GDC

Epic AND Interactive Music in FINAL FANTASY XV

Sho Iwamoto
Audio Programmer / Square Enix

What I will talk today

- Interactive musics in FFXV
- Tools and techniques
- Synchronization issues

What I **will** NOT talk today

- How to compose epic musics

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Who am I

- Sho Iwamoto
  - Audio Programmer at Square Enix since 2014
  - MAGI system developer
  - Designing and implementing interactive music system for Final Fantasy XV

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Challenge

EPIC VS INTERACTIVE

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FINAL FANTASY MUSIC

- Epic
- Memorable
- lots of Concerts
- has Strong melody line
- one of the Sales points

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Goal

EPIC AND INTERACTIVE

MUSIC IN FINAL FANTASY XV
for wide & seamless gameplay

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Concept > Design > Features

- Not to reduce repetition
- but to enhance the emotional experience

- Make transitions musical as much as possible

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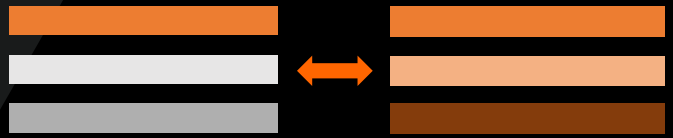
Concept **Design** Features

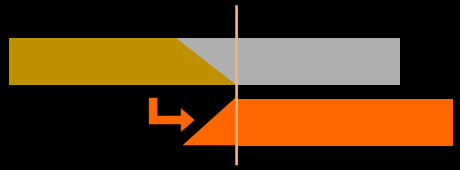
Bidirectional change

use Vertical remixing



Unidirectional progress

use Horizontal resequencing



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Concept > Design > **Features**

- Vertical Remixing
  - Chocobo Riding
  - Fishing
  - Outposts (Hammerhead, Gardin Quay, Lestallum, Cape Caem, etc...)
- Horizontal Resequencing
  - Astral Summons
  - Boss Battles (VS Loqi, Titan, Leviathan, Ifrit, etc...)

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Intro

MAGI

- Vertical remixing
- Horizontal resequencing

Synchronization

Conclusions & Future

Music **A**PI for **G**aming **I**nteraction

1, Features

2, Authoring Tool

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Features of MAGI

- Enables vertical/horizontal transition
- Allows any tempo, time signature and their changes
  - MIDI import (auto set up tempo/meter)
- Easy to use

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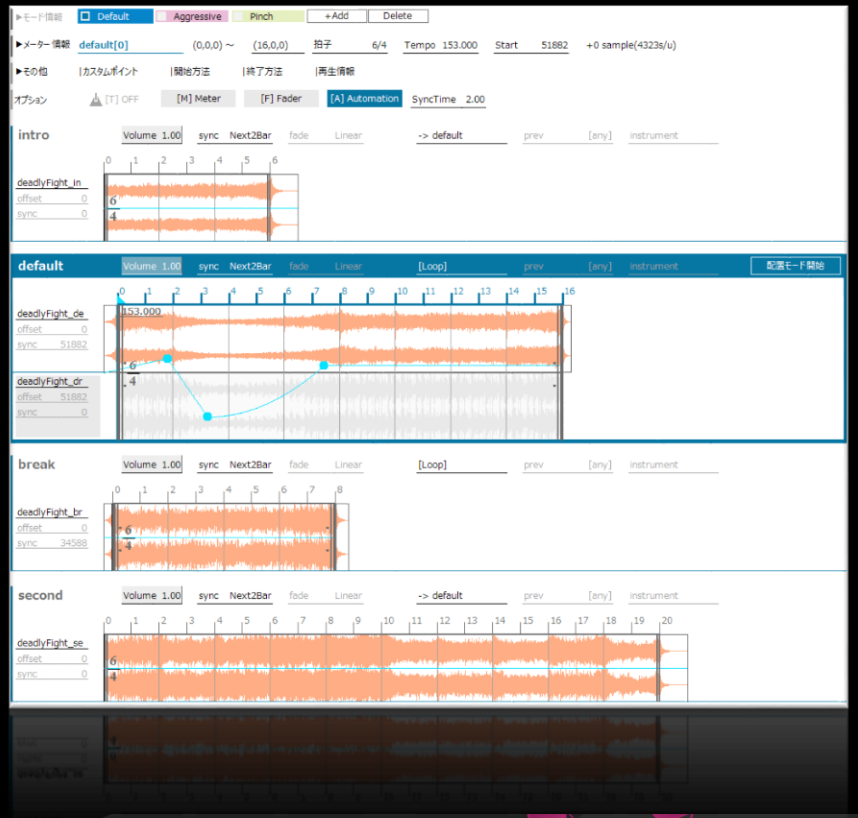
Authoring Tool for MAGI



