

A Reference of Mapping Ideas

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Mapping Ideas. A subject so big --- that's really hard to cover the whole thing with just few sentences. Since I'm going to write a guide about this, I decide to break down to various elements and looking into each one of them deeply to grasp the true meaning of it.

As to why am I starting this essay...I guess I don't really know...maybe because I'm disappointed at how osu!wiki turned out to be right now. The essay is long enough, which seems to be heading this way, I may add a index page later.

My aims to this guide is for people who play this game for a while, after getting familiar to the editor, have come up some big idea for mapping and is willing to do it themselves. So I won't spend a great deal of time to explain the functionality and how-tos on editor or on gameplay itself. But I will clear up some terms' definitions and usages because it will be really hard to communicate on a subject to everyone else without the proper clue of meaning.

Chapter 0: Overview

0.1 Brief Intro

Years ago, peppy, the creator of "osu!", was originally thinking of making a simulator of "Elite Beat Agent" and "Osu! Tatakae! Ouendan", 2 of the popular rhythm game series on NDS, but for PC. The initial idea is to make the gameplay a carbon copy of those games. Time passed, with a lot of features later got implemented, including a working online multiplayer lobby, an own IRC server, a forum that acts as an irreplaceable medium for beatmap discussion, beatmap downloading server, player information, moderating system, score ranking, with the core game program integrated all of the aforementioned feature together, and in additional, 2 other gameplay modes.

0.2 The Gameplay Modes

The game osu! comes with 3 gameplay modes: "Standard Mode", "Taiko Mode", "CTB (Catch the Beat) Mode". But being a rhythm game, the player's essentially doing the same thing: to play the game while following the music.

Standard mode is the primary mode, and not surprisingly, the most popular gameplay mode out of 3. The general objective, is to cursor click all the hit objects, sequently, at the exact moments, emerging throughout the music, and doing all of them simultaneously while following the music. This is the mode we're primary dealing with in this essay.

Taiko mode is another attempt of simulating a music game. This time, it's a popular Japanese arcade series "Taiko no Tatsujin", but only using the normal map data (which I'll introduce it later) to generate the stage. A stream of notes flying constantly from right to left, you need to hit every note when it's at the exact position. It's originally played with a taiko drum, so there are different types of objects to represent the drumming movement as well. Due to various questionable design choice and native limitations, it was seen not as a perfect clone of said game. It's the least popular of the 3 modes, but what it has is a really strong community activity going on.

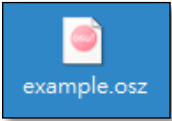
Compare to the previous 2, CTB (Catch the Beat) mode is more like a minigame. As its name would

suggest, the goal is to use left and right on the d-pad (you can change the control in the option menu) to control a running mini figure with a plate on top of its head to catch all the fruit raining down throughout the music. Because its simplicity compares to the former 2, its popularity sits between taiko and standard mode.

0.3 Map, Mapset, Beatmap Package

A “map”, or a “beatmap”, is just like a level, or a stage, in a sense of a video game term. Like any rhythm games, a map’s playtime, or the stage length, is often strictly limited to the music. Usually, the game begins when the music starts, and the game’s over as soon as the music’s over. (Not every map is like this though) The general difficulty settings of a map, as well as stage objects (“Hit Objects”) during the gameplay, are all stored into a single beatmap data , separated with the music data, and they can be shared with all 3 gameplay mode mentioned above. (An in depth discussion of the settings and the elements will be written on Chapter 1.)

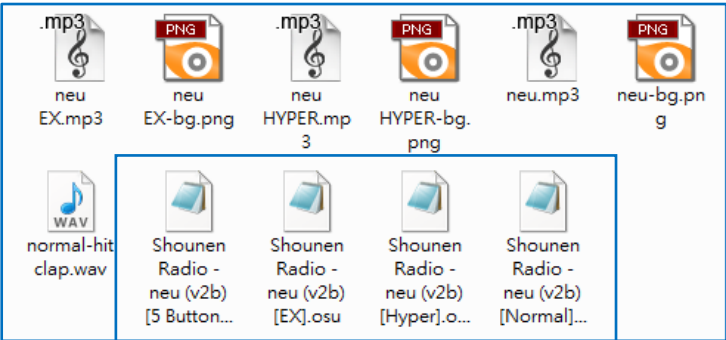
A beatmap package, when download from the official website, is in a zipped custom format (“.osz”). It’s essentially a renamed “.zip” format, that means you can open it with every other archive unzip program if you change the label of the file format, but you still need the game program to play the map. (But this may change in the future as a newer



