encrypted face   decrypted face   original face   encrypted face   decrypted face   original face   real_A   fake_B   real_B

real_A   fake_B   real_B   real_A   fake_B   real_B   real_A   fake_B   real_B

real_A   fake_B   real_B   real_A   fake_B   real_B   real_A   fake_B   real_B

encrypted face	decrypted face	original face	encrypted face	decrypted face	original face	real_A	fake_B	real_B
real_A	fake_B	real_B	real_A	fake_B	real_B	real_A	fake_B	real_B
real_A	fake_B	real_B	real_A	fake_B	real_B	real_A	fake_B	real_B

Original					
Blurred					
Aged					
Recoverd					
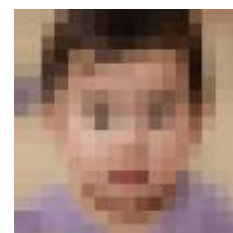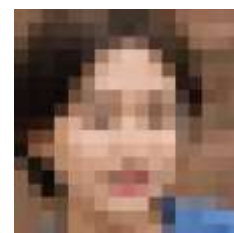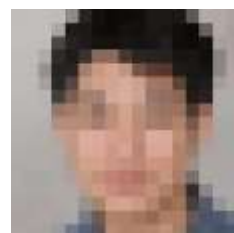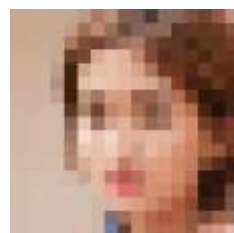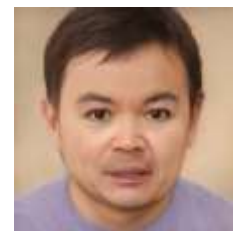
Original					
Blurred					
Aged					
Recoverd					
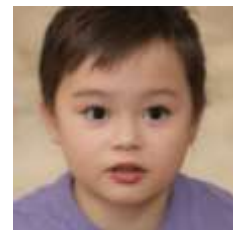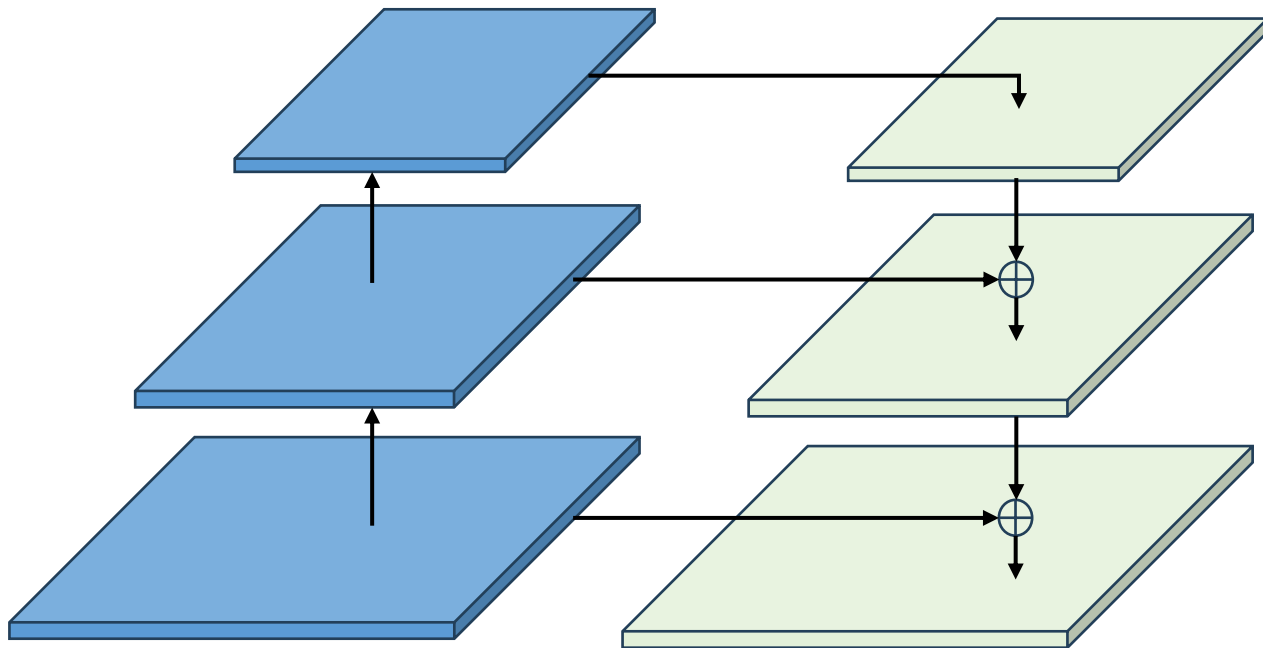
a)ResNet   b)Feature pyramid
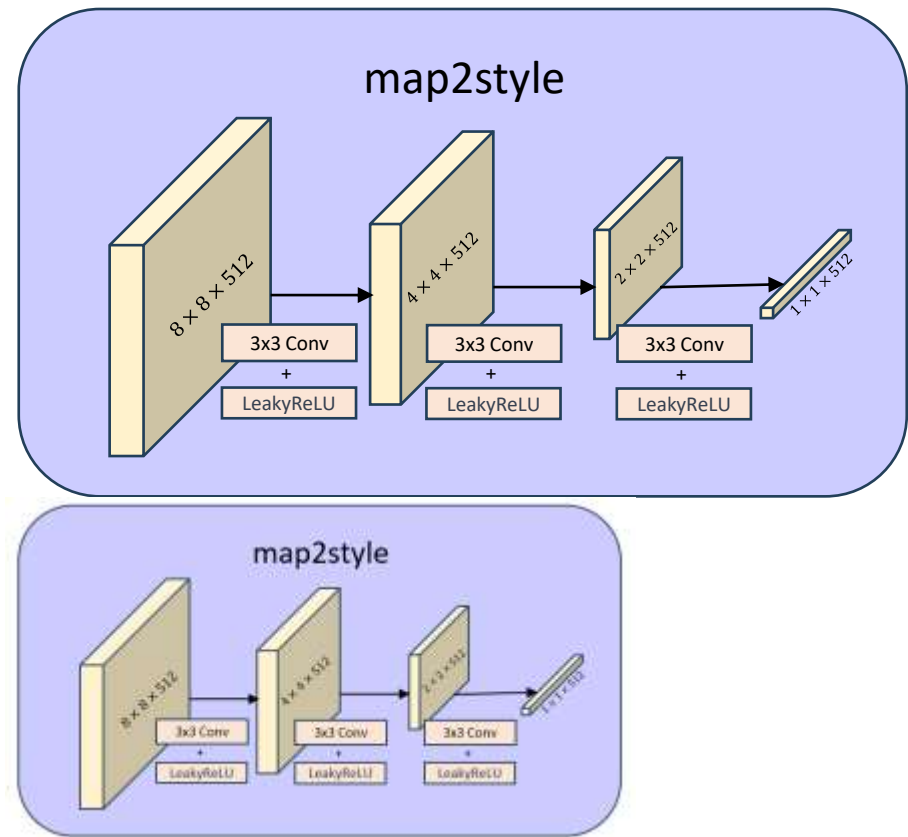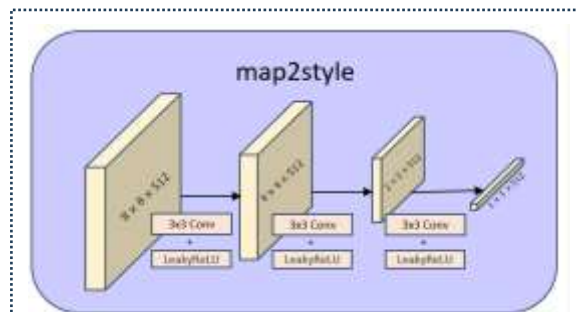
pSp Encoder

