0421 Report
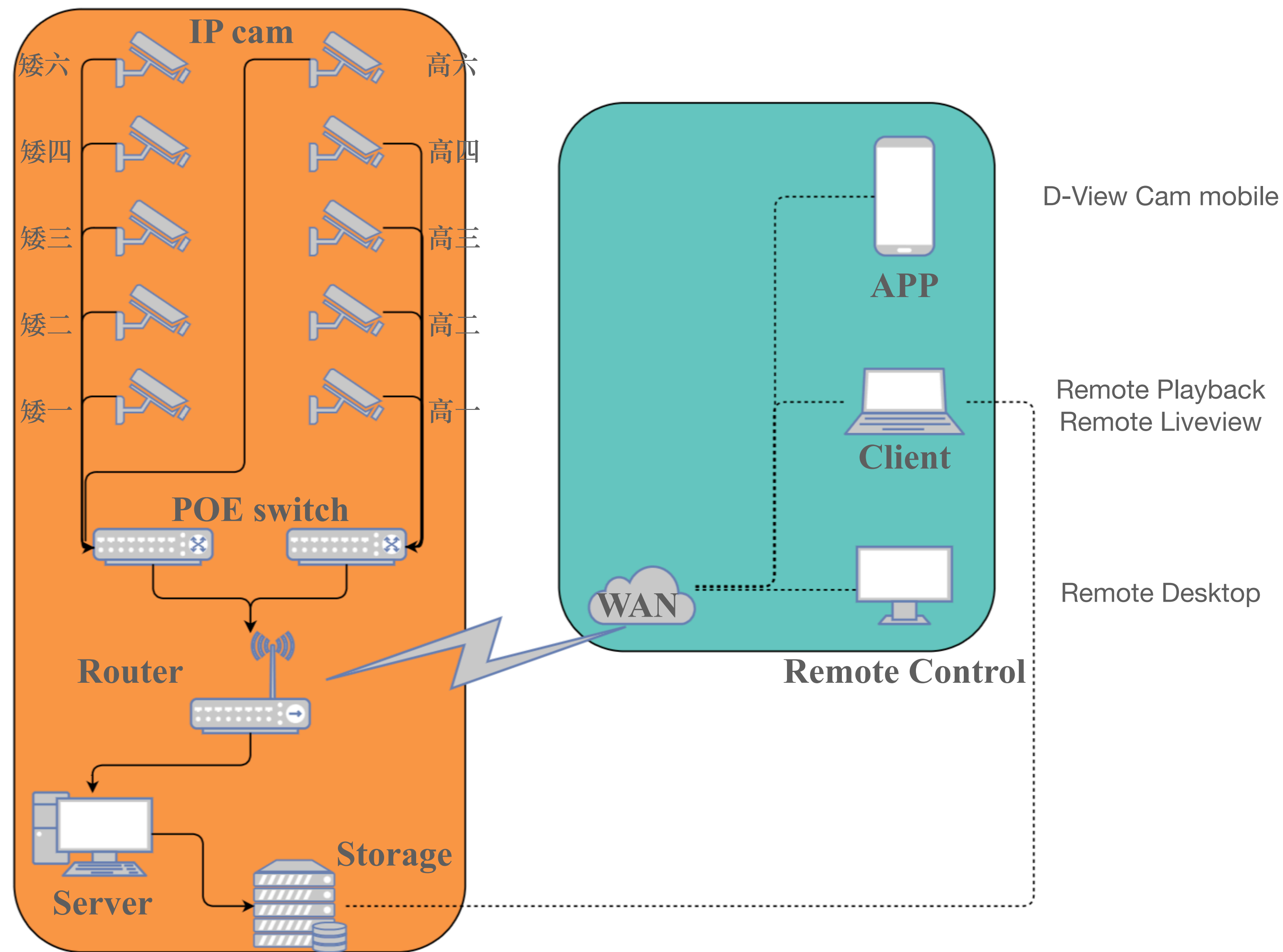
智科組 林柏嶢

Outline

- 宜陽監視器系統架構規劃

- 問題與排除