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Intro

MAGI

Vertical remixing

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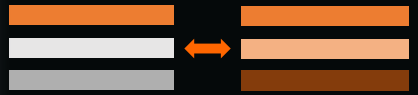
Synchronization

Conclusions & Future

“Mode” Transition

1, Chocobo

2, Gardin Quay



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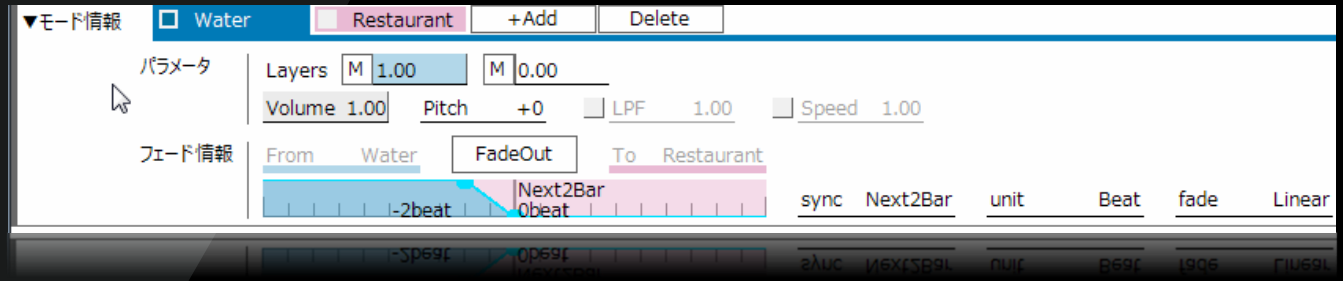
“Mode” is



- Each mode has
  - layer volumes
  - volume, pitch, LPF
  - transition parameters
    - fade time, fade offset, fade curve type, sync type

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1, Chocobo

- Speed based mode transition

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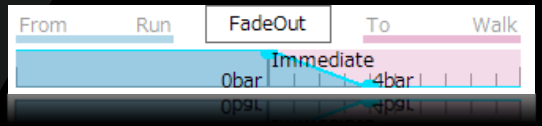
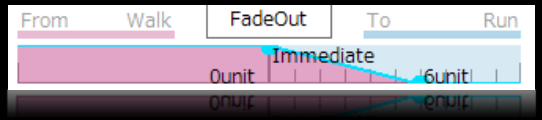
1, Chocobo - implementation

- Different transition time for each mode
  - from Run to Walk(may be not intentional) : long transition



4 bars

  - from Walk to Run(mostly intentional) : short transition



6 units = 1.5 beat

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1, Chocobo - Pros and Cons

- Pros
  - not being messy
  - quick feedback when start running
- Cons
  - few chance to hear slow version (except for swimming)

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2, Gardin Quay

- Position based mode transition

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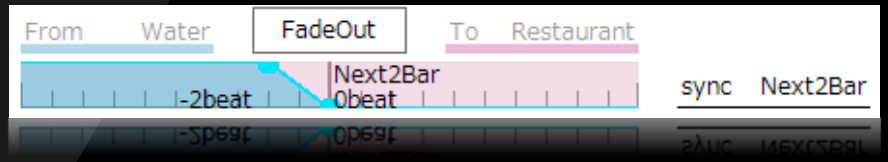
2, Gardin Quay - implementation

- Transition on musical timing



  - wait for next 2 bar (no problem)

