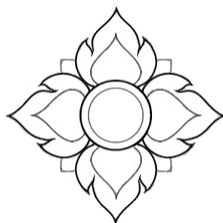


Tony Jaa

Supplemental Design Material Document

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Introduction

This supplemental document provides more detail about the fighting system and the designer's tool we'll use to specify design data. First, it covers the basic template for how many moves each character will have and approximately what the player inputs will be to perform the moves. Next, it shows simple schematics for how the special moves will function with an emphasis on attacking with two or more characters in parallel and controlling space on the playfield. Finally, some screenshots of our design tool show how the data for each move will be organized.

Character Moves

The basic move template is somewhat similar to Soul Calibur's in that the player can do different moves by tapping any direction plus a button, or holding any direction during an 8-way run plus a button. Note that during your 8-way run, your character(s) still faces toward the enemy character(s). Holding the Free Run button allows you to break the auto-face and run any direction you want.

Button	Function
X	Block
Square	Light Attack
Triangle	Heavy Attack
Circle	Special Attack
R1	Free run
R2	Super modifier
L1	Not used
L2	Not used

The X button blocks, the Square and Triangle buttons are Attack 1 and Attack 2. The Circle button is for special moves. Note that the circle button only has about 5 moves on it as opposed to the more than a dozen moves on each of the other attack buttons. This is a conscious decision, similar to the decision made in Super Smash Brothers Melee. Because so much of the gameplay revolves around the use of special moves, the special move button is designed to be as simple as possible.

Below is a sample (empty) list of moves for a character. It's meant to show how many moves each character would have and how they are activated.

Moves Template

This template shows that each character will have about 52 moves, none of which require complex d-pad movements.

Attack 1 Moves

S
[S]
S~T
S,S
S,S,S
S,S,T
f+S
df+S
d+S
db+S
b+S
ub+S
u+S
uf+S
While 8-way running f+S
While 8-way running uf/df+S
While 8-way running u/d+S
While 8-way running u/d+S,S
While 8-way running ub/db+S
While 8-way running b+S
Free-run+S

Attack 2 Moves

T
T,T,T,T,T
T,S
T,S,S
f+T
df+T
d+T
db+T
b+T
ub+T
u+T
uf+T
While 8-way running f+T
While 8-way running uf/df+T
While 8-way running u/d+T
While 8-way running u/d+T,T
While 8-way running ub/db+T
While 8-way running b+T
Free-run+T

Special Moves

C
f+C
b+C
u or d+C
Hold Free-run+C

Throws

X+S = throw
X+S from side = side throw
X+S facing enemy's back = back throw

Burst

C+T = "burst"
(can be done even while getting hit, useable about once per round)

Reversals

(similar to Dead or Alive)
ub+X = reverse high attacks
b+X = reverse mid attacks
db+X = reverse low attack

Legend	
Symbol	Meaning
S	Square button
T	Triangle button
C	Circle button
X	X button
f	forward (toward enemy) on d-pad
df	diagonally down and forward on d-pad
d	down on d-pad
db	diagonally down and back on d-pad
b	back on d-pad
ub	diagonally up and back on d-pad
u	up on d-pad
[S]	Hold down the S button, then release it
S~T	Press the S button, then *immediately* roll the finger to press the T button

Tony Jaa, Elephant Keeper

Note that both “Tony Jaa” and “Tony Jaa, Elephant Keeper” are playable characters. The Elephant Keeper version has fewer Mui Thai moves but gains the help of an “assist” character with the baby elephant as well as several elephant moves. The main life meter is Tony Jaa’s, and the elephant cannot actually be killed. When the elephant gets hit, he is briefly stunned, preventing the elephant from attacking for two seconds.

S: Tony Jaa attacks

T: Baby elephant attacks

C: Special moves (from both Tony Jaa and the elephant)

Tony is maneuverable and powerful, able to do high damage juggle combos off of his launchers. His small elephant can act as a giant shield or he can charge into an enemy group at the same time as Tony to put on pressure. Also, when Tony Jaa stands right next to the elephant, several of his normal attacks are replaced by context sensitive attacks involving him doing acrobatics off the elephant’s legs, side, tusks, etc.

Special Moves

C	Elephant Tusk Flick
[C]	Elephant Power-up, then Charge
[C], C	Charging Tusk Flick (cancels Charge attack)
f+C	Spinning Double Cartwheel Kick
u or d+C	Acrobat Flip
b+C	Elephant Rears Up
Hold Free-run + C	Knee of Legend

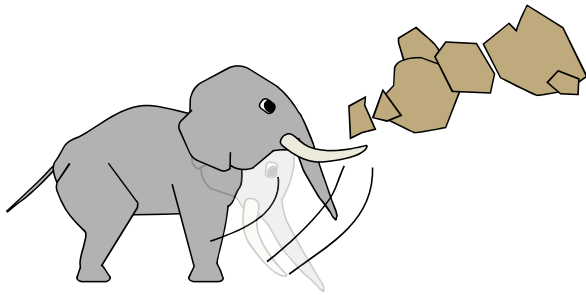
Super Moves (Hold R2, then...)

S	Mui Thai Flurry
T	Elephant Rampage
C	Elephant Stampede

Special Move Descriptions

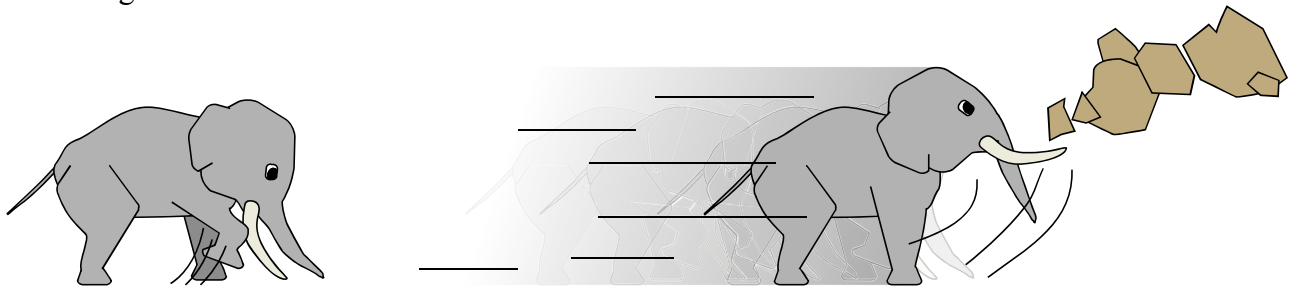
Elephant Tusk Flick (C)

The elephant bows its head then flicks up debris and rocks from the ground toward the enemy. This is a slow attack but Tony Jaa is able to attack in parallel using the debris as cover.