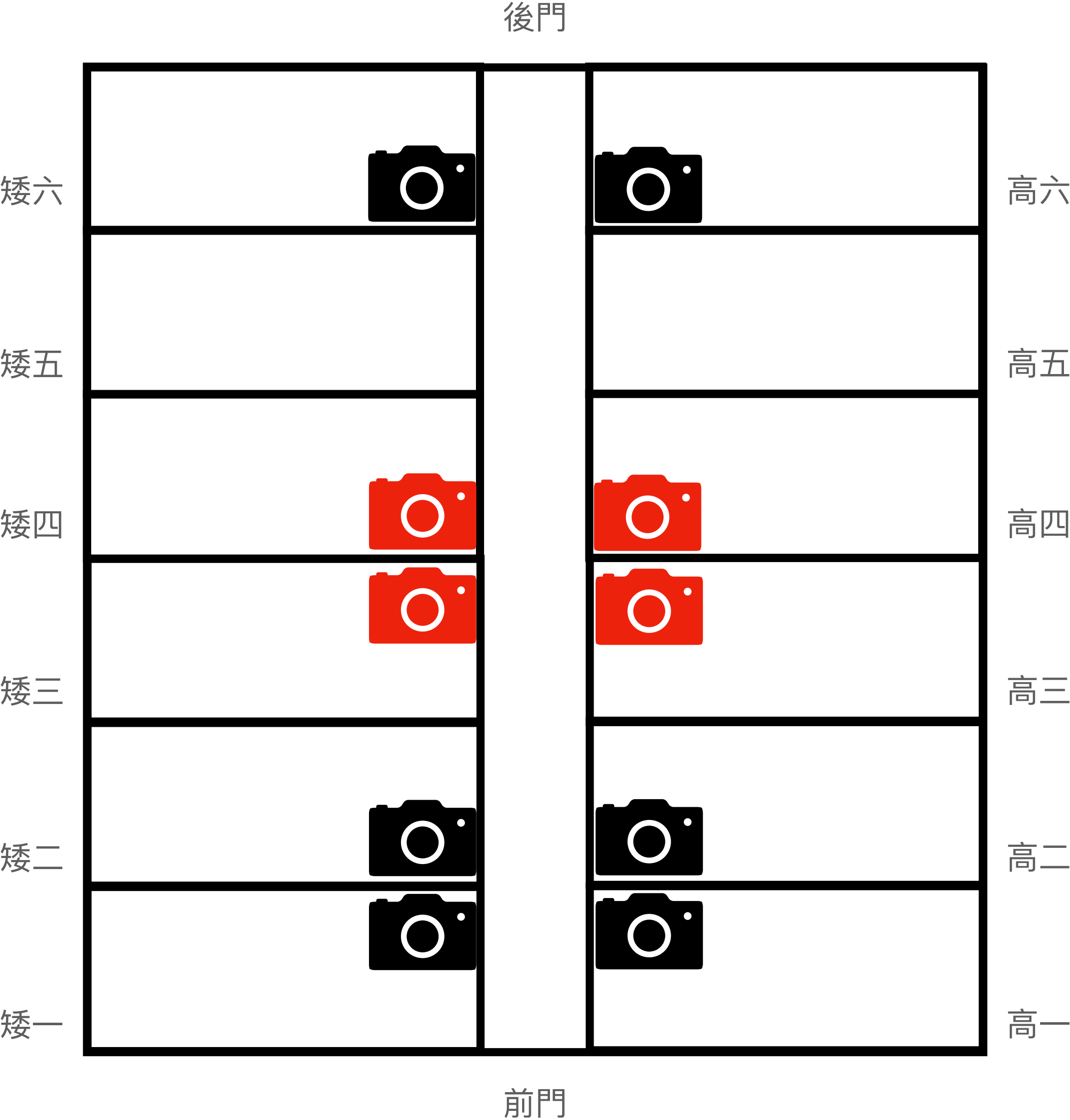- 回顧過去研究

宜陽監視器系統架構規劃
硬體與網路

宜陽監視器系統架構規劃
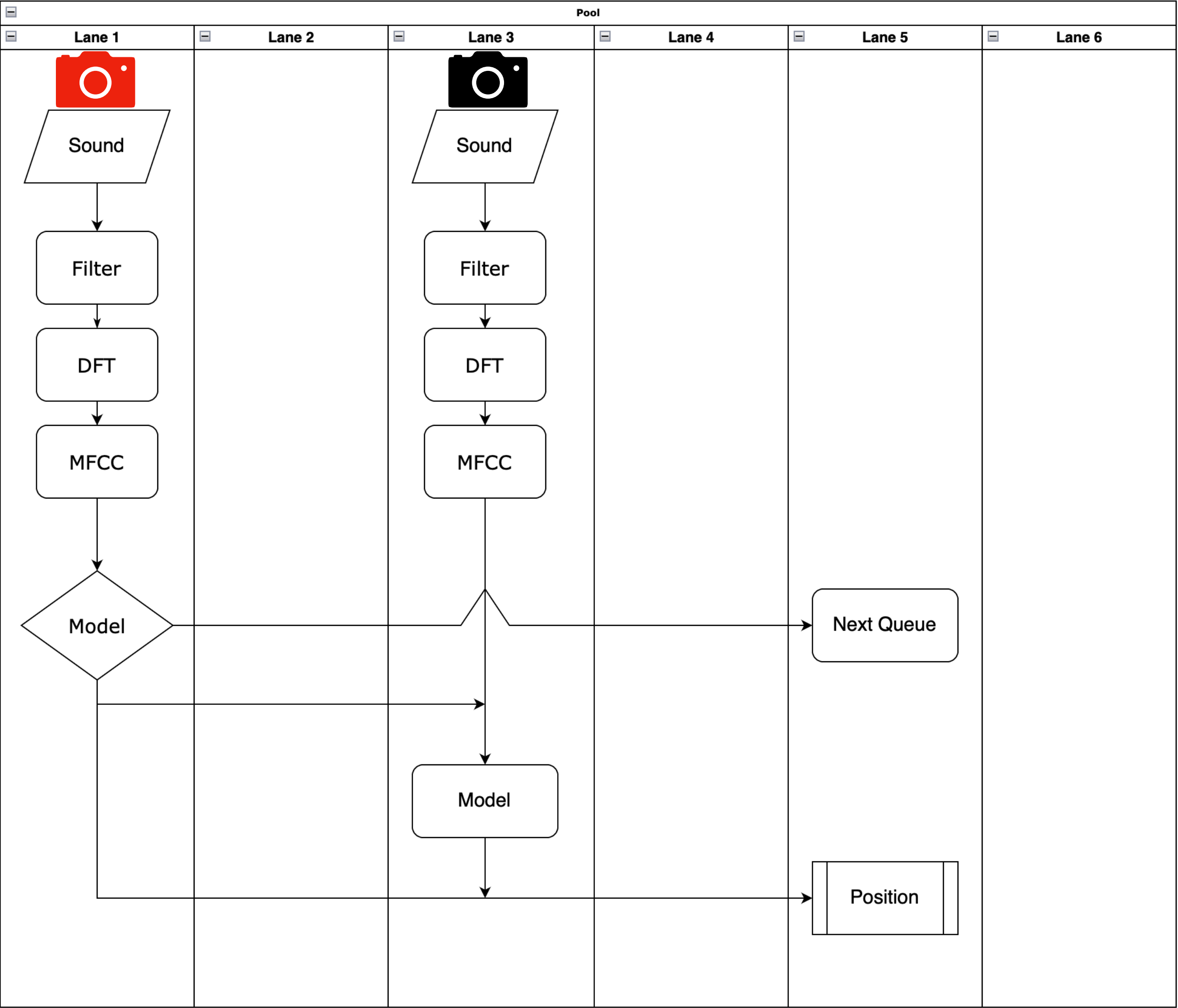