

Animating a Complex 2D Fighting Game 3 Frames at a Time

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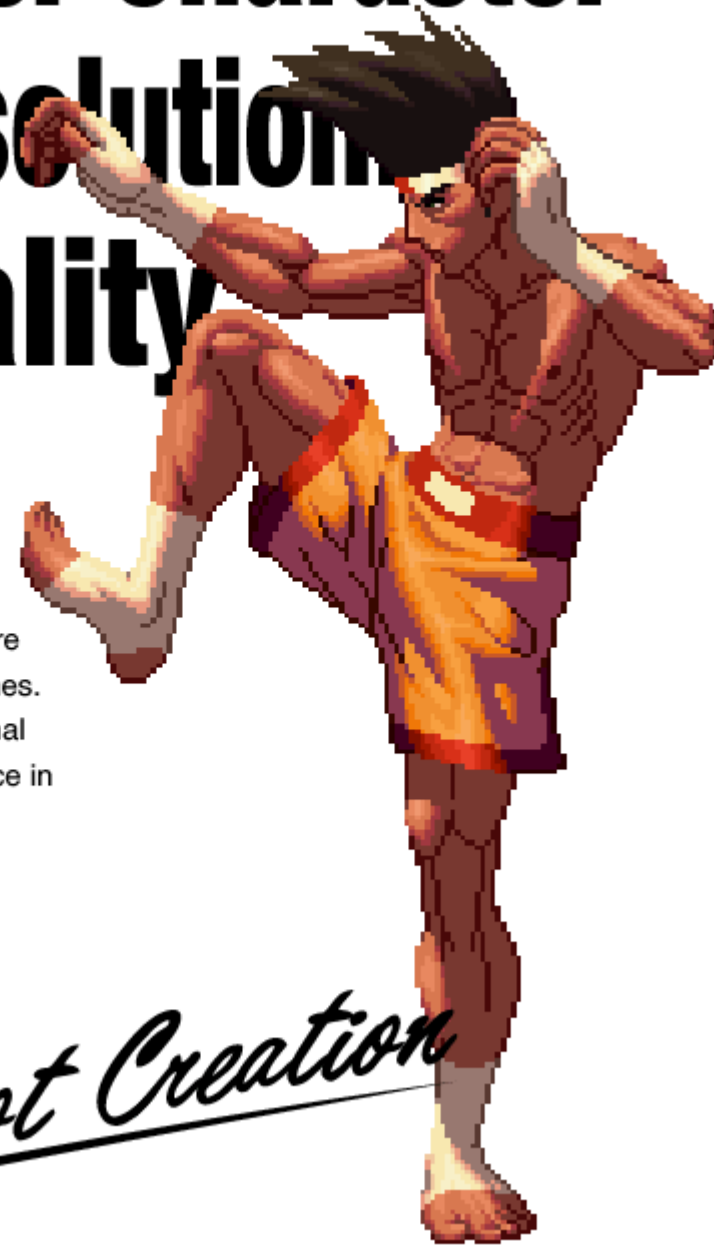
About 500 Frames Per Character at Quadruple the Resolution Breathtaking Quality

Put all the above steps together, and the entire creation process for a single character takes an estimated year and four months to complete, a mind-boggling journey from start to finish.

The development team took on this grueling process nevertheless, hand-drawing 400 to 600 pixel frames for each character -- and what's more, the characters were drawn in painstaking detail at four times the resolution used in previous KOF games. According to the art staff, the process involved five times more work than traditional animation. Compare KOF XII's pixel art to previous KOF games, and the difference in detail is obvious at a glance.



Dot Creation



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Breathtaking Quality

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Creation

Who Am I?



Shawn Alexander Allen

- *BFA in Computer Art*
- *In games for >13 years*
- *Started animating in Flash/Gifs*
- *Worked on these at* 

grand
theft
auto IV

MIDNIGHT CLUB
LOS ANGELES

RED DEAD REDEMPTION
UNDEAD
NIGHTMARE

grand
theft
auto
Episodes From
Liberty City

grand
theft
auto V

RED DEAD
REDEMPTION

L.A. NOIRE

ROCKSTAR GAMES PRÄSENTIERT
MAX PAYNE 3

grand
theft
auto
CHINATOWN
WARS



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TREACHERY in
BEATDOWN
CITY



Hirakan Works

(TURN THE VOLUME UP!)

Overview

1. *Genre Definitions*
2. *Gameplay Goals*
3. *Goals Vs. Animation*
4. *Animation Process*
5. *Implementation*
6. *The Sauce*
7. *Benefits/Pitfalls the process*