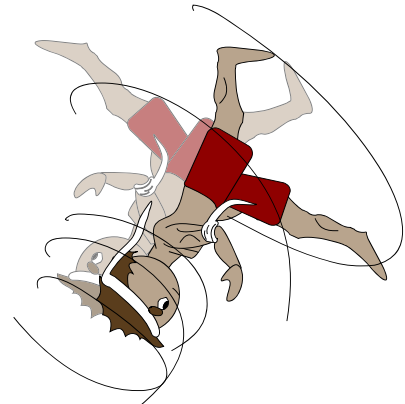
Elephant Power-up, then Charge ([C], then C for elephant tusk flick)

If the C button is held down, the elephant stomps one of his front legs faster and faster as he powers up. Releasing the button causes him to charge straight forward very quickly, knocking down enemies in the path. If the player presses the C button again during the charge, the elephant cancels his charge into a short range tusk flick. The tusk flick does even better damage and stun than the charge, but it must be timed just right because of its short range.



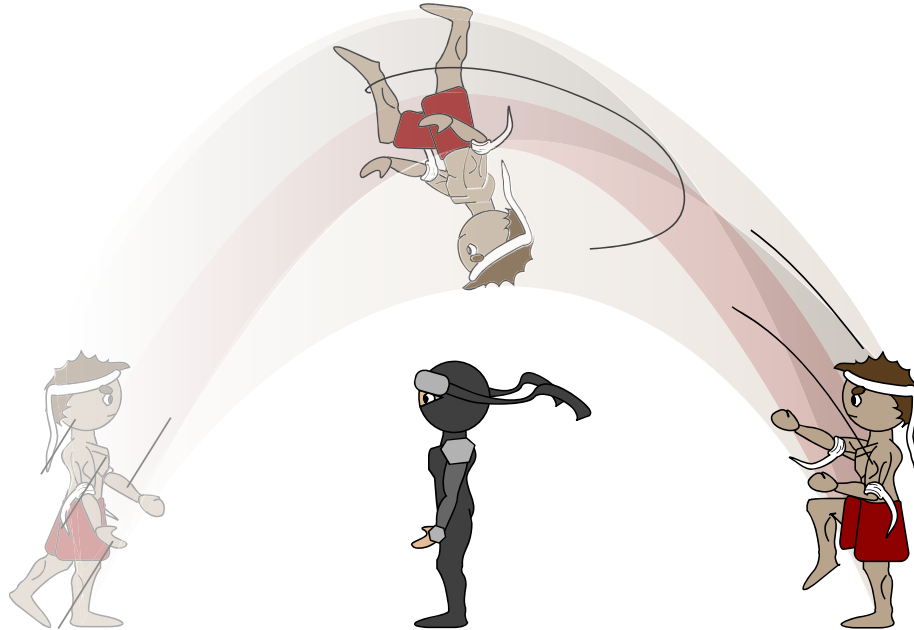
Spinning Double Cartwheel Kick (f+C)

Tony Jaa does a tilted double cartwheel kick, as seen often in his real-life exhibitions. The kick knocks enemies slightly off the ground, juggling them. He can often perform a second cartwheel kick for more juggling hits before the enemy lands.



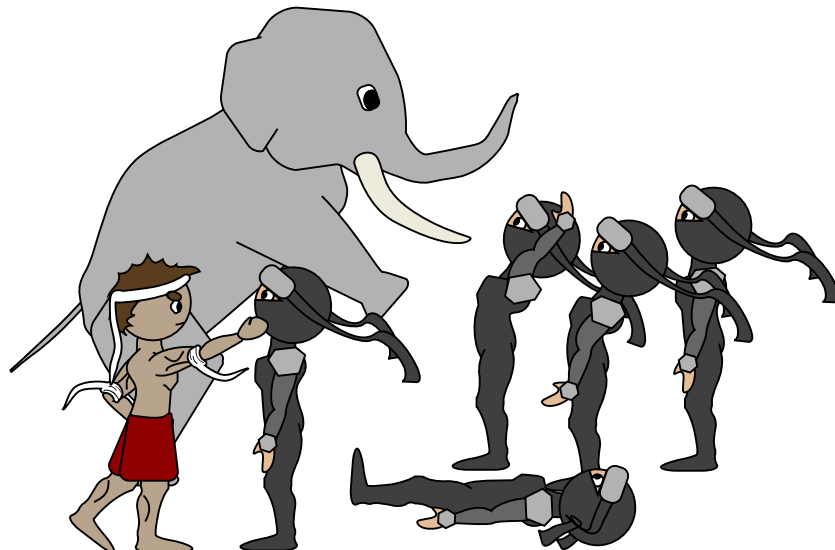
Acrobat Flip (u+C or d+C)

This move does not hit or cause damage, but is used to maneuver. Tony Jaa does a very high jumping flip and lands either forward and left of his starting location or forward and right depending on whether the player did u+C or d+C. The move can sometimes be used to get behind opponents. It acts similarly to Taki's acrobatic flip in Soul Calibur.



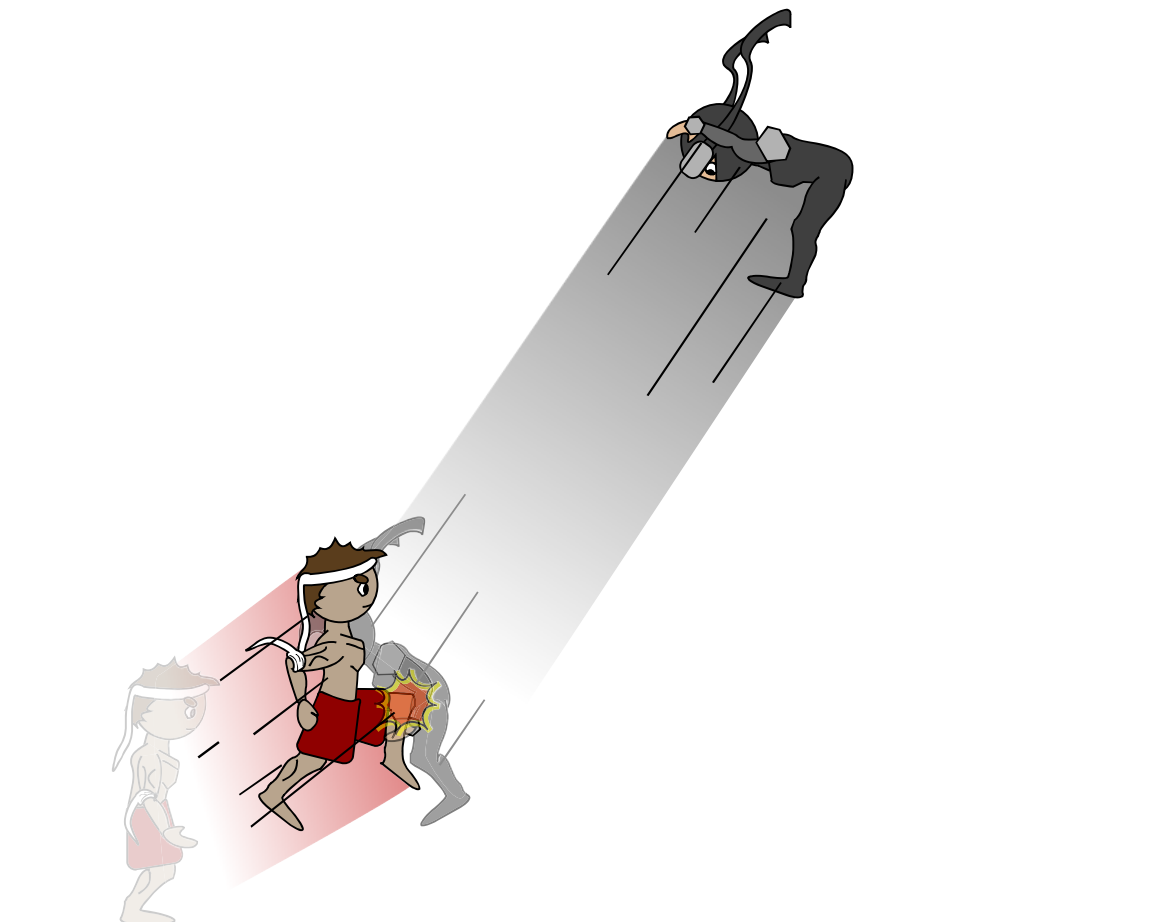
Elephant Rears Up (b+C)