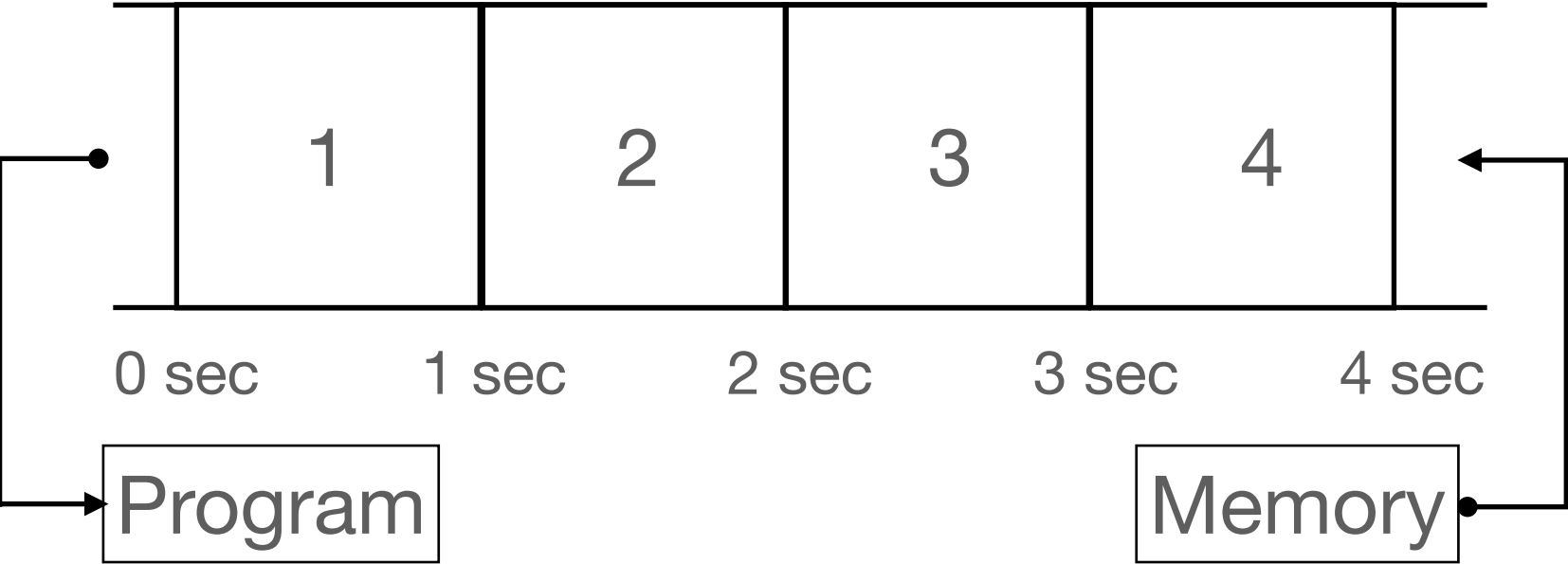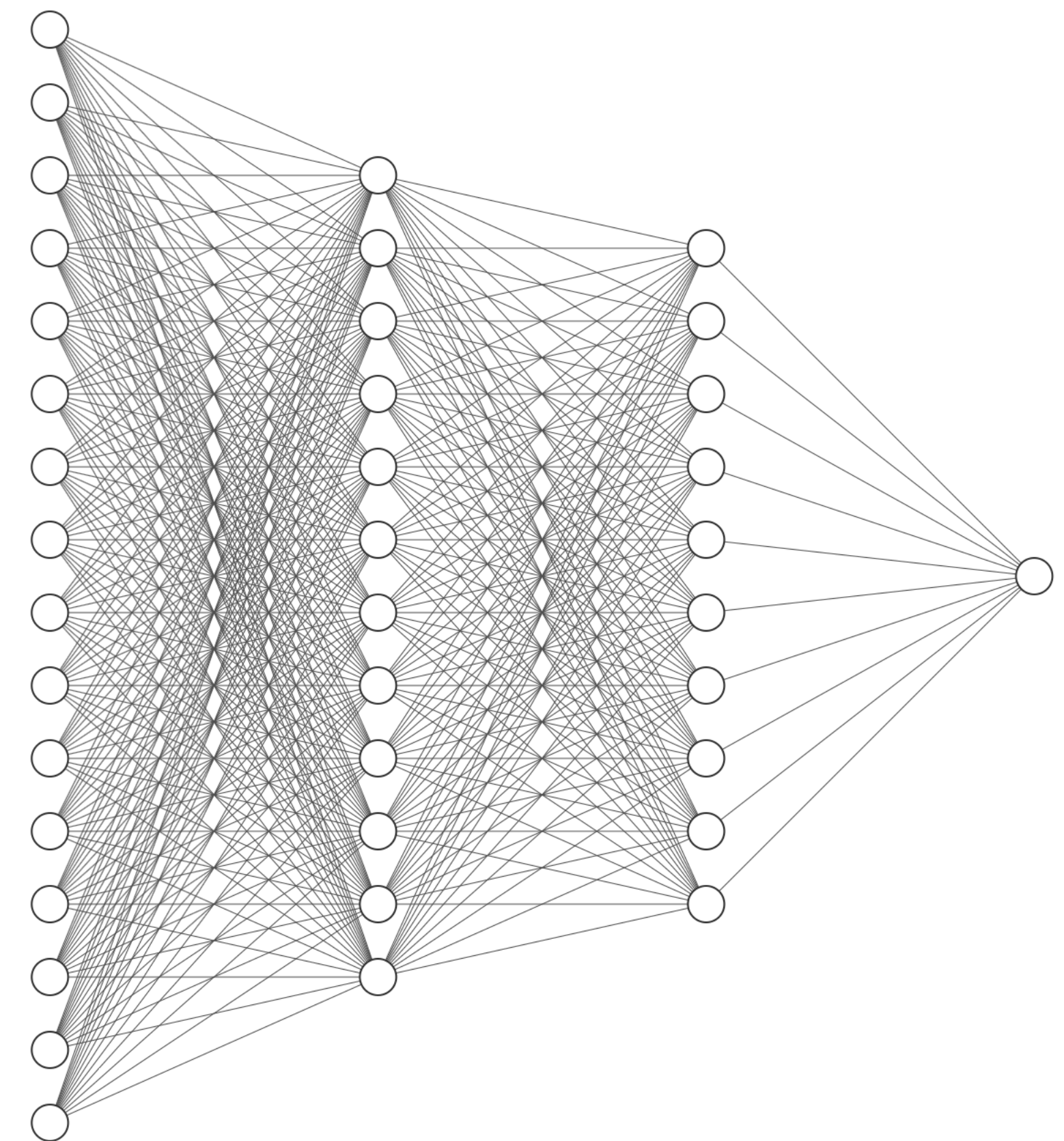
硬體與網路

