# Module 3.1.1: In Class Exercise iterative analytic listening "Sound Reporter"

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Module 3.1.1

# Sound Reporter – steps:

1. Describing an Audio Scene: Listen and plan how to describe the sounds
2. Performing a Sound Reporter: Present a real-time report describing the sounds
   - You will speak over the audio scene
   - Those who are not reporting will collect descriptions from other reporters and make notes along with a rough timeline of the scene
3. Team compilation of descriptions into keywords
   - Use a notecard for each keyword & mark the time in the scene
4. Class converges and curate a set of keywords

# Example Properties of an audio scene

- Sound source and qualitative description
  - “bird” “boy” “couple arguing”
  - “crowd noise”(wide spectrum irregular vocal events) “muted”(high frequency attenuated)
- Space
  - Physical dimensions; big, small, high, low
  - Open or closed; indoor or outdoor; reflective, absorptive, or diffusive surfaces (“reverberant” “damped”)
- Positions of sound sources relative to the listener and to one another
  - Foreground, middle ground, background
  - Left, middle, right, far, close

# Step 1: Describing an audio scene

- The class will be given an audio scene
- You will have 5 minutes to audition the scene and plan what to report
- You will use a timeline for ordering you plan
- After 5 minutes, each student will present the spoken report

# Step 2: Performing a Sound Reporter

- Your report is delivered as a real-time presentation
- Speak over the audio scene: you may refer to the sounds
- Speak in short phrases to describe the sounds in the scene (see *Example properties of an audio scene* )

# Step 2: Instructor's Example for Performing a Sound Reporter

~ 59 seconds

# Step 2a: listening to other reports while collecting descriptions

- Prepare a rough timeline for the audio scene before listening to other reporters
- Make notes of other reporters' descriptions
  - new descriptions
  - repeated descriptions
  - the time it occurs in the scene

# Step 3: Team compilation of descriptions into keywords

- When all reports have been presented, class organize into 4 teams (3+3+4+4) review, compare, and summarize descriptions.
- Represent each description with a keyword
  - Write each keyword on a separate notecard
- Build consensus for each keyword
- On the notecard include the time in the scene where the keyword occurs.

# Step 4: Class convergence and curating keywords

- Each team mounts their notecards on the wall in timeline order.
  - Each team' cards form one row.
- Cards with the same timestamp should align vertically
- Build Consensus on a set of keywords
  - Which keywords are used most often?
  - What are the keywords that provide good alternative descriptions?

# Audio scene for real-time In-class Sound Reporter exercise

~ 2 minutes and 15 seconds

# Disambiguating related words

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Module 3.1.2

Descriptors

Concept

Tags

Keywords

Vocabulary

## Descriptors

- When words are used to describe or identify features
- Data about how other data are stored and retrievable
- In computing: computable data through parameters
  - Ex. Object.defineProperty (*obj.*, *prop.*, *descriptor*)

## Concept

When words convey an idea

## Tags

When words are used to label something to attach other information

## Keywords

When words act as key to significant information about something

## Vocabulary

a collection of words adopted by a certain group of people or a domain of practice

# Keywords and Themes for audio scenes

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Module 3.1.3

# Audio Resources, Keywords and Themes

| Audio resources (sound files) | Keywords assigned to sound files |
|---|---|
| Car pulling away | car, leaving |
| Car driving | car, moving |
| Cat meow | cat, mewing |
| Car braking hard | car, sudden stop |
| Cat screaming | cat, screaming |