The elephant rears up on his hind legs and flails his front legs and trunk. During this time, Tony Jaa can move behind the elephant as a shield or fight beside him. This elephant move is especially effective up close because it can force several enemies to block several hits while Tony Jaa is still free to act.



Knee of Legend (Hold Free run + C)

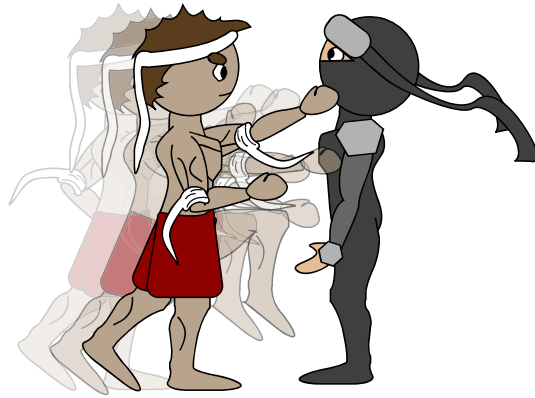
This is a mighty flying double knee attack that's invulnerable at the start and launches the opponent into the air. Tony Jaa is vulnerable if the knee is blocked or if it whifs.



Super Move Descriptions

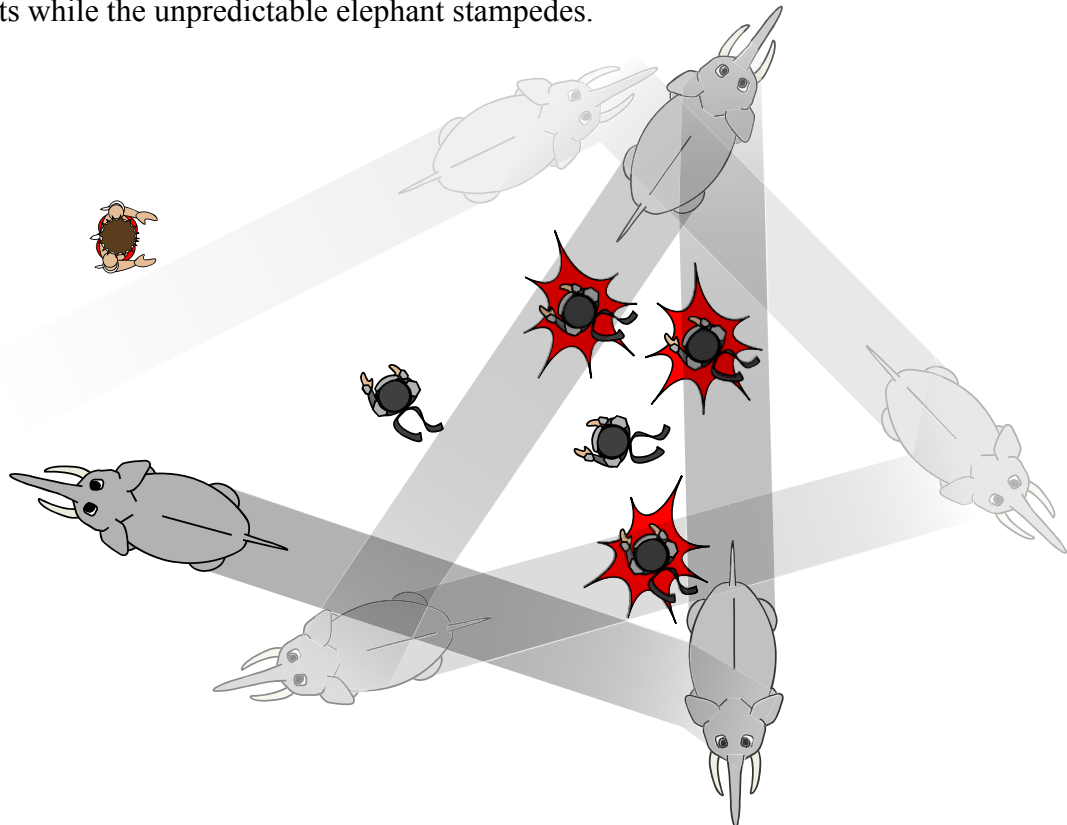
Mui Thai Flurry (Hold R2, then S)

Tony Jaa's attack and movement speed are *greatly* increased, allowing him to overwhelm enemies for the duration of the super. We could try a version of this super where Tony Jaa attacks at normal speed, but all his attacks are followed by "shadow attacks" that also hit like a 'custom combo' in Street Fighter Alpha 2 or 'V-ism combos' in Street Fighter Alpha 3.