宜陽監視器系統架構規劃

軟體

Job Queue

| 1 | 2 | 3 | 4 |

0 sec   1 sec   2 sec   3 sec   4 sec

Program   Memory

Pool

| Lane 1 | Lane 2 | Lane 3 | Lane 4 | Lane 5 | Lane 6 |

Sound

Filter

DFT

MFCC
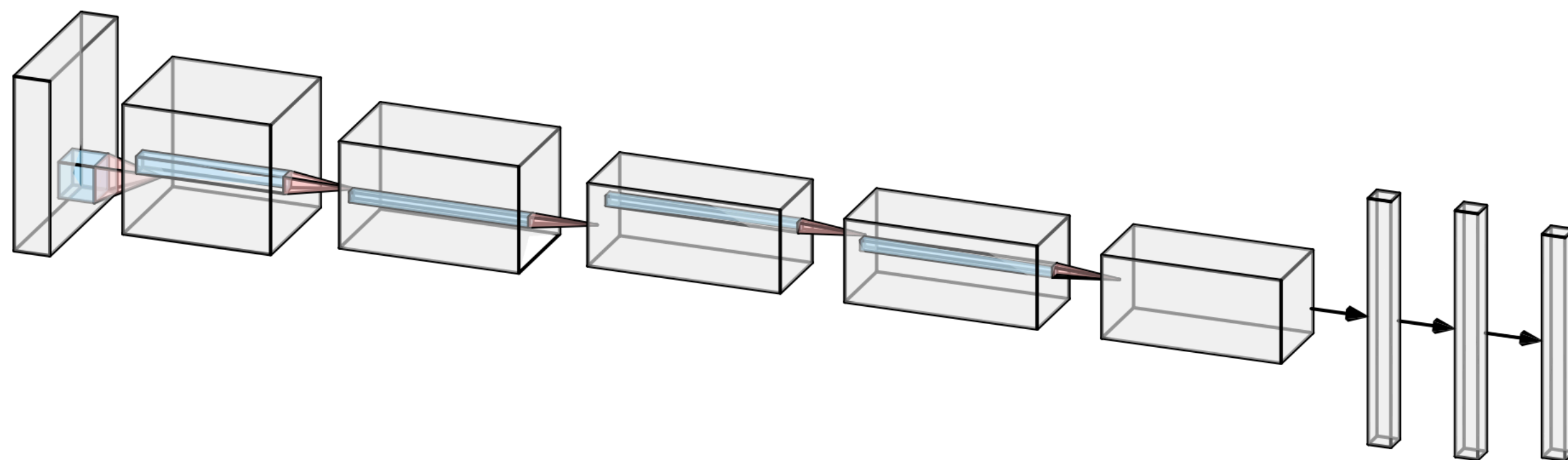
Model

Sound

Filter

DFT

MFCC

Model

Next Queue

Position

宜陽監視器系統架構規劃
軟體

問題與排除