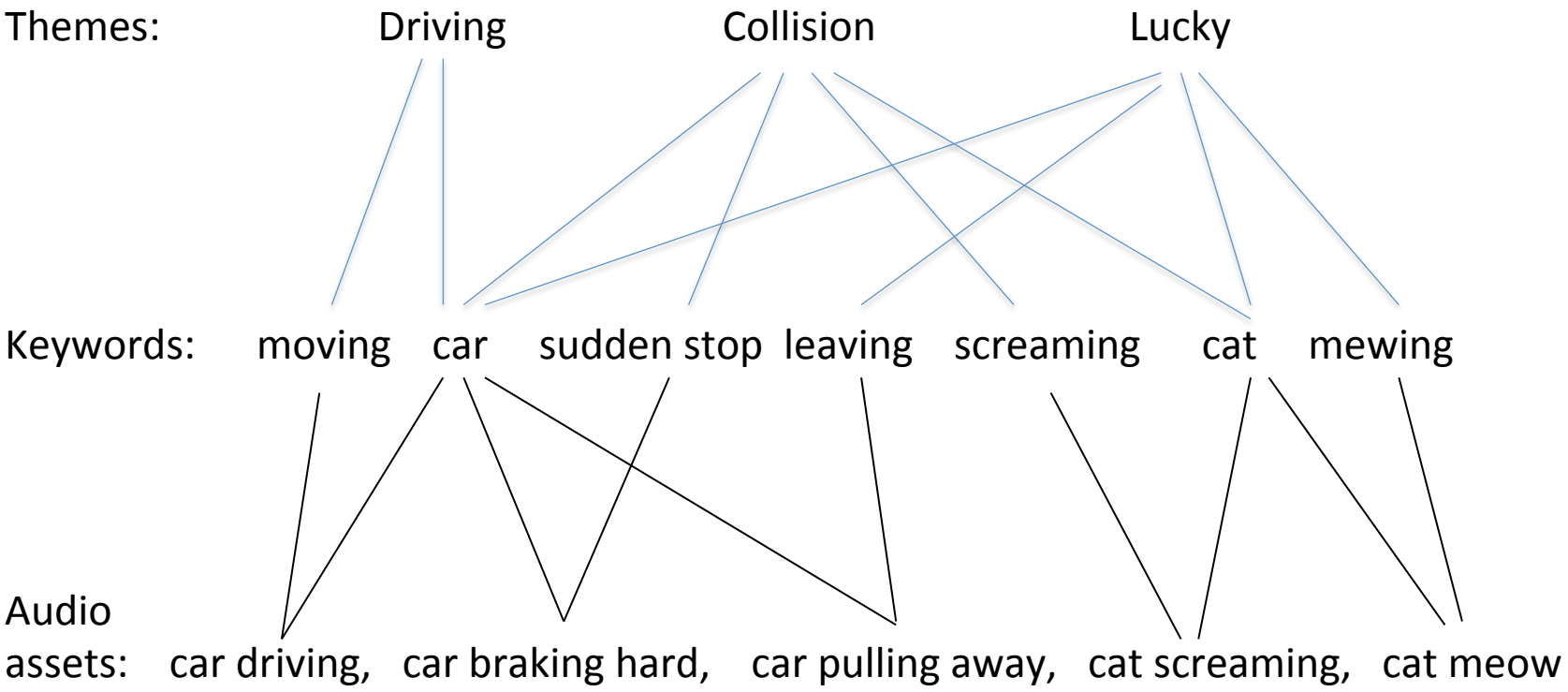
Keywords are assigned to audio resources as metadata and stored with each sound file.

