

Keywords and Themes for audio scenes

SonicXP Sp2015

Module 3.2.1

Review

Disambiguating related terms

Descriptors

Concept

Review

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

Review

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

Assets, Keywords, Themes

- Assets: Media Resources tagged with keywords
- Keywords: Convey useful information about a media resource about its content therefore yields insights how to use it
- Theme: a set of keywords

Coding Themes using OR and AND

- OR: Broadening themes
 - Mexican Art OR mural painting
 - Mexican Art OR mural painting OR graffiti
 - Mexican* OR mural painting OR graffiti
- AND: Narrowing themes
 - Mexican art AND mural painting
 - (Mexican art AND mural painting) AND (Chicago AND Pilsen AND National Museum of Mexican Arts)
- Combination: Refining themes
 - Mexican Art AND (mural painting OR graffiti)

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, mewling
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 mewling)	Car pulling away + Cat meow

Semantic binding

Themes:

Driving

Collision

Lucky

Keywords:

moving

car

sudden stop

leaving

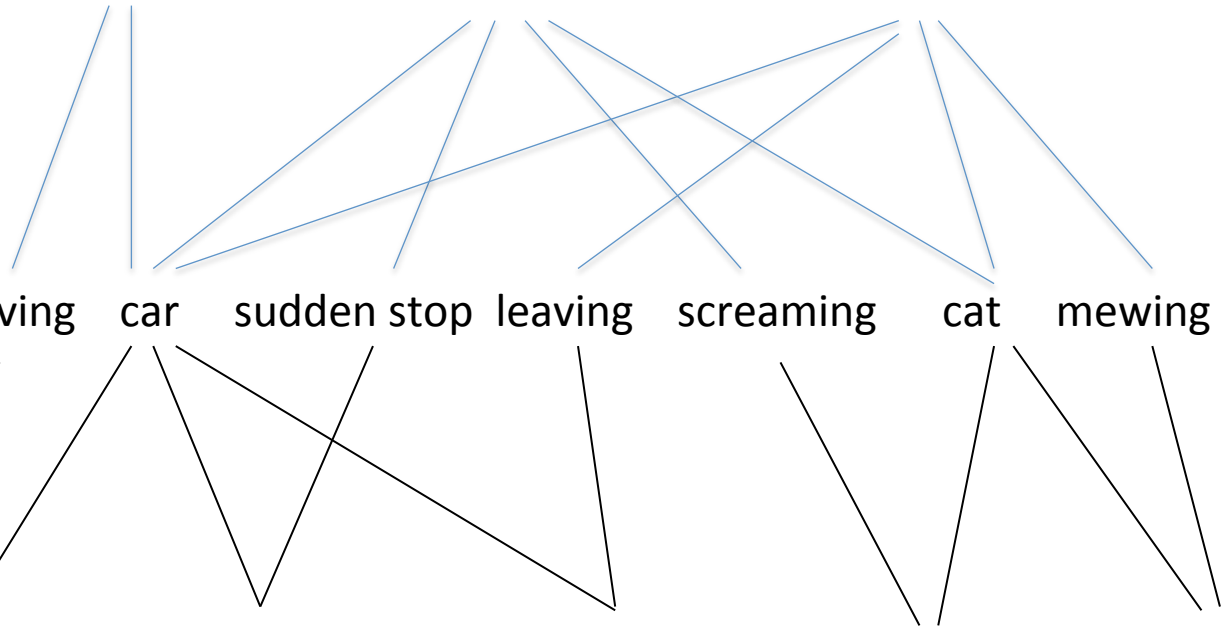
screaming

cat

mewing

Audio

assets: car driving, car braking hard, car pulling away, cat screaming, cat meow



Semantic binding

Themes:

Driving

Collision

Lucky

Keywords:

moving

car

sudden stop

leaving

screaming

cat

mewing

Audio

assets: car driving, car braking hard, car pulling away, cat screaming, cat meow

\cap

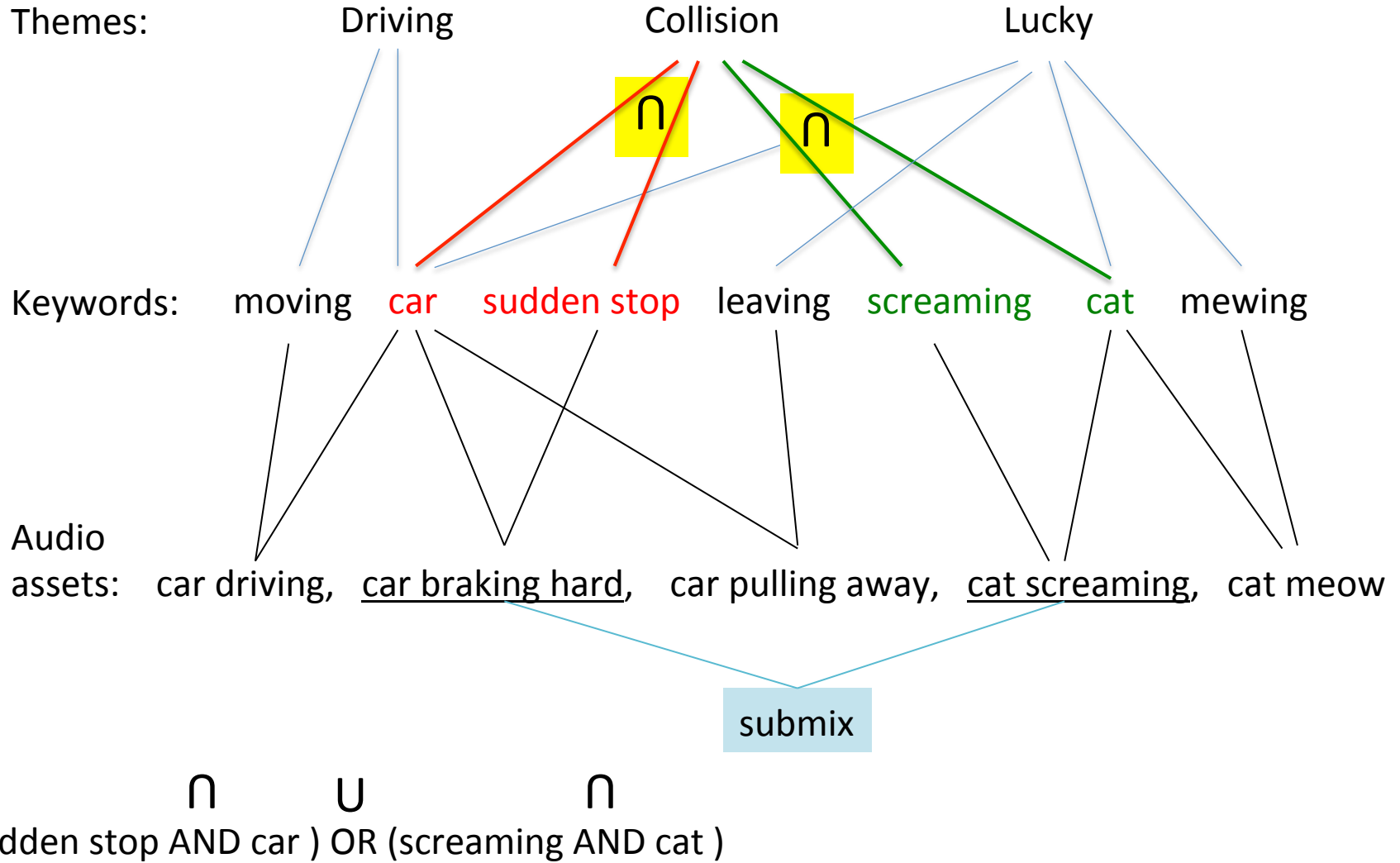
moving AND car

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

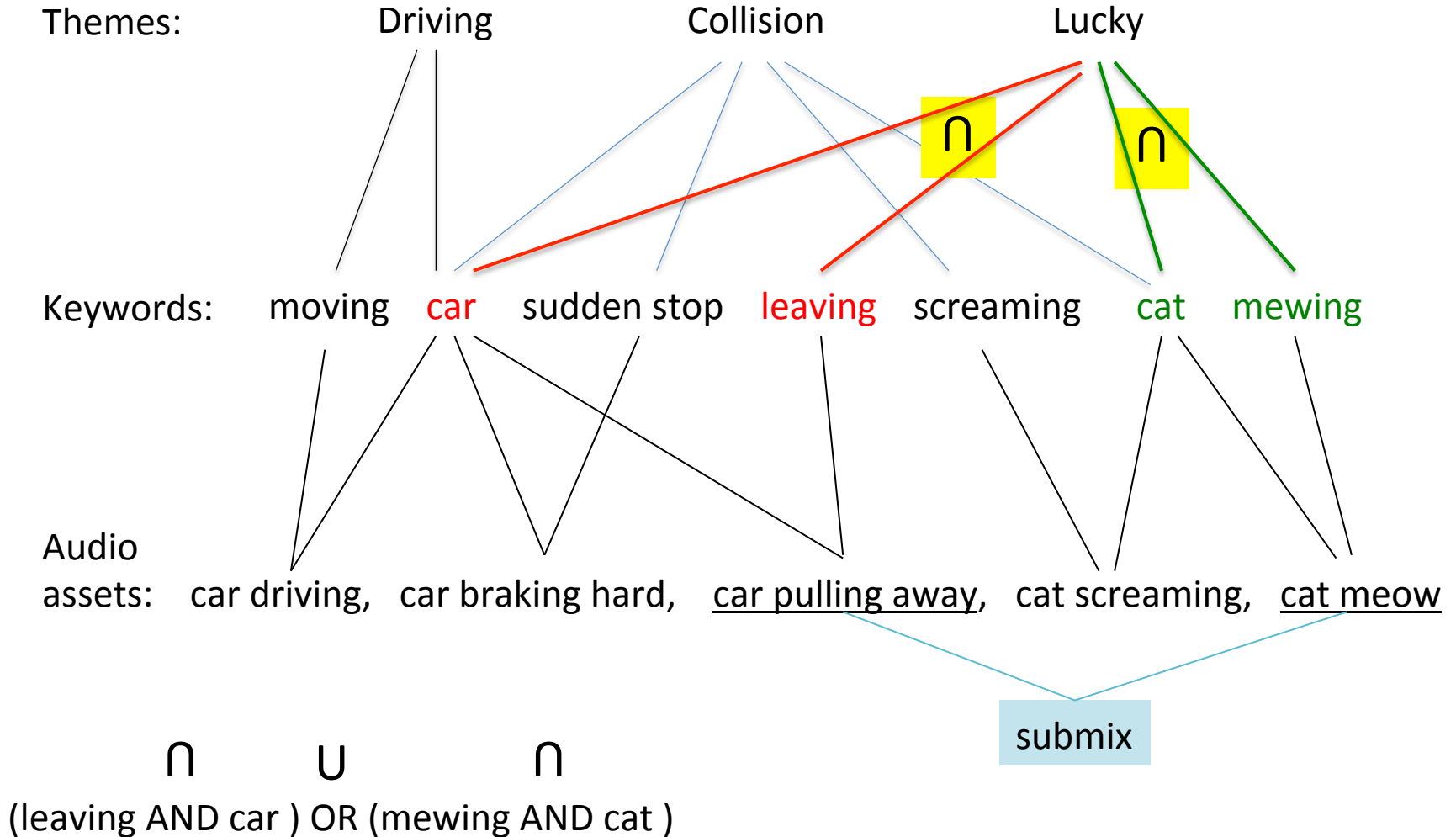
\cup – Union – “OR”

