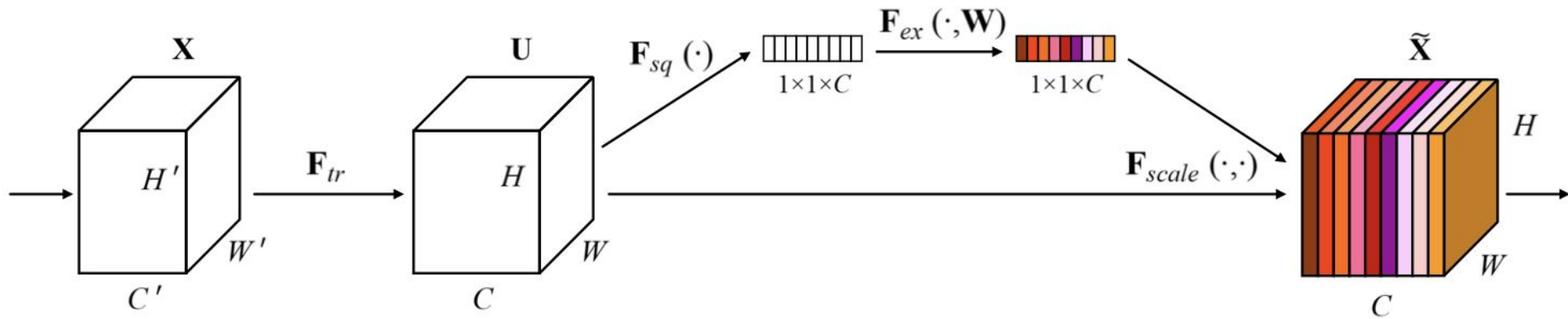


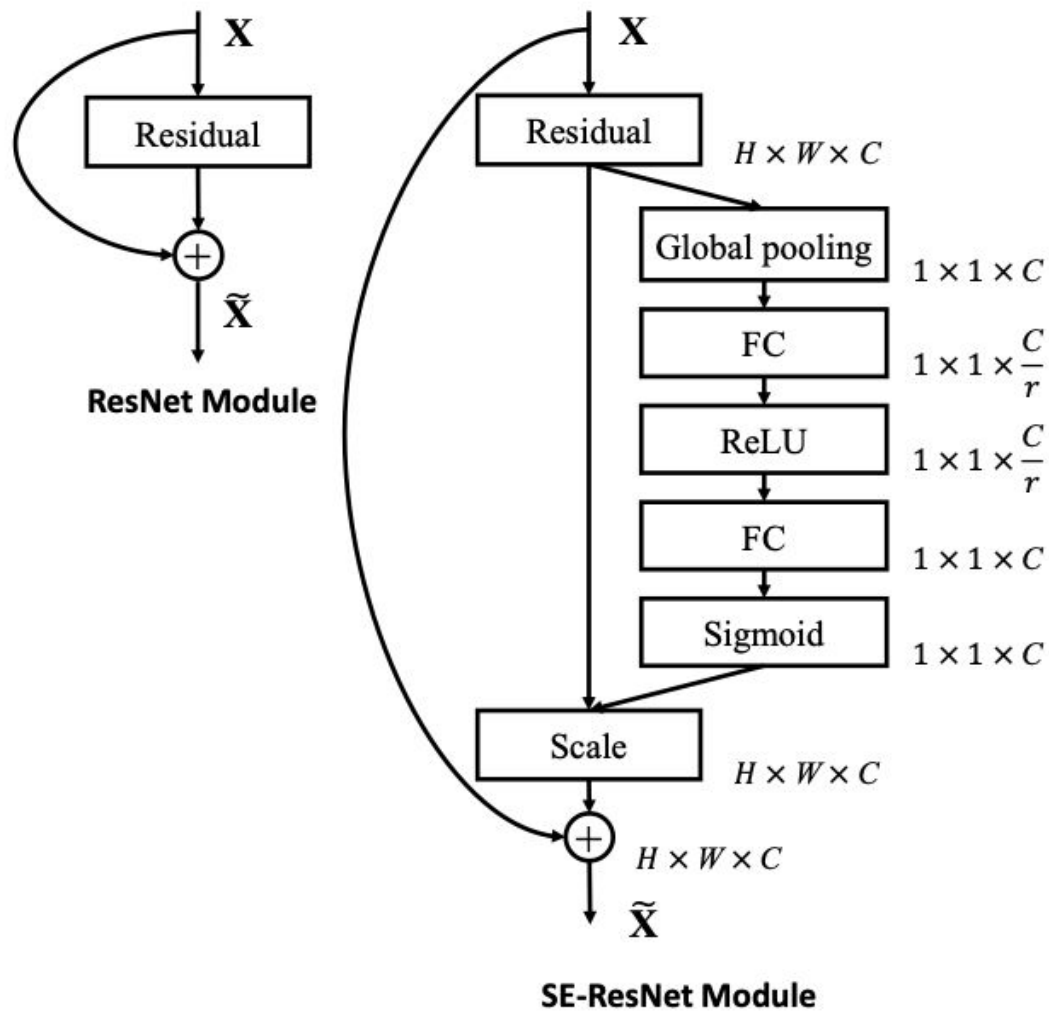
MBConv

