9) - anyways, what we were actually talking about

a stack after a stream

movement wise, these are easy to hit

you're already there

the problem is

due to having been streaming before this

the player was focusing on the tapping

and not interpreting the next rhythm

Celektus-15/09/2017

it's 2 different rhythms so players might misclick

Halfslashed-15/09/2017

yeah

so even if the approach circle is there as an aid

the player may misread

so, it's still fair game honestly but

it is harder than expected

Celektus-15/09/2017

is it also correct to say that is give a lot of emphasis?

Halfslashed-15/09/2017

it could, but again, you'd need high spacing

Celektus-15/09/2017

interesting

that's getting really unreadable in that case
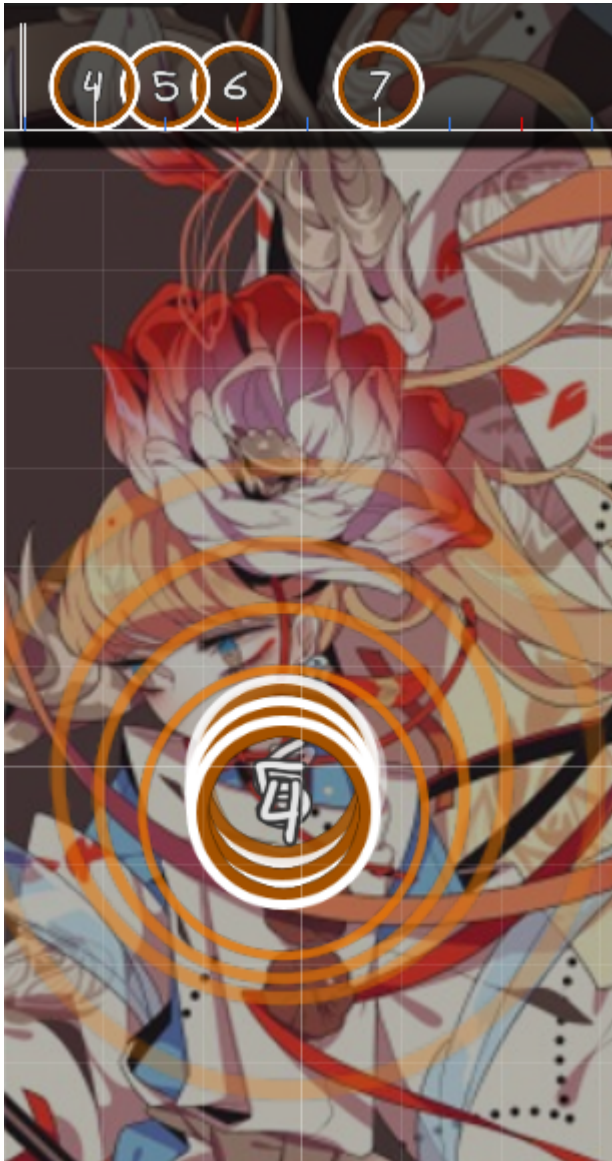
Halfslashed-15/09/2017

probably just a bit unfair

lol

Celektus-15/09/2017

you could only tell by the bottom of the approaches

oh and it's also hidden by the stream

Halfslashed-15/09/2017

yeah

Celektus-15/09/2017

yea anyway

what else is there?

Halfslashed-15/09/2017

stacks that lead into streams

so about those

you end up with the same readability issue

but it's less s severe

Celektus-15/09/2017

well depends more on spacing

01:23:195 (7,8,1,2,3,4,5) -

Halfslashed-15/09/2017

it usually just functions more like an anti jump

Celektus-15/09/2017

mhm

what about mid stream?

Halfslashed-15/09/2017

well i think we already talked about those lol

but uh

if we didn't

https://osu.ppy.sh/b/152480

this map is iconic for its use of that

it works the same

as a split stream

just... opposite

lol

reverse emphasis

anyways i think that's all we have about stacking

Multiple Reverses

Celektus-15/09/2017

multiple reverse now

Halfslashed-15/09/2017

yep

so, in the case of 3/4 or longer we'll talk about that when we talk about low diffs

but generally you can use them whenever they're musically appropriate

1/4 or shorter however

when they repeat they are too fast to read the reverse arrow

so you work with these by making them intuitive in what is clicked next

this is why 1/4 double reverses are common

because you click the head and the next object is 1/1 from it

same logic applies to basically anything shorter

of course, also be mindful of the gap after

and how much room you have for leniency purposes

as far as 1/2 multiple reverses

these are a very interesting case in that

they work well with low SV in slow sections, since they function identically to

1/4 multiple reverses in purpose

however, with higher SV the issue becomes

the reverse arrow is still too fast to be read properly by most players

it can be read properly but most players likely won't have the skills necessary to do so

anyways, as far as when they're appropriate...

they rarely are

the way the player can play them reliably if they don't have to move btw

is by just holding down until they see the approach circle for the next object

https://osu.ppy.sh/b/1368401 have another bor map

00:19:336 -

that entire section has unpredictable reverse counts

and the SV is high enough that you almost have to move

but you don't.

you can hold down

so, if the SV is high enough that the players has to move to avoid slider breaking

you need to condition the back and forth motion

a good way to do this is the method i showed you of how

to emphasize the reverse arrow and slider tail

you can also use back and forth circles,

etc.

be creative, but the idea is that you want the player to know that they have to move back and forth

Irregular Rhythms (3/4 and 1/3)

Halfslashed-15/09/2017

alright

now for a summary of rhythm conditioning for 3/4 and 1/3

(since those are common)

Celektus-15/09/2017

didn't we talk about that with mir?

Halfslashed-15/09/2017

we did but i'm just repeating it since

we talked about more stuff than that

3/4:

1. single reverse
2. https://halfslashed.s-ul.eu/6UHCByXQ with 1/2 spacing and the 1/4 is stacked
3. stack

1/3:

1. single reverse
2. stack
3. if bpm is high enough, you can space it like a stream

bpm being high enough being stuff like

anything higher than 180-190 bpm

so that's the summary and

now you can pretty much answer the last thing we have left

what is readability

try to define that

Celektus-15/09/2017

readability is the ability of the player to understand certain patterns, rhythms, spacing/movement concepts etc.

not necessarily in relation to the song, but that might be a possible skill too

Halfslashed-15/09/2017

more or less you have the right idea

readability is a measure of how hard it is to interpret what the player needs to do to accurately hit the next note

Celektus-15/09/2017

in relation to other notes

Halfslashed-15/09/2017

yeah

this is what separates modern maps from old maps etc.

something can be made easier to read (and therefore more fair on the player) by introducing it properly

or conditioning the player for it

and that's it

Hitsounding

Discussion by Halfslashed

Basic Theory

Halfslashed-29/09/2017

so i guess i'll start with the basics of hitsounding

you're pretty familiar with this - i know you hitsounded a bunch of stuff already

but the basic theory of hitsounding is that you're intended to supplement the sounds that are already in the song

particularly, the percussion

a good way to look at hitsounding is to view it as drumming to the song

that's why i know that in some guides, people suggest that you look at drum covers of your favorite songs

and hitsound it similarly

it gives you an idea of where you should place your samples

so, often you hear people saying

"hitsounding should complement your rhythms"

but if the line of thinking you agree with is that hitsounding should be for percussion (or drumming to the song)

then this basically disallows vocal based rhythm

OR

limits your vocal based rhythms to only being hitsounded with whistles

as well as basically any other melody rhythms

the line of thinking that leads to this brings me to the gameplay side of hitsounding

which is providing audio feedback

and this idea basically follows what most people say

strong sounds should have the most feedback provided, less important sounds shouldn't, etc.

as for where i stand on this

I disagree that hitsounds should only be used for feedback on strong sounds - at least from the perspective of clicking

i like to hitsound each instrument that stands out to me

and i usually do this after the fact

now, this works well because of how i create my rhythms usually, in that i usually follow an instrumental layer in a certain way

usually the song is consistent enough that stuff like

snares almost always get put on slider ends, for example

kicks are usually clicked

etc.

in a sense, this gives proper feedback to each instrument

because the same rhythmic action is usually repeated

now even if i didn't stick to this all the time (like i switched to a different instrument)

that just means that its a point where i vary my hitsounding a bit

so anyways, you can choose whatever, but if you only believe that hitsounds should provide feedback in terms of clicking

then you're going to be really limited in your rhythm choice

any questions?