IP address與其他設備衝突

- Solution

  - Camera維持原樣：192.168.1.4~13

  - Server：61.61.220.93

問題與排除
遠端連線

- Solution

  - 從防火牆伺服器設定IP forwarding

問題與排除
檔案格式

- Solution
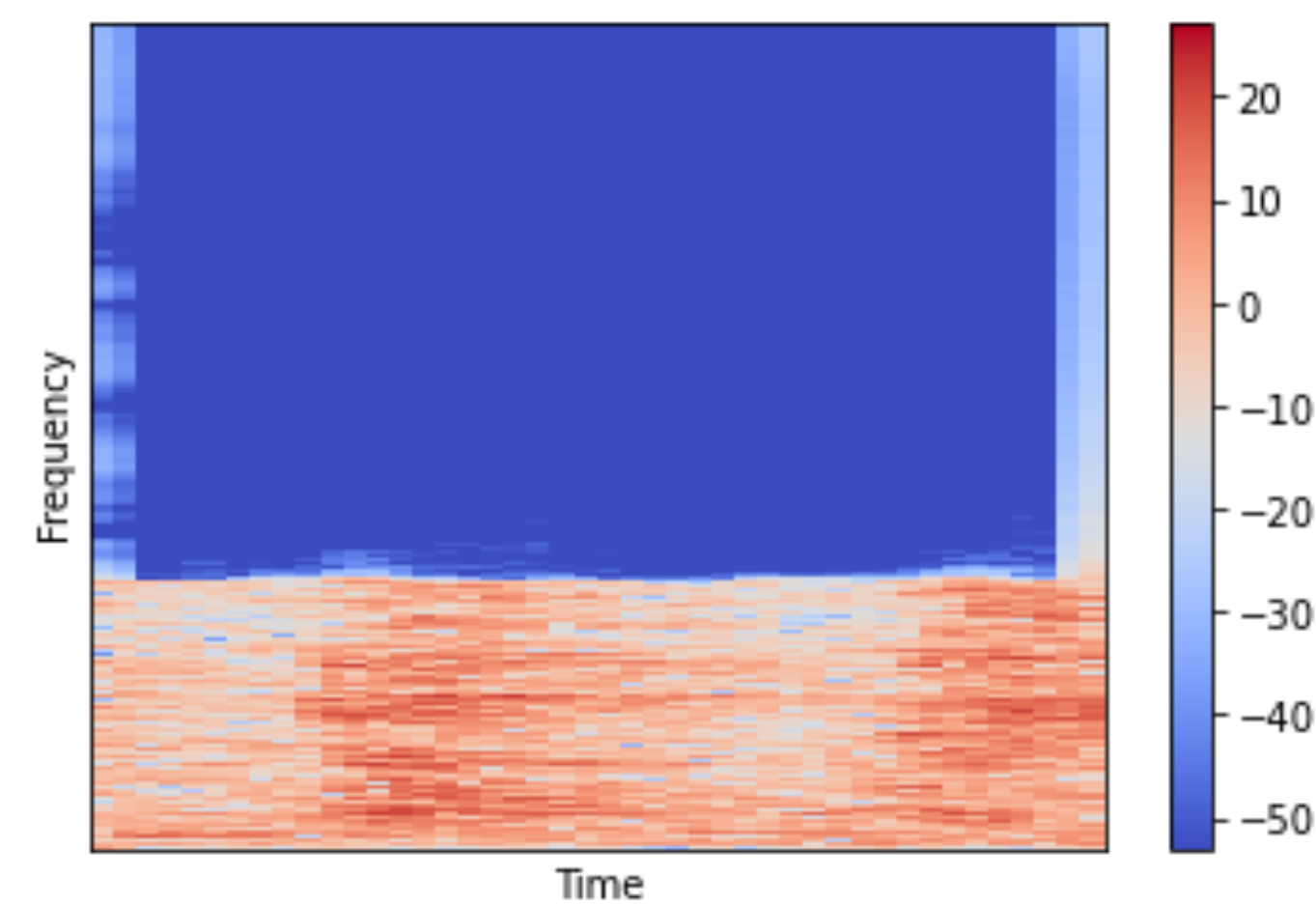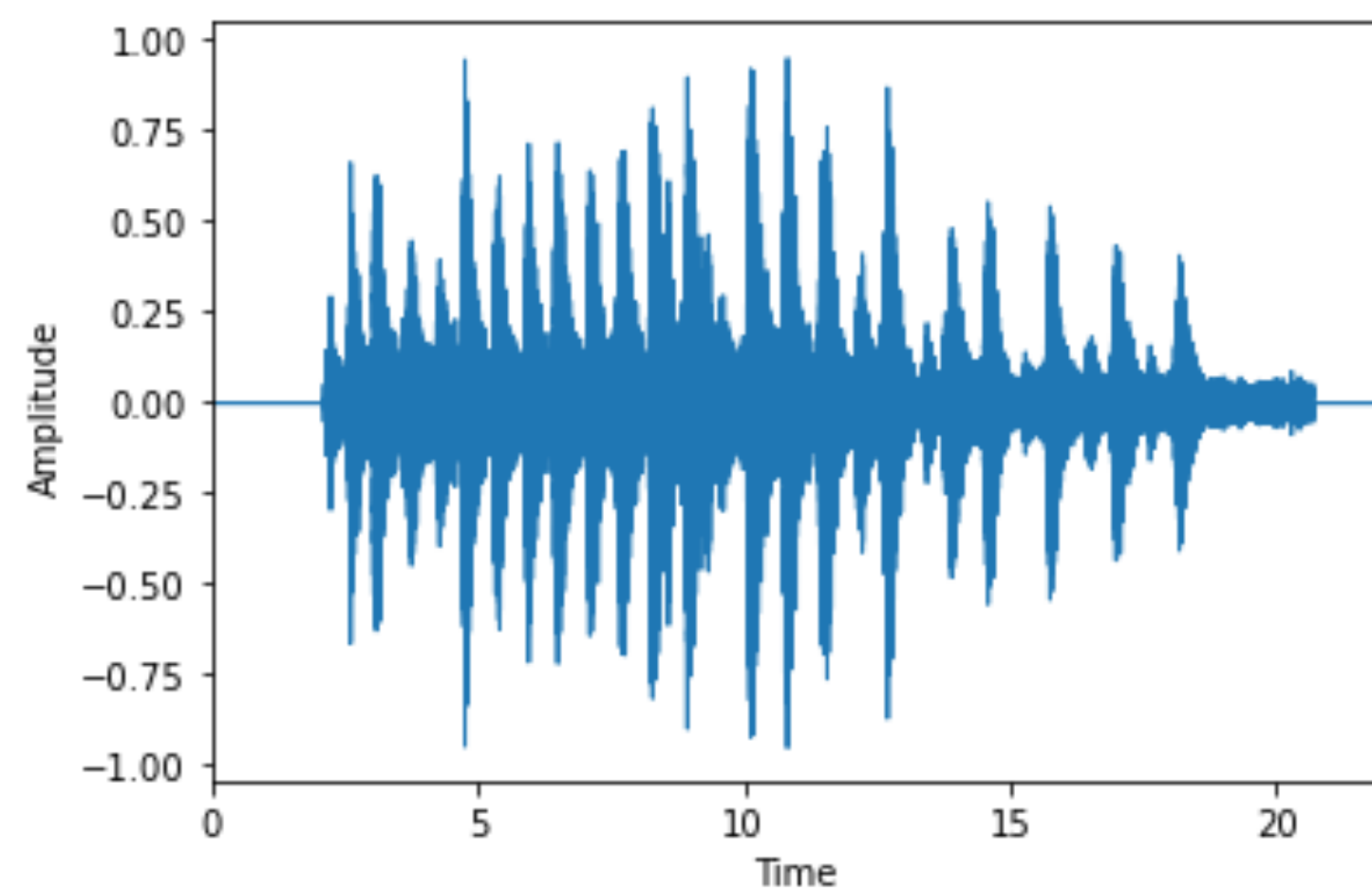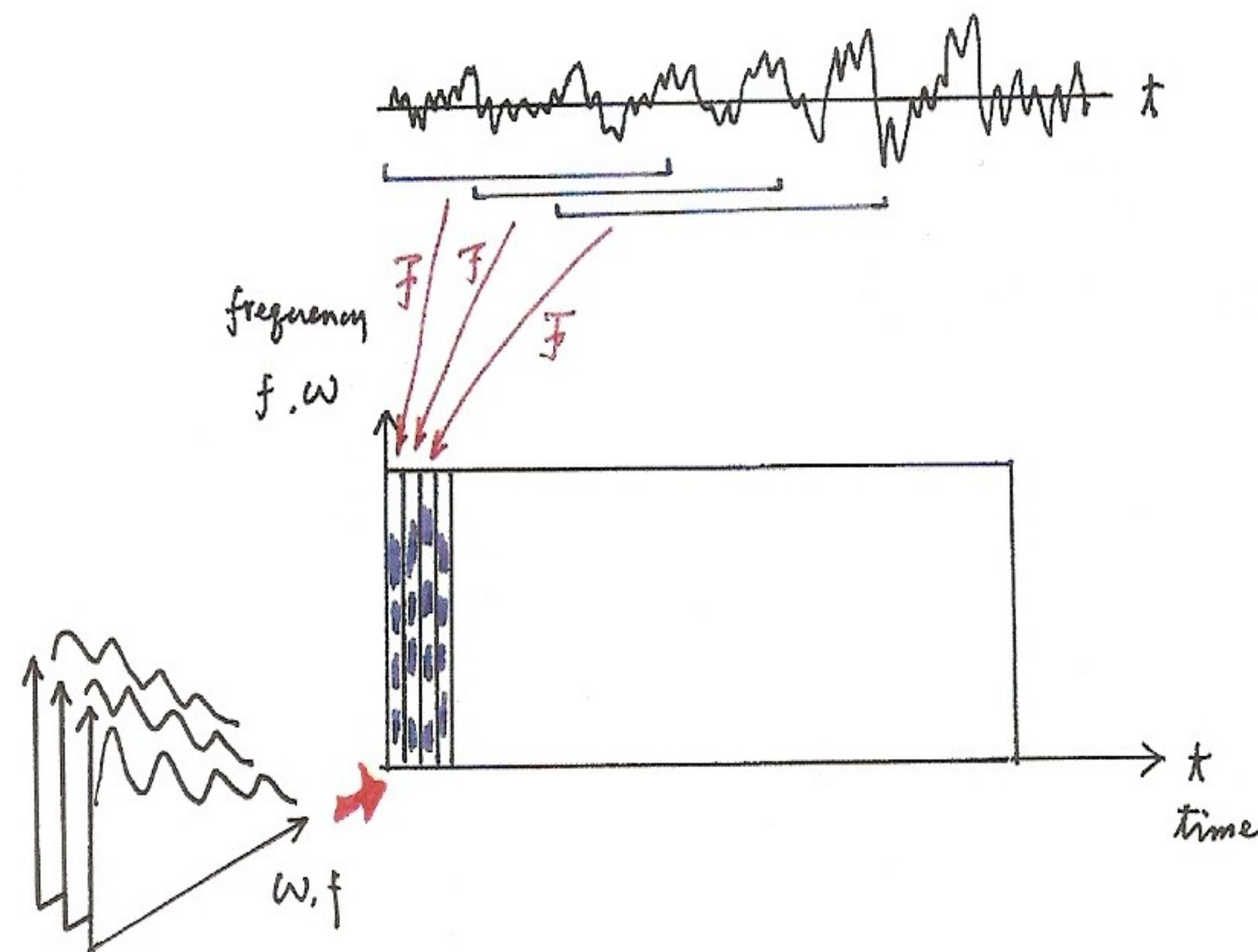 - 下載轉檔軟體觀看但無法轉檔
  - 若要轉檔需要先手動匯出成AVI檔後再轉檔