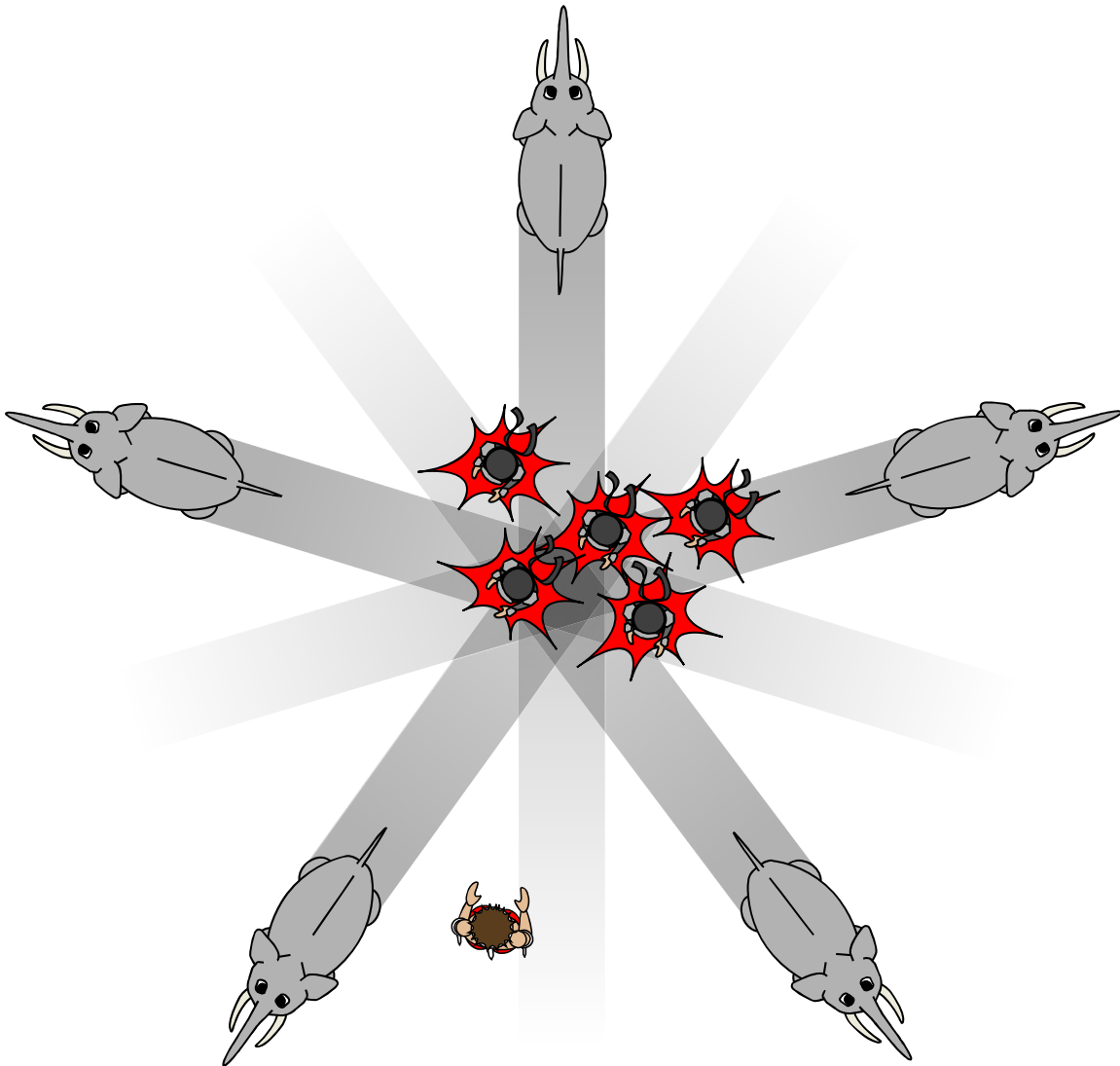
Elephant Rampage (Hold R2, then T)

The elephant rampages around, charging in various directions and causing chaos. Because the elephant cannot hurt Tony Jaa, this gives him ample cover to attack however he wants while the unpredictable elephant stampedes.



Elephant Stampede (Hold R2, then C)

Four other elephants in addition to Tony Jaa's elephant stampede onto the screen, trampling anything in their way. They run in a criss-cross pattern capable of hitting a pack of several enemies, even if the enemies are spread out.



Attack 1 Normal Move Descriptions (Tony Jaa, Elephant Keeper)

Command	Name	Description
S	Short Jab	A quick, short, jab with the leading hand
[S]	Elbow Dash	A lunging attack with the front elbow to the opponent's solar plexus
S~T	Standing Elbow Uppercut	The Jab is immediately followed by an elbow uppercut from the same arm
S,S	Standing Fist 1-2	The Jab is followed by a standing punch from the rear fist, the footwork does not switch
S,S,S	Slant Kick	The 1-2 is followed by a slant kick from the rear leg, the footwork changes so that the kicking leg becomes the front leg once complete
S,S,T	Knee Finisher	The 1-2 is followed by pulling the opponent's head into a knee strike by the rear leg. That leg returns to the rear once complete
f+S	Standing Front Tiger Kick	A quick forward "pushing" kick with the front leg to the opponent's chest
df+S	Standing Low Kick	A low stomping kick to the shin with the rear foot
d+S	Hammer and Anvil	An attack/block that can intercept a midrange attack between the knee and elbow
db+S	Iron Broom	A low sweeping kick with the rear leg
b+S	Quick Low High	A standing low kick is followed by a quick jab
ub+S	Spinning Jump Kick	A spinning crescent jump kick
u+S	Overhead Elbow	An elbow drop to the crown of the opponent's head
uf+S	Knee to the Ribs	A diagonal knee attack to the ribs
8-way run, f+S	Fierce Elbow	A horizontal elbow smash
8-way run, uf/df+S	Overhead Knee	A standing overhead knee attack. The torso rotates towards the ground while standing on one leg
8-way run, u/d+S	Foot to the Face	A high kick with the foot or shin to the face or neck
8-way run, u/d+S,S	Rising Monkey Knee	After a foot to the face, spin towards the ground and then continue to spin as you leap into the air with a knee uppercut
8-way run, ub/db+S	Spinning Elbow	The rear leg steps forwards while torso rotates towards the new rear leg and the back of the elbow strikes the opponent's face
8-way run, b+S	Spinning Back Kick	A spinning back kick to the midsection of the opponent
Free-run+S	Flying Sidekick	A run and jump side kick

5 Ninjas

The 5 ninjas each share one large lifebar, so it's not possible to kill just one of them. The player will always control all 5 until the round ends. The ninjas look either identical or nearly identical, allowing them to be used interchangeably for moves. For example, if the player has performed the "human projectile" attack with one ninja and there are four left in the main group, the "bomb carrier" move will use whichever of the four grouped ninjas are farthest back. The player doesn't need to micromanage exactly which ninja is used for each move.

The 5 Ninjas are versatile and able to control space well, similar in spirit to the design of Ryu in Street Fighter. Their human projectile attack sends one of the five ninjas forward like a fireball, forcing the enemy to block or evade. The "dual flanking dash" sends out two ninjas who run very quickly and automatically attack. One targets the space to the right of the main enemy group and the other targets the space to left, suppressing possible evades. Two different special moves involving bombs allow the ninjas to control space even more.

