

# MULTIMEDIA ALGORITHM IMPLEMENTATION

## MVP 1 – WEEK 15

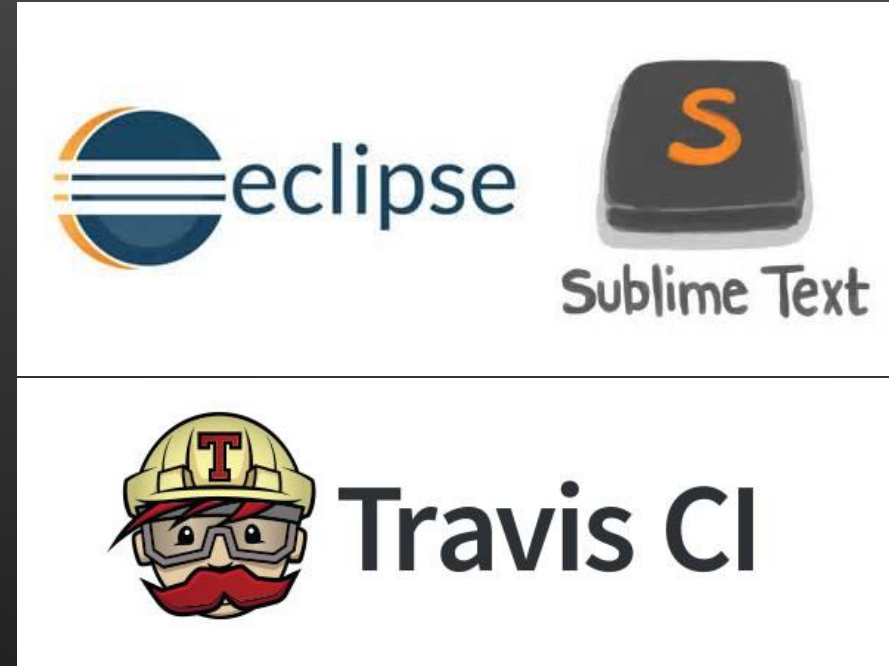
Project plan

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Candice PERSIL

## Supported OS



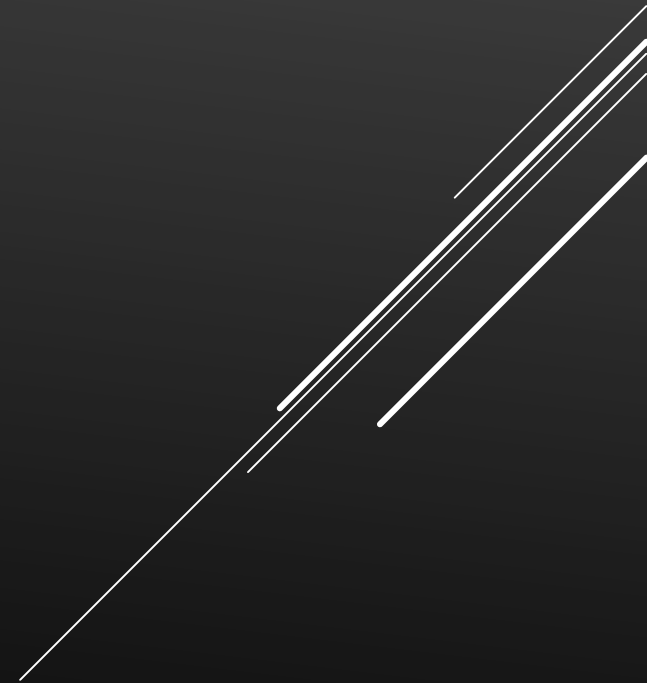
## Software



## INTERFACE DESCRIPTION

# RESEARCH

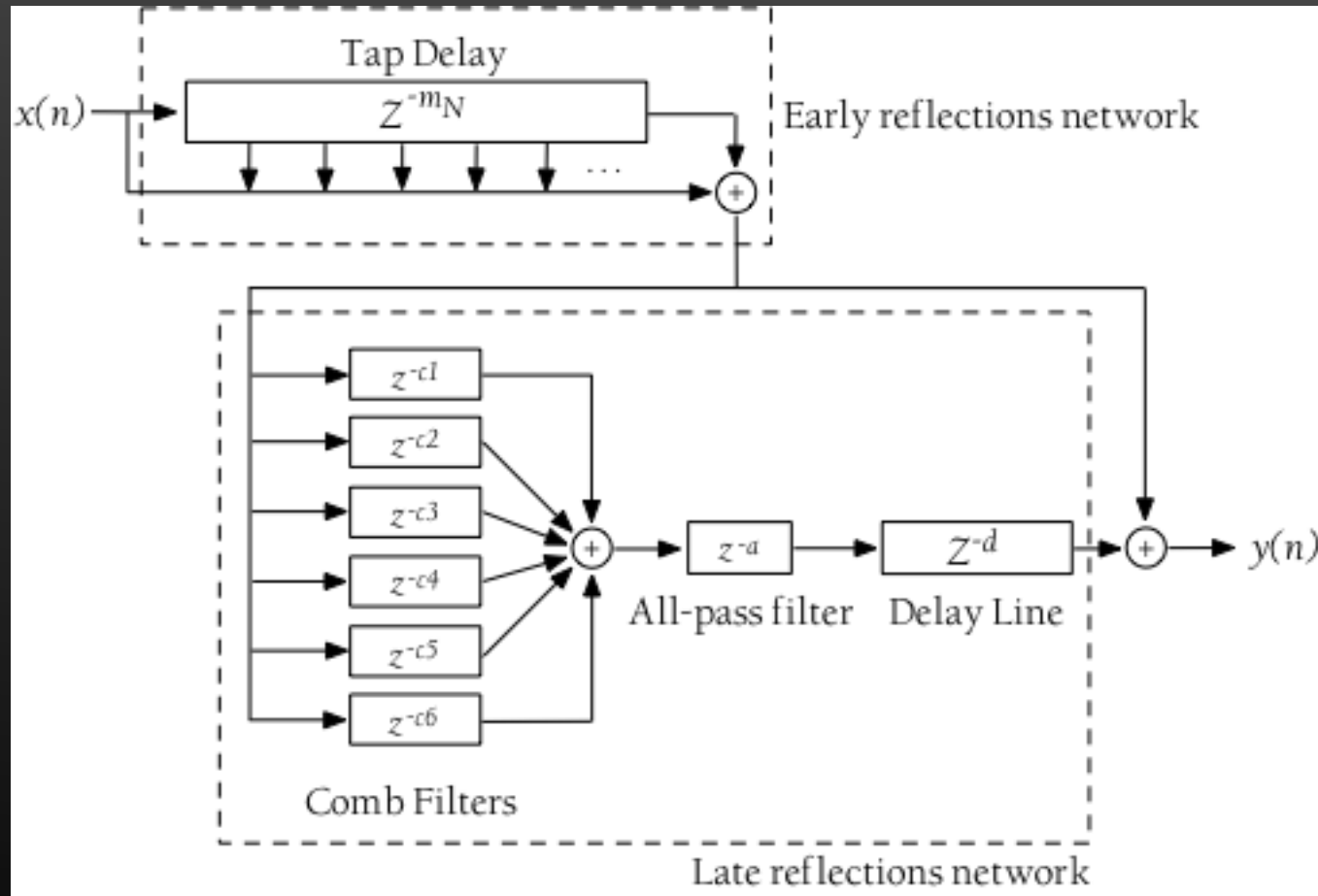
- ❑ Schroeder reverberators
  1. SATREV -> comb filters into all pass filters
  2. JCREV -> all pass filters into comb filters
- ❑ Moorer – improvement of schroeder design
- ❑ How to create a reverb
- ❑ Different types of reverbs
- ❑ Modifiable parameters



## BASE ALGORITHM

### THE MOORER DESIGN

- Tapped delay line for early reflections
- A 1<sup>st</sup> order low-pass filter in the feedback loop of the 6 comb filters for absorption effects of air



# KEY FACTS FOR IMPLEMENTATION

- ❖ Type of artificial reverberation -> Delay networks
  - ❖ Simulated using delay lines, filters and feedback connections
- ❖ Use of feedback loop around the structure -> more natural decay
- ❖ More comb filters > more better reverberation
- ❖ Different decay times for left and right for a more natural sound

- Meetings to gather individual work































Weeks	Mon	Tue	We	Thu	Fri	Sat	Sun
14		7pm-9pm		6pm-10pm	3pm-5pm		
15	presentation	5pm-7pm		12pm-2pm			
16	presentation	5pm-7pm		12pm-2pm			
17	presentation	5pm-7pm		12pm-2pm			
18	presentation	5pm-7pm		12pm-2pm			
19	presentation	5pm-7pm		final presentation			

# SCHEDULE

- Internal due dates for tasks

# SCHEDULE

Weeks	Mon	Tue	We	Thu	Fri
14		> Research		> Research > Interface description > Base algorithm	> Organisation
15	> Make Travis upload release presentation	> Play processed audio > Read audio file > Shroeder implementation		> Make Travis build > Total Moorer implementation	
16	presentation	> Implement control parameters in algorithm		> Add CLI with control parameters > Algorithm improvements	
