



The Cloud Classroom For Online Course

CNL Final Project
Team02

Cloudsera

http://www.cloudsera.com

CLOUD SERA

search

Whiteboard

Your ID: StudentA

Chatroom

18:17 Teacher: Hi !
18:17 StudentA: Hi !

Send

教授Comment: 多人共筆、倒出canvas功能

The screenshot shows a web-based whiteboard interface. On the left, a large whiteboard area contains a single horizontal purple scribble. To the right of the whiteboard is a 'Chatroom' window displaying a message exchange between a 'Teacher' and 'StudentA'. The Teacher says 'Hi !' at 18:17, and StudentA replies 'Hi !' at 18:17. Below the whiteboard are color selection circles and drawing tools (pencil, eraser, undo). The top navigation bar includes standard browser controls (back, forward, search, etc.) and the URL http://www.cloudsera.com.

Real-time
Video

Whiteboard
Drawing

Audio

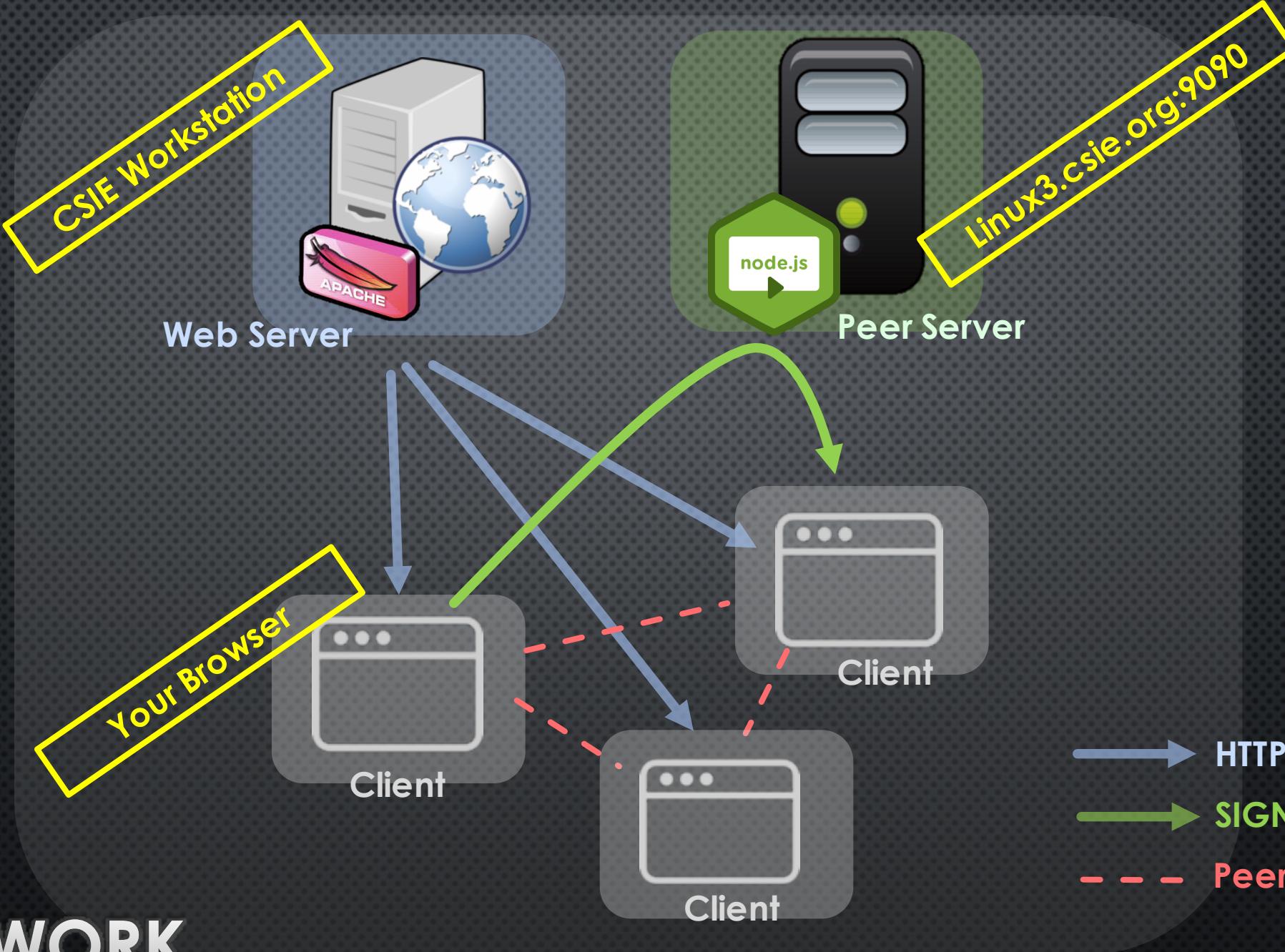
Message

Not Critical