問題與排除
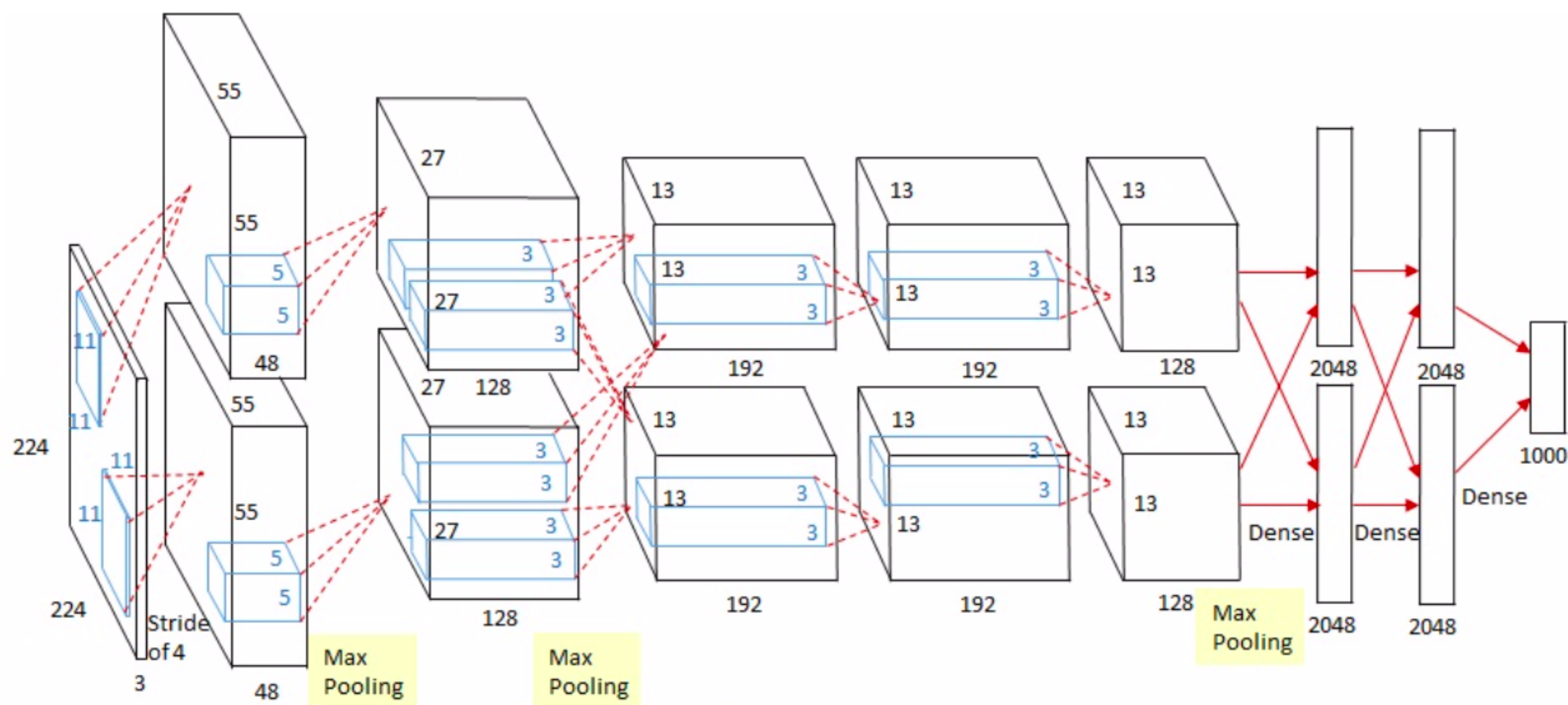**聲音輸出**

- Solution

  - 調整影像輸出格式

  - 添購一組收音麥克風（降噪處理、收音範圍...）
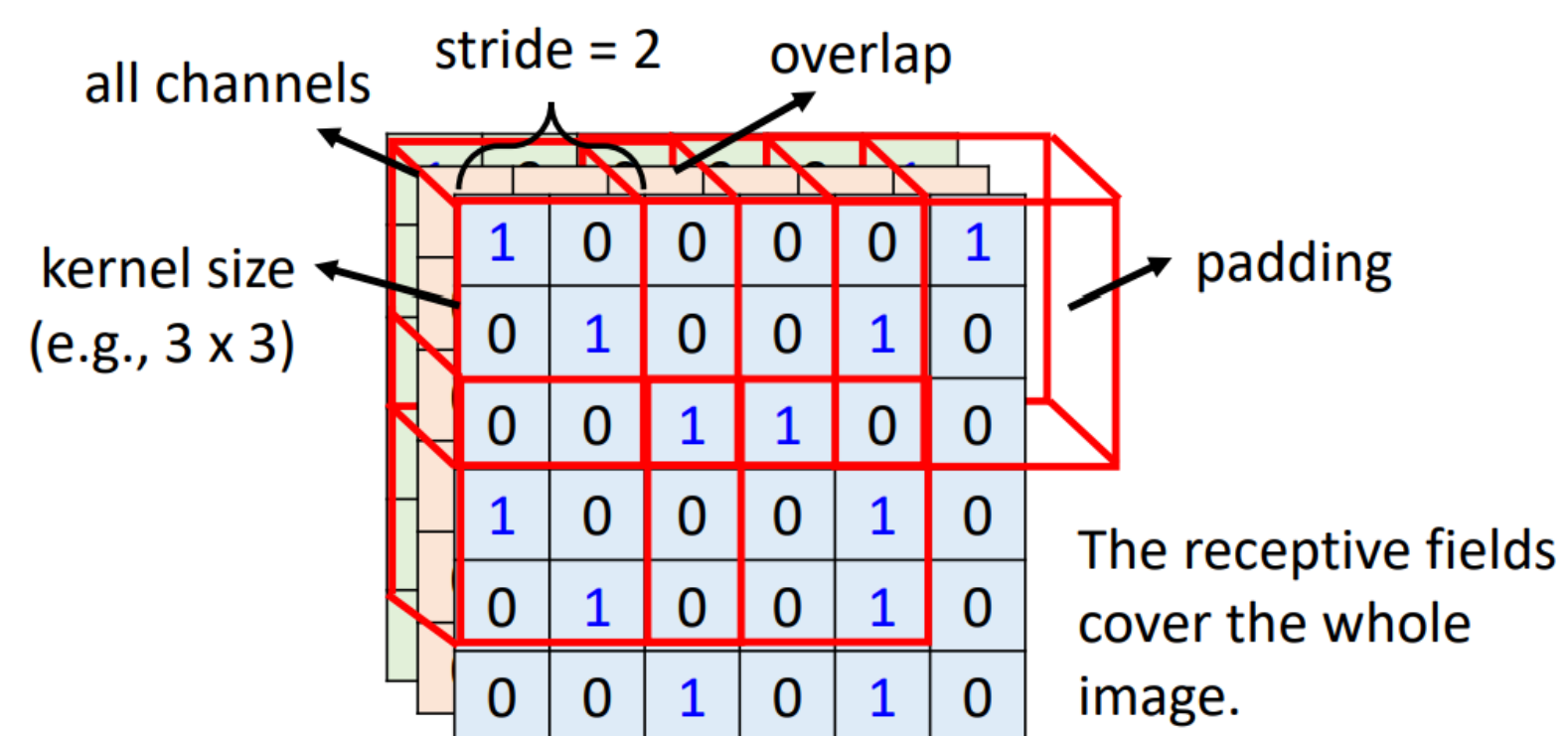
回顧過去研究
頻譜圖分析

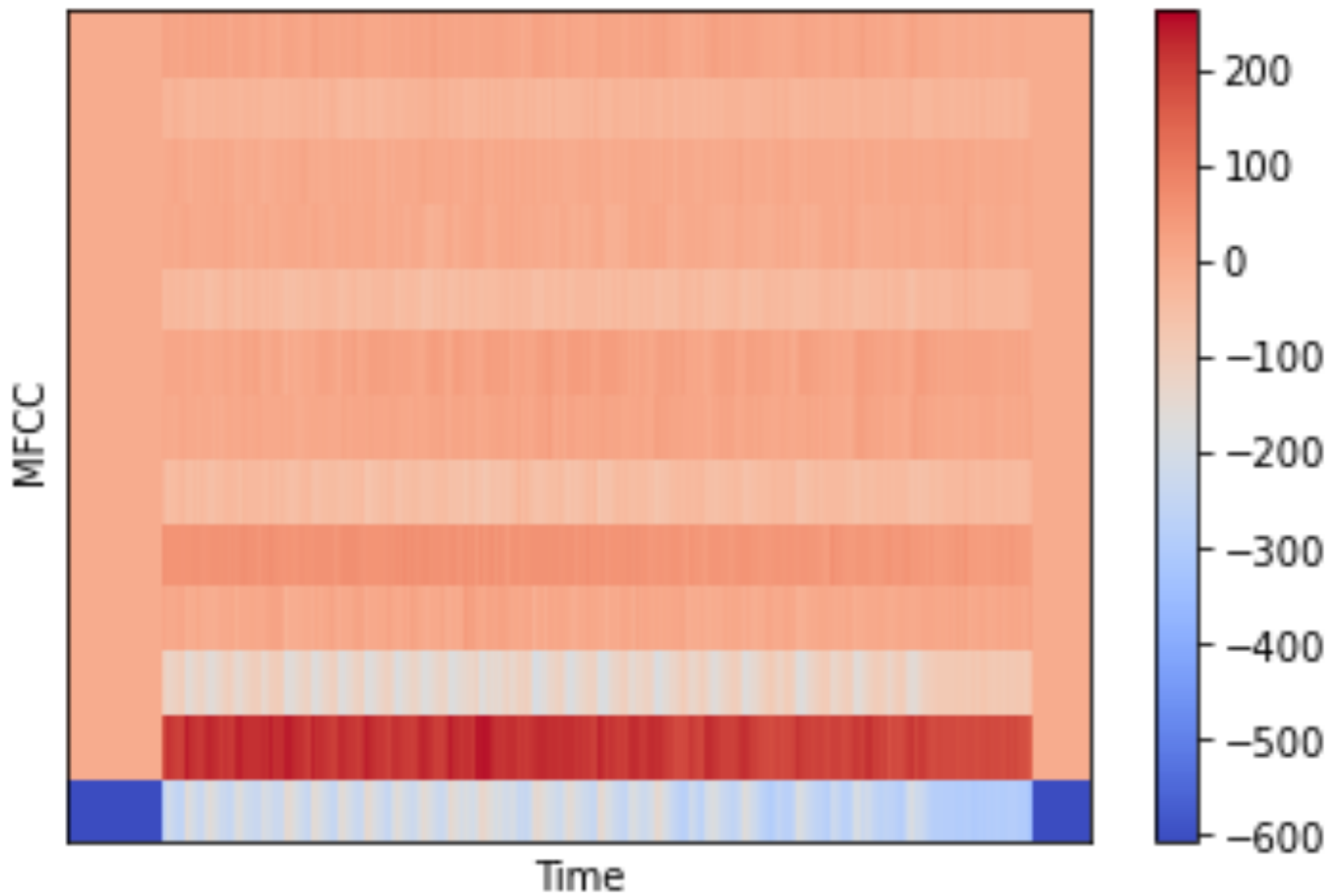- Spectrogram