17	presentation	> Play audiofile > Save processed audio to file		> Make algorithm real-time > Trigger playback by UI	
18	presentation	Finalisation of the project		Preparation of the presentation	
19	presentation		Submit project online? 10.5.2017	final presentation	

<input type="checkbox"/> 18 Open ✓ 1 Closed	Author ▾	Labels ▾	Projects ▾	Milestones ▾	Assignee ▾	Sort ▾
<input type="checkbox"/> <b>Read audiofile</b> #1 opened 4 days ago by straend  MVP 2 - Week 16...						
<input type="checkbox"/> <b>Play processed audio</b> #2 opened 4 days ago by straend  MVP 2 - Week 16...						
<input type="checkbox"/> <b>Algorithm implementation</b> #3 opened 4 days ago by straend  MVP 2 - Week 16...						 1
<input type="checkbox"/> <b>Base Algorithm</b> #4 opened 4 days ago by straend  MVP 1 - Week 15...						 1
<input type="checkbox"/> <b>Interface description</b> #5 opened 4 days ago by straend  MVP 1 - Week 15...						
<input type="checkbox"/> <b>Research</b> #6 opened 4 days ago by straend  MVP 1 - Week 15...						 1
<input type="checkbox"/> <b>Organisation</b> #7 opened 4 days ago by CandicePersil  MVP 1 - Week 15...						
<input type="checkbox"/> <b>Make Travis upload Releases for macOS and Linux</b> #9 opened 4 days ago by straend  MVP 2 - Week 16...						
<input type="checkbox"/> <b>Make Travis build</b> #10 opened 4 days ago by CandicePersil  MVP 2 - Week 16...						
<input type="checkbox"/> <b>Implement control parameters in algorithm</b> #11 opened 4 days ago by CandicePersil  MVP 3 - Week 17...						
<input type="checkbox"/> <b>Add CLI with control parameters</b> #12 opened 4 days ago by straend  MVP 3 - Week 17...						
<input type="checkbox"/> <b>Algorithm improvements</b> #13 opened 4 days ago by straend  MVP 3 - Week 17...						 1
<input type="checkbox"/> <b>Make algorithm real-time</b>						 1

# TASKS - ISSUES