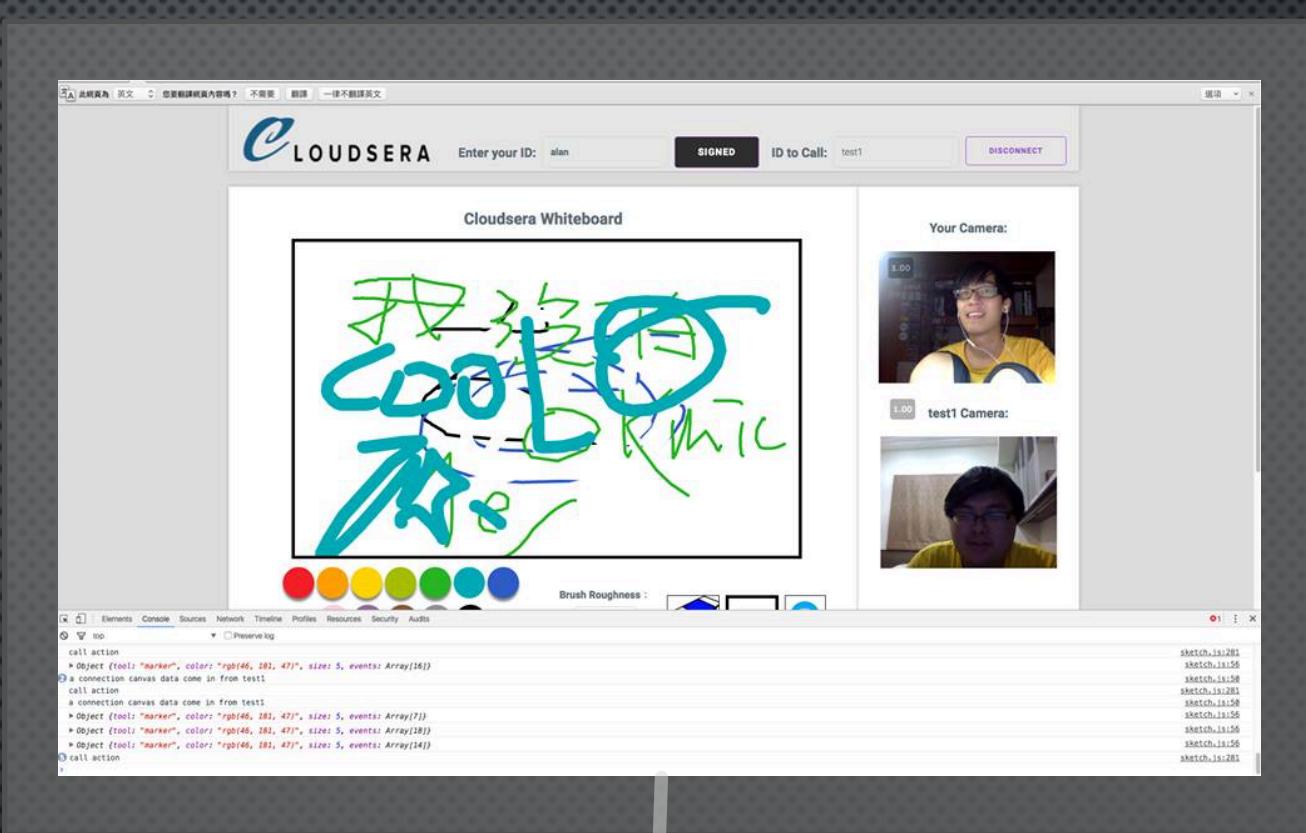
FEATURE



FRAMEWORK

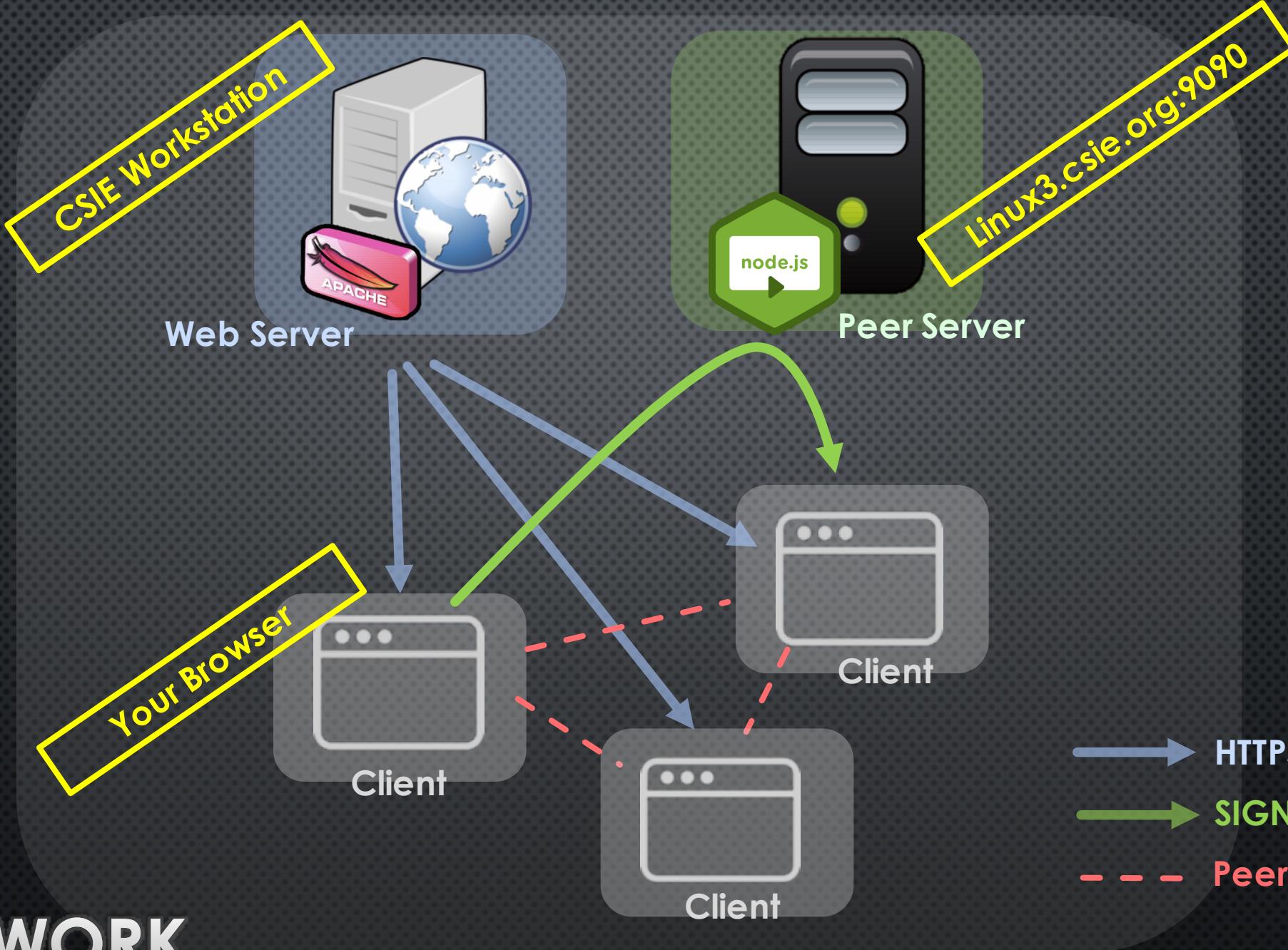


DEMO

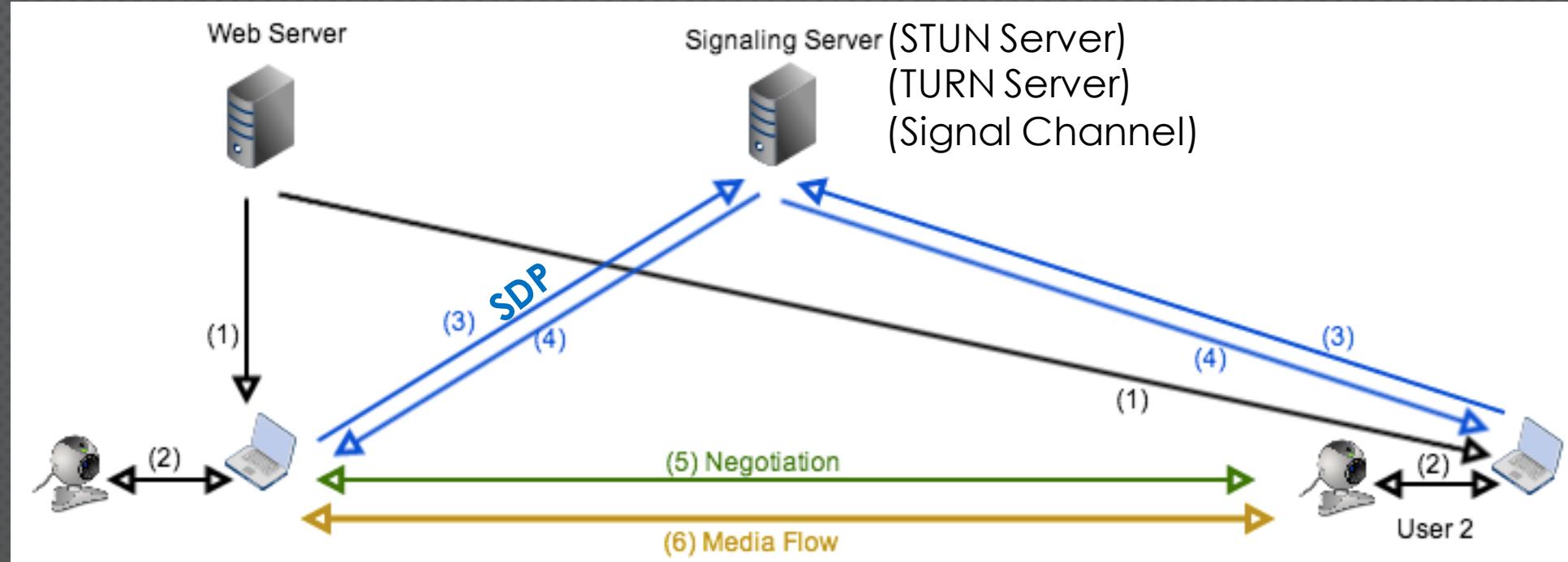


- Peer Server: <https://linux3.csie.org:9090/> → Proceed to unsafe https
- Cloudsera: <https://www.csie.ntu.edu.tw/~b02902071/cloudsera/>