S: Light Attack
T: Heavy Attack
C: Special moves

Special Moves Summary

C	Double Flanking Slice
f+C	Human projectile
f+C,C	Delays the human projectile, then launches two ninjas
f+C,C,C	Delays the human projectile, then launches three ninjas
u or d+C	Double Flanking Bomb Toss
b+C	Bomb Carrier
Hold Free-run + C	Rising Dragon

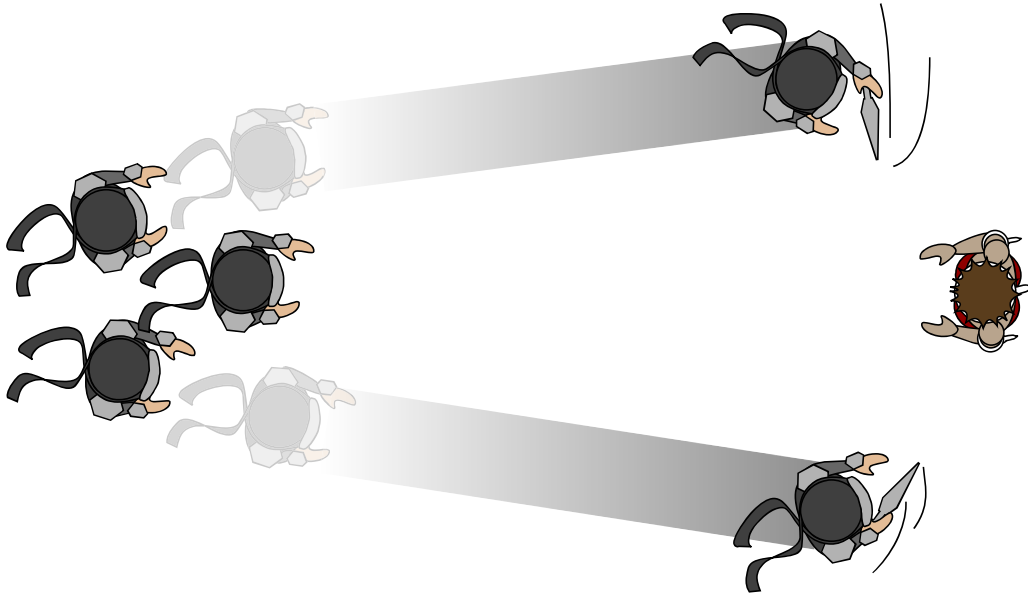
Super Moves (Hold R2, then...)

S	Ninja Blur
T	Shuriken Barrage
C	Ninpo Circle

Special Move Descriptions

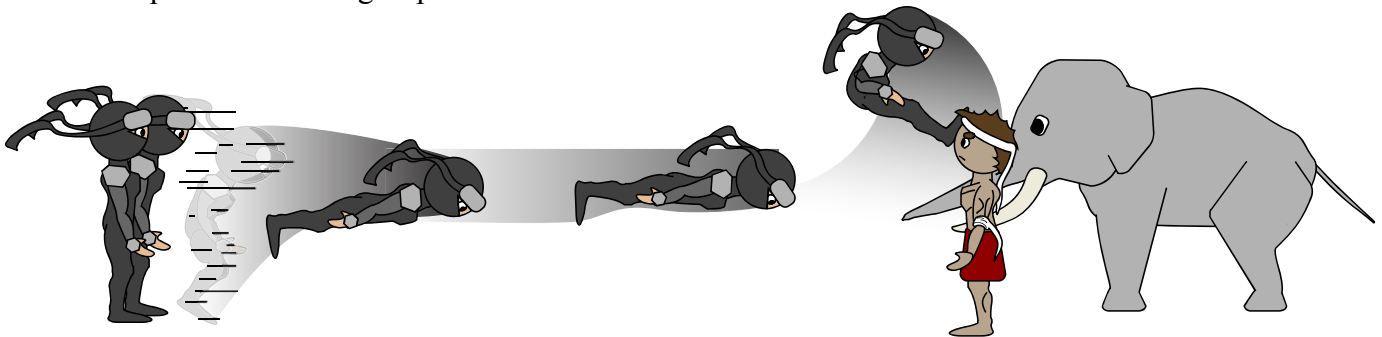
Double Flanking Slice (C)

Two of the group's front ninjas dash forward quickly and slice. One dashes to right of the enemy group and the other dashes to the left. This move is meant to control space against sidestepping so that the ninjas other straight-on attacks will be more effective.



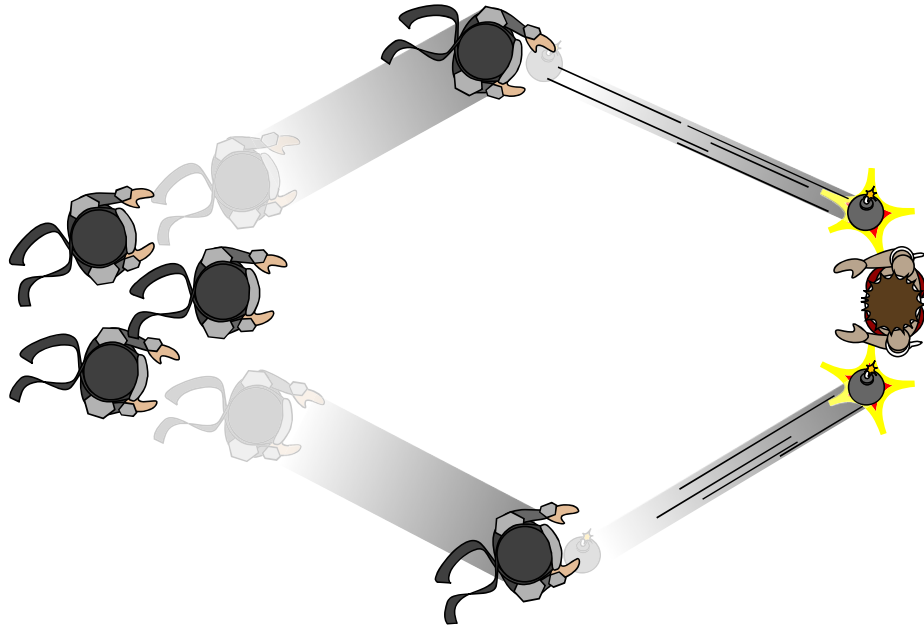
Human Projectile (f+C or f+C,C or f+C,C,C)

The front-most ninja launches forward as a human projectile, similar to a fireball in Street Fighter. If the player presses the C button a second time during the start up this move, then the first ninja will wait a few extra frames before launching himself, and a second ninja will follow right after him for two hits. If the player starts this move by pressing f+C, and then C,C rapidly, the startup delay will be even longer, but three ninjas will launch themselves straight forward for more hits and damage. This will leave only two ninjas to attack, though, while the three projectile ninjas recover from their attack and teleport back to the group.