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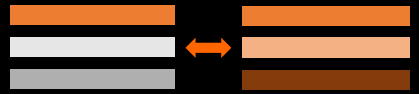
Wrap up - “Mode” transition



- Transition techniques
  - Different transition time for each mode (Chocobo)
  - Transition on musical timing (Gardin Quay)

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Intro

MAGI

Vertical remixing

Horizontal resequencing

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“Section” Transition

1, Tempo & Time signature changes

2, Custom Sync Points

3, Pre-end section

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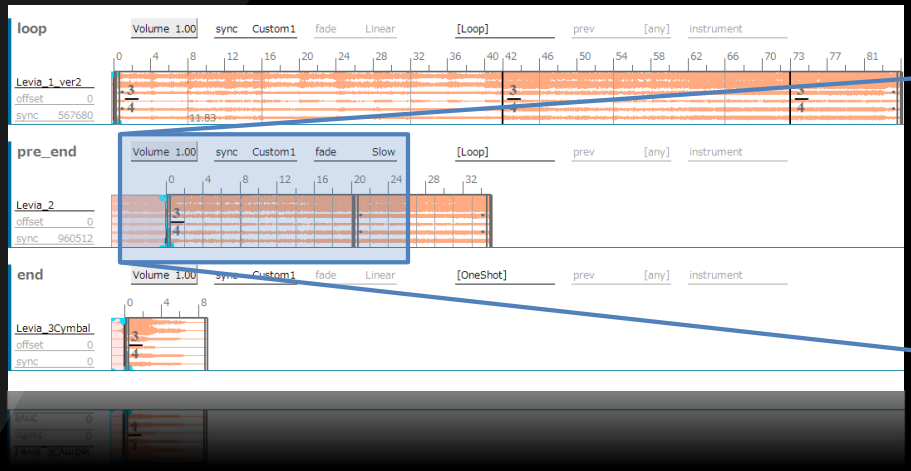
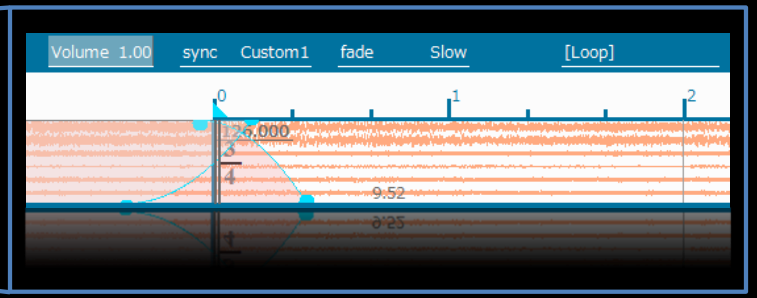
“Section”

- makes Musical progression
- has Transition parameters





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Boss Battle

- Situation based transition (linear)
- End music in sync with the game

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Section transition - challenges

Time signature & Tempo changes

Custom Sync Points

Pre-end section

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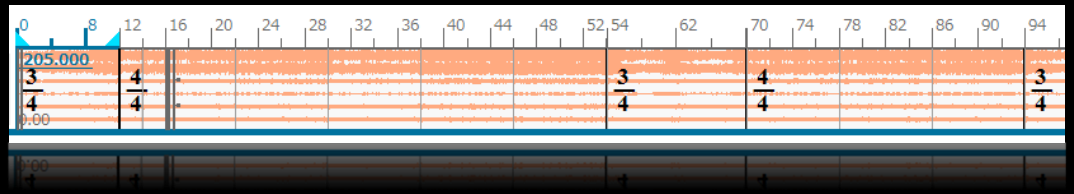
Time signature & Tempo changes

