

# **Music 15**

## Lecture 5

Wednesday, Feb 12, 2020

# Lecture Outline

1. Announcements
2. Section Information
3. Quiz Review
  - a. Terminology
  - b. Readings
4. One-on-one help

# Announcements

- **Quiz: Tomorrow, Feb 13, during main lecture**
  - Estimated duration is 45 minutes
  - Mostly multiple choice
  - No cheat sheets, notes, or open textbooks

# Announcements - Q&A posted last Monday

## **What is the best way for me to study for this quiz?**

I think the best way to study for the quiz would be to do the following:

1. Complete the assigned readings in the textbook
2. Study the terminology
3. Review what you did in the last 3 homework assignments
4. Come to the section lecture this week to participate in my quiz review

## **How do I find what's most important in the book?**

I don't know what Professor Dubnov will include on the quiz, so unfortunately I can't recommend you focus on specific chapters or sections from the readings over others. In short, everything from the readings is important. However, at the very least, you should study the review sections from each chapter.

# Announcements - Q&A posted last Monday

**The professor said which pages are important for the book. However, the ebook doesn't have page numbers, so how do I know what to read?**

I've attached a document that has the required readings for the quiz. To avoid confusion caused by page number discrepancies between different versions of the textbook (or a lack of page numbers in the case of the ebook), I made reference only to section headings.

**I'm struggling to know what to put down for the terminology because some of the terms aren't specifically described in the document on Canvas. What should I do?**

We'll go over terminology in depth during the section lecture this week. In the meantime, I would suggest that you look up basic definitions for the words that don't have definitions in the terminology document on Canvas.

# Section Information

- Assignment 2 grades will be posted by next Wed
- To those who emailed about sick-related absences or technical issues related to uploading Assignment 3, I will respond soon. Apologies for the delay.

# Quiz Review

Part A: Terminology

# Quiz Review - Terminology (covered today)

Linear composition

Nonlinear composition

Adaptive music

Vertical reorchestration

Horizontal re-sequencing

Ludology

Narratology

Game audio middleware

Digital audio workstation (DAW)

Tracker

Sequencer

Chiptune

Sampling

DX7

FM Synthesis

MIDI

Transposition

iMUSE

Minimalism

Duty cycle

Longitudinal wave

Counterpoint

Fugue

Prelude

Melodic contour

Chord progressions (e.g. I-V-I,

I-V-vi-IV)

Harmony

Frequency spectrum

Computer memory

Musical tension

Tempo

Notation software

Granular synthesis

Stinger

Voice-over

Key

Tonality

Atonality

Diegetic music

Non-diegetic music

Sound design



# Quiz Review - Terminology

**Linear composition**: music is composed to a fixed timeline or sequence of events that is known ahead of time (as is the case with film music)

**Non-linear composition**: Game and music are somehow integrated.

**Adaptive music**: music made using non-linear composition (e.g. music that is somehow affected by the gameplay). **Also known as “interactive music”**.

- **Vertical reorchestration**: several tracks of pre-composed music are mixed and re-mixed according to what happens in the game.
- **Horizontal re-sequencing**: pre-composed music is re-shuffled by the gameplay (e.g. the audio may crossfade from one score to another between scenes).

# Quiz Review - Terminology

**Ludology**: the study of games, the act of playing them, and the players and cultures surrounding them. (Wikipedia)

**Narratology**: the study of narrative and narrative structure and the ways that these affect our perception. (Wikipedia)

**Ludology vs. Narratology debate**: an argument about whether games are in fact stories and should be studied as such.

# Quiz Review - Terminology

Game audio middleware: software that is integrated into a game engine to handle the audio (e.g. Wwise, FMOD). (Wikipedia)

Digital Audio Workstation (DAW): a software application used for recording and/or producing audio (e.g. music, sound effects, TV/film audio, podcasts, etc).

- Examples: ProTracker, FastTracker, GarageBand, and **LMMS**.

# Quiz Review - Terminology

Before middleware: [https://www.youtube.com/watch?time\\_continue=12&v=-klvST16Otc&feature=emb\\_title](https://www.youtube.com/watch?time_continue=12&v=-klvST16Otc&feature=emb_title)

After middleware: [https://www.youtube.com/watch?time\\_continue=22&v=lugoigZuBLq&feature=emb\\_title](https://www.youtube.com/watch?time_continue=22&v=lugoigZuBLq&feature=emb_title)



# Quiz Review - Terminology

**Tracker**: A DAW that uses **vertical tracks** and a spreadsheet of note information. Examples include ProTracker, Renoise, FastTracker, and OpenMPT.