Celektus-29/09/2017

nope

Halfy's Personal Sampleset/Addition List

Halfslashed-29/09/2017

ok, so then we have

the default sampleset

i think you know this better than me but

normal-hitnormal - a loud sound with a strong impact. good to use as a snare (they're comparable), mainly used as such by russians.
normal-hitwhistle - its... a whistle. loud, annoying, only good for loud and annoying sounds.
normal-hitclap - overbearing clap, almost never used.
normal-hitfinish - crash cymbal, usually sounds muted but strong, so used sparingly
soft-hitnormal - the default sound, it's a hihat.
soft-hitwhistle - used for accenting non-percussion sounds, it sounds like a chime of sorts or something.
soft-hitclap - the default "snare" hitsound, good for pop songs.

soft-hitfinish - a reasonable cymbal crash, this is what you usually use at the start of each hypermeasure
drum-hitnormal - a more powerful hihat
drum-hitwhistle - some sort of muted cymbal/hat, not sure, but usually relatively situational
drum-hitclap - tom drums, good for certain drum patterns in rock/metal
drum-hitfinish - closest thing to a kick sound we have, fairly situational

ok

more or less that's how i see it

listed are some of the ways i usually think of them

and instruments they sound like

for various different genres though, some things just don't work

like a lot of songs have kicks

but the drum-hitfinish doesn't always work as one

Celektus-29/09/2017

yea I do some of them differently but most of that list I agree with

Halfslashed-29/09/2017

electronic songs usually have the hitnormal replaced for some sort of hi-hat

Celektus-29/09/2017

differences for me would be that I use normal-hitnormal for Kicks and Drum-finish for lower pitch toms

Halfslashed-29/09/2017

could definitely work on the drum finish, but the sounds for normal-hitnormal and kicks kinda conflict

and while some degree of conflict is good the kicks are more like

a muted, blurred sound

while the normal-hitnormal is sharp/abrasive

its a difference in impact

Celektus-29/09/2017

well percussion is usually associated with sharpness anyway

it depends on the song

I used drum-finishes too depending on the Kick

Halfslashed-29/09/2017

mhm

that actually covers most of the various instruments

the way default sampleset is set up, anyways

it's actually a pretty good drumset

the only thing it doesn't have is a good kick

so now

when do you use customs? i gave a couple examples in the form of electronic songs

they usually have some weirder sounds associated with them and also

usually consistent hi-hat layers

so choosing an appropriate hi-hat may be a good consideration for you

Celektus-29/09/2017

or like the electronic drums

Halfslashed-29/09/2017

yep

i remember lasse got on me about that

for kizuato

Celektus-29/09/2017

you should've added some anime moaning sounds to annoy him

Halfslashed-29/09/2017

lol...

anyways

as for how you would put this together

given that you want to usually hitsound

the snares, the kicks, the toms, the hi-hats, cymbals

the way i usually approach this is i hitsound one instrument at a time

usually starting with snares (because that's easiest)

then the kicks

then the cymbals

after that, i go for toms/hi-hats since usually i'm not bringing those out too consistently

unless the song has a really extensive hi-hat layer

Whistles

Halfslashed-29/09/2017

uh

sorry i got distracted by something

anyways, i guess we'll move on

if discord stops lagging

and it looks like it has.

so, onto whistle usage

so far i mainly focused on

how you hitsound to percussion and not to things like

vocals, synths, etc.

but whistles and such are just for that

primarily the soft whistle

so, this is something you use to prioritize sounds in the rhythm layer

you primarily map your clicks on

relatively straightforward

you generally don't want to spam this though

as with spamming anything else, emphasis gets lost

there are a few exceptions but it's hard to talk about those without seeing a map

since its very song dependent

but yeah, they're your general purpose "i want to make something seem important"

just make sure its consistent in what you prioritize

normal whistles however

are again, for especially annoying sounds

in anonymous i used them primarily for really loud brass

but in general, you won't always find a use for these

rather, sounds annoying enough to use them

really powerful guitar could also use it

i guess

if it was really screechy

also, don't forget that you can use it more appropriately for held sounds

by hitsounding the head and body with normal whistle

the same does not work for soft whistle

that sound is... some kind of garbage

on the body

anyways, then i guess we have the additive hitsounding part

before that

i want to mention that we have

several levels of quality to hitsounding

for "acceptable" and beyond

so, acceptable hitsounds represent some percussion in the song

this is what most people do

alright hitsounds represent most of the percussion in the song and also highlight things like

guitar, vocals, etc.

good hitsounding represents the percussion, provides good feedback, in addition to the above

great hitsounding enhances the sounds in the song in addition to the above

that's the general trend

so, it's easier to do additive rhythm with your whistles

since to most, they're already considered "extras"

an example of how you can do this is, even if there isn't some sort of strong vocal/synth/whatever

if you have a triple leading into a strong vocal/synth

you can do 3 whistles

soft ones ofc

Celektus-29/09/2017

question

do you actually need to whistle who stacks in some cases or is using the first note in the triple similar enough?

Halfslashed-29/09/2017

hmm, depends

if you say, use whistles with a frequency less than

1/1

only doing the first note in the triple will be enough

because the fact that you have two whistles 1/2 apart

compared to your typical usage of

1/1 or whatever

it stands out

now, if you say

have a predominantly 3/4 beat

you may not want to enhance triples

but rather stuff like doubles

i did this a lot in the anonymous along with

some other forms of additive stuff

this is one of the less scientific parts of this but

you'll find that by trying to apply the logic of "comfortable rhythms" you can enhance certain beats with your hitsounds

like, remember the way i told you about making 3/4 gaps readable

where you have a 3/4 gap into a double?

that actually legitimately works

as an additive rhythm

Celektus-29/09/2017

yea and then it would also make sense to whistle the starts of those 2 consecutive doubles right?

Halfslashed-29/09/2017

yep

now, if you say

started on a white tick with a double

then had a 3/4 gap afterwards

that'd sound like shit in terms of whistles

but if you used the double to switch from white-red ticks to blue ticks

it ends up creating an interesting feeling that you can then transition back

with an even number of whistles every 1/4

a bit wordy but yeahg

really, you want to use your creativity when it comes to this

just keep in mind things like

contrast, syncopation (what i just described), enhancing transitions

and you should be good to go

as far as variation on your drum line

if you do this

keep consistent sets of variations

like across a hyper measure

1 2 1 3

so you have one hitsound pattern the same for both

the first and third measures

the second one is different

and the third one is different

the third one is serving to highlight the transition

so remember that

any questions?

Celektus-29/09/2017

not really

Halfslashed-29/09/2017

alright, well, we're pretty much done then

not much to talk about since uh

at its core, hitsounding isn't really complicated

stuff like adding to the song is stuff we covered with overmapping already, for the most par

and is more feeling based than actually formulaic

Celektus-29/09/2017

yea and it's also very easy to apply overall criticism to feel like

since it's very easy to change

Halfslashed-29/09/2017

and you have a decent bit of experience hitsounding already

Low Diffs Part 1.

