

Sound in Film Dialog + Sound Effects + Music

- *Dialog* is the voices of the actors.
- *Sound effects* include Foley, object (alarm clock), actions (breaking), environment / ambience.
 - *Foley sounds* follow the actors movement – touching, breathing, shifting, walking, clothing, etc.
- A *Soundtrack* includes all of the above.
- *Diegetic Sound*: we see the source, or if not, the characters can hear it too. Includes other voices.
- *Nondiegetic*: comes from outside the story space
Examples: film score music, or a narrator. 1

Job Titles in Film Sound

- Production Recordist
- Sound Editor
- Sound Mixer
- Sound Designer

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What is Sound Design?

- *Design*: making decisions to communicate the right messages
- *Creating the overall sound character for the video, film or game project*
- *Supporting the visual or story elements*
 - After the development stage...
 - In the **preproduction** stage, a sound landscape or **sound map** is developed to support the thematic material, including the desired emotional character of the sounds.
 - Lists action and object sounds, environmental sounds, Foley sounds, dialog, and music. 2

Production Recordist

- Recording during the actual filming of the movie
- S/he'll have a microphone on the set, and will gather dialogue and some sound effects if they are available during the actual shooting.
- Must be consistent, make notes on each recording, so as to be able to make matching recordings later

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Sound Editor

- Person back in a studio who generally has a collection of sounds
- Able to go out with a portable recorder and bring back and edit sounds and fit them into the soundtrack

Sound Mixer

- Person whose job is to blend together all the different sounds that make up the soundtrack

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Sound Designer

- Might do all the above: recordist, editor, and mixer.
- A relatively new kind of job, for a person who is *in on the planning* and involved with the director in making sound an integral part of the content delivery.

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Sound Production Sequence

- **1. Collaborate with director.** What is s/he trying to communicate? (“pre-production”)
- **2. Sound Asset Collection** (“production”)
 - Buy or Record or Create sounds?
 - Build Example -mix an organic sound with a non-organic. Common in *Star Wars*, *Indiana Jones*, *Rings*, *Avengers*
 - Quality?
 - High quality and consistent level, tone
 - Make as dry as possible
 - Musical Score?
 - If music is budgeted, engage a composer
 - Now days some composers create music without an orchestra. Quite often a combination of software + live.
 - Loop editing is the least expensive option. Can be OK+

Sound Production Sequence

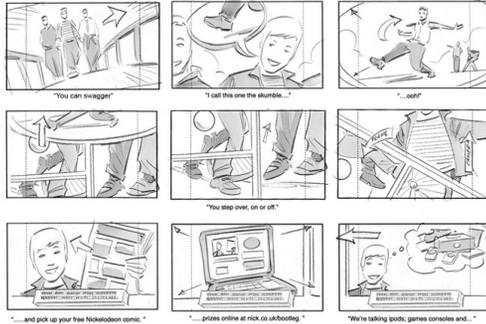
- **3. Sound Processing** (“post-production”)
 - Compression, Layering, EQ, Noise Removal, Normalizing
- **4. Mix and Master the tracks** (“post-production”)
 - Balancing, normalizing, creating consistency
 - Automation of effects such as levels, EQ variables
 - Producing alternate mixes for media variations

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Pre-Production

- 1. **A Treatment or Concept**
 - A rough outline by director
- 2. **Story Board, Director's Summary**
 - A range of documents from a set of illustrations to a formal proposal, or scope of work

A Story Board



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Music Cue Sheet

A **cue sheet** can start as a planning tool, but continues as a licensing document. It contains a detailed listing of all the music used within the production, and substantiates royalties.

| No. | TCR in | TCR out | Name | Length | Composer | Usage | Notes (PT %) | Publisher(s) | Affiliation | % |
|-----|-------------|-------------|-----------------|-------------|--|-------------------------|--------------|----------------------------------|-------------|-----|
| 21 | 01:00:00:00 | 01:00:28:08 | Stream Sequence | 00:00:28:08 | Andreas Smil Hilbert Hagen | Background Instrumental | PRS 100 | Andreas Smil Publishing Designee | PRS | 100 |
| 22 | 01:01:30:12 | 01:03:00:12 | Opening Credits | 00:01:30:00 | Andreas Smil Patricia Virginia Compuser | Background Instrumental | SESAC 100 | Andreas Smil Publishing Designee | SESAC | 100 |
| 23 | 01:01:30:12 | 01:03:00:12 | Opening Credits | 00:01:30:00 | Jean-Pascal Woffroy | Background Instrumental | SESAC 100 | Composor: Large Ensemble (100%) | SESAC | 100 |
| 24 | 01:01:30:12 | 01:03:00:12 | Opening Credits | 00:01:30:00 | | Background Instrumental | PRS 100 | | PRS | 100 |
| 25 | 01:01:30:12 | 01:03:00:12 | Opening Credits | 00:01:30:00 | | Background Instrumental | PRS 100 | | PRS | 100 |
| 26 | 01:01:30:12 | 01:03:00:12 | Opening Credits | 00:01:30:00 | | Background Instrumental | PRS 100 | | PRS | 100 |
| 27 | 01:01:30:12 | 01:03:00:12 | Opening Credits | 00:01:30:00 | | Background Instrumental | PRS 100 | | PRS | 100 |
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Pre-Production