FRAMEWORK

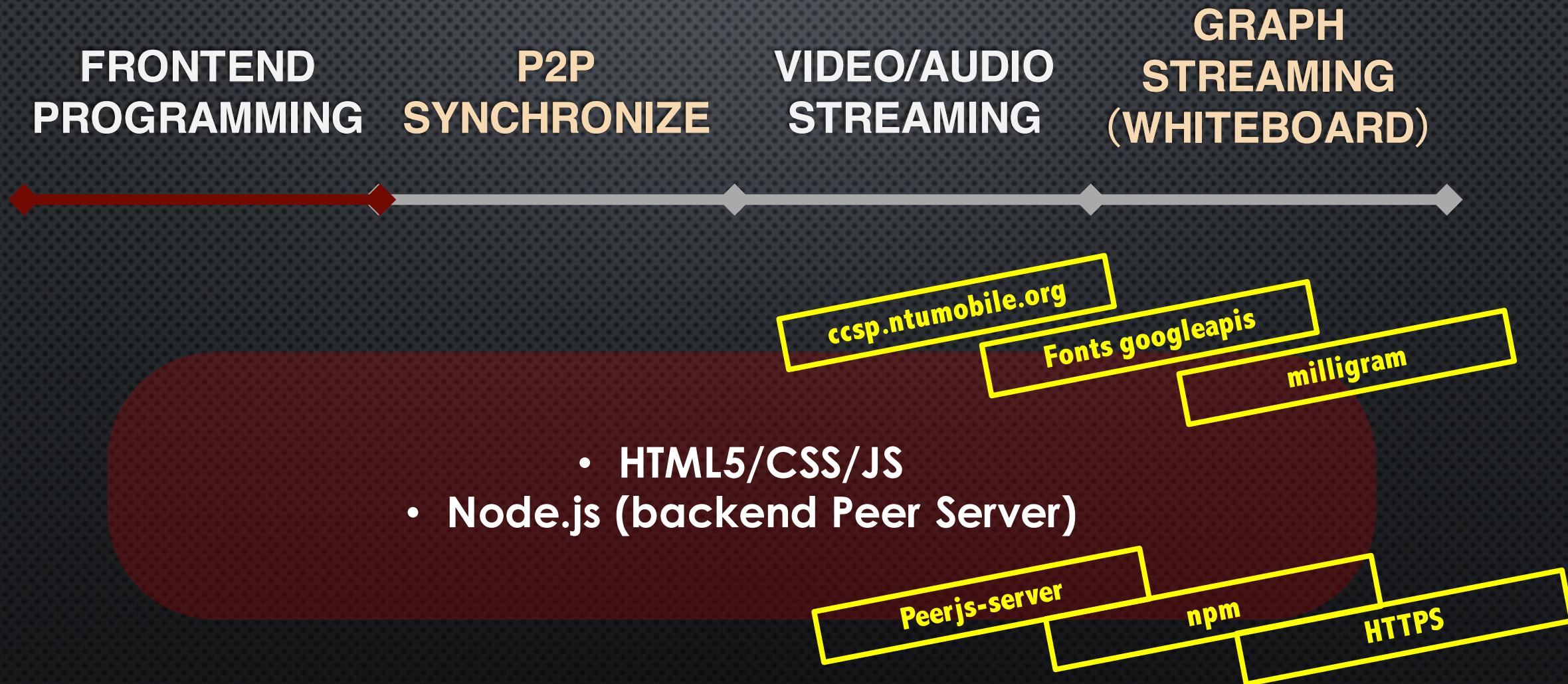


REFERENCE

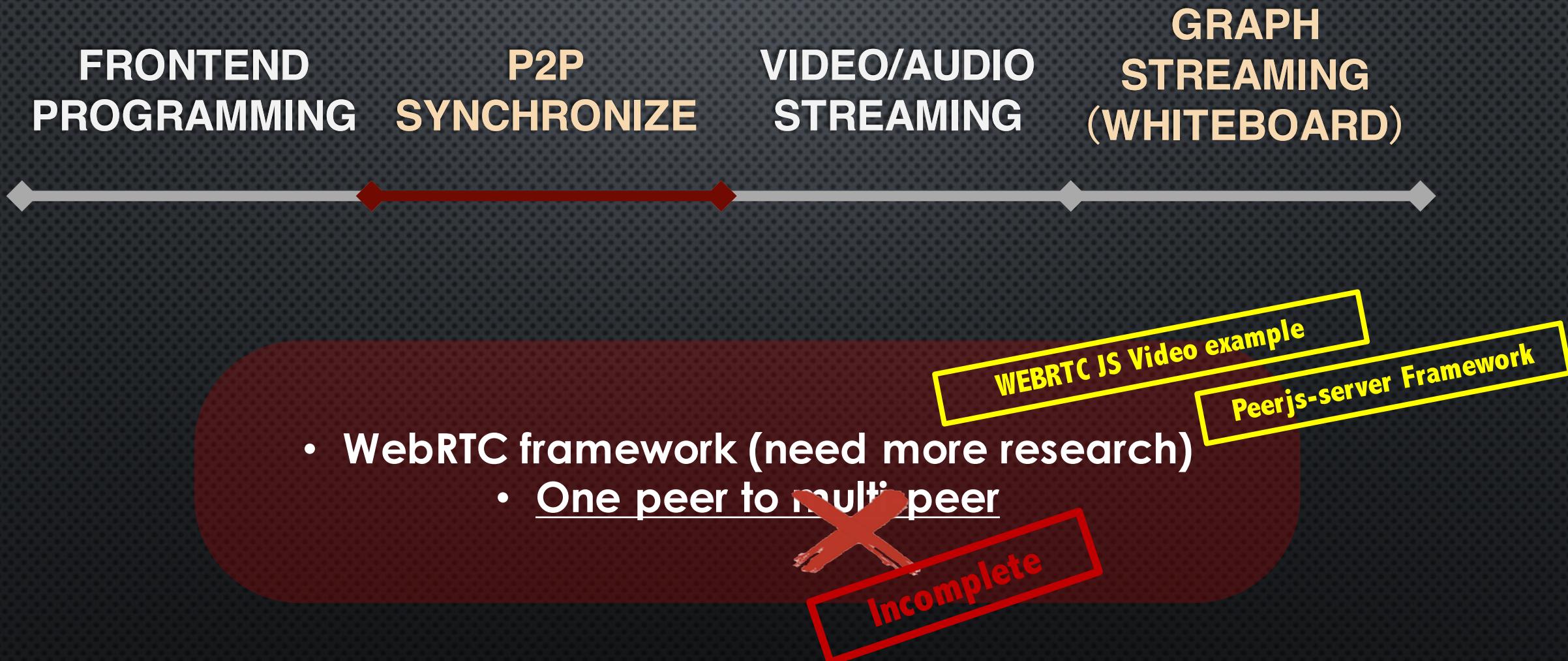


WEBRTC FRAMEWORK

DIFFICULTY



DIFFICULTY



DIFFICULTY



- Convert Streaming into bytestream
(need more research)