Themes are sets of keywords that describe audio resources.

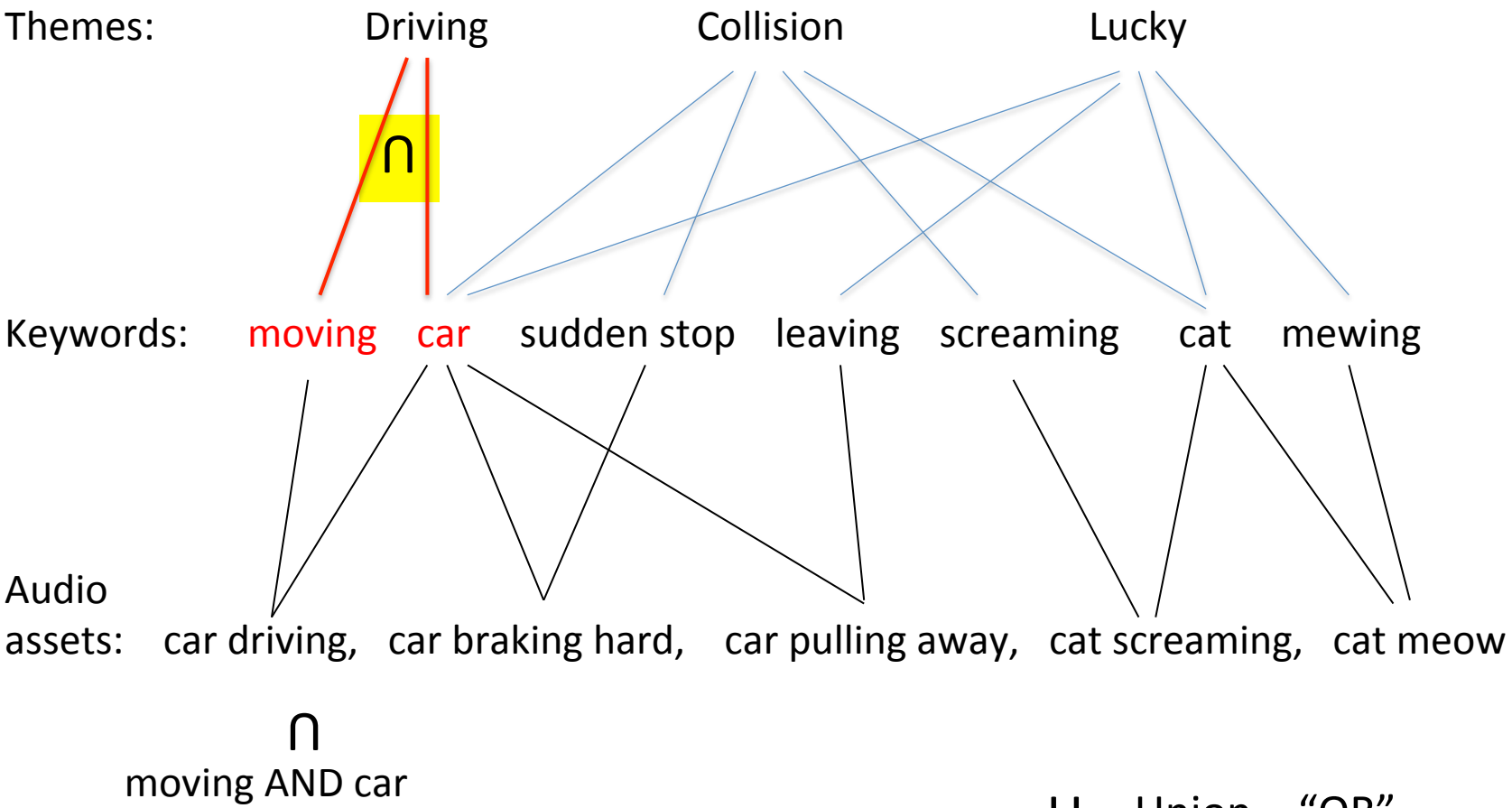
The associated sounds can create a submix to depict the Theme.