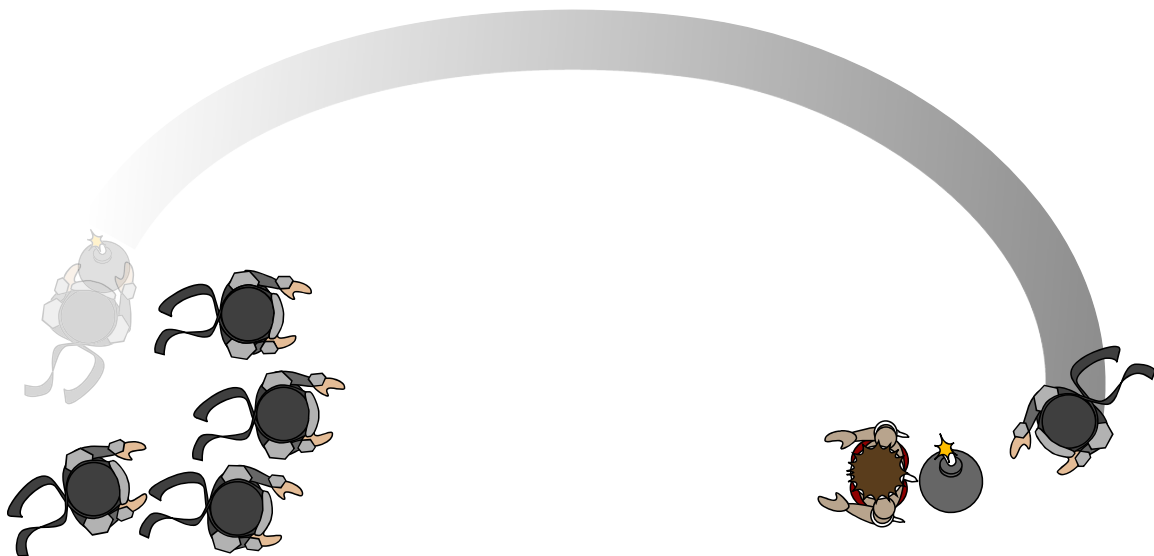
Double Flanking Bomb Toss (u+C or d+C)

Two of the side ninjas step forward and outward, then each toss a smoke bomb toward the enemy group. This move is slow enough that it gives the remaining three ninjas time to do their own attacks before the bombs go off.



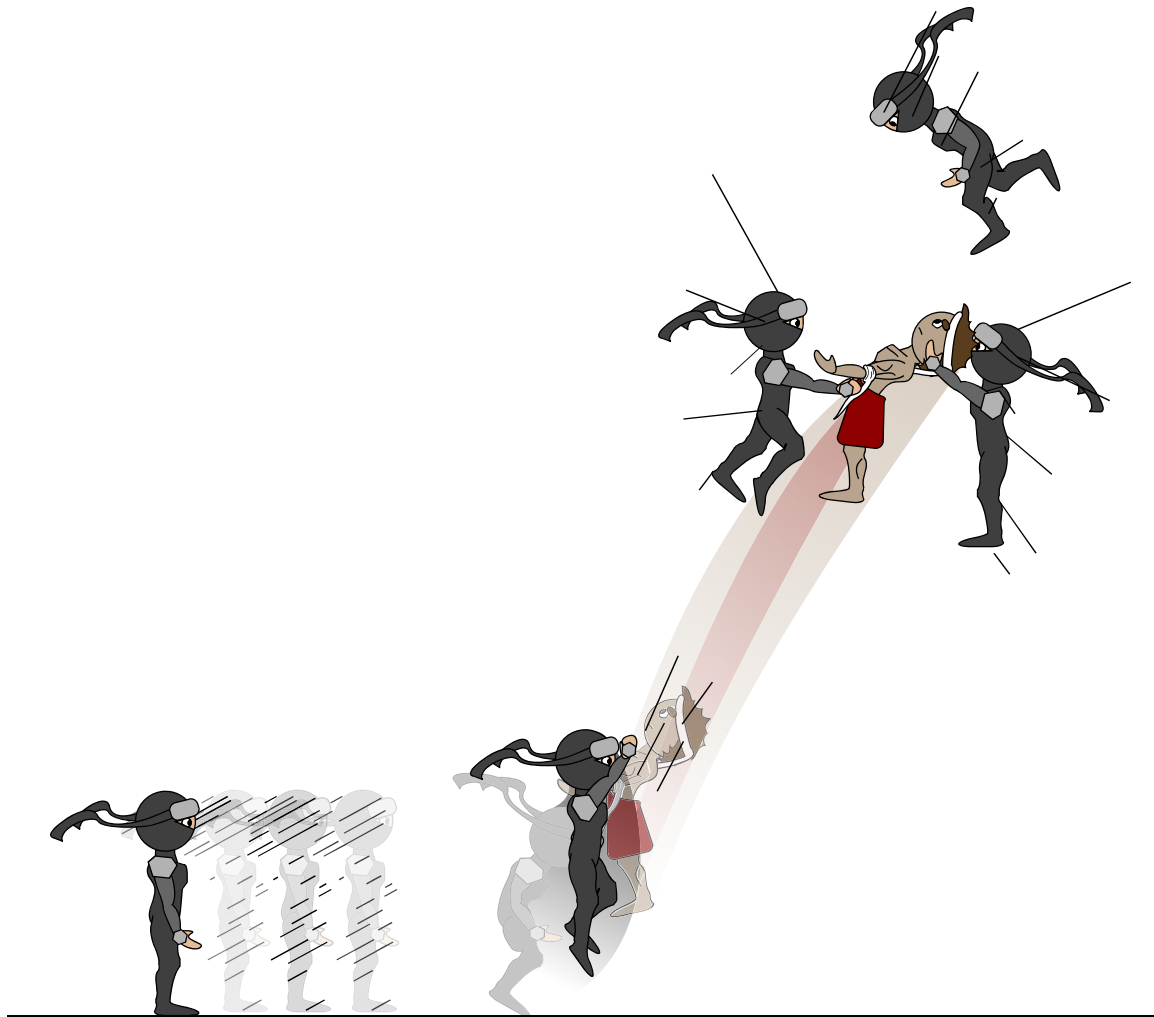
Bomb Carrier (b+C)

The rear-most ninja attempts to run all the way to the back of the enemy group and place a very large bomb. If he places the bomb or if he gets hit two times on the way, he will teleport back. Again, the long duration of this move allows the other ninjas to do their own attacks before the bomb goes off.