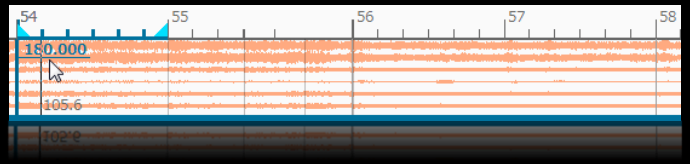
Custom Sync Points

Pre-end section

- Case : Invidia (vs Loqi)
  - Mix of 3/4 and 4/4



- Case : Omnis Lacrima (vs Boss Monster)
  - Many ritardandos



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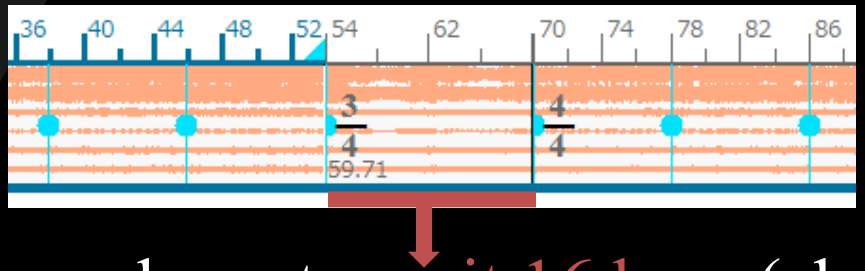
UBM

Time signature & Tempo changes

Custom Sync Points

Pre-end section

- Every beat/bar/grid couldn't work
- Customize sync point for each song enables musical transition



- may have to wait 16 bars (about 14sec)

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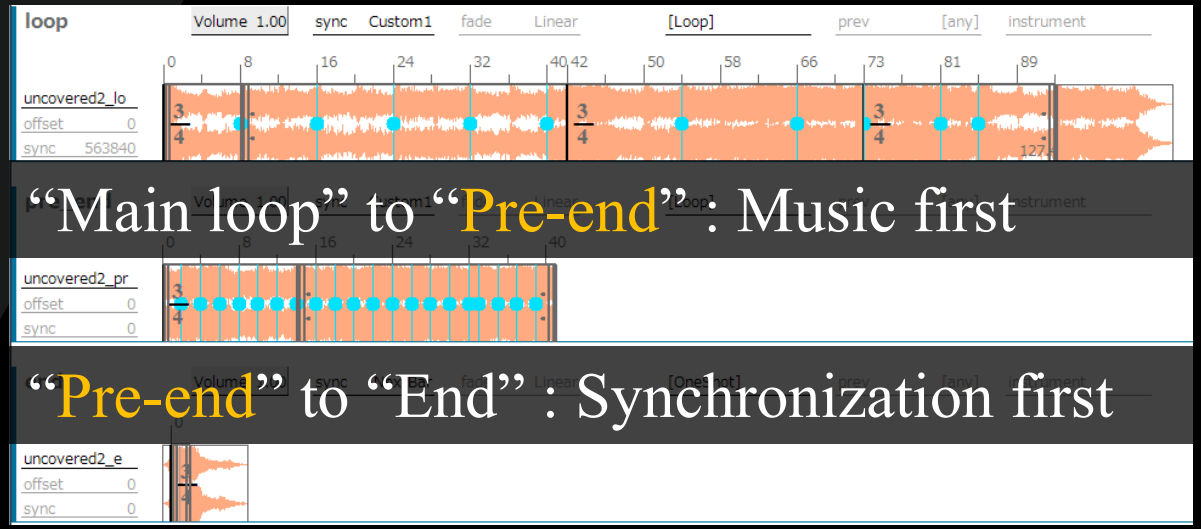
Time signature & Tempo changes

Custom Sync Points

Pre-end section

- “Main Loop” “Pre-end” “End” structure



Main Loop section

Pre-end section

End section

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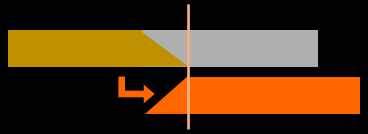
Wrap up - “Section” transition



- Epic music that has strong melody line needs
  1. Tempo & Time signature changes support
  2. Custom Sync Points
  3. Pre-end section

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Intro
MAGI
Vertical remixing
Horizontal resequencing

Synchronization

Conclusions & Future

1, VS Leviathan
2, VS Ifrit

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Spoiler Alert!