| Themes | Keywords and logical expressions | Submix of associated sounds |
|---|---|---|
| Driving | car AND moving | Car driving |
| Collision | (cat AND screaming) + (car AND sudden stop) | Car braking hard + Cat screaming |
| Lucky | (car AND leaving) + (cat AND mewing) | Car pulling away + Cat meow |

# Semantic binding



# Semantic binding



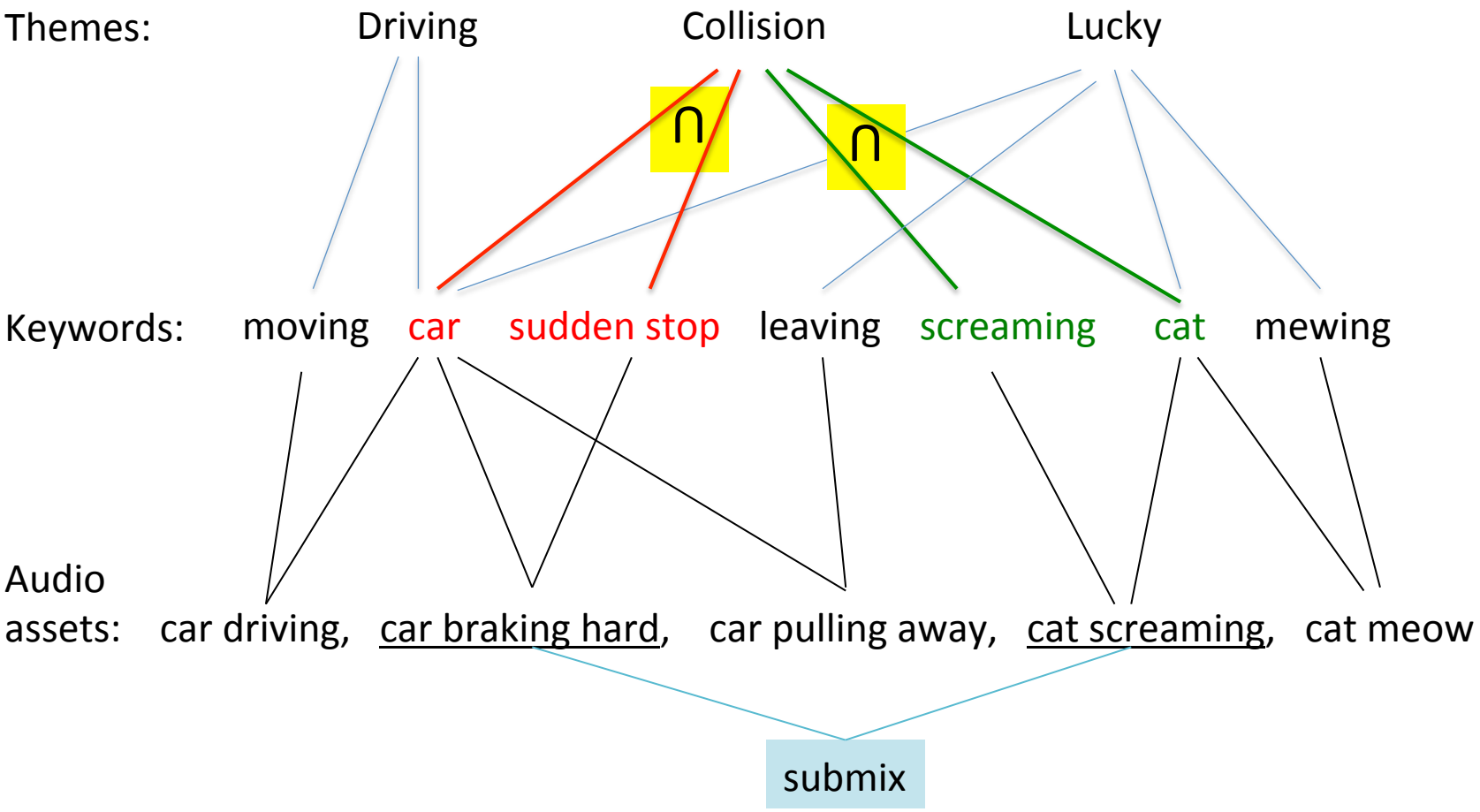

∩
moving AND car

Retrieve sounds with both keywords "moving" AND "car" – and no others.

∪ – Union – "OR"

∩ – Intersection – "AND"