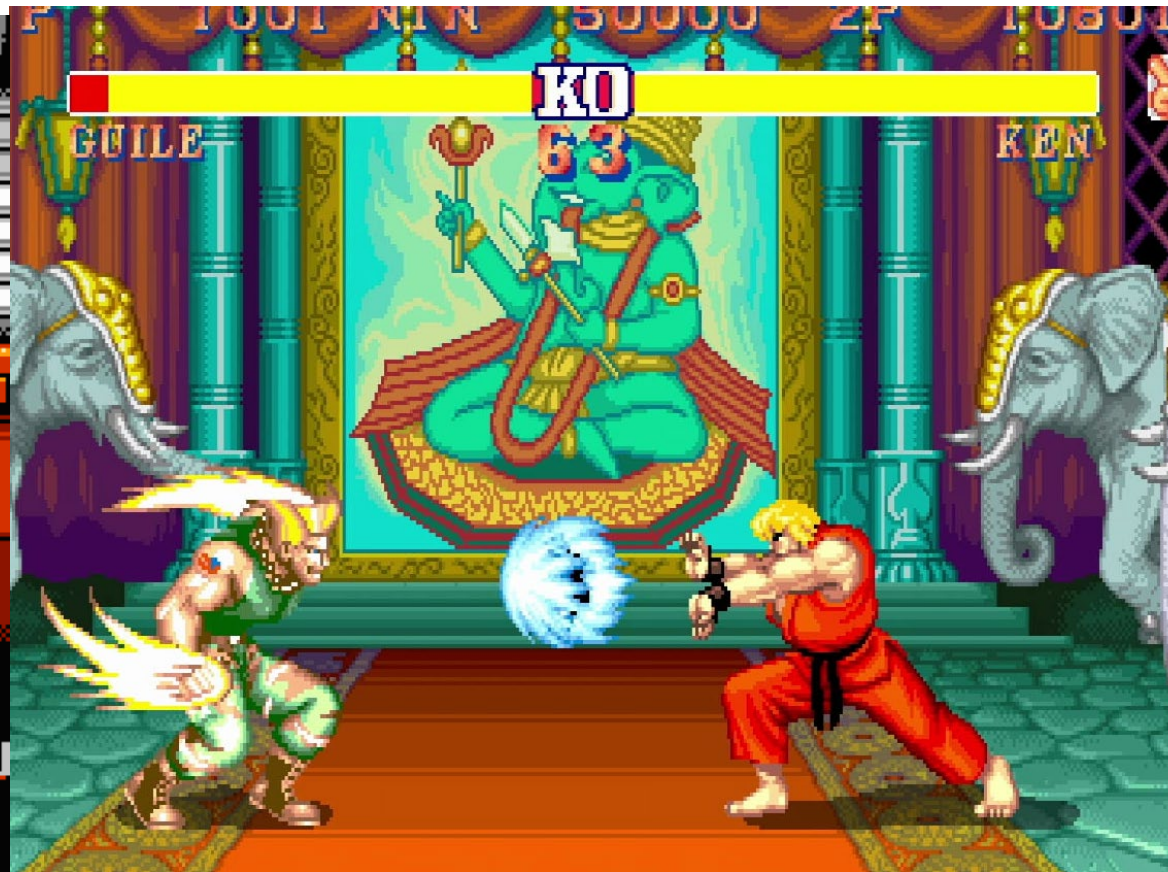
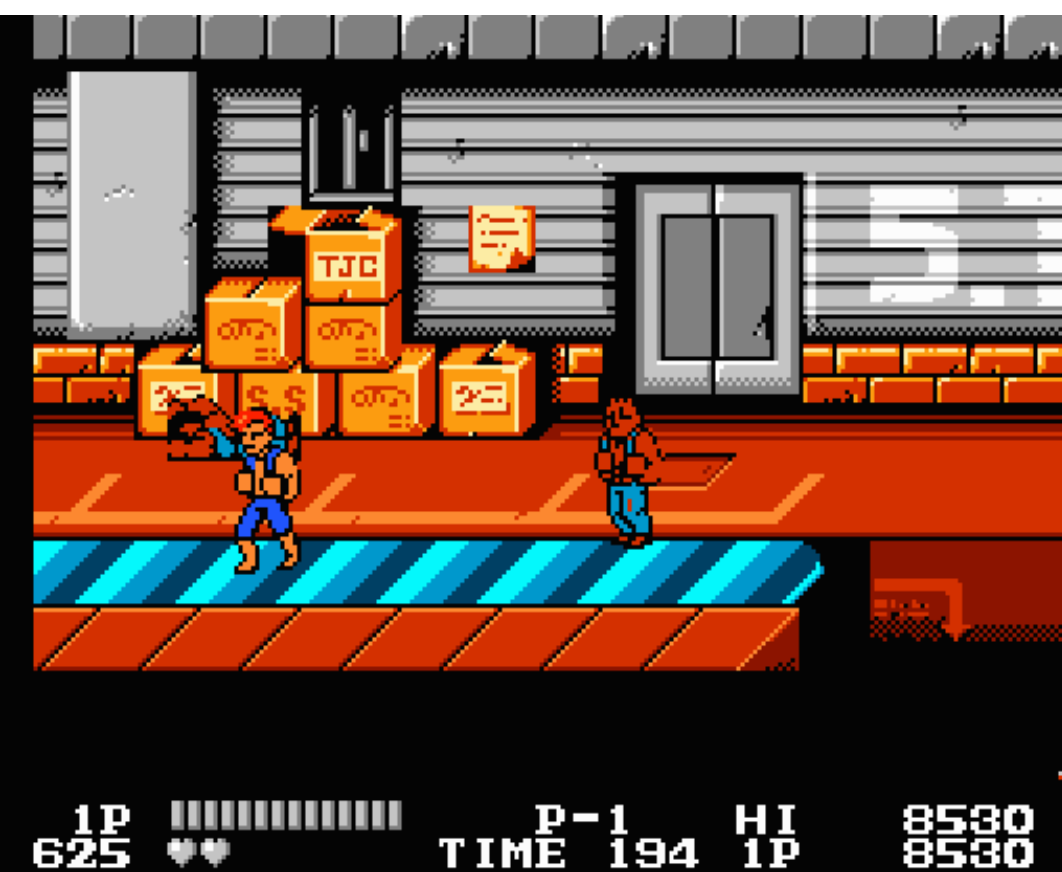


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1. Genre Definitions: What do we mean by “Complex Fighting Game”

Complex Fighting Games



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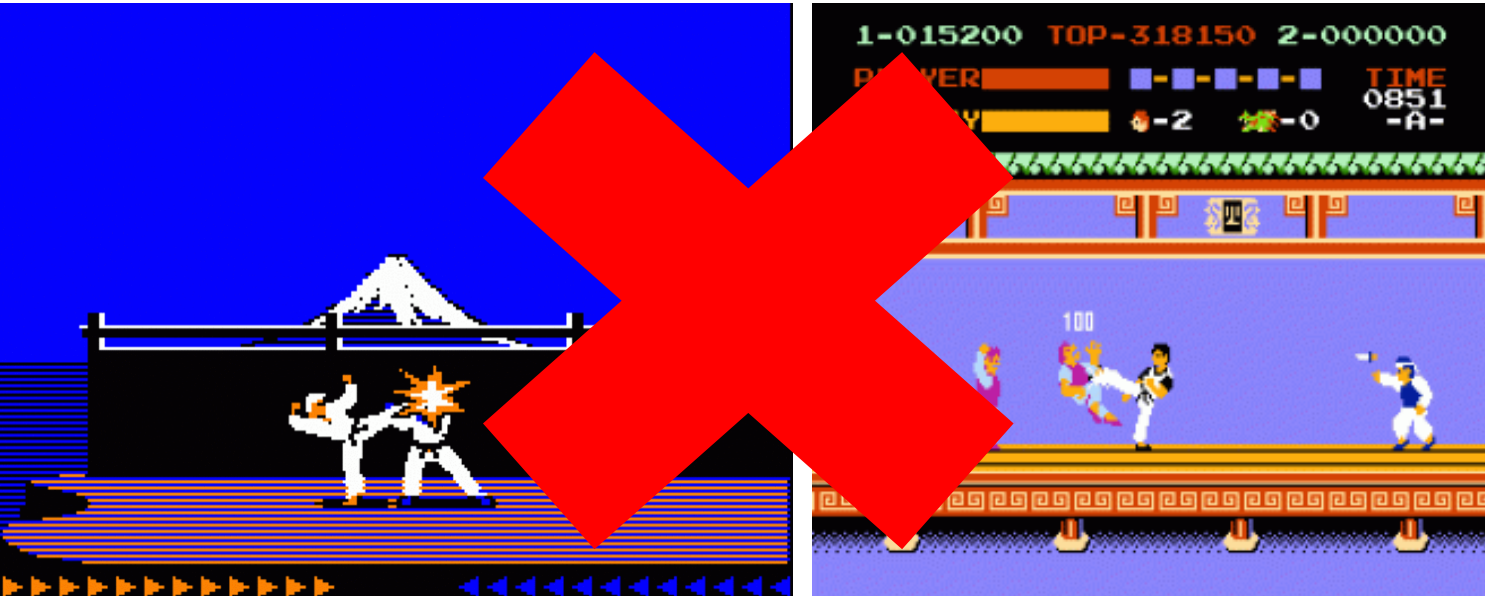
Complex Fighting Games