回顧過去研究

模型架構
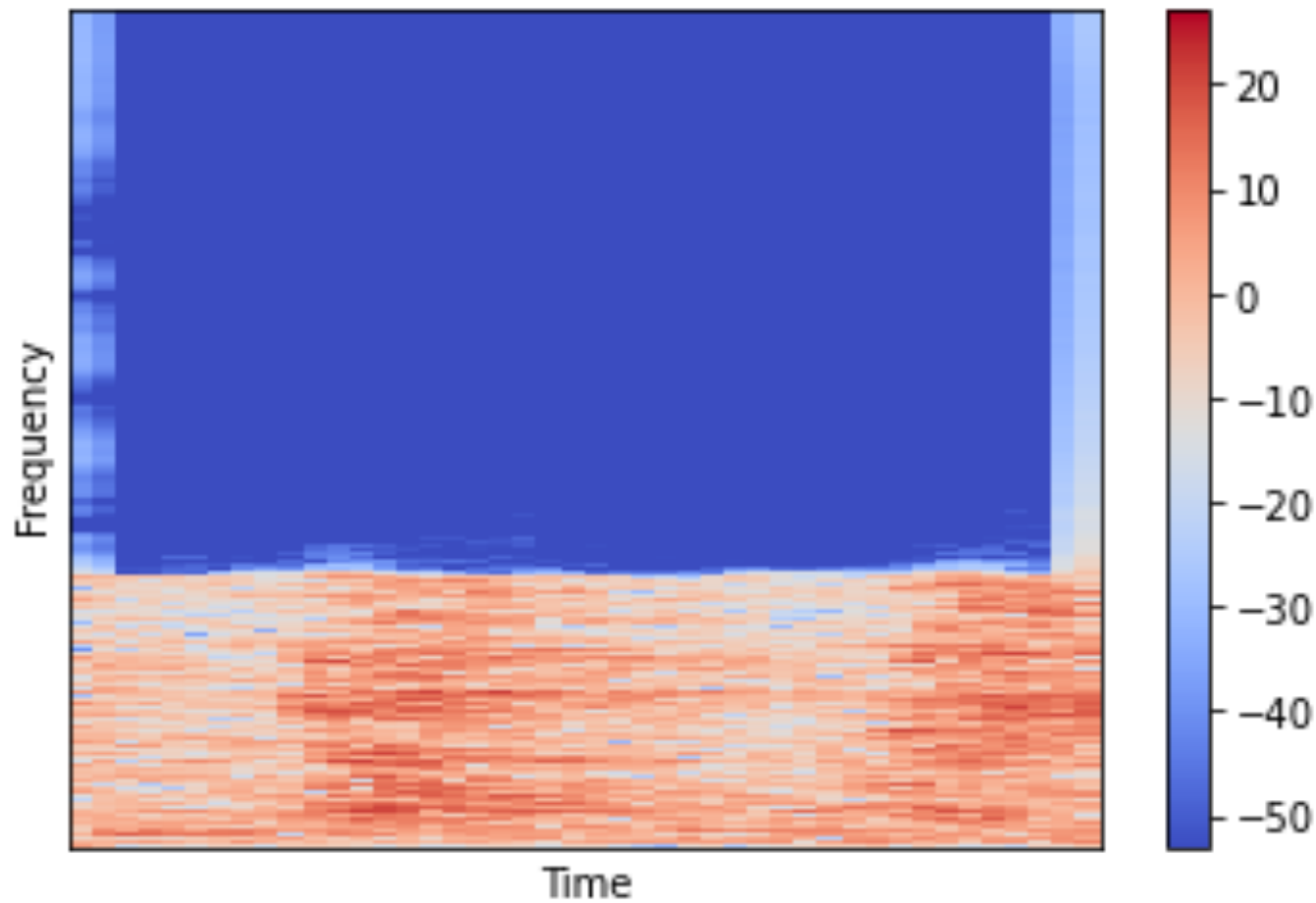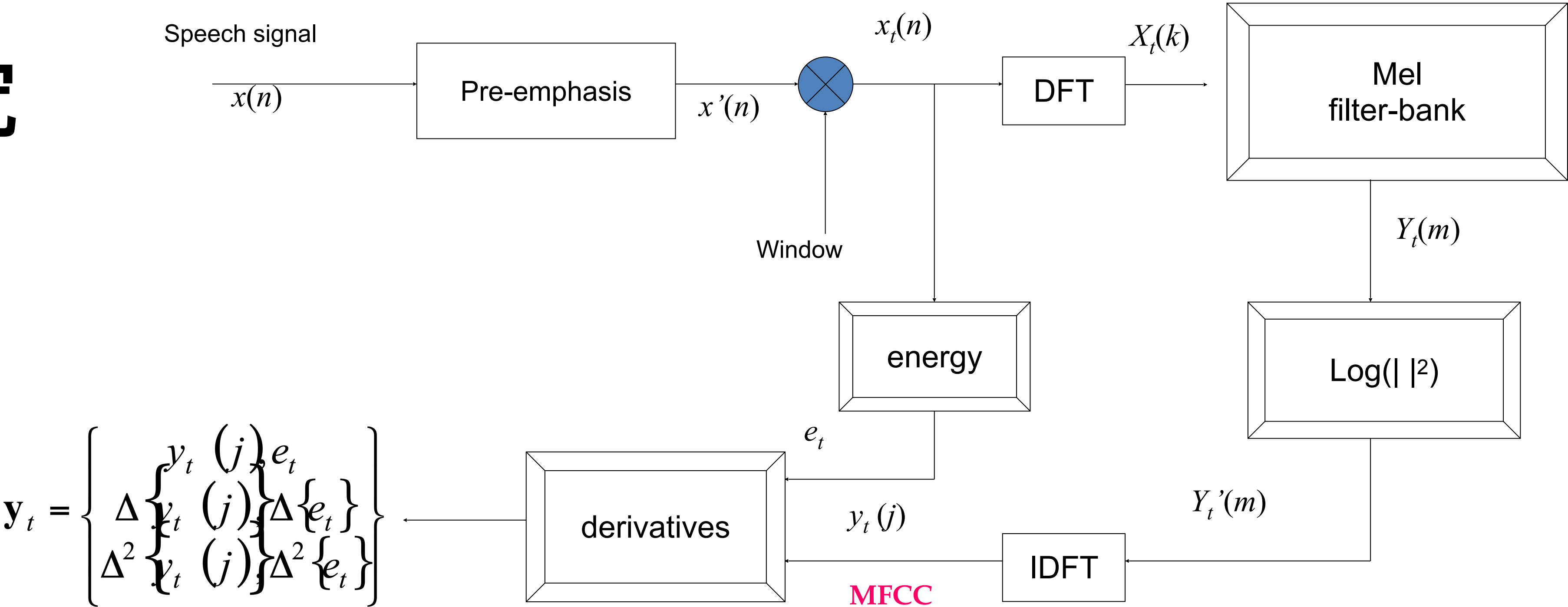
• Alex-Net

Each receptive field has a set of neurons (e.g., 64 neurons).