- 3. **Spotting Session**
 - Director and composer watch the developing film and plan the music cues.
- 4. **Sound Map (or Landscape or Blueprint)**
 - A plan to be approved by the director
 - *Adjectives* describe sound *communication goals*, such as “Innocent, sinister, pulsing/driving dramatic, dark, magic light, magic dark, etc”
 - Includes “*cues*” for music
 - Supports mood changes, transitions
 - Includes ideas for specific sounds

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Sound Map Lists These Elements

- 1) **Environment** – nighttime, city, etc
- 2) **Foley Actions** – walking, falling, things the actor does
- 3) **Objects & Actions** – wind, siren, crashes
- 4) **Clues to Emotion** – “positive”, “negative”, “hurried”, “lonely”, etc.
 - Suggests sounds or musical ideas.
- 5) **Moments of physical or dramatic transition**
 - Things are changing for better or worse
 - Suggests sounds or musical ideas.

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Sound Map

| Objects Actions Environment Emotions Transitions | Descriptive Adjective | Time | Sound Ideas | Music Ideas |
|--|--------------------------|------|---|---|
| Introduction | working energy | -4 | music only | regular optimistic steady homey |
| Environment Work Camp | working energy | 0 | Grunts clanks machinery | regular optimistic steady homey |
| Emotions | mighty vital | 0 | straining laughing clanks | |
| Environment Men working | victorious army | 6 | marching feet | fife and drums - civil war |
| Environment Railroad build | steel driving | 9 | clanks railroad sounds | |
| Emotions | strongest | 13 | grunts breathing hard hammer sounds | back to first music regular optimistic steady homey |
| Objects | energetic | 20 | big steel spikes | steady marching beat |
| Objects | faithful | 25 | "there you go" "that's it" | |
| Object | giving up | 29 | sigh | |
| Emotion | a little ominous | 35 | steam engine | add a steady low tone |
| Emotion | excitement | 42 | men excitedly talking | move music up a half step |
| Objects | big and strong | 50 | add clanking hammers | |
| Object | excited onlookers | 55 | howling and cheering | move music up a whole step |
| Object | excited onlookers | 1:02 | cheering | music slows is calm and major |
| Object | excited onlookers | 1:11 | another big cheer | |
| Emotion | something wrong | 1:16 | | music stops on minor chord |
| Emotion | transition | 1:20 | body hitting ground or John Henry's last sigh | music drops 1/2 step - still minor |
| Object | shock | 1:20 | crowd gasping | |
| Object | sad | 1:23 | hammers hit ground | only two notes - 2nd |
| Emotion | grief | 1:25 | men murmur | only two notes - flatted 2nd |
| Emotion | lost forever | 1:30 | men's murmurs fade out | only one low note held |

Sound Design Working Principles

- *Support the Images on the Screen*
 - Collect sounds that *match* the action, set the *scene*, create the feeling, tell the "*back story*".
 - Manipulate sound elements such as warm or harsh overtones, consonant or tense pitch intervals, to *suggest emotions*.
 - Modify sounds - Add expressive texture
 - Add a short burst of low frequency noise to a sound.
 - Add unrelated but suggestive layer to object/action sounds.
 - i.e. dog food leaving can for terminator moving through bars
 - Use music that suggests emotions
 - Major/minor keys, rising/falling tones, graceful/martial, stabbing/soothing, leitmotif themes for characters 14

Sound Design Working Principles

- Listener overload? **About 4 sounds at once (3-5 max)**
- *Creative ideas?* Object sounds that morph into music, or vice versa. Make musical chords out of non musical sounds that occur together in time. Use sounds that remind the listener of other sounds. Metallic drums behind the terminator. A distant wailing siren for a quiet but desperate character. A dog bark. Birds singing or squawking. Hinges squeaky or smooth.
- How did Ben Burtt set up the missile explosion in the asteroid chase scene so that the audience *anticipated* it?
 - He preceded it with a moment of pure silence.

Sound Design/Mixing Working Principles

- Make the *key* sound elements easier to *notice/hear*
 - Frequency. +2.5k for clarity. 5-7k for consonants.
 - Placement in sound field
 - Need to seem louder?
 - Boost level, or boost 3-4k Hz range, or reduce *other* track levels, or use compression
 - Use EQ to *separate the frequency* ranges of potentially competing sounds.
 - Have a gentle peak at 2.5 k for one, and 1.5 k for the other
- Open a "hole," that is, make space for it in the mix.
 - Pan other sounds away from it.
 - Temporarily reduce level of competing sounds.
 - Reduce the relevant Hz range in the competing tracks.

Sound Design Working Principles

- **Support focus points - “beats”** in the production
 - *Important points in the plot. Something happens that will ultimately change the outcome.*
 - *Moment when the right idea occurs to the hero*
 - *When we notice the tide of the battle is changing*