Discussion by Halfslashed

Spread Balance

Halfslashed-06/10/2017

okay so the first thing is the idea of having a balanced spread

as it turns out, people cannot instantly play insanes/extras

who would've guessed

/lesson

i'm kidding

but yeah, spreads are important because there should be a clear pathway to gaining the skill to play insane diffs or higher

from insane to extra it obviously gets more vague but

yeah

the issue is as mappers, most of us have already played the game for a decent bit of time and decided

they want to make maps to fit the song

or whatever

they want to get plays

so a lot of mappers don't like making lower difficulties despite them being vital

for newer players to be able to enjoy the game

as a result, you often get people making approval sets, sets where the host only mapped the top diff or an insane

etc.

everything up until now has been about mapping to fit the song

but we haven't done anything to bring it down for newer players

or looking at the function of a spread

so, anyways the main aspects of the difficulty spread are to progress the player from a day 1 player to being able to play insanes or higher

we mainly measure this by: rhythm density, cursor speed, and spacing design

Difficulty Breakdowns

Halfslashed-06/10/2017

so anyways, with that we get to the individual difficulty breakdowns

- **Easy** difficulties are for players that literally just started playing the game they may or may not have played the tutorial they can barely hold onto sliders they need a lot of time to process objects as a result, these difficulties should be as intuitive as possible and rhythm density should be sparse enough that they can actually process the objects despite having no rhythm game experience

- **Normal** difficulties are similar in this regard, but they introduce denser rhythms

- **Hard** difficulties assume that the player can finally get a handle on the rhythm aspect of the game with the exception of some of the faster rhythms but rhythms too straining are still a bit of an issue and here is where we start seeing spacing emphasis

- **Insane** difficulties are where we see extensions of the spacing emphasis concepts, more straining rhythms, etc.

so the main idea here is that

Easy and **Normal** primarily teach **rhythm**

Hard and **Insane** primarily teach **spacing** stuff

Celektus-06/10/2017

and hard is to introduce spacing concepts and somewhat harder rhythms like ¼

they don't use streams or constant jumps tho

Halfslashed-06/10/2017

mhm

so, broken down into technical terms

- **Easy** will generally either have **1/1** or **2/1** rhythm density

- **Normal** will have **1/1** or **1/2** rhythm density with **1/1** gaps

- **Hard** has a primary rhythm density of **1/2** but no more than about **5-6** circles in a row

Celektus-06/10/2017

and some **triples**

Halfslashed-06/10/2017

right, some basic **1/4** as well

Celektus-06/10/2017

what about 1/4 sliders?

Halfslashed-06/10/2017

we'll talk about that next week

because there's no easy answer to that

and then **Insanes** have **streams** of up to about 10-16 notes and as much **1/2** as the song demands
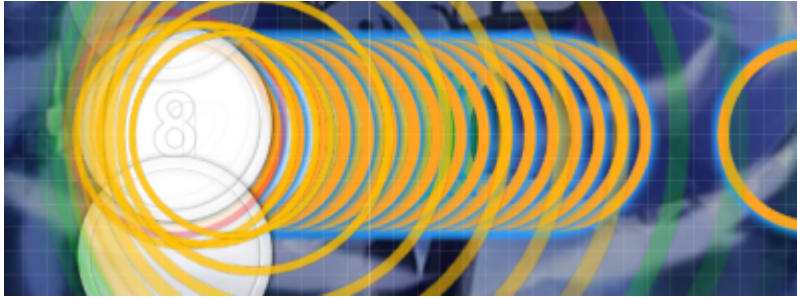
Celektus-06/10/2017

16?

is that like assuming it's very slow cause 16 sounds like a lot

Halfslashed-06/10/2017

it's 16 with that kind of spacing

since you mentioned it, its worth noting that

something like the extreme only makes sense when the spread builds up to it

that means i better see 5 note bursts in your hard

otherwise don't even think about doing this

anyways, so this is great and all but

most spreads do not look like this

especially nowadays when we're very paranoid about good spreads

you typically see **Advanced** difficulties and **Light Insanes**

so why is that?

Celektus-06/10/2017

cause gaps in difficulty might be too big

like you have a very easy hard, but a really challenging Insane

Halfslashed-06/10/2017

yep

I was more wondering why this happens

I mean, I just pretty much told you what every difficulty needs to do

but anyways we'll get into that

Easy/Normal Difficulties

Halfslashed-06/10/2017

so let's start with the easy difficulty

at a glance they're very simple

your rhythm density is 1/1 or 2/1

you put distance snap on

you make sure shit doesn't overlap

etc.

but no lol

first of all, there are some big debates over what an easy even is

a lot of people will think an easy is 2/1 rhythm density

with occasional 1/1

or just straight 2/1

some will think its 1/1 with 2/1 gaps

some will think its straight 1/1

i personally believe in the 1/1 with 2/1 gaps sort of thing

since you're preparing a player for a Normal

and the normal is similar to that as i'll talk about

so if you go with this approach, your rhythm chains will be about 5-6 objects connected by 1/1 gaps

with a 2/1 gap in between some objects

or you might only do that for the verses

and instead opt for a full 1/1 kiai

that's valid

rhythm gaps are usually not the issue here

Celektus-06/10/2017

and maybe even lower in calm sections?

Halfslashed-06/10/2017

yeah shape has an issue as well

but i'll get to that in a sec

so anyways, breaking up chains of sliders can be done with a large gap

(in this case 2/1)

or circles

you don't want more than 4-5 sliders if you can help it

in a row

Celektus-06/10/2017

is all circles valid?

Halfslashed-06/10/2017

circle strain is still an issue in easies

so try to have the player click less than 5 times in a row

and that 5 times should be

for kiais

but slider strain is a bigger issue

before i get into other aspects of easies
https://osu.ppy.sh/b/1411681
let's talk about simplification
practical stuff
02:06:188 (2,3) - so look at this
this is a common way to handle simplification of two 1/2 beats
pay particular attention to the slider
and notice that on the red tick after the head of 3

and the red tick before the tail of 3

are both prominent beats

this is a common solution

so let's say that snare wasn't there

if you started the slider on the red tick after

that would also serve as a good way to handle the kick-snare at the end

anyways keep that on hand we'll go back to it in a sec

actually

this map has some of it

because there's more to rhythm in easies than just 1/1 and 2/1 gaps

3/2 gaps

for example

are relatively common

in easies they're analogous to

3/4 gaps in hards and above

Celektus-06/10/2017

yea and anything slower than 1/1 essentially

Halfslashed-06/10/2017

well anything slower than 1/1... who cares lol

err

slower than 2/1

stuff like 5/4 is some messed up stuff

you probably shouldn't do that in easies

like, at all

Celektus-06/10/2017

yea and blue tick emphasis is kinda hard right

was about to ask

Celektus-06/10/2017

unless then song is all 3/4?

eh 5/4

I mean

Halfslashed-06/10/2017

well then you're not mapping an easy and then instead you're mapping a normal

err

all 5/4 yeah

i guess

but that's really uncommon

i don't think i've *seen* a song like that   →   →
deep vision Halfy

anyways, you can use 3/2 gaps but the song better have a lot of them

or as everything else, introduce early

similar to other rhythms, it's better to condition with a repeat or introduce it passively

01:05:845 (1,2) - this is a passive 3/2 gap

01:06:702 (2,3) - this is an active 3/2 gap

so anyways actually, while we're here, what do you notice about the rhythm density

Celektus-06/10/2017

the kiais are mostly 1/1 gaps with occasional 2/1 gaps and the other parts are less dense

Halfslashed-06/10/2017

and how about consecutive 1/1 clicks?

Celektus-06/10/2017

there are some in a few section like 01:33:274 (1,2,3,1,2,3,1,2,3,1,2,3) - even though it's not the kiai

the kiai in fact has never 3 consecutive clicks

as far as I can tell

Halfslashed-06/10/2017

yep

so rhythm density here is actually much lower than typical and here you would get an example of modern easy difficulty rhythm density

Celektus-06/10/2017

I would also assume that's because consecutive 1/1 isn't as hard as long sections of constant rhythm

Halfslashed-06/10/2017

i don't follow this rhythm philosophy

most of the rhythm ideas i follow are actually

from older eras

so my easies don't usually have the 2/1 gaps very often

and the player is clicking more often

some would call it more similar to a normal

which i hate lol

but yeah

i also hate making Easies

anyways though

onto the placement aspects

you already know what your distance will be like

it's going to be distance snapped

however, you should also satisfy two conditions for intuitive gameplay

Celektus-06/10/2017

everything spaced

Halfslashed-06/10/2017

- 1. your DS should not be **less than 0.8x or 1.3x**
- 2. your DS should cause circles to **not overlap**
- and you need to select an appropriate slider velocity based on tha 0.8-1.0 is the standard for standard bpms