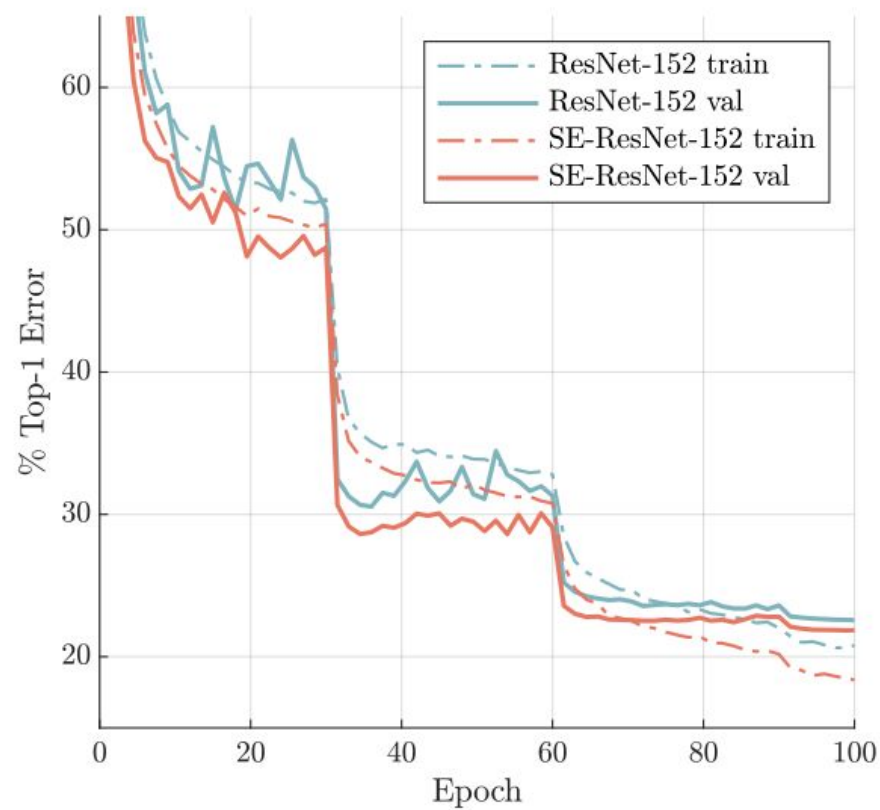
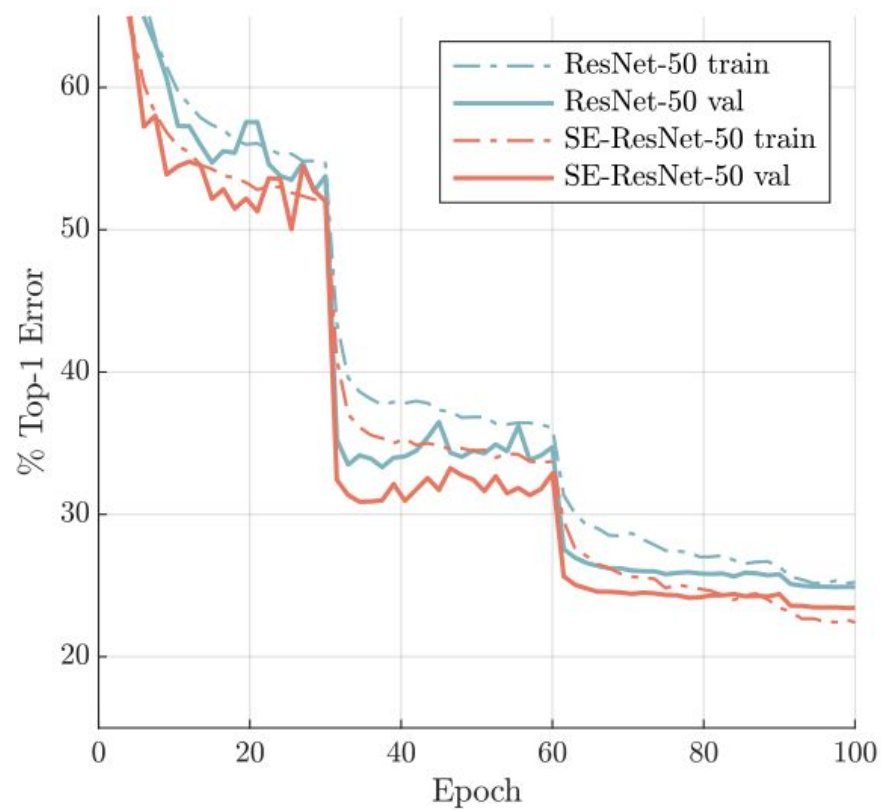
Squeeze-and-Excite