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“Dirty, Realistic” Fighting Games



How does Treachery in Beatdown City fit in?



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2. Game Design Goals:

***“I wanna be the very best
Like no one ever was.”***

-anonymous

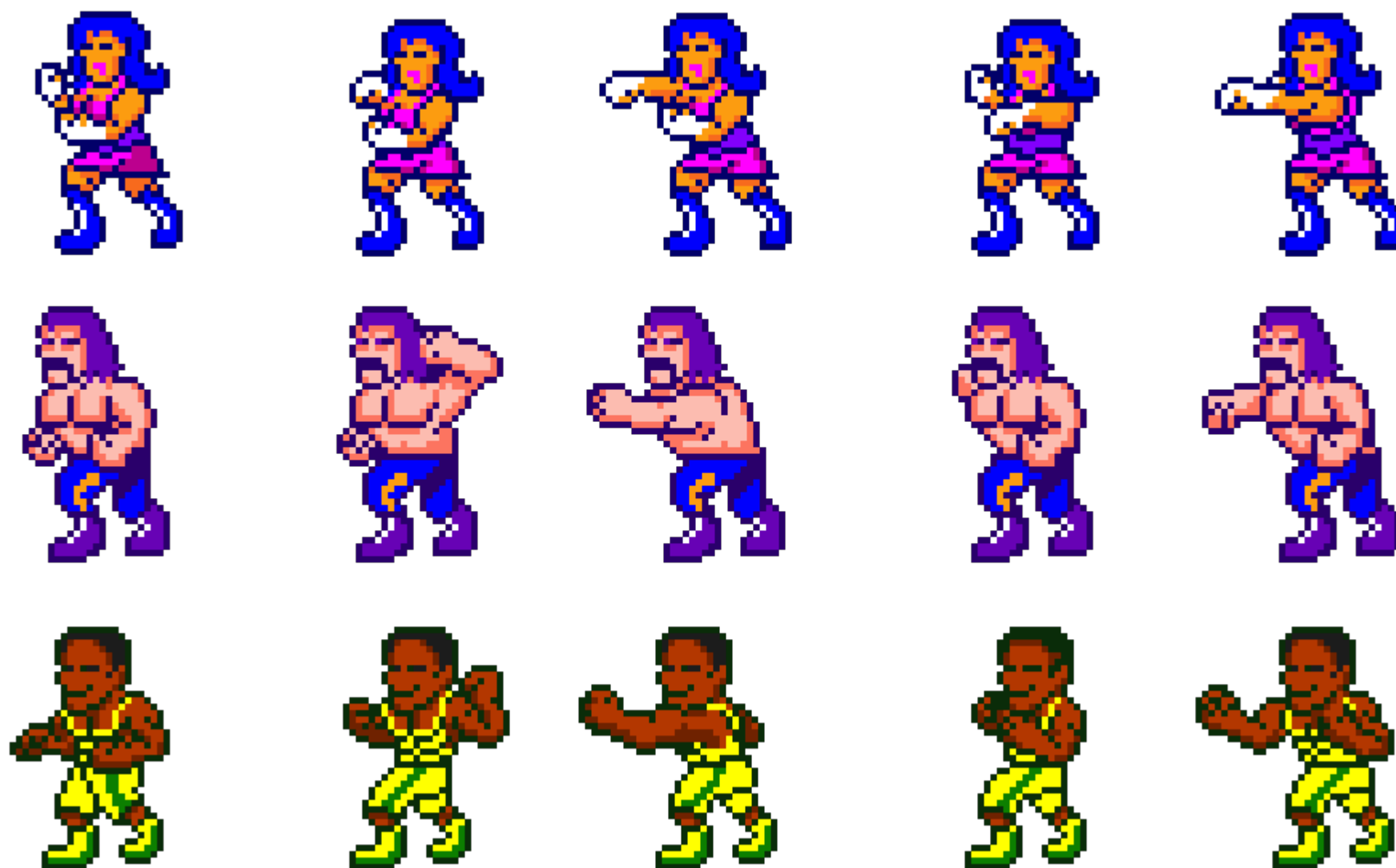
Game Design Goals

- a) Reduce the feeling of repetition in combat*
- b) Combat the FEELS GOOD and IMPACTFUL*
- c) Create a large and compelling possibility space for combat*