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VS Leviathan - Overview

- Tornado happens : transition to Pre-end
- Ending scene starts : transition to End

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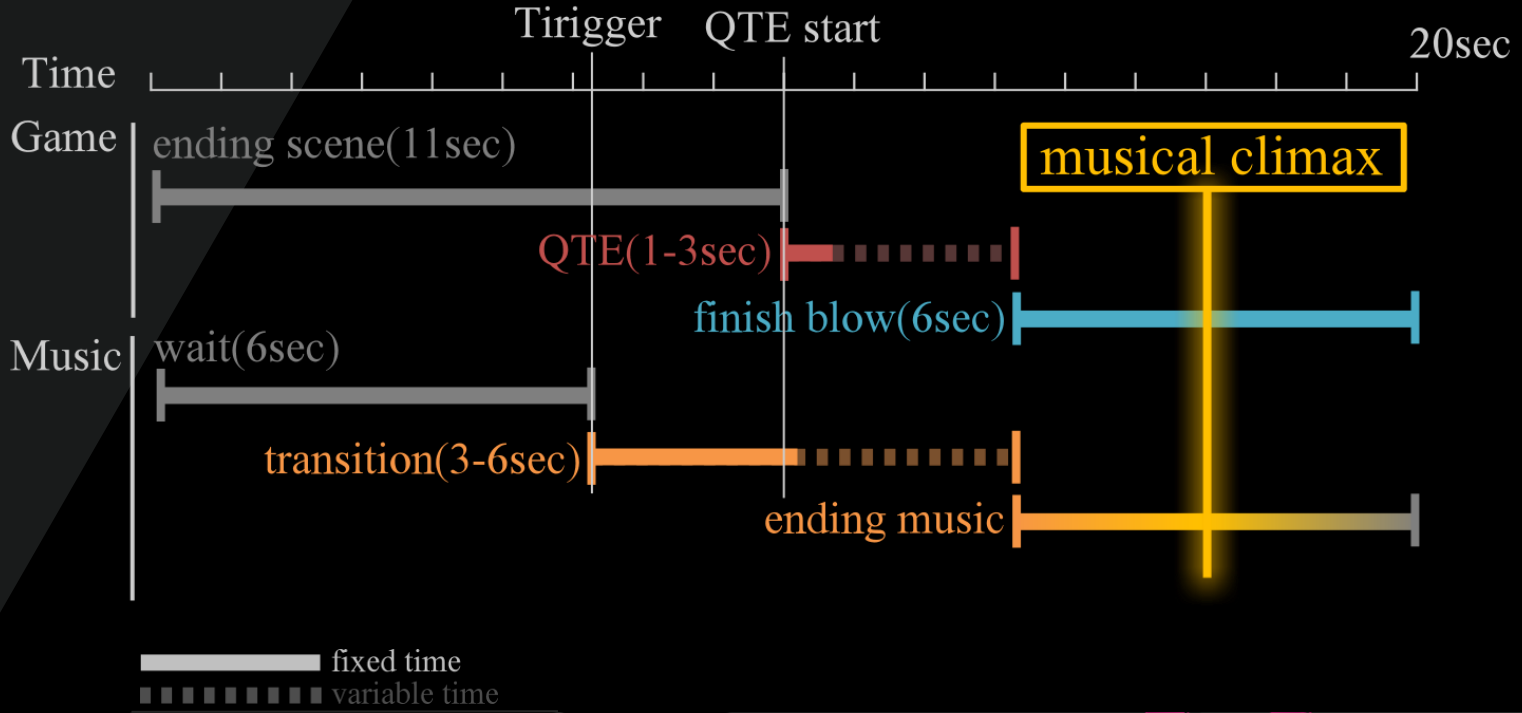
VS Leviathan - Synchronization



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VS Leviathan - Comparison

- Long version

- Short version

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VS Ifrit - Overview

- Ifrit gets “serious” mode : transition to Pre-end
- Ending scene starts : transition to End