A beatmap package

format is working underway.) The zipped package contains the music data (in .mp3 or .ogg), several map data (called a “mapset”) as there won’t be just one difficulty shared with only a single music track. It contains all the necessary information for a beatmap. And there are storyboard elements and script data (to create a PowerPoint-esque animation during gameplay). A beatmap package doesn’t necessary have only one music track, you can have multiple songs associate with each of the different difficulties, and still pack them into a single beatmap package.

An extracted beatmap package



A Mapset.

(In this case, the [Normal] and [5 Button] difficulty shares the music track “neuEX”, [Hyper] is “neuHYPER”, and [EX] is using “neuEX”)

0.4 Beatmap Editor

One of the most important features that come with this game is a map editor, and the integrating functions like uploading, discussing, rating, and the stat behind it. This is the place where you, a mapper, can make a level or edit other mappers’ levels as long as you have their map data. But if a map is already ranked/approved, then no matter what you edit, the map of yours won’t count toward your score.

All 3 gameplay modes can be played on every single working map data with a slight conversion of gameplay. And the goals within the 3 modes, while all of them are to score as much as possible, but the gameplay experiences are fundamentally different. So that means for a mapper to design a beatmap, one can do a map to cater specific mode players, or make good use of map traits shared among the 3 modes to do an all-around map and impress everyone. But for this essay, I’m covering the standard mode only.

0.5 Skins/Storyboards

Chapter 1: Map Elements Introduction

We can generally divide these elements into two parts: “Hit Objects” (section 1.1 to 1.4) and “Difficulty Settings” (section 1.6 to 1.10). Different object has its own scoring mechanism, and the **combo counter** (section 1.11) behaves differently as well.

1.1 Hit Objects Overview

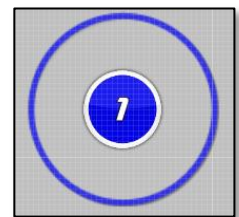
A hit object is the primary composing element for a map (also usually referred as a “note”). Most types of hit objects will have a number placed in middle to indicate the clicking sequence. It can be placed anywhere on the playfield, far or near to the previous objects (which we will have an entire chapter dedicated to this), yet it can’t be placed at any moment only if it’s following the music. As a result, only one object is available for clicking in one moment during the play.

A hit object generally appears before the actual moment of clicking, at the same time accompanying with a larger hollow circle, called an “**approaching circle**”. It shrinks over time and serving as a visual cue of the timing. What you need to do is to click on the object following the song rhythm and earn your score according to your performance. (Not every gameplay object will operate like this however, so we will discuss this in the below section.)

You will also notice when there are several objects overlap each other, or if it’s thought as way too early (like if the approaching circle is too far away) the object behind will be temporary unavailable to click, to protect from the accidental hit.

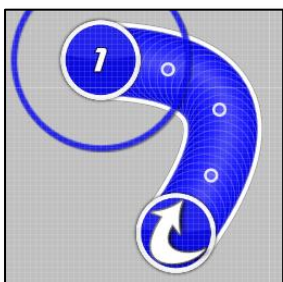
1.2 Circles

A Circle is the most common notes on a beatmap , which takes shape in a normal solid round circle, as opposed to the hollow approaching circle appearing simultaneously together. When it appears, move your cursor toward the center of the circle and click them at the precise time, and they disappears and you earn your score.



When you click on a circle at the exact moment the hollow circle start overlapping the actual original circle, you receive a perfect score (300). You will get less scores (100, 50) if you land a less accurate timing click, or a “miss” if the is considered to be entirely inaccurate at all, depend on your timing judgment setting.

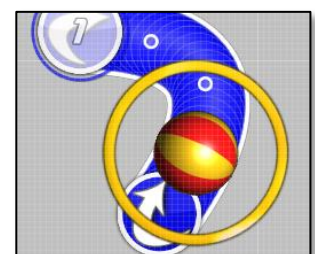
As long as it’s not a miss, your combo counters will +1 after you complete a circle.



