WELCOME TO INTERAKTIV MUSIKK

Spring 2022

WEEK 9

Department of Musicology Spring 2022

Interactive Music

SYLLABUS

INSTRUCTORS: Çağrı Erdem, Qichao Lan
TIME: Tuesday 09:15–10:00 and Friday 12:15–14:00
LOCATION: ZEB, Seminarrom 2

WEEKLY SCHEDULE

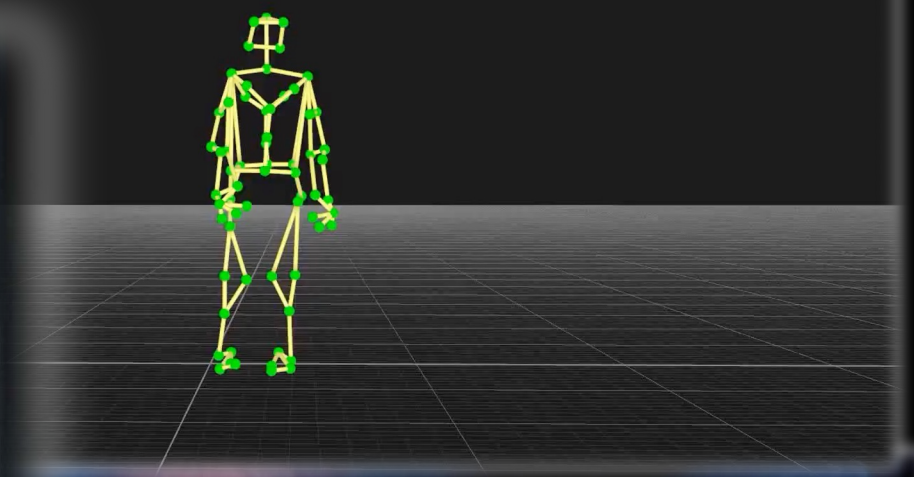
WEEK 1 Introduction: Microphones, tools, effects, and noise
WEEK 2 Analogue Synthesis 1: Main concepts and parameters
WEEK 3 Analogue Synthesis 2: Sound sources and processors
WEEK 4 Collaborative performance and Live Coding
WEEK 5 Digital Synthesis 1: Introduction to Pure Data
WEEK 6 Digital Synthesis 2: Basics, oscillators, and filtering
WEEK 7 Digital Synthesis 3: Audio effects
WEEK 8 Digital Controllers 1: MIDI
WEEK 9 Digital Controllers 2: Sensors and mapping
WEEK 10 Ensemble 1: Composition and improvisation
WEEK 11 Ensemble 2: Final concert preparation

COURSE DESCRIPTION: This course provides students with knowledge and skills in designing, building, and performing with various musical instruments and interactive music systems. Students learn the basics of sound synthesis, gain hands-on experience on hardware synthesizers, digital controllers, and audio programming, explore new methods for musical expression and produce artistic works for electroacoustic music ensembles.

Digital Controllers pt2

"Playing in the air"

“Playing in the air”