Rising Dragon (Hold Free run + C)

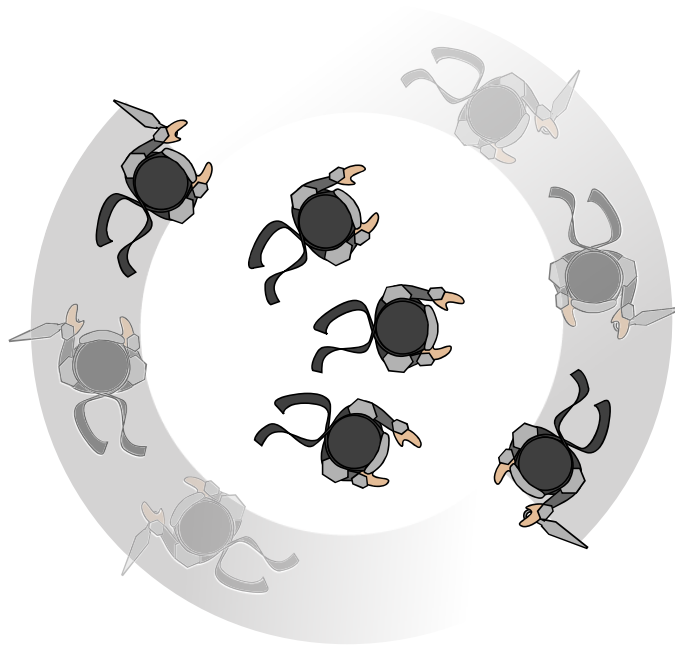
This attack is similar in spirit to a dragon punch in Street Fighter. While free running, the lead ninja does a very fast, invulnerable launcher attack. If it does not hit, he's very vulnerable. If it does hit, then another ninja teleports up to meet the enemy and automatically performs an air throw. If the launcher attack hits very solidly (deep hit, point blank range) then a much more powerful version of this move occurs. Three ninjas teleport up one by one to attack the enemy in the air in a canned sequence. Several hits have a very long "hit-pause" (pausing the game briefly on each hit) making it feel very damaging.



Super Move Descriptions

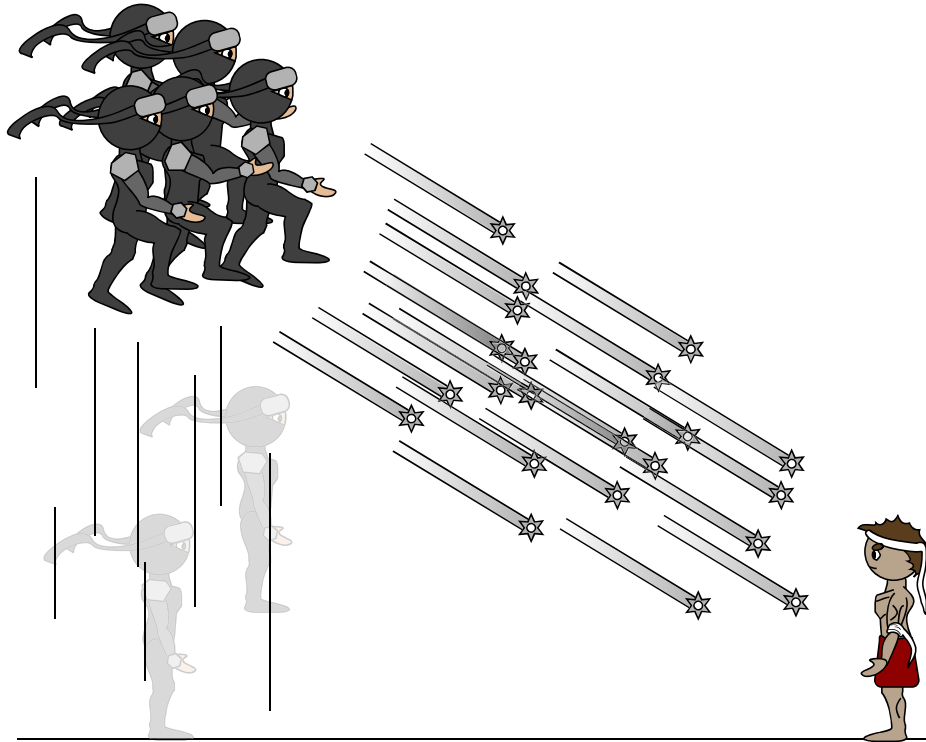
Ninja Blur (Hold R2, then S)

This causes two ninjas to run extremely quickly around the other three ninjas, serving as a multi-hitting damage shield. The remaining ninjas can move and attack normally and attempt to get extra hits just by being close to an enemy. This is similar in spirit to Strider's Oroboros super in Marvel vs. Capcom.



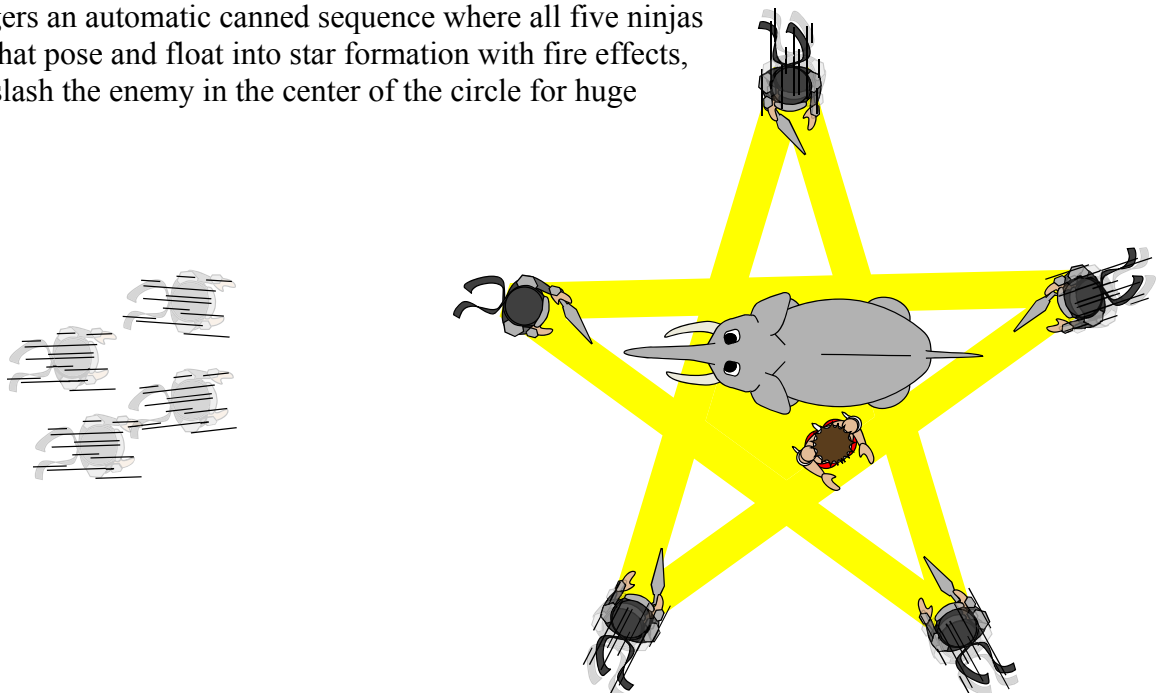
Shuriken Barrage (Hold R2, then T)

Each ninja leaps up and hangs in the air as he throws dozens and dozens of ninja stars diagonally down and forward at the center of the enemy group.



Ninpo Circle (Hold R2, then C)

The lead ninja floats forward a set distance in a statuesque pose. If he touches an enemy, this triggers an automatic canned sequence where all five ninjas take on that pose and float into star formation with fire effects, then all slash the enemy in the center of the circle for huge damage.