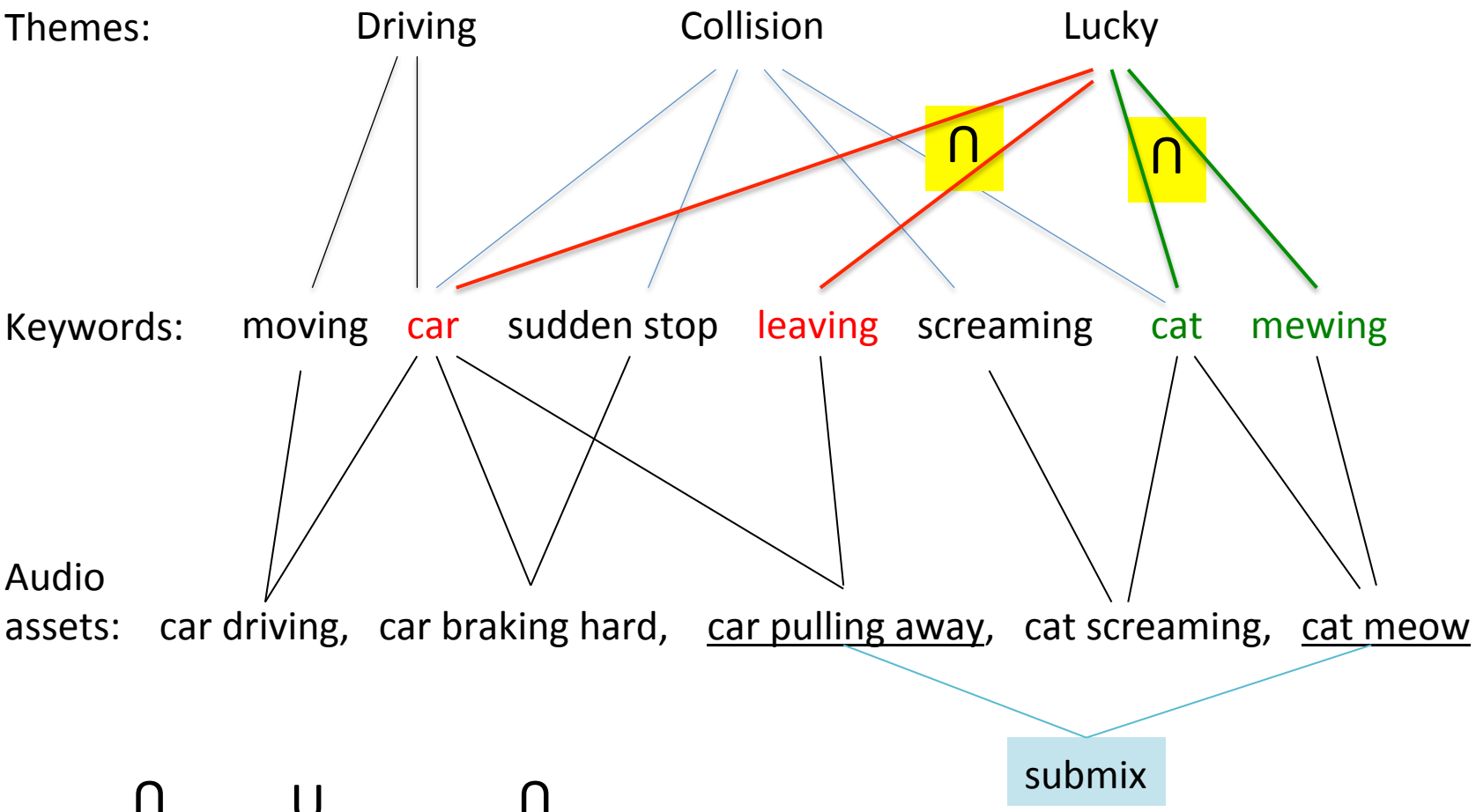
# Semantic binding




∩ ∪ ∩

(sudden stop AND car ) OR (screaming AND cat )

# Semantic binding



# Assignment 3.1
# Composing an Audio Scene

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Module 3.1.4

# Assignment 3.1

Compose 45 seconds to one-minute audio scene using your sound files from Assignment 3.0.

- You will be creating a complex audio scene framing multiple documented spaces.

**Requirements**:

1. Depict at least five distinct sound sources.
2. Exhibit audible spatial qualities portraying relative positions of sound sources.
3. Present documentary elements (see the guidelines).
   - May be combined with formalized and processed elements
4. Project Documentation of sound sources and processing
   - *Module 3 Design Documentation Template* provided
   - READ FULL ASSIGNMENT ON MOODLE

# Assignment 3.1 Guidelines

- **Assess** your sound files from Assignment 3.0.
  - You may create additional resources for your scene.
- **Plan** the use of both original and processed sounds.
  - Sounds may depict recognizable or imaginary sources.
- **Design** the transformation of spatial characteristics.
  - Depict listener's movement from initial space to a different space.
  - Apply formalized processing to the spatial characteristics.
- **Preserve or enhance** the documentary elements
  - Depict sound sources in a space as events that are co-located and concurrent in a real world environment.
- **Be conscientious** to convey spatial acoustic properties.
  - Audible physical dimensions and material qualities (surfaces that reflect, absorb or diffuse sounds)

# Documentary and Processing

A documentary sound:

A sound generated by applying processing to the documentary source:

**DESIGN DOCUMENTATION EXAMPLE**
SonicExperience Module 3 Spring 2015
Insook Choi

**Example Scene: Tienanmen Square**

| SOUNDFILE NAME | Source/history | CONTENT KEYWORDS | Processing | Technical Keywords | Potential THEMES |
|---|---|---|---|---|---|
| TSquare_BigScreenArea | Tiananmen Square, Beijing, China, June 8 2012, 44.1kHz 2chan, Sony Cybershot DSC RX100 | Tsquare, exterior ambience, general, foreground_noise, voices, crowd, hubub, | Amplitude envelope (for fade in, mix level control, and fade out), dynamic stereo panning | free field, high frequency attenuation, background, complex sound source, omnidirectional | Tiananmen Children, Tiananmen Soldiers |
| TSquare_children+mom2 | Tiananmen Square, Beijing, China, June 8 2012, 44.1kHz 2chan, Sony Cybershot DSC RX100 | Tsquare, children, mom, active, CU, footsteps, brushing, pbjects clicking, bumping, snapping | Amplitude envelope, dynamic stereo panning | middle ground, simple sound source, rapid onset, high frequency noise spectra, percussive, directional | Tiananmen Children |
| TSquare_2Kids_mom2 | Tiananmen Square, Beijing, China, June 8 2012, 44.1kHz 2chan, Sony Cybershot DSC RX100 | Tsquare, children, play, mom, active, CU, conversation, | Amplitude envelope, dynamic stereo panning | foreground, simple sound source, directional, full frequency spectra, pan center to right | Tiananmen Children |
| TSquare_SoldiersMarch_short | Tiananmen Square, Beijing, China, June 8 2012, monaural, iPhone 3 video converted to 44.1kHz .wav file | Tsquare, footsteps, marching, approaching, CU | Amplitude envelope, dynamic stereo panning | periodic events, multiple sources synchronized, dynamic frequencey spetra from midrange to full frequency, crescendo, pan left to center | Tiananmen Soldiers |

# Audio Scene 1 mix: Instructor's example Sound Reporter exercise

# Audio Scene 2 mix: control functions
# In-class Sound Reporter exercise

# Audio Scene 2 mix
# In-class Sound Reporter exercise