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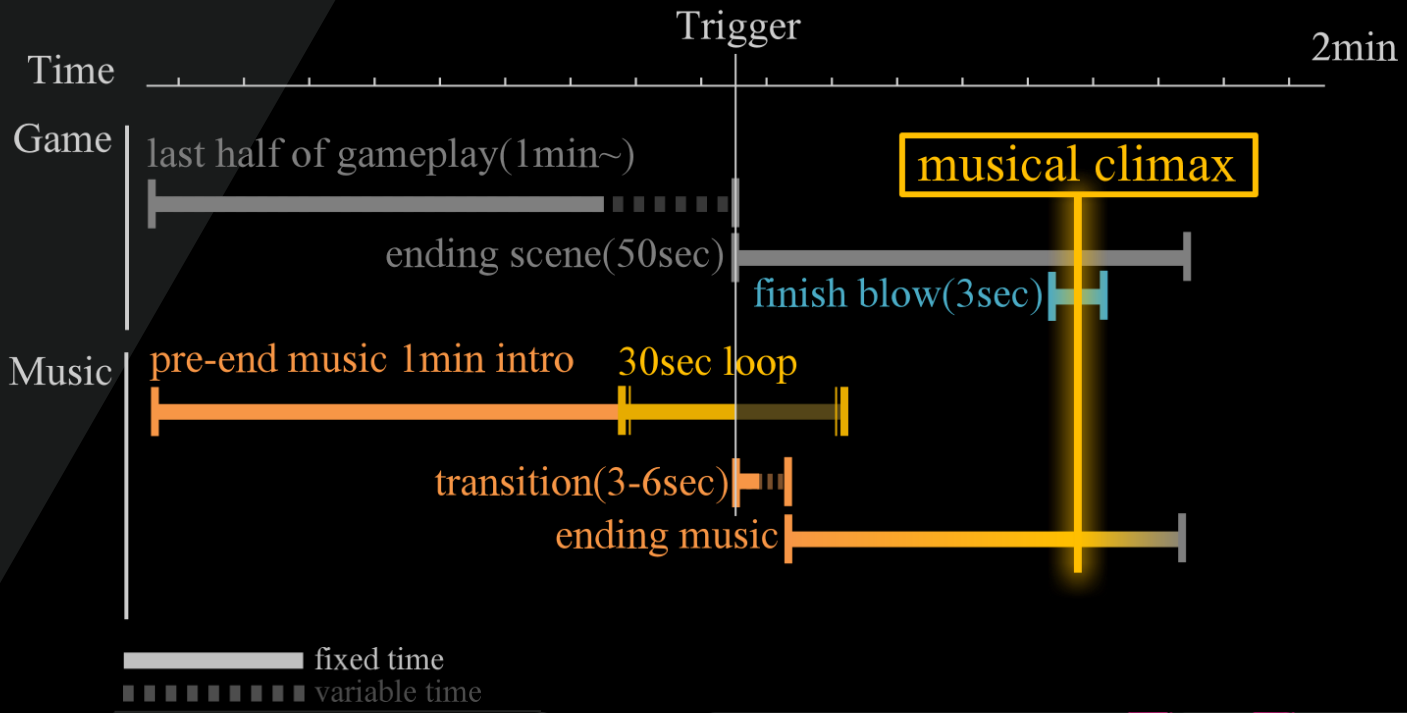
VS Ifrit - Synchronization



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VS Ifrit - “Hellfire”

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Wrap up - Synchronization

- Be considerate of Durations
  - Duration of transition
  - Duration of loop
  - Duration of cutscene
  - Duration of gameplay
  - Duration of player's emotional change

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Conclusions

- Epic music that has strong melody line
  - Needs any tempo/time signature support
  - Needs Custom Sync Points
  - Use pre-end section to synchronize with game

- Be considerate of durations of transition, gameplay, emotion, etc...

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Future

- Custom transition “destination”
- “Interactive VS short loop” problem

- More interactive music features :)

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Q&A

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Special Thanks

Yoko Shimomura	Main Composer
Tetsuya Shibata	Composer
Yoshino Aoki	Composer
Yoshitaka Suzuki	Additional Composer
Shota Nakama	Additional Composer
Mitsuhiro Ohta	Arranger
Keiji Kawamori	Music Supervisor
Toru Osanai	Music Planner

and All Staff of FINAL FANTASY XV

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