Celektus-06/10/2017

but RC says it should be 1,2x :'(

1,3x for normal

Halfslashed-06/10/2017

whatever

lol

i just go for 1 usually to make life easier or

1.04x lol

Celektus-06/10/2017

…

Halfslashed-06/10/2017

https://osu.ppy.sh/b/1211443

do you think i'm joking?

lol

Celektus-06/10/2017

no 1,04x just sounds needlessly specific
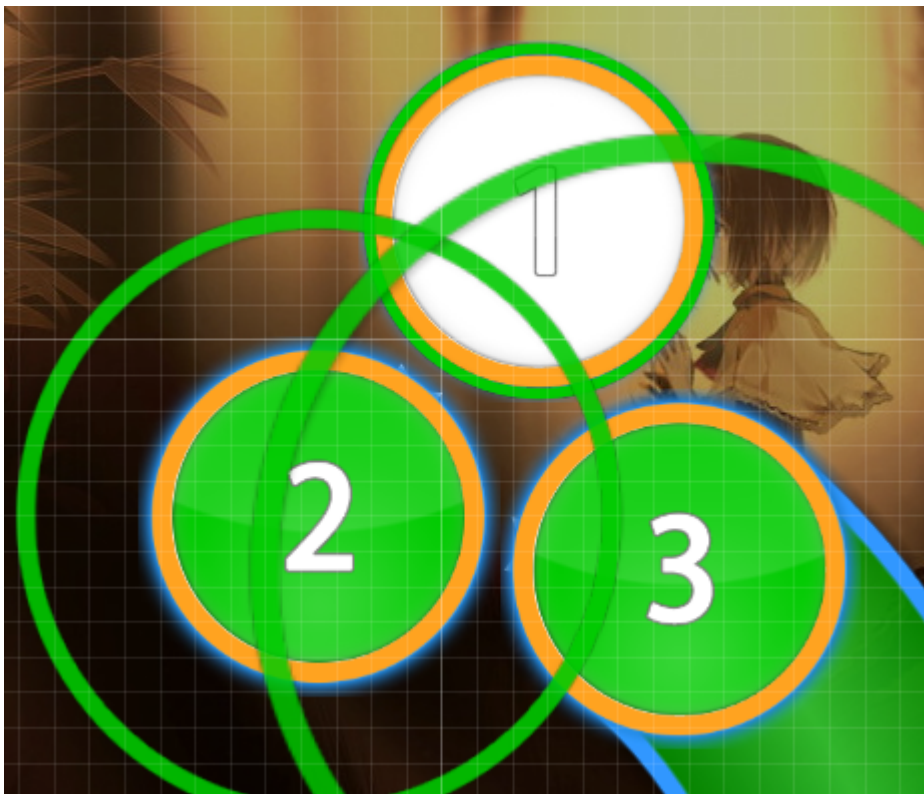
lol

Halfslashed-06/10/2017

at the time i was really, really attached to how that spacing looks

okay

anyways

now onto the actual placements

first, this is a common mistake:

Halfslashed-06/10/2017

so tell me why this is an issue

Celektus-06/10/2017

it's hard for nubs to interpret what to click first since both are spaced visually by the same distance

Halfslashed-06/10/2017

perfect

now, if i NC'd 3

would this still be an issue?

Celektus-06/10/2017

I would say it'd be better, but still a bit unfair

cause nubs are nubs

Halfslashed-06/10/2017

more or less my philosophy as well

however, when NCing since the colors are different

it becomes more of a personal thing rather than an actual issue

since while with no NC

there is nothing but numbers

with an NC there are different colors

so there's a means to differentiate other than numbers

Celektus-06/10/2017

question does that also count here? since I once heard players might even misinterpret slider ends as clicked objects I can even vaguely remember that being hard when I started playing

Halfslashed-06/10/2017

mmm, it's really not - circles and slider heads are differentiated enough by the approach circle

and that's really one aspect of the game that the players shouldn't be ignoring because
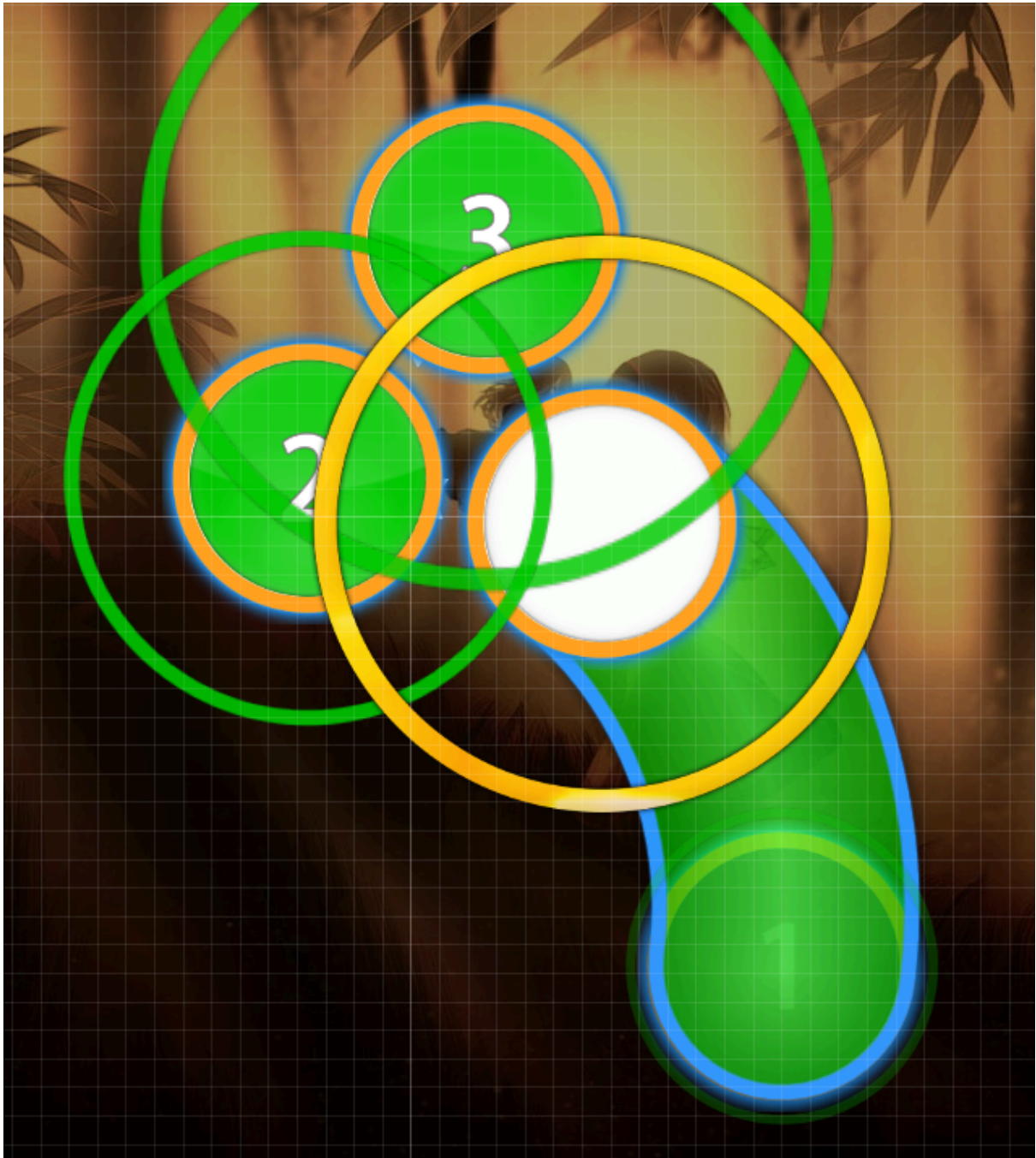
Celektus-06/10/2017

yea so it's also more of a personal preference

Halfslashed-06/10/2017

that's the most important thing at this stage

yeah, even more personal than triangles with NCs

editor bug ignore


now, is this an issue

y/n?

Celektus-06/10/2017

yes? because the direction you need to go next to is even more obscure?