a) Reduce the repetition

- *Real*
- *Perceived*

Player Uniqueness



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Enemy Uniqueness

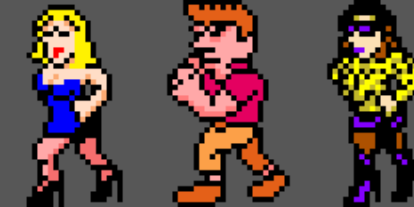
Brawlers



Sneaky



Support



Grapplers



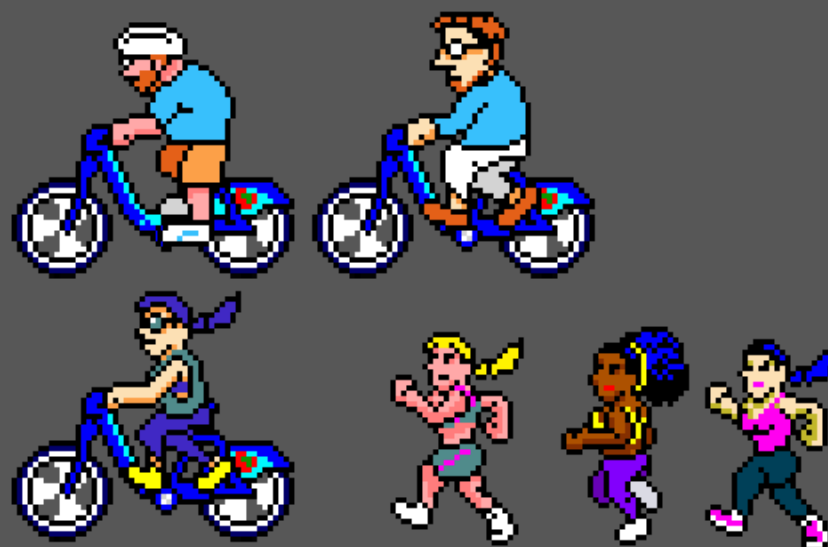
Giants



East Fulton "Dark Devils" mc



Cyclists & Runners



Moneybags Security



Deputy Mayor Bob

Mayor Moneybags



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At this stage, combat is still a ways out.

3. Goals Vs. Animation: Why 3 Frames?

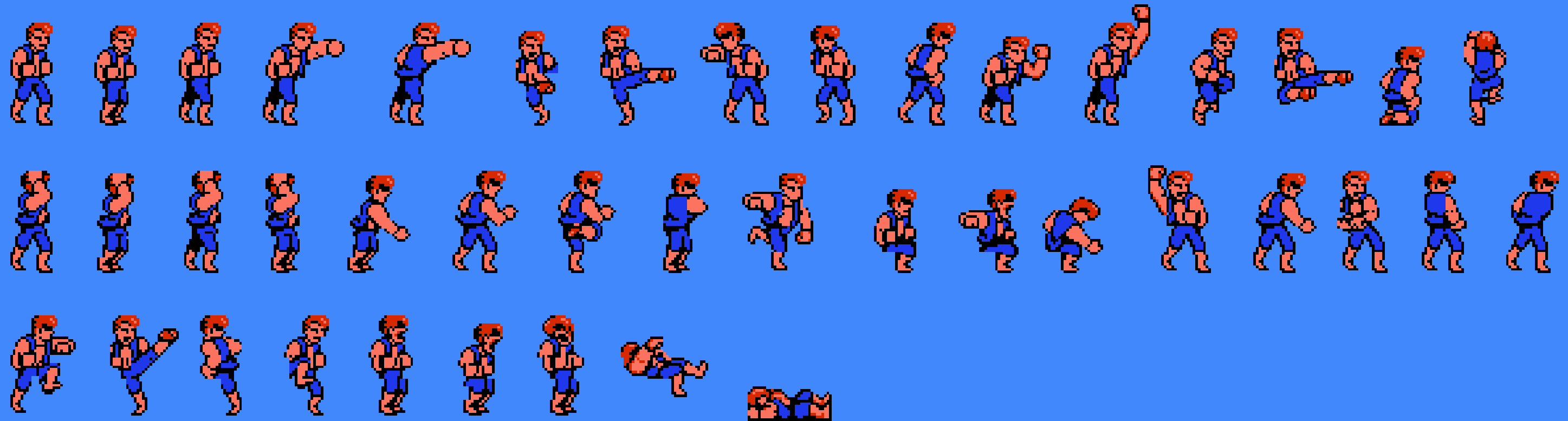
Limitations



*(3 Player characters x >20 moves) +
(>33 Enemy characters x 3 moves)
Divided by 1 artist
= ???*

Preference & Goals

Double Dragon - Mode A - Billy



Source: [spritters-resource.com](https://www.spritters-resource.com)



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Preference & Goals



Source: fightersgeneration.com

The Evolution(?) of FG Animation



Source: fightersgeneration.com

Impact over Quantity



Source: fightersgeneration.com



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Bounce



Source: fightersgeneration.com

Bounce



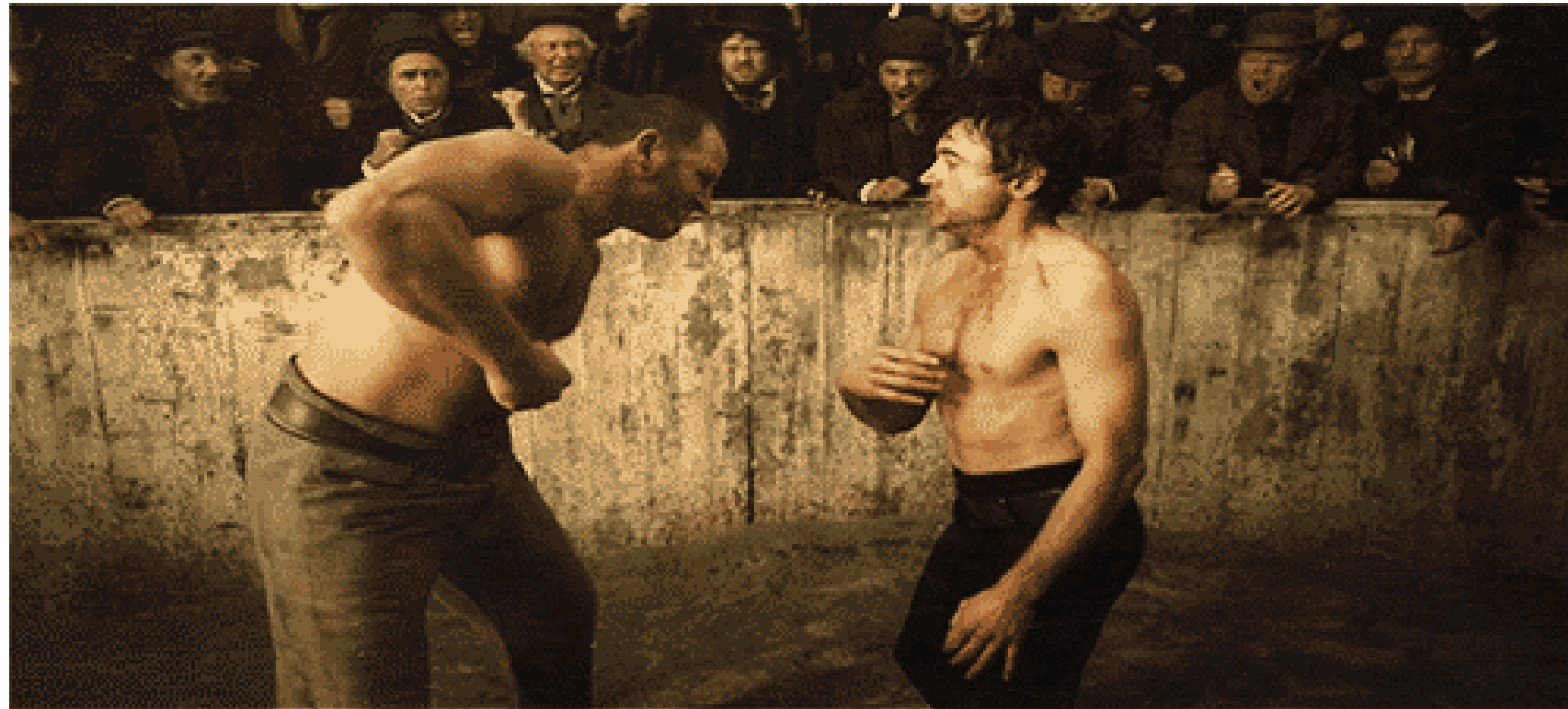
Source: <https://probertson.tumblr.com/>