**Sequencer**: A DAW that uses **horizontal tracks** and a piano roll. Examples include GarageBand, Pro Tools, Ableton Live, and LMMS.

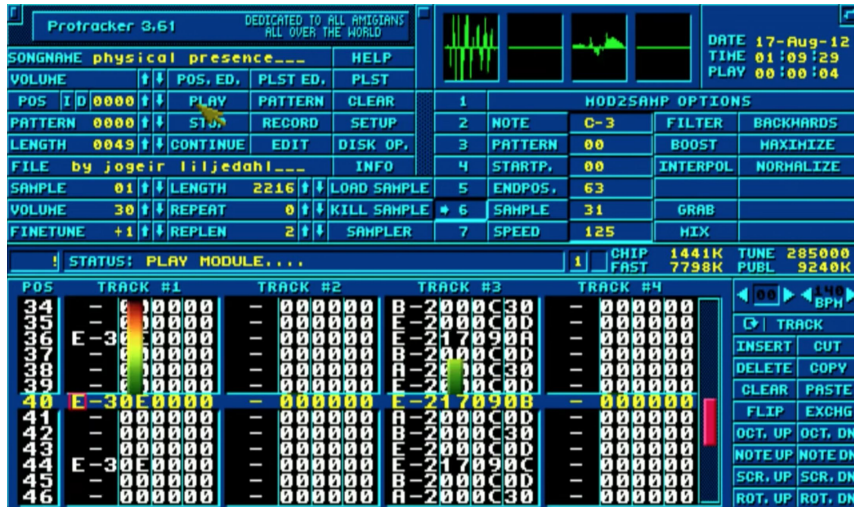
**Chiptune**: a style of music made using basic waveforms (e.g. pulse waves, triangle waves, etc) and noise. **You made this kind of music in Assignment 1.**

**Sampling**: the reuse of a portion (or sample) of a sound recording in another recording (Wikipedia). This is a common technique in hip hop music.

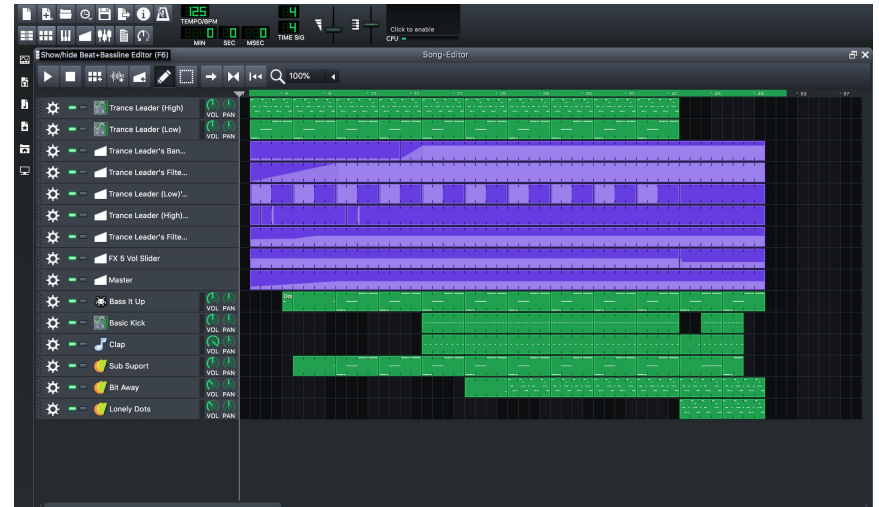
# Quiz Review - Terminology

## Tracker (ProTracker)

[https://www.youtube.com/watch?time\\_continue=1625&v=ecIMFa0M1c&feature=emb\\_title](https://www.youtube.com/watch?time_continue=1625&v=ecIMFa0M1c&feature=emb_title)



## Sequencer (LMMS)



# Quiz Review - Terminology

Example of sampling: <https://www.youtube.com/watch?v=GWT9BSDvCz0>



# Quiz Review - Terminology

**MIDI** (Musical Instrument Digital Interface): a kind of technology that connects electronic musical instruments to computers for making music. The music can be saved as .midi files and imported into a DAW (**we did this in Assignment 2**).