回顧過去研究
模型優化

- MFCC

回顧過去研究
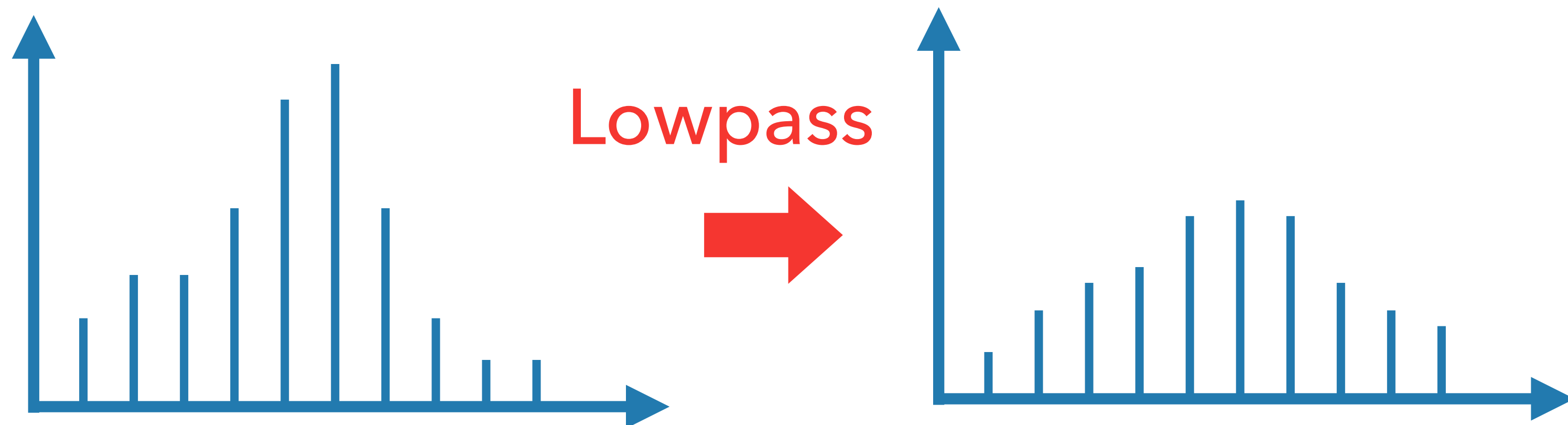## 模型優化

- FIR filter

  Finite Impulse Response filter (FIR)

  $$y[n] = b_0 x[n] + b_1 x[n-1] + \ldots + b_N x[n-N]$$

  $$= \sum_{i=0}^{N} b_i x[n-i]$$

Lowpass

回顧過去研究

辨識結果
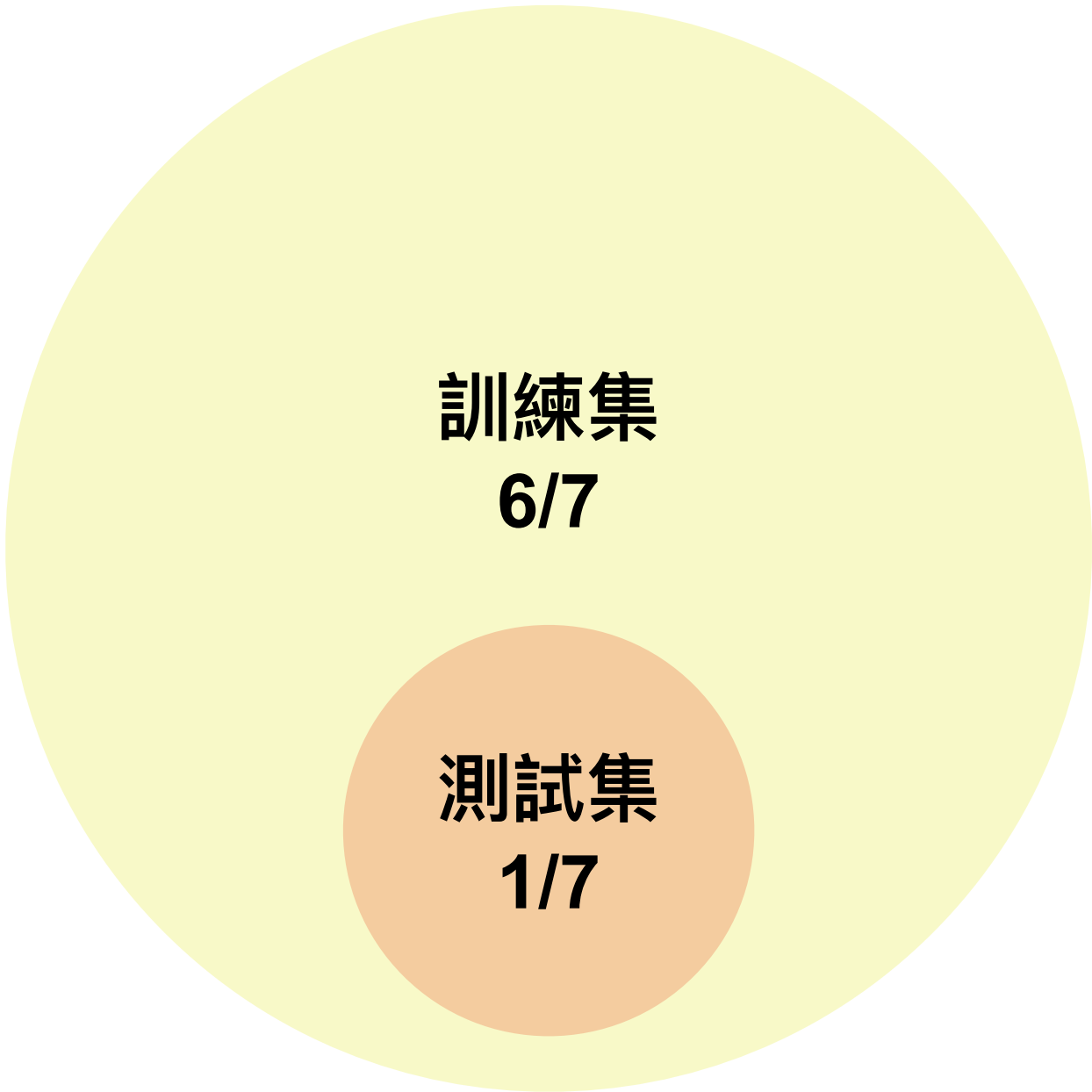
	Set 1	Set 2	Set 3	Set 4	Set 5	Set 6	Set 7	Avg.
Coughing Accuracy	86.1	87.4	88.3	88.9	88.3	87.8	86.3	87.6
Non-coughing Accuracy	82.5	83.7	86.0	87.6	84.2	82.8	82.2	84.1
Overall Accuracy	84.7	86.1	87.1	87.6	86.9	86.5	84.9	86.3
Precision	85.2	85.9	87.9	88.5	86.2	85.6	85.7	86.4

訓練集 6/7

測試集 1/7

回顧過去研究
硬體設備

	IP	Account/ Password	Remote Desktop
D-View Cam	61.61.220.93	A:admin P:admin	
Remote	80(Web) 5150(Playback) 5140(Liveview)	A:admin P:admin	
DCS-4623	192.168.1.4~13	A:admin P:ntuast2022	
POE switch Hub	192.168.1.3	A:admin P:(blank)	
Computer	61.61.220.93	A:(blank) P:(blank)	P:ntuast

Any Question?