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Which 3 Frames?



Source: Can only find a reblog site



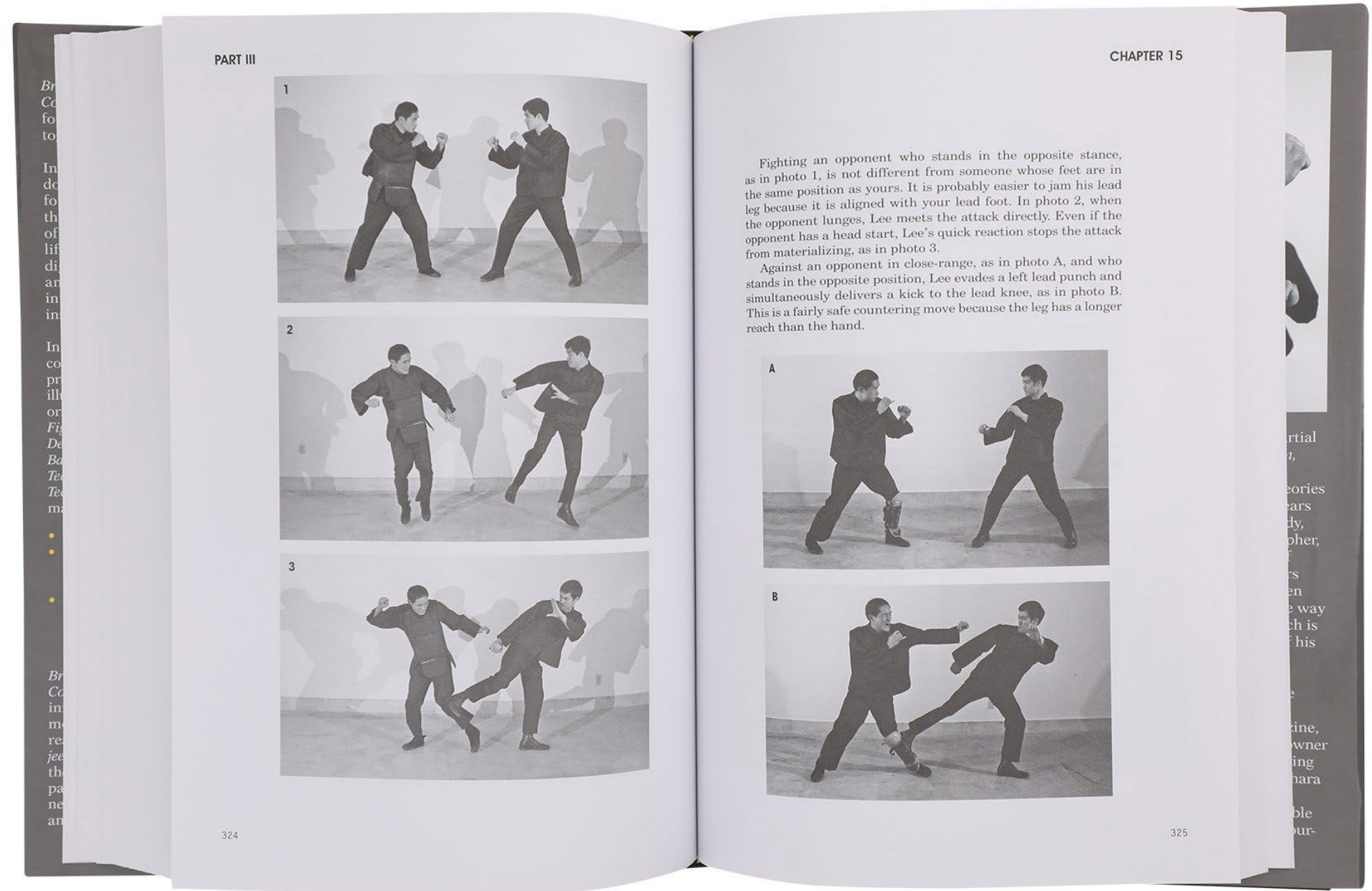
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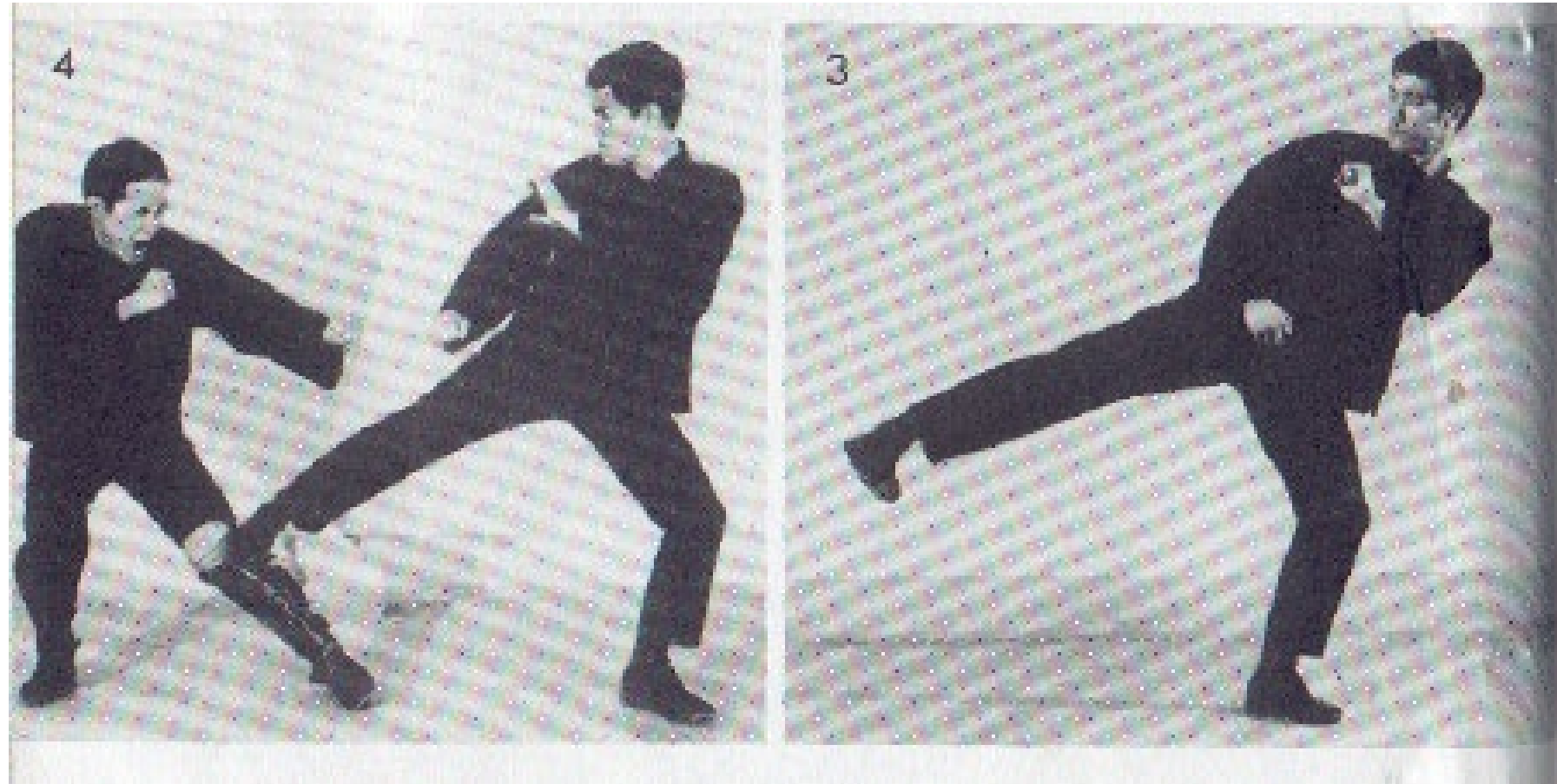
Animation Process:

Reference

- **Books**
- **Websites**
- **Videos**
- **Video Games**



Book Reference



Video Reference



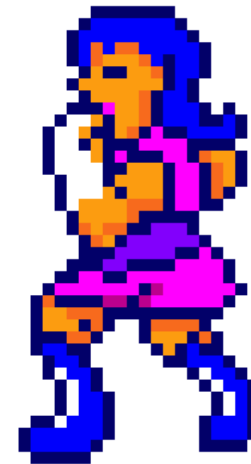
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Game Reference

- *Fighters Generation*
- *<https://www.justnoint.com/zweifuss/>*
- *Tekken Command List videos*
- *Fire Pro Wrestling Edit mode*

Converting Reference



5. Implementation:

a) Merging Art with Design

Implementating Frames

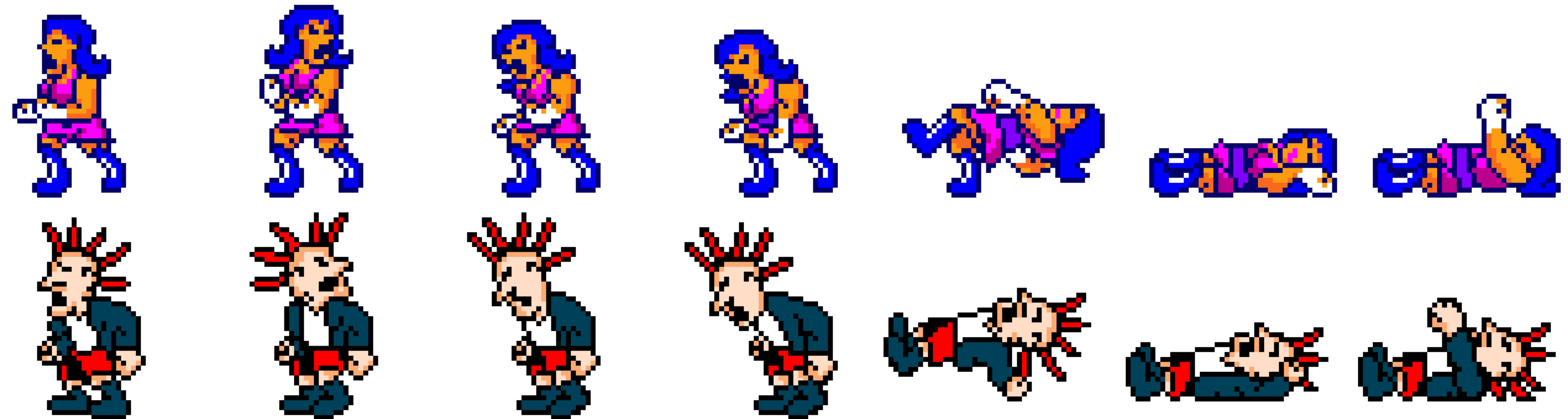


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5. Implementation:
b) Selling the Drama or
The first step to making
IMPACTFUL COMBAT