map2style
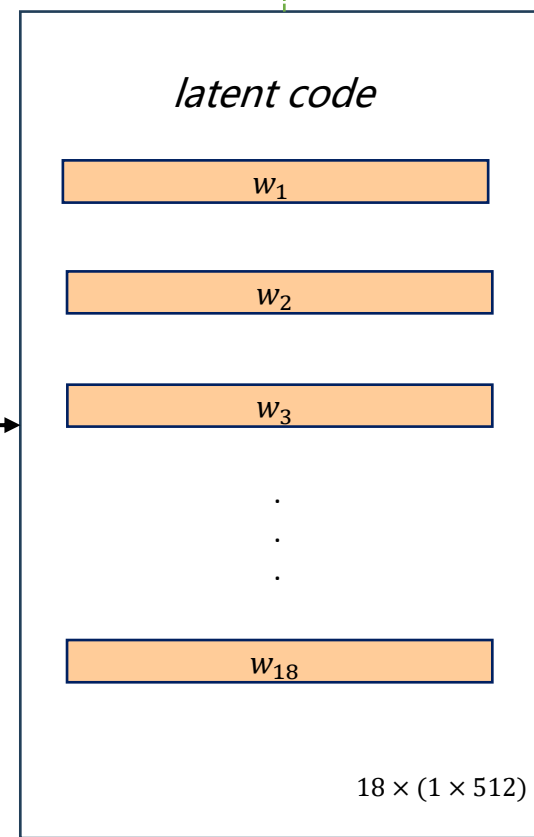
latent code

w_1

w_2

w_3

w_{18}

$18 \times (1 \times 512)$
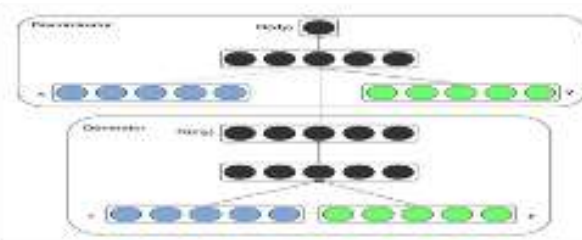
average

$\bar{w}$

Input Image

a) ResNet

b) Feature pyramid

c) Map2style

d) Add latent_avg
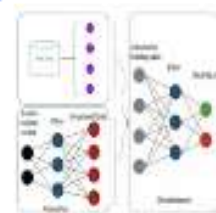
Extracting semantic features of face and encrypting transmission
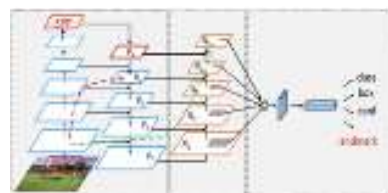
GAN I

Cloud storage of semantic secret key

Query human face terminal

GAN II

Results output

Face Detection & Gaussian encryption

video local storage

Extracting semantic features of face and encrypting transmission

Query human face terminal

Cloud storage of semantic secret key

Encoder

Face Detection & Gaussian encryption

video local storage

GAN generator

Results output