Fighting Game Designer's Tool

Overview

Our team has been developing an interactive tool to aid game designers in the creation and management of character and animation data for use with fighting games. The goal is to provide game designers with a single interface to as many design parameters as possible, and to streamline the process by which edits to these parameters are communicated to engineers. Ideally, the designer will be able to see the effects of their edits in the game engine, immediately after making them in the tool.

Sections








The interface is divided into 3 main sections: Global, Character and Animation.

Global Parameters Tab

Global Character Animation			
▼ Global <ul style="list-style-type: none">Guts, Defense, WeightGuard MeterGutsHit Reaction	variable	value	comment
	Hit Points	440	Max hit points
	Healing Rate	5	Hp/second he
	Healing Delay	2	Seconds after
	Super meter points per bar	100	
	Max level of super meter	3	
	Initial level of super meter	1	Fight begins w
	Reset super meter between rounds	Yes	
	Time limit	60	Number of sec
	Max rounds per game	3	








The “Global” section contains parameters that apply to all characters, environments and animation. For example, the total number of “Hit Points” in each characters life meter can be adjusted here.

Character Tab (Basics)

Global Character Animation			
Tony Jaa 1	variable	value	comment
Tony Jaa 2	Character Name	8-Armed Buddha	
Jungle Adventure Girl 1	Defense Modifier	1	
Jungle Adventure Girl 2	Guts Rating	0.6	
8-Armed Buddha	Healing Rate Modifier	1.1	
<div>  Movement </div>	Weight	1.3	
<div>  Normal Moves </div>	Mesh File	buddha.msh	
<div>  Special Moves </div>	Rig	buddha.rig	
<div>  Assists </div>	Textures	buddha.tx	
<div>  Super Moves </div>			
<div>  Throws </div>			
<div>  Other </div>			

The “Character” section consists of a collapsible panel for character selection and a series of parameters which give access to all character-specific data (e.g. Name, Weight, Defense Modifiers and etc.) Also accessible via this panel are sub-sections for the different categories of moves (e.g. normal, special, super) available to each character.

Character Tab (Normal Moves)

Global Character Animation					
Tony Jaa 1	Input	Damage	Lvl	Block	Start
Tony Jaa 2	J(c)	10	1	HL	4
Jungle Adventure Girl 1	J(f)	8	2	HL	3
Jungle Adventure Girl 2	S(c)	8	3	HL	3
8-Armed Buddha	S(f)	10	3	HL	3
 Movement	F	15	3	HL	3
 Normal Moves	R	20	5	HL	3
 Special Moves	d+J	8	2	HL	3
 Assists	d+S	10	2	L	3
 Super Moves	d+F	14x2	3	HL	3
 Throws	d+R	20	5	L	3
 Other	j.J	10	1	HA	3
	j.S	8,10	1	HA	3

In the current version of the application, these sections are tuned towards the specific requirements of a 2D fighter, but all of the menus and fields are dynamically populated and could easily be re-configured to accommodate different combat systems. Most of the data in this tab is also accessible via the “Animation” section, but the goal here is to present a quick summary of parameters to aid designers in balancing characters.

Animation Tab

The “Animation” section gives designers a visual tool for editing many of the parameters attached to an individual move or animation. The main interface for this section is the “timeline” which consists of a variable number of layers, each of which can contain “individual” or “linked” flags, representing animation keyframes.

The screenshot displays the Animation Tab interface. At the top left is a 'Play' button. The main area shows a video preview of two characters in red outfits in a boxing ring. Below the video is a timeline with a scale from 0 to 50. The timeline has several layers: Time, Sounds, Visual Effects, Hit Scan, Hit_01, Hit_02, Hit_03, Scripts, Cancel Scan, Cancel_01, and Cancel_02. Red flags and bars indicate keyframes and event windows across these layers. To the right is the 'FX PROPERTIES' panel with fields for Filename (grunt_01), Parameters (vol=15), and Comments (Replace with AC3), along with a Preview button.

	0	5	10	15	20	25	30	35	40	45	50
Time											
Sounds			▼		▼						
Visual Effects											
Hit Scan											
Hit_01				▼		▼					
Hit_02						▼			▼		
Hit_03								▼		▼	
Scripts				▼							
Cancel Scan											
Cancel_01			▼			▼					
Cancel_02						▼		▼			

For one-time events, such as the playback of a sound, individual flags can be placed on the appropriate layer. When the designer clicks on the flag, supplemental data (e.g. linked files, sub-parameters, & etc.) are revealed in the “properties” panel.

For events that require the description of a “window” on the timeline (e.g. hit-scan windows, cancel windows) designers can place a series of flags. By adjusting the “in” and “out” flags, designers can define a range of frames for these events. Since many animations will contain a number of distinct and overlapping frame ranges, the timeline

has been designed to allow for multiple instances of each layer type (i.e. new layers can be created for “hit-scan window 1” and “hit-scan window 2” and so on).

Another aspect of the timeline / flags interface is that of “linked” events. For instance, in some moves, the “in” and / or “out” frames of a particular range may not be permanently attached to specific frames, but instead are dependant on an in-engine event (e.g. hit makes contact). These types of frames are displayed on the timeline as blue flags (as opposed to red flags, for “normal” keyframes). When a designer creates a flag whose position is dependant on another event or keyframe range, this linkage is established via the “properties” panel. Once a linkage has been established, the linked frames will move in sync with the keyframes they are linked to, but their exact position on the timeline is only provided for reference. The actual “in” and “out” points for these types of flags can only be determined by viewing the “properties” panel, or by navigating to the appropriate move in the “characters” section of the tool.

An example of a move which might depend on “linked” keyframes is a “Blocked Normal canceling into a Special” from Street Fighter. Here, the “in” flag for the cancel window doesn’t open until the move makes contact, and is open for a specified period of frames after the hit, regardless of at what point during the hit scan window the move makes contact.

One more special type of flag to keep in mind with regards to hit-scan and cancel-scan windows is the “trigger point” flag. This is used when a cancel window is open for a fixed period of time, but the effects of canceling are delayed until the move reaches a particular frame. For example, the player may cancel into a new move throughout the entire “backdash” portion of Slayer’s “dandy step” in Guilty Gear, but the results of this cancel are delayed until Slayer reaches the correct frame in the initial move’s animation.

Here is a more common example of this last type of flag from basically every 3D action game. When the player does a chain combo of punch, punch, punch, the cancels don’t happen immediately. The player presses the attack button and the first punch comes out. If the player presses the attack button again just a few frames later, it does *not* abort the current punch. Instead, the current punch continues until it reaches full extension and can hit, then it’s cancelled into the next punch. Note that if the first punch had already reached passed a certain frame (after the full extension of the punch), then pressing the attack button again *would* cancel the first punch instantly. The delayed cancel is only needed when the player presses the attack button very, very rapidly.