Intentional & Varied Hurt Frames



5. Implementation: Grappling with Frames

Grappling with Frames



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Grapple Breakdown



Grapple Breakdown



Grapple Breakdown



Grapple Breakdown



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Grapple Breakdown



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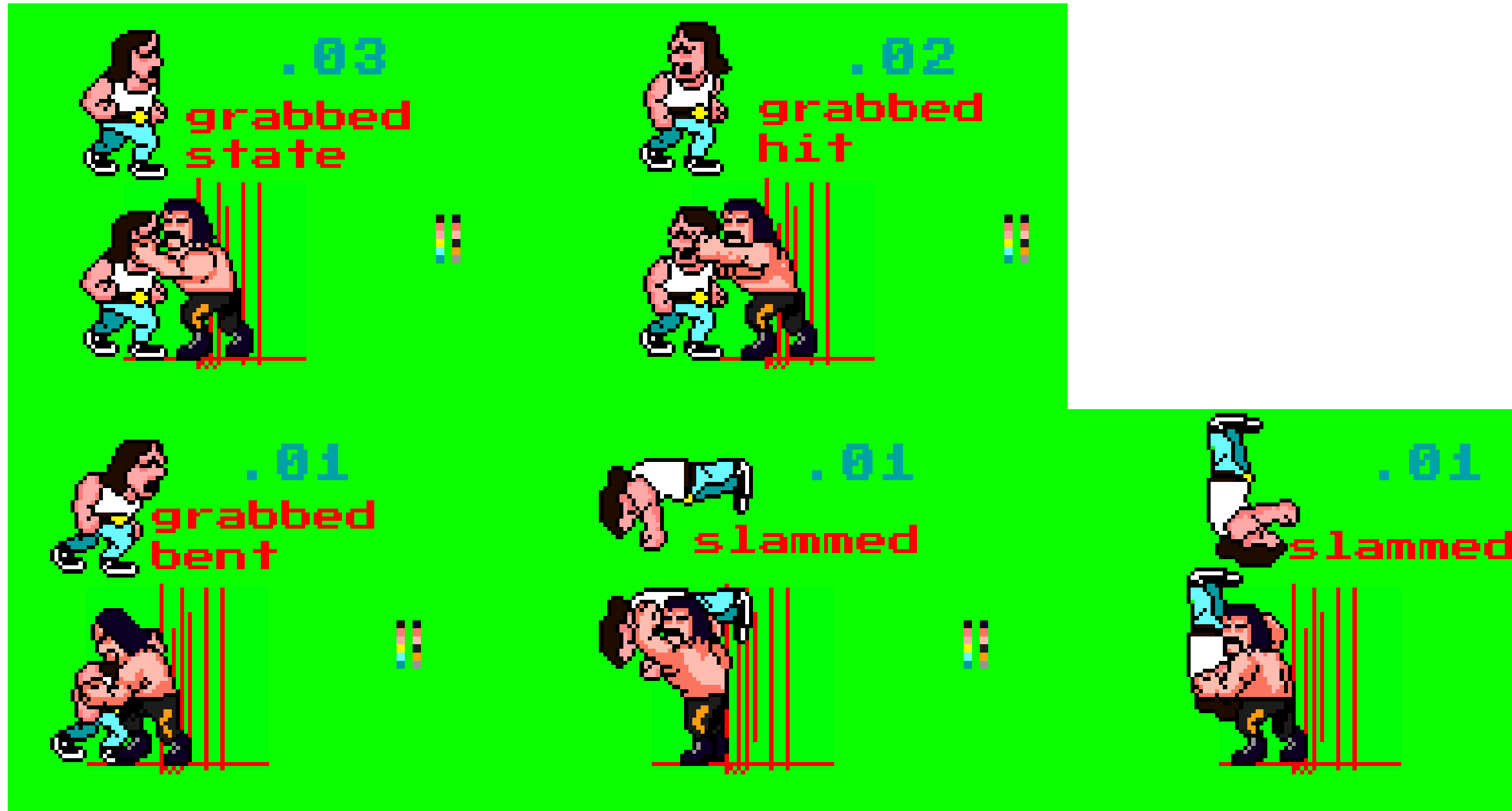
Grapple Breakdown



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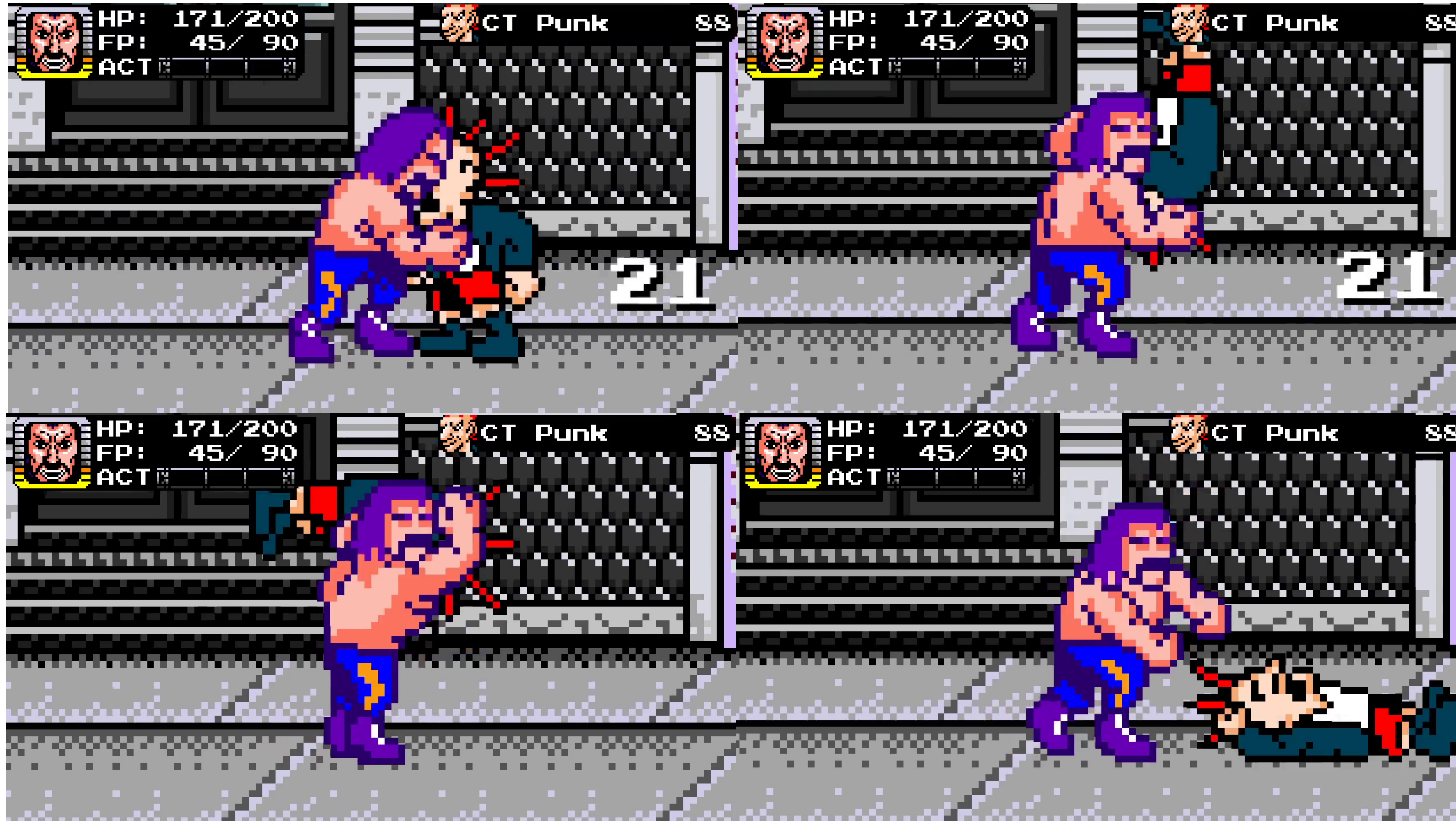
Grapple Breakdown