I'm actually a bit unsure
Halfslashed-06/10/2017

okay, the slider implies movement into 2

and then 3 is there

but both are equally spaced from the tail

so the real answer here is

it depends

if you never, and i mean

NEVER

do anything aside from implied movement

EVER

then this is fine, the player will naturally expect to hit 2

however

if you find yourself doing this kind of thing often
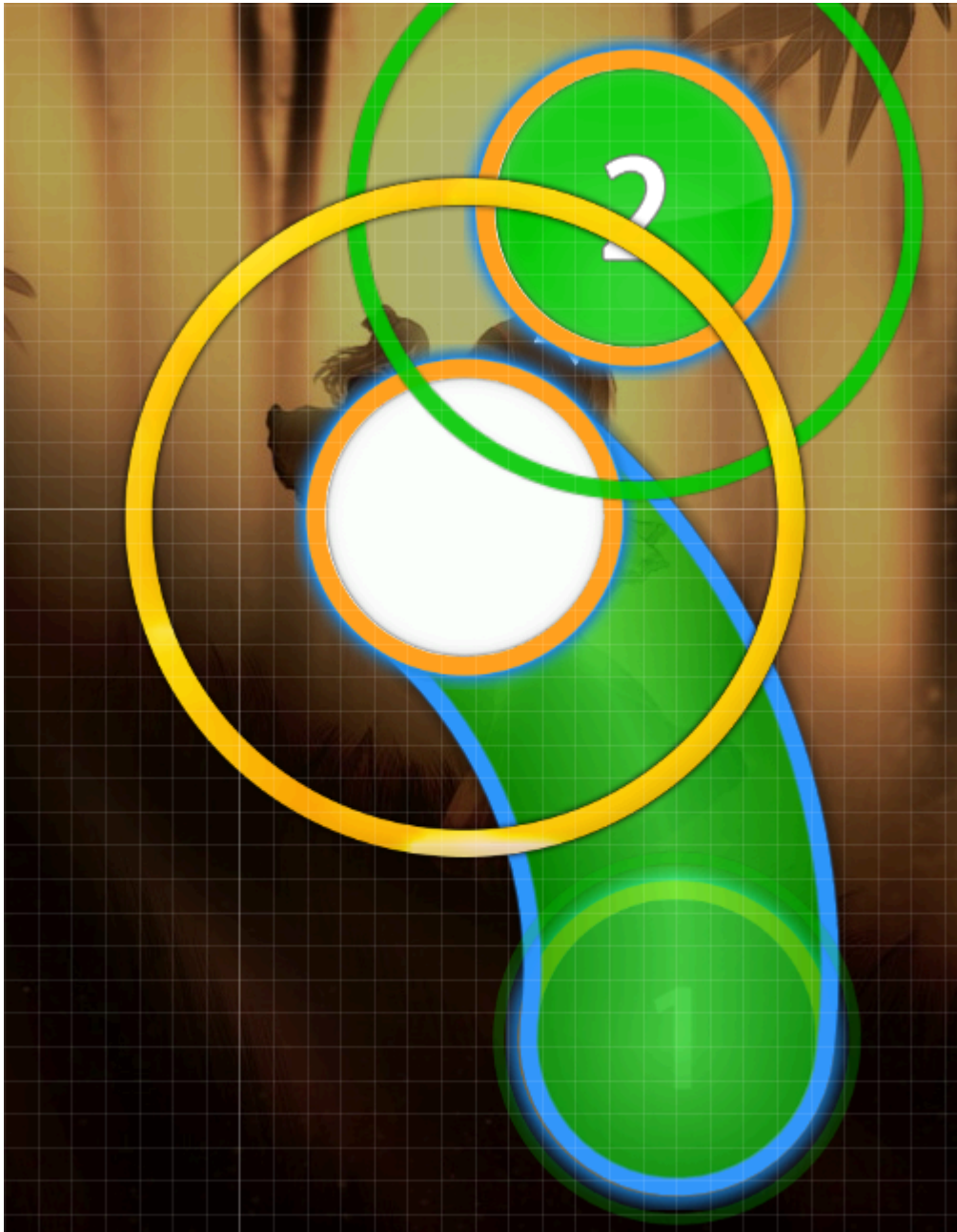
then it becomes an issue

a player can no longer rely on the slider to tell where they are intended to go again, this is more of a preference based thing but i still find slider direction to be a subpar way to show where the next object is

Celektus-06/10/2017

I'll probably just keep thinking bad of those equally spaced distances as bad as a whole, but it helps to know that context matter for slider tails

Halfslashed-06/10/2017

forgive me, its been a long time since i've made a blanket
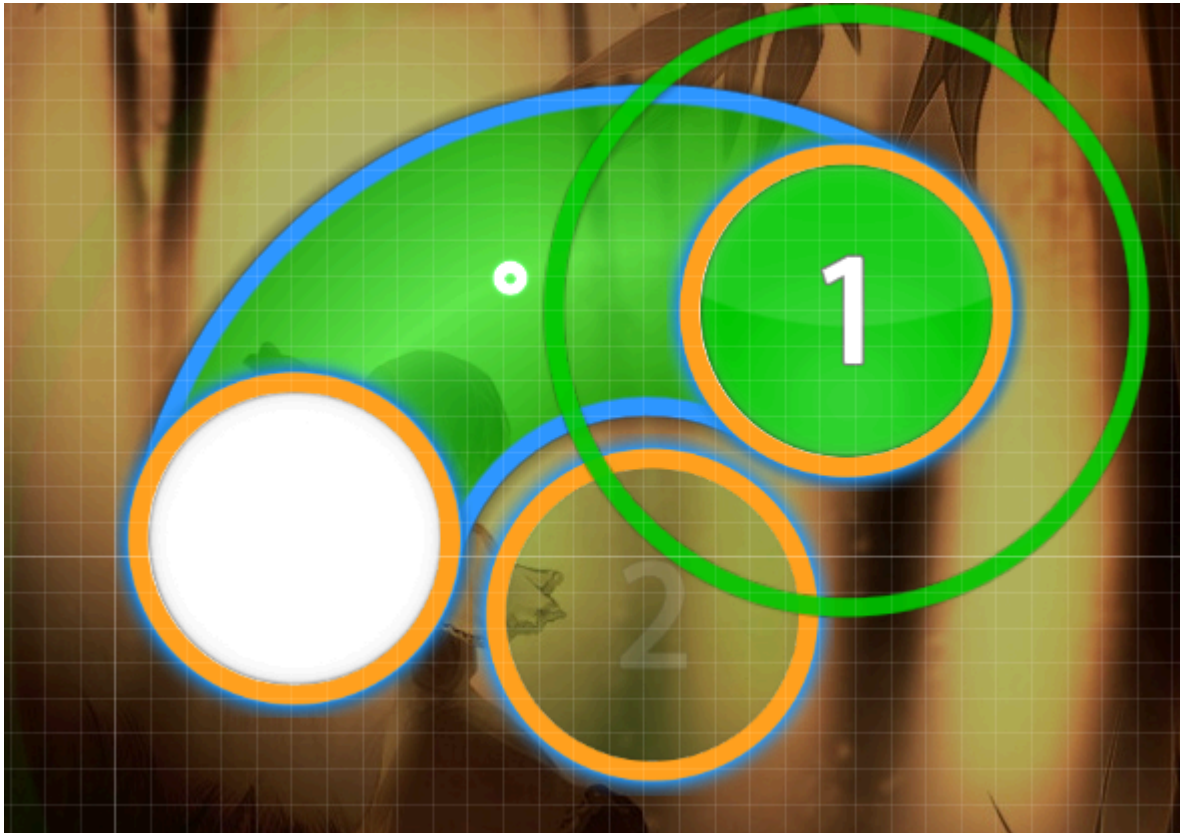
but is this an issue