WEBRTC JS Video example

DIFFICULTY



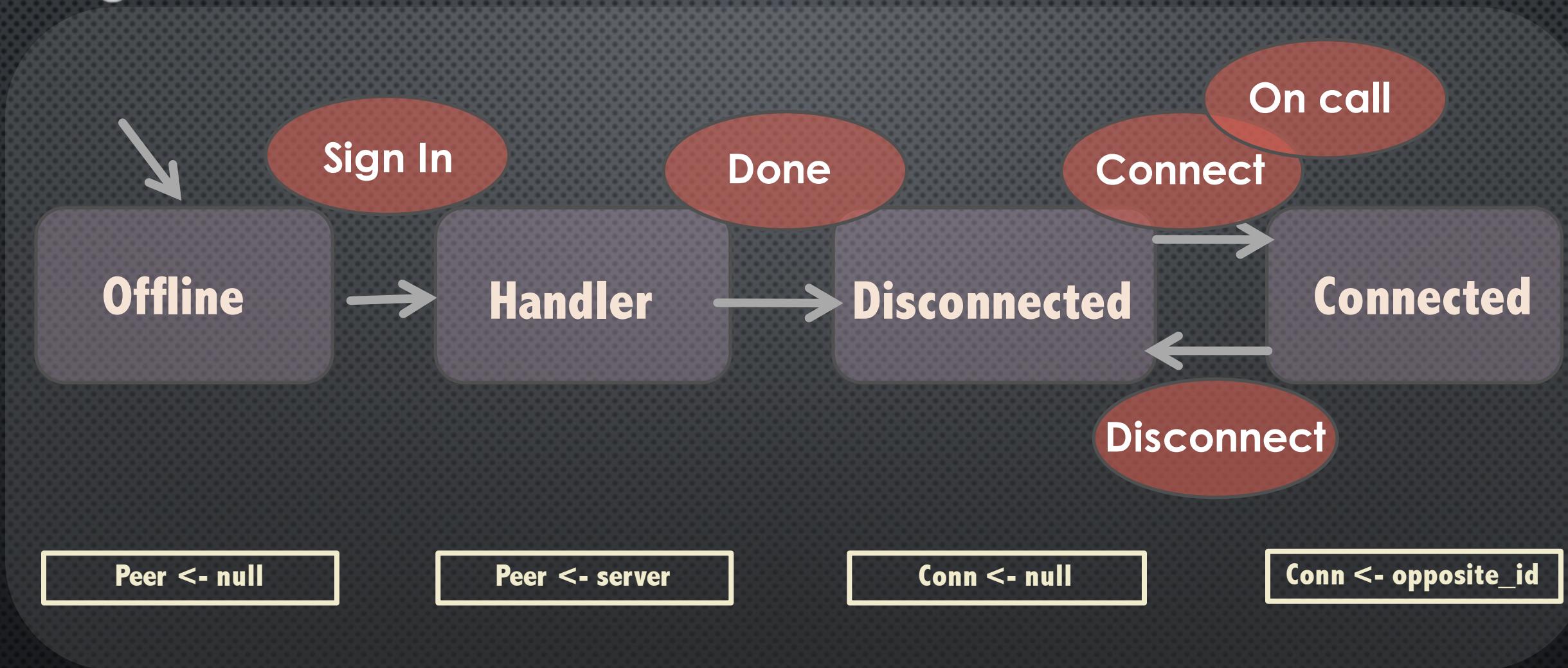
- `html(Canvas)`
- Convert graph path to ~~byte streaming~~ json packet

`sketch.js`

Core Development!!



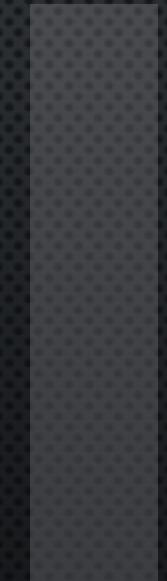
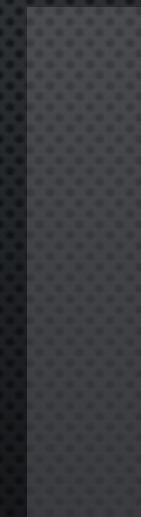
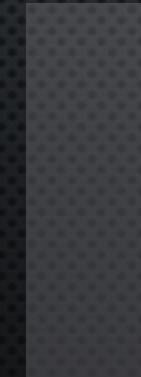
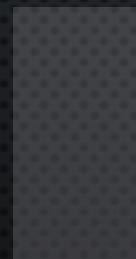
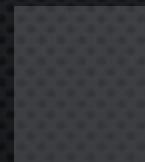
CORE TECH – VIDEO SIDE