WEEK 9

MUSICLAB VOL 4 - UTOPIA

KULTURHUSET (LAB) 2. NOVEMBER AT 1PM - 3PM

UiO : University of Oslo Library

Music Lab

OSLO WORLD

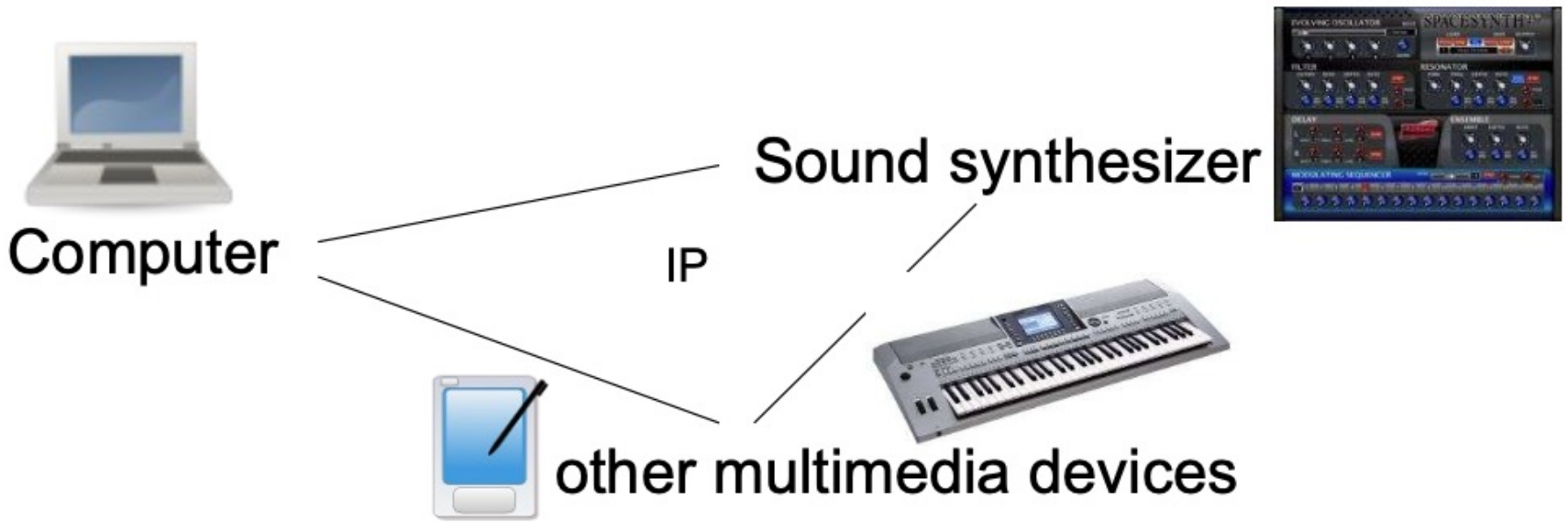
Open Sound Control (OSC)

Open Sound Control (OSC)

OpenSoundControl (OSC) is a data transport specification (an encoding) for realtime message communication among applications and hardware. OSC was developed by researchers Matt Wright and Adrian Freed during their time at the Center for New Music & Audio Technologies (CNMAT).

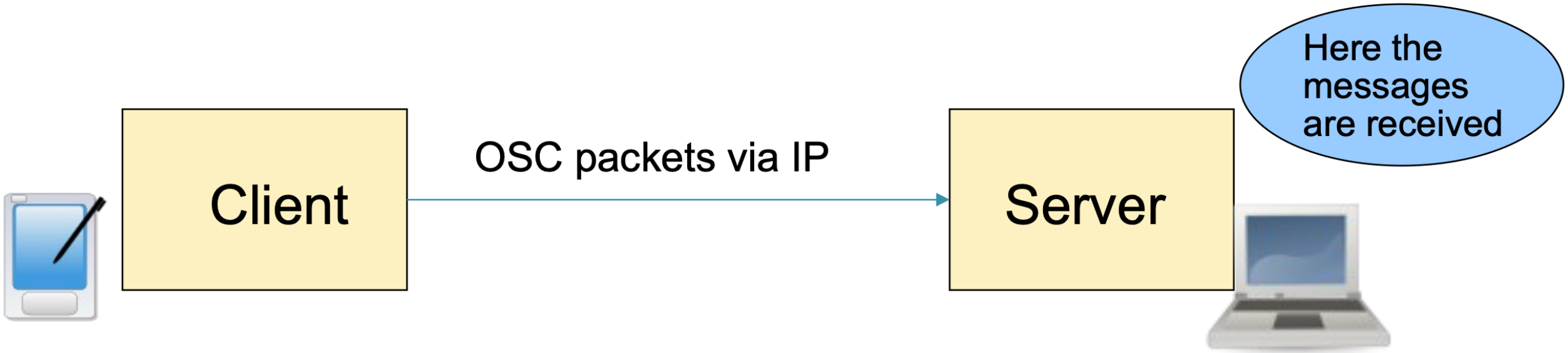
https://ccrma.stanford.edu/groups/osc/index.html

What is OSC?



A protocol for communication between computers, sound synthesizers and other multimedia devices

	MIDI	OSC
When created?	1983	2002
Data form	Compact binary	Integer, float, string, etc.
Protocol	Serial	Independent, e.g., User Datagram Protocol (UDP)
Speed/rate	31.25kb/s	Dependent on the IP speed
Resolution	128 levels	Arbitrary (e.g., float)
Messages	Pre-defined messages (byte code) e.g., 144 60 64 (noteon)	User-defined messages e.g., /phone/acc/x 0.2604 /trig 10 0.3


Client
OSC packets via IP
Server
Here the messages are received

- Android
  - Touch OSC mk1
  - Sensors2 (on F-Droid)

- OSX
  - Touch OSC mk1
  - GyrOSC

Camera-based Interaction

https://monlim.github.io/Handmate-MIDI/

Action–Sound Mappings

- One-to-one
- One-to-many
- Many-to-one


That’s all, folks ☺