y/n

Celektus-06/10/2017

well no since 2 isn't there until you've clicked 1

Halfslashed-06/10/2017

wrong

this is a common mistake in maps

so, players at this level will try to follow sliders religiously

however, they also will

let go and try to click the next object

if the next object is close by

so while on this slider track

the player may let go of the slider before or after the tick

and click 2 early

Celektus-06/10/2017

hmm

depends on the rhythm gap too I guess

Halfslashed-06/10/2017

yep, it gets worse with longer rhythm gaps but even then

you may have forced a potential slider break

l o l

Celektus-06/10/2017

very intuitive

Halfslashed-06/10/2017

incredible

but anyways, yeah

so anyways

this begs the question

how do you emphasize in easy diffs

aside from clicking

movement emphasis is still very possible
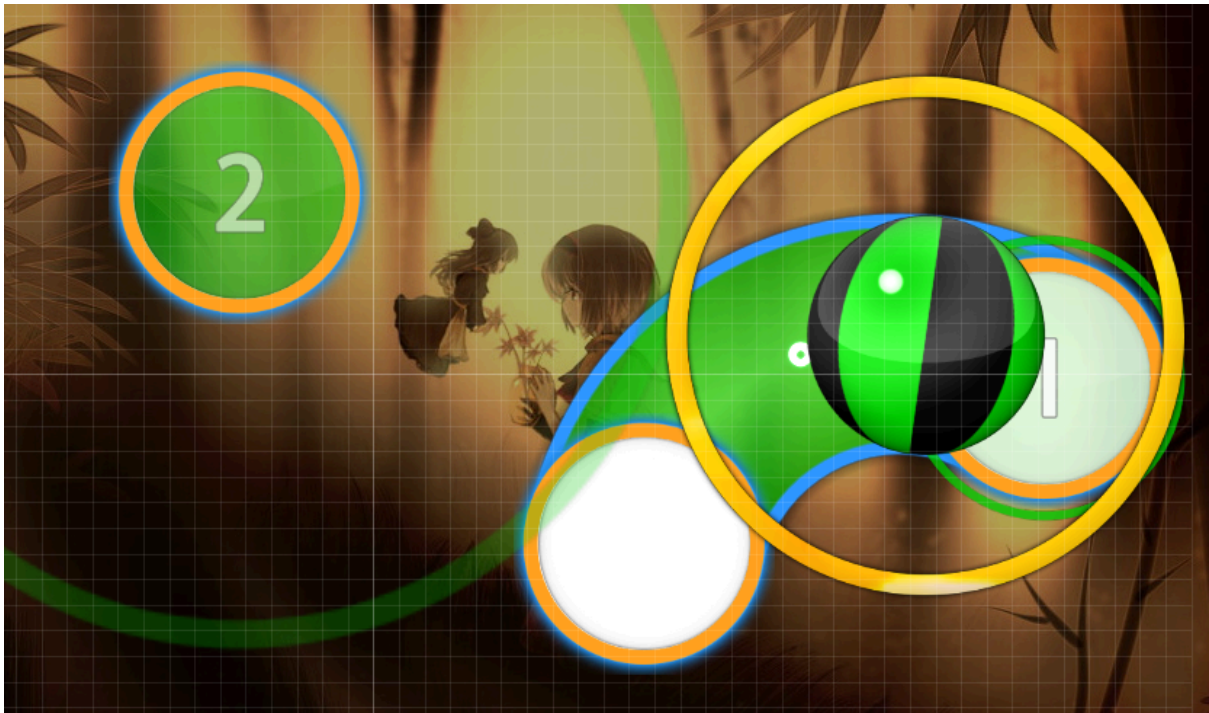
Celektus-06/10/2017

how far can you go with that?

in terms of being un-implied

Halfslashed-06/10/2017

if you still have kizuato open

i do this quite a bit

00:12:445 (1,2,3) - this is an example of using a sharper than normal angle to emphasize the next beat

after hitting 2, the player would naturally expect 3 to be there in a circle

but.. .that doesn't happen

Celektus-06/10/2017

something similar would be stuff like rotation changes right?

or ehmm axis changes?

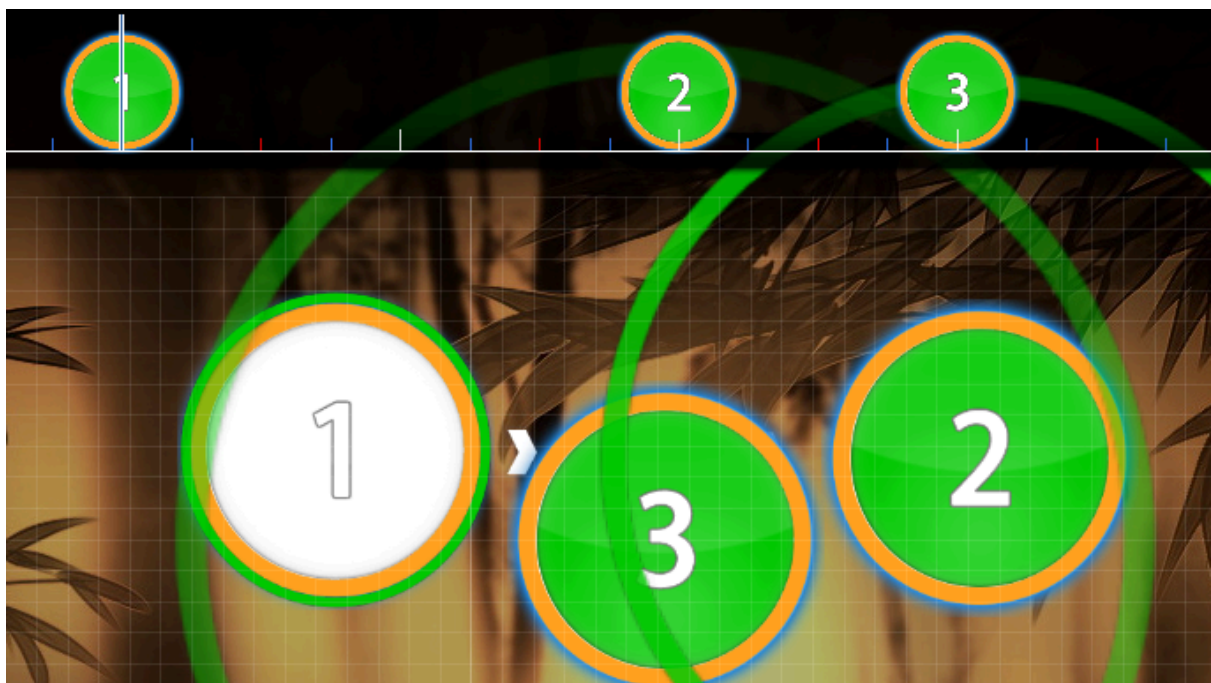**Halfslashed**-06/10/2017

exactly

get creative

also, if you have different snaps

i will disown you

if you do something like this

ever

Celektus-06/10/2017

yea

it gives me cancer already

Halfslashed-06/10/2017

anyways

i'm gonna give you two maps to look at

[Fear, and Loathing in Las Vegas - Let Me Hear \[Easy\] by Hollow Wings](#)
[Ogura Yui - Honey Come!! \[HW's Easy\]](#)

so, let's talk about the first one

what are some things you noticed

Celektus-06/10/2017

sec I'm reopening it

a similar like we talked about on the top diff 00:01:507 (2,3) -

all the back and forth motion give emphasis

axis changes 00:06:398 (1,2,2) -

00:11:616 (1) - slider body emphasis through sharp angles, also probably helps that the sliders have relatively fast velocity and length

lots of overlaps 00:12:920 (2,1) - not sure if I would say they are intended to give emphasis, but they could and they are readable

also might be only a minor thing but the kiais get different visual design while all other sections are very rigid with all of the straight sliders

Halfslashed-06/10/2017

mm

okay

so on the first point

it's actually another example of slider leniency abuse

it's not a blanket but

notice how the same kind of motion is there

and therefore, the same problem

however, the difficulty is built around this

the player might mess this up a few times but

it will be easy to get used to since its in the beginning

yep, all of the overlaps are readable

good, you noticed the slider design

with the sharp angles

that emphasize the ticks

now, notice because of the conditioning of "don't let go of the slider early"