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Grapple Breakdown

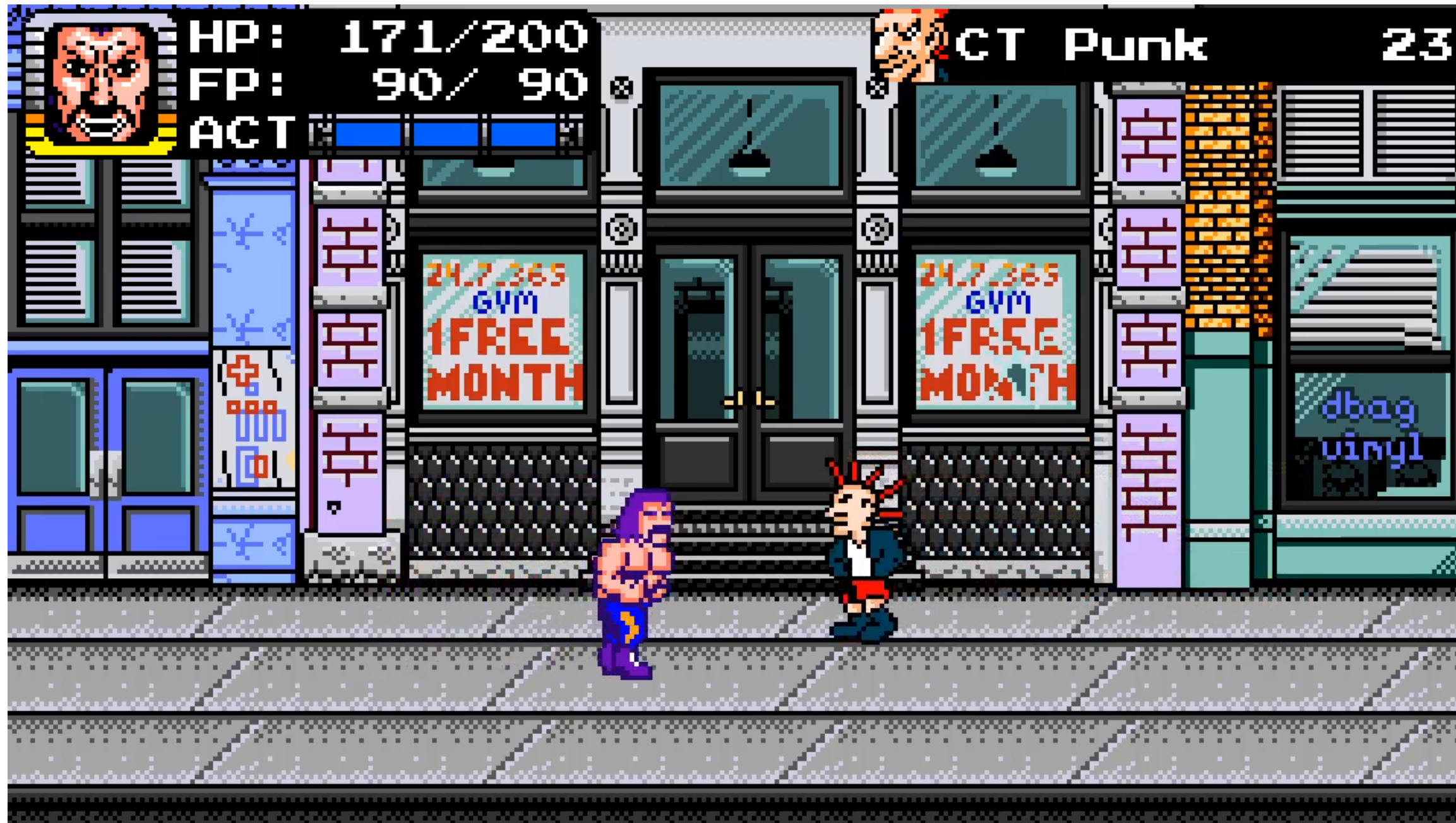


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***6. The Sauce:
Short Animations + Frame
Holds + Camera & Other
Trickery =***

Impactful Combat



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More Fighting



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7. Conclusions: Benefits & Pitfalls

Benefit:
Satisfied Design Goals

Benefit:
People appreciate it!

Benefit:

***I'm proud that we were able to
do this.***

Pitfall:

***It Takes a lot of Time
&***

It May Not Be Noticed

Pitfall:

***Players still fell into
repetitive play***

Pitfall:

***Hard time
differentiating moves***

Thank You

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