1.3 Sliders

Contrary to normal circles, which you only need to click them on time, sliders require you to actually first click the beginning and drag your cursor to move for a period of time. A slider consists of a circle head, a circle tail, and a path body that connected the tail and the head together, and finally, It appears with an dedicated approaching circle too.

Immediately after you click the slider head, you can see a “**slider ball**”



rolling toward the slider end at a constant speed to inform you the progress. Occasionally there are small dots laid on the path, called “**slider ticks**”, which give you 10 additional points when you roll over it. There’s also a bigger “**follow ring**” also moving dependly to the ball; you would no longer get a perfect score if, at the same time, the ball’s hitting a slider tick when the cursor isn’t inside the ring. As soon as the cursor’s away from the ring, it will disappear until your cursor contacts the rolling slider ball again.

Sometimes you will also encounter a “**reverse arrow**” pointing backward at ends of a slider, which means it’s not the end; you need to trace the path back until one side of the slider doesn’t contain a reverse arrow anymore, then you can released the cursor to receive your score. Get to one reverse arrow will earn you additional 30 points.

The scoring of a slider is actually rather complicated. I didn’t bother to test it myself, so this is the words straight from the FAQ with a little rewrote: “If you follow a slider path the whole process completely, you get a perfect score of 300. 100 If you get half or more than half the amount of slider ticks, one startpoint, one endpoint, and the numbers of reverse arrows all adding together, and 50 when you pass less than half of the amount, and finally, a miss if you completely miss the whole slider.” So as you can see, the most distinctive feature of a slider is that the timing actually doesn’t really matters much. To people who care about combos, every tick, including the start, reverse arrows and the finish all count as one. So a long slider in a slow song with lots of ticks will usually net you more combos than, say, a slider but with less density ticks in a fast song, on the same period of time.

1.4 Spinners

Spinners were rarely used in mapping. You can even publish a map without any spinner. That being said, spinners are more important to competitive players for maps where the scoring range between top players is so small, even a few additional points will alter the rank position greatly. The spinning speed displayed at the bottom of the playfield, which shows how fast a player performs, is also a common topics between players as well.

A spinner is a giant disk that filled the whole playfield in the middle with 2 progress bars, called a “**spinner meter**”, on both sides of the playfield. When a spinner emerges, a player wants to hold on it cursor immediately, and spin as fast as it can. This is the only object that has no approach circle before start, but has an giant approach circle as big as the disk first, it then gradually shrink toward its center until it disappears, to indicate the end of the spinner. The **autoplay** will always has the maximum speed of 477, but for most 99% of the ranked maps, a speed of 286 (or in spunout mod) is enough.

As soon as you start spinning, the meter fills itself up from the bottom with colors (the predetermined meter picture overlay from the skin you use), the more you spin, the faster the filling speed is. A small portion of the bar is worth 100 points, when it completes itself before the end, every additional circles will add another 1000 points to your score. Complete a spinner without a miss will also earn the player 1 combo multiplayer.

1.5 Combo Sets/New Combos

So I assume you’re already all noticed how those objects (except spinners) come along with different colors and various numbers within either sequentially or with different color, but resettled number to 1 for next notes) on every map. That’s basically the purpose of combo sets; you use them to mark and differentiate

a group of notes to makes the map less boring to read.

Unfortunately, it doesn't bring you extra score.

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1.6 General Configuration Elements Overview

1.7 HP Drain Rate

1.8 Circle Size

1.9 Approach Rate

1.10 Overall Difficulty

1.11 Scoring/Combo Counters

This place is mainly for the addition rules

As for slider, if you don't finish at the very end of the slider, you would receive no combo count of the endpoint, but it won't break the combo counters.

2: Music Elements

2.1 beat

2.1.1 "Strong Beat" and "Weak Beat"

2.2 pinch

2.3 new combos

2.4

3. Idea Conflicts (Part 1)

3.1 "Following the Beat" or "Creating the Beat" ...?

3.2 which music instrument should I follow?

3.4 symmetry or not?

3.5 new combos abuse...?

4. Mapping structures and formations

4.1 General Configurations

4.2 Mapworks

4.2.1 New combos

4.2.2 Pattern

4.2.3 Spacing

4.2.4 Path

4.2.5 Sound Effects and Kiai Time

5. beatmap characteristics, beatmap formations, beatmap traits

6. Idea Conflicts (Part 2)

3.3 hitsound volume?

6.2 hold sliders being unrankable?

Etc...