00:24:659 (1,1) - stuff like this ends up intuitive

though ordinarily it'd be a bad idea

00:40:311 (1,2,1) - look at the rhythm here

3/1 reverse out of nowhere

to match the 3/2 reverses before and emphasize the transition

into the next section

and the 3/1 sliders too

also

visual design is one way to approach it yes, but

you missed the movement idea

remember - the player follows these sliders

01:01:181 (1) - kiai is full of large circular shapes

the player is trying to move in a perfect circle

now, just like if you were moving in a perfect circle in a stream

its hard

for newbies

this is a very harsh motion to put on the new players and

it adds a lot of strain despite the rhythm being so sparse

Celektus-06/10/2017

also it's twice the same then the rotation starts down instead of up

and so on

Halfslashed-06/10/2017

yep

but the main thing to take from this is

the effects of slider curvature are present here

just like they are in stream curvature

and thus comes the key of intuitive slider design in lower difficulties

movement concepts are shared

now

one thing to keep in mind is

00:27:268 (1) - look at the end of this slider

notice how this obscures the sliderbody?

this is an example of a flaw in the map

newbies should be able to see the sliderborder of each slider

no matter what

anyways

that's it for that map so

tell me about honey come now

what are some things you noticed

Celektus-06/10/2017

first of it uses consistent overlaps like conventionally modern normal diff but the rhythms are all still 1/1 and lower

I don't see a particular reason for it other than maybe making some rhythm gap later on clearer

it shows that is works though

the sliders are nearly all curved by a bit at least and HW plays around with a few un/implied curves and rotations I think

this slider is on a repeated phrase 00:21:889 (1) - think that's just visual and doesn't feel as different from a curve

00:45:367 (1) - I don't know what I should say other than that they aren't too obscure and some later are a more obscured I think

also the repeated way it overlaps makes this one readable 02:14:063 (1,2,1) -

and it's also NC'd

not so sure if this overlaps works 01:28:410 (3,1) - might work since it's very long and there's enough time to react after clicking the head

nearly forgot these short 1/2 reverses 01:37:867 (2) - I think most people would question them since they are really short and players would want to follow them perfectly and might get confused, but they also appeared quite early I think

01:53:193 (3,4) - did she use that slider end overlap to emphasize the drum on the tail and make it different from the tail of 3?

02:21:563 (4,2) - uhh I'm unsure about this one

passive 3/2 03:47:160 (5) - active 3/2 03:48:628 (2,3) -

well not exactly active

there's lots of 3/2 early on

the first few sliders already introduce some of this maybe since the are 2 3 or 7/1
00:01:020 (1,2,1,2) -

Halfslashed-06/10/2017

alright

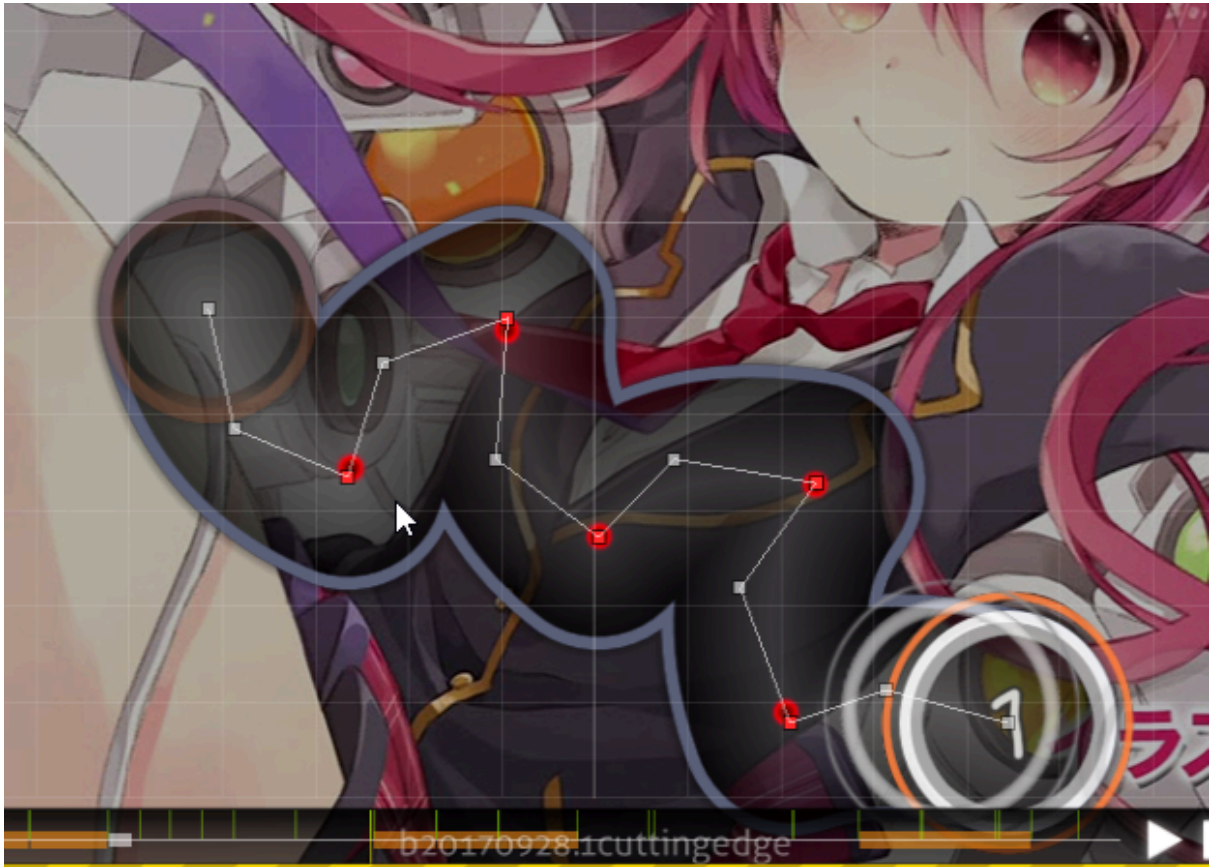that it?

Celektus-06/10/2017

I guess it's a bit hard for me to look at the more movement oriented stuff besides
the obvious

Halfslashed-06/10/2017

you'll get used to it

Celektus-06/10/2017

no I'll just do it

OH

slider tick sliders

Halfslashed-06/10/2017

wait a sec

okay

good.

anyways yes

they were both here and in the last difficulty i linked you

good, that's the main thing of this diff

anyways, the distance snap

yes it is weird

it causes 1/1 circles to overlap

however, this is to differentiate between 1/1 and 3/2

more easily

00:11:454 (1) - this is not a curve

it is similar to one but this is setting up the slider tick bouncing that goes on later

Celektus-06/10/2017

did I say it was one?

Halfslashed-06/10/2017

"this slider is on a repeated phrase 00:21:889 (1) - think that's just visual and doesn't feel as different from a curve"

it's the first instance of that

she uses angles to differentiate patterns

00:16:672 (1,2,3,4) -

00:19:606 (2) - owo what's this

Celektus-06/10/2017

hmm I would still say it plays somewhat like a curve but I can see it having an effect at this SV

Halfslashed-06/10/2017

yes it it is

a 1/2 reverse

in an easy

yep, this diff is about the sliders so

HW used as low as feasible DS as possible

to differentiate circle movement from slider movement

anyways

something i didn't talk about at all are 1/2 sliders

let alone 1/2 reverses

or anything about reverses, really

so, this 1/2 reverse comes in relatively early

at 20 seconds

good way to introduce it

but any new player that plays that without

seeing a reverse in action will not know how to play it

also you are absolutely correct about the slider length

players want to follow it and will get confused

due to the low SV

this is generally the reason why 1/2 sliders are discouraged in lower difficulties

however, the player should know what a reverse plays like

due to 00:10:150 (3) -

and that's what HW is taking advantage about

Celektus-06/10/2017

I assume it gets even weirder with 1/3 or high BPMs

Halfslashed-06/10/2017

1/3 in an easy..

unless it's a swing song lol not happening

but anyways those sliders are awesome right?

xD 00:54:498 (3) - even stuff like this

is really cool

Celektus-06/10/2017

kinda mhm I also like how she keep some still very wide like 00:55:802 (1) -

Halfslashed-06/10/2017

yep

01:29:715 (1,2) - also look

less intense shapes

to differentiate from kiai

there are still bumps but

this is generally more straightforward

02:11:128 (4,1,2) - also stuff like this is fine

the player is holding down for 3/1 doing basically nothing

and the previous object fades out fast enough

03:40:150 (1,2,3,4) - building intensity with increasingly sharp angles

anyways

1/2 sliders are one of the hardest things to get away with in today's era

in an easy

so i wouldn't advise using them

but if you want to use them for whatever reason

usually you want a large timeline gap between them and the next object

so players have time to react to what they handled

anyways, with that

we have extensively covered easies

and i mean

we could talk about normals but

more or less the same thing except all of the unintuitive placement stuff applies to 1/2 instead of 1/1 stuff

try to keep maximum chains of 1/2 less than 5-6 notes

Celektus-06/10/2017

no multiple 1/2 reverses?