\cap – Intersection – “AND”

Semantic binding



Semantic binding



Review: Design Document

Example Scene: Tiananmen 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 frequency spectra from midrange to full frequency, crescendo, pan left to center	Tiananmen Soldiers

I. Simple Example: Thematic Organization

```
{  
  "name": "SonicXP ichoi Aerialcode",  
  "maximumOnScreen": {  
    "image": 3,  
    "text": 1,  
    "video": 1,  
    "audio": 3  
  },  
  "displayDuration": 10,  
  "displayInterval": 2,  
  "transitionDuration": 5,  
  "themes": {  
    "groundLevel": "MaxwellStMarket, unprocessed, fullspectrum",  
    "midLevel": "EI",  
    "highLevel": "aerial"  
  },  
  "style": {  
    "backgroundColor": "black"  
  },  
}
```

Media Set up

{

"name": "SonicXP ichoi Aerialcode",

"maximumOnScreen": {

"image": 3,

"text": 1,

"video": 1,

"audio": 3

},

"displayDuration": 10,

"displayInterval": 2,

"transitionDuration": 5,

"themes": {

 "groundLevel": "MaxwellStMarket, unprocessed, fullspectrum",

 "midLevel": "EI",

 "highLevel": "aerial"

},

"style": {

"backgroundColor": "black"

},

Display Spec

```
{  
  "name": "SonicXP ichoi Aerialcode",  
  "maximumOnScreen": {  
    "image": 3,  
    "text": 1,  
    "video": 1,  
    "audio": 3  
  },  
  "displayDuration": 10,  
  "displayInterval": 2,  
  "transitionDuration": 5,  
  "themes": {  
    "groundLevel": "MaxwellStMarket, unprocessed, fullspectrum",  
    "midLevel": "E1",  
    "highLevel": "aerial"  
  },  
  "style": {  
    "backgroundColor": "black"  
  },  
}
```

Themes: set of Keywords

```
"name": "SonicXP ichoi Aerialcode",
"maximumOnScreen": {
  "image": 3,
  "text": 1,
  "video": 1,
  "audio": 3
},
"displayDuration": 10,
"displayInterval": 2,
"transitionDuration": 5,
"themes": {
  "groundLevel": "MaxwellStMarket, unprocessed, fullspectrum",
  "midLevel": "EI",
  "highLevel": "aerial"
},
"style": {
  "backgroundColor": "black"
},
```


II. Complex Example: Thematic Organization with Boolean Operators

```
"themes": {  
  "SnowPiercer": "highend clear AND (no beat AND timestretch)",  
  "Squaredancing": "square wave, quantized",  
  "GroundZero": "(natural sound foreground AND periodic echo)",  
  "MillSweeper": "(HP 5khz AND LP 300hz) AND echo, (highend  
clear AND micro dur) AND timestretch, (BP 400hz AND highpass beats)  
AND continuous",  
  "MillBlower": "(formant 1khz AND formant 300hz) AND macro  
dur, (BP 300hz AND high freq amplified) AND macro dur, (HP 2khz AND  
BP 400hz) AND highpass beats, (BP 2khz AND BP 400hz AND BP 5khz)  
AND echo, (BP 400hz AND echo AND strong beat AND macro dur), (BP  
1khz AND echo AND strong beat AND continuous)",  
  "Windswallow": "(dynamic BP filter AND two formant regions)  
AND timestretch"  
},
```