CANVAS TRANSFORMATION



Canvas Object



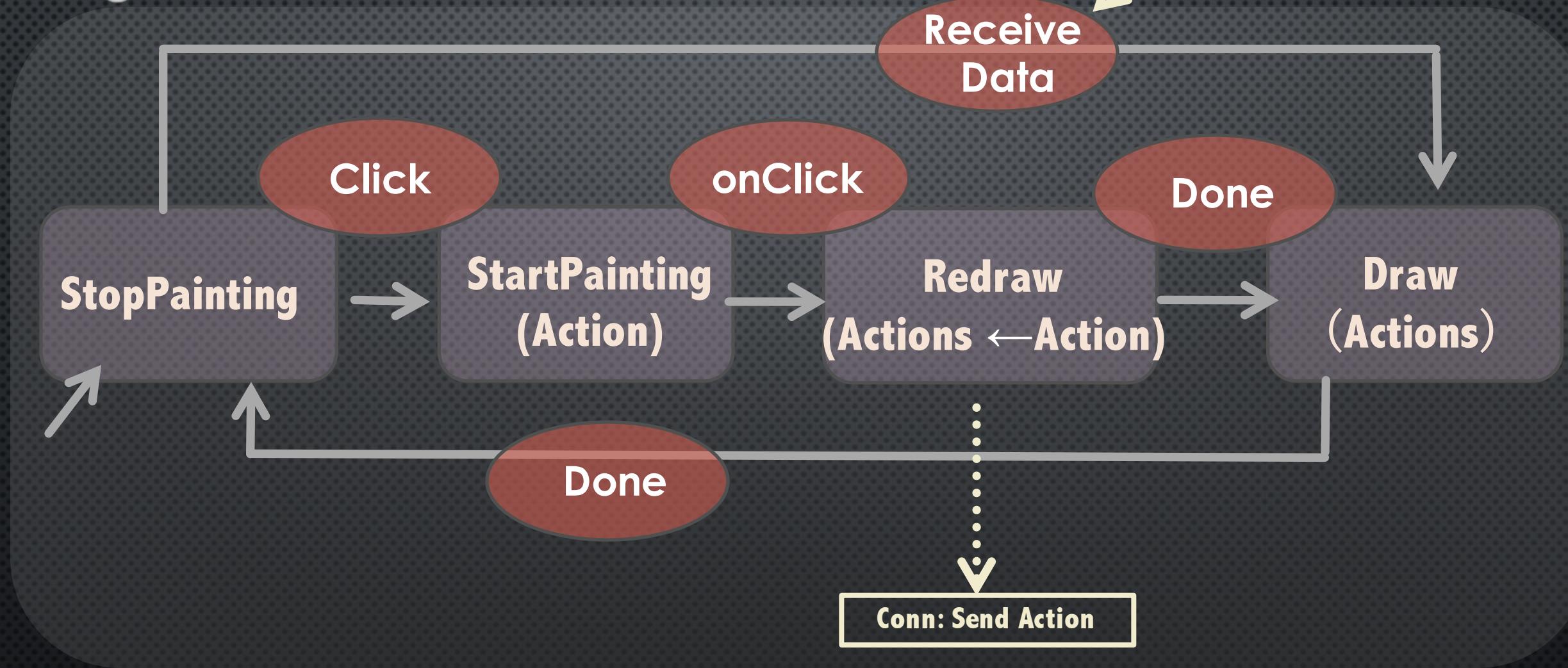
Image(png)

Actions
(sketch History)

Action



CORE TECH – CANVAS SIDE



PLATFORM

Not Support Sketch



VIDEO COMES BEFORE CANVAS

TEAM02 - MEMBERS



Jun-wei Chen
Canvas(Sketch.js)
& CSS



Alan Chen
Biderection, HTML/CSS
& ppt presentation



Ying-wei Wu
Video-Streaming



Mark Yan
Node-Server & Report



Wei-zhong Liao
Canvas,
Action/draw transformation
& CSS



Rich Huang
Jquery & Sketch Action



CLOUD SERA

Q&A

THANK YOU