**iMUSE**: one of the first adaptive music systems for games, created by LucasArts (first appeared in **Monkey Island 2**). It defines the use of music markers that specify loop and branch points, allowing the music to adapt in real time to gameplay mechanics (see glossary). **Note that the professor said this will be on the quiz!**

**Prelude**: a short piece of music that may be thought of as a preface (Wikipedia).



# Quiz Review - Terminology

**Musical tension**: the anticipation that music creates in a listener's mind for relaxation or release (Wikipedia). It can be created by increasing the tempo or volume, gradually raising the pitch to a higher or lower level, or by adding more musical layers.

**Stinger**: a short music phrase that signals a change in the game state or indicates a reward (see glossary). Usually lasts less than 10 seconds.

# Quiz Review - Terminology

Tension created by increasing tempo: <https://www.youtube.com/watch?v=UZIEXI9xgR8>



# Quiz Review - Terminology

Example of stingers (see 1:39:30 - 1:44:40, whenever Link opens a treasure chest or finds something useful): <https://www.youtube.com/watch?v=9iTQCA7FxEQ>



# Quiz Review - Terminology

**Key**: the notes of a scale that make up a musical composition

**Tonality**: the arrangement of pitches and/or chords of a musical work in a hierarchy of perceived relations, stabilities, attractions, and directionality. In tonality, the tonic (tonal center) is the tone of complete relaxation and stability, the target toward which other tones lead (Wikipedia). “Pleasant-sounding”.

**Atonality**: music that lacks a tonal center, or key. “Unpleasant-sounding”.

# Quiz Review - Terminology

**Diegetic music**: music this is played on-screen by musicians or a music device in the scene (see glossary). Think of Link playing the ocarina.

**Non-diegetic music** (also “extra-diegetic”): music that only the viewer can hear and that emphasizes the emotional content of the story (see glossary).

**Sound design**: it has 3 definitions (see glossary):

1. The use of sound effects as an non-diegetic element
2. The combination of sound effects, Foley effects and ambience in a scene
3. The customization of instruments or sounds through the use of synthesis or other techniques

# Quiz Review

Part B: Readings

# Quiz Review - Chapter 1 (music storytelling)

- Know the **differences between linear and nonlinear music** (e.g. type/length of experience, number of plays, game mechanics, etc)
- Know the **4 categories** of music in video games
  - a. Diegetic music
  - b. Non-diegetic music
  - c. Music as gameplay (the player assumes the role of musician)
  - d. Player-customized music (you import the music you want to listen to)
- Know some **common functions of music in video games** (e.g. setting the scene, introducing characters, etc)

# Quiz Review - Chapter 2 (interactive music)

- Know the **different types of interactive music** (see Review section for summary of types)
- Know the **different types of physical control inputs** (e.g. game controllers, keyboards, mice, microphones, etc)
- Know the **different ways that music can respond to control inputs** (e.g. dynamic mixing, changes in tempo, triggering of stingers, etc)
  - Simple example: when data sent by the game controller causes Link to open a treasure chest in Zelda: Link's Awakening, a stinger is triggered



# Quiz Review - Chapter 3 (spotting the game)

- **Spotting**: process wherein the game director and the composer discuss the musical approach on a scene-by-scene basis (see “The Spotting Process”)
- Know the **goals of a video game music score** (e.g. outlining the emotional context & story arc, synchronization, etc)
- Know the **video game scoring techniques** discussed in the chapter (e.g. horizontal resequencing, vertical reorchestration, MIDI scores, etc)

# Quiz Review - Chapter 5 (history of game music)

- There's a lot to take in, but at least be sure you know what **iMUSE** is
- Also, at least **read the Review** section to familiarize yourself with the basics of the history
- Refer to your notes/memory of the **film we watched in class**

# Quiz Review - Chapter 13 (virtual instruments)

- Know how MIDI, MOD, and SoundFont files can be used as alternatives to prerendered audio in video games
- **SoundFont**: a file format that allows you to play MIDI files using custom sample-based instruments. **We did this in Assignment 2.**

# **On-on-one help**

Please help someone in need if you are finished