Halfslashed-06/10/2017

consecutive 1/2 clicks less than 3 notes

no multiple 1/2 reverses.

however, multiple 1/1 reverses are more acceptable

i didn't mention them with easies but yeah

they're discouraged because multiple reverse arrows are too fast to react to for newbies

for 1/1

or shorter

its 1/2 or shorter for normals

now.

here's the one important thing to talk about

with normals

and the answer to why advanced difficulties are so common

ranking criteria permits you to have a simplified normal

what that means is

instead of using a maximum of 5-6 objects with 1/2 gaps

you're using a maximum of 2-3 objects with 1/2 gaps and almost all of it is passive

the idea here is that in a spread, you want the lowest thing to have a density of 1/1 or lower primarily

so that beginners can play anything

that's less than 5 mins, ofc

so anyways, the main difference is rhythm density

https://osu.ppy.sh/forum/t/602580

look under the section about normals

for lower difficulty players (easy and normal) its kinda implied that

reverse sliders are the hardest thing you can throw at them

because unlike everything else, the most effective way to play them is to hold down

else you have to do a sharp back and forth motion which you never have to do for any object

and its a slider on top of that

so "Avoid connecting reversing sliders shorter than 3/2 into other objects by 1/2." is for that reason

your lowest difficulty should make it easier to get used to reverses

but hey, you can still use 1/1 multi reverses

"Avoid consecutive sliders shorter than 1/1 connected by gaps less than a beat." this says no consecutive 1/2 sliders because yeah they are still kinda fast to process

alright

so advanceds are common due to

a lot of people thinking easies are 2/1 spam and they don't want to map it

so they make a normal with 1/1 rhythms only

and then need an advanced to bridge to their hard

i think that's all i wanted to say

blah blah blah difficulty settings just use the ones everyone else uses

lol⇕¶

Low Diffs Part 2.

Discussion by Halfslashed

Hard Diffs

Halfslashed-15/10/2017

so, we talked about easy, normal, advanced

more or less already

so i guess the next step is hard diffs

and as you mentioned, you wanted more practice on this

well, these are commonly messed up

because you have to introduce a lot of things

did we talk about stacking at all? i forgot

i'll do that before we really get into the specifications of a hard diff

remind me what i said about stacking

in easy/normal

Celektus-15/10/2017

oh you didn't say anything about those

I think

Halfslashed-15/10/2017

yep that's what i was asking

thought as much

anyways

stacking in easy difficulties is discouraged

its discouraged because it introduces multiple spacings for certain snaps and

it overlays two approach circles on each other

so that may not be great

however, its possible to do it b

but like everything else

introduce it early

and introduce it for even snaps

and...

only use it for one snap

but otherwise, try to avoid stacking

in normals however

stacking is more commonly accepted

but like easies, you only want to use it for one snap in a map

aka

if you want to use it for 1/1

then you can only use stacking for 1/1

no 1/2 stacks

however, in hards

basically you can use different snaps in a map

but only using the same stacks within a combo

so like

one combo could have

1/1 stacks

the next can have

1/2 stacks

etc.

(sorry i'm a bit distracted)

anyways

in terms of rhythm

what a hard looks like is that it is usually the first difficutly in a spread

to introduce 1/4(edited)

err

1/4 in general*

in terms of 1/2

this is the point where slider ends no longer add stress to a player

and so the only thing we need to worry about in terms of tapping strain at a normal bpm

is consecutive 1/2 circles

so, you can usually go up to 4-5 in a row

otherwise, feel free to use 1/2 as filler

spacing is where things get interesting

most of a hard will be distance snapped

but you're able to introduce spacing emphasis

so how that works is you're mostly able to introduce spacing emphasis from 1/2 sliders

Celektus-15/10/2017

you mean like constant abuse of slider leniency?

Halfslashed-15/10/2017

sorta yeah

but just in general

you're able to introduce jumps from 1/2 slider

Celektus-15/10/2017

what about 1/2 jumps?

Halfslashed-15/10/2017

between circles?

you can use them

Celektus-15/10/2017

now I get how to not get a too high SR

wow

I'm dumb

btw what about higher DS than 1,3x?

like 1,5

does that work is would you say it might be too hard?

Halfslashed-15/10/2017

i'd stay away from it

anyways more on 1/2 jumps between circles

and jumps in general

they should not be consecutive

aka, you can only have one jump at a time

so...

yeah.

in terms of mixing stacks, you should save that for insane difficulties

also, how 1/4 is handled

generally you don't want to introduce things longer than 5 note bursts

and 1/4 shouldn't be spaced

Celektus-15/10/2017

what about overlapping?

1/4

Halfslashed-15/10/2017

not overlapping either

really

or just really low spacing

anyways yeah

just avoid things longer than 5 note bursts and

5 note bursts should be rare

on the topic of 1/4 reverse sliders

they are fine to use in either the single reverse or double reverse variety

but if you use both, then you should also use distance snap

to indicate the difference between them

in terms of spacing from 1/4 sliders btw

it's alright not to obey distance snap but this limits your single reverses

so be aware of that

so, how about readability

you're able to use more advanced stacking ideas

overlaps can be used but they should be really consistent

and people generally don't like them

aka mun's hard on forest of the spirits

got shut down for this

so be careful

alright

on the topic of 1/4 sliders

Celektus-15/10/2017

they don't work like one insane I'm assuming

Halfslashed-15/10/2017

right.

they're still fast and hard to process

so they're discouraged

any more questions on hards?

i don't have much more to say about them

Celektus-15/10/2017

what about overall rhythm density, can you say anything about that?

Halfslashed-15/10/2017

typical rhythm density

except again, limit the amount of consecutive 1/2 clicks

also

with 1/4, remember you're introducing uh

it for the first time

this means that say

two consecutive triples

seperated by a 1/2 gap

is too hard

because you're not giving players any chance to rest

however

a pair of doubles is alright

these are natural as long as you have a 1/1 clicking gap

let's see

Celektus-15/10/2017

I have a question about triples on hards. should I only use them when they land on strong beats? like what if the song has only on-beat triples that don't land on strong sounds?

Halfslashed-15/10/2017

map them whenever it makes sense

but yeah

↓¶

Advanced Diffs

Halfslashed-15/10/2017

i think that's it for hards

now

on advanceds

you can actually introduce 1/4 repeat sliders

in advanced difficulties

if you want to

however, makes sure that this makes sense

that would mean that your hard difficulty has lots of triples and

5 note bursts

etc.

anyways…

Insane Diffs

Halfslashed-15/10/2017

insane difficulties

we won't really have much to say here

the idea is that this is a more cut down version of an extra

or rather

an extra is an augmented version

this is where you introduce consecutive jumps, longer streams (9-16 notes)

etc. etc.

stuff like harder to read 1/2

more extreme slider velocity changes

etc.

so then you might ask

what's the purpose of a light insane

light insanes are in the event that you want a more conservative hard difficulty

aka

no spacing emphasis

no jumps between circles

very limited 1/4

etc.

this is really the range you can play around with your spread

sorry this ended up being a bit vague and uh

i was distracted but

more or less this is what i wanted to say

and for anything else

please ask questions

it's a vague area