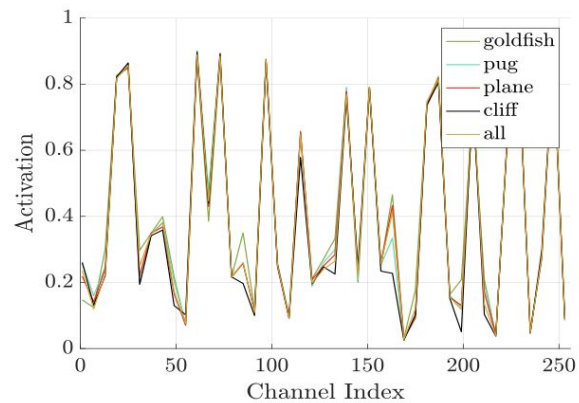
Марк Блуменау, Магистратура ИИ

Squeeze-and-Excite

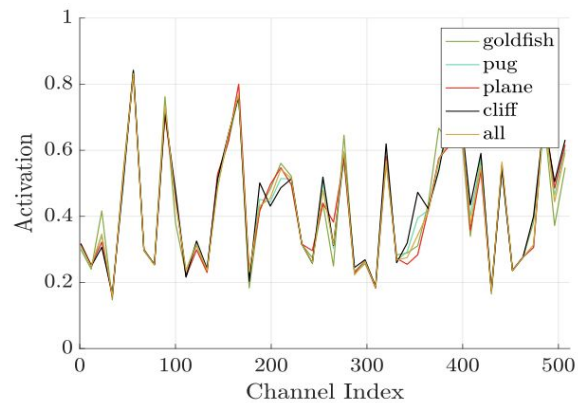




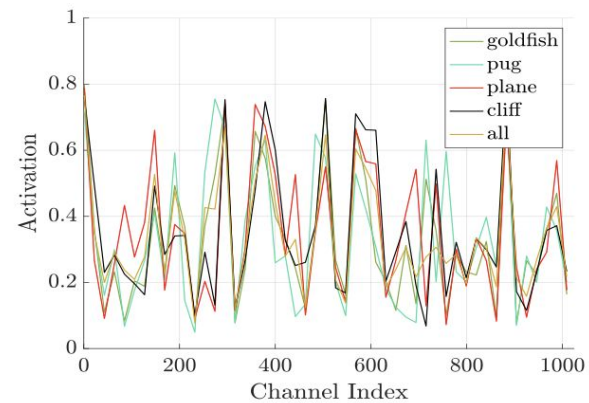




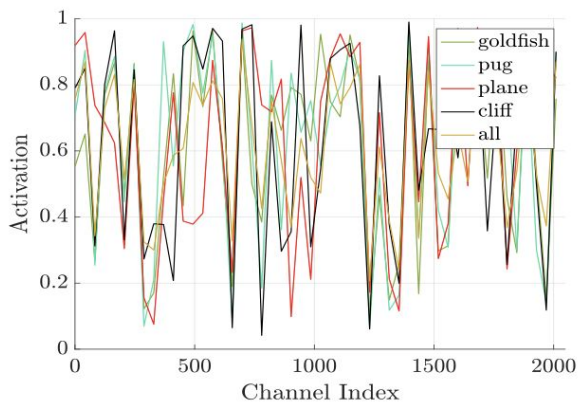
(a) SE_2_3



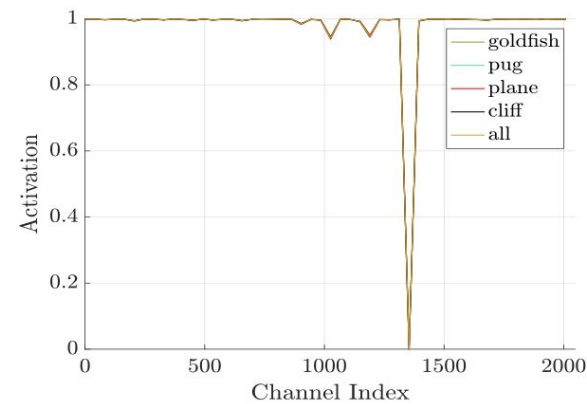
(b) SE_3_4



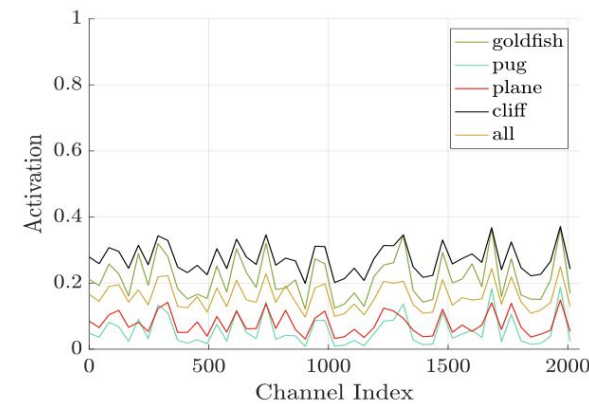
(c) SE_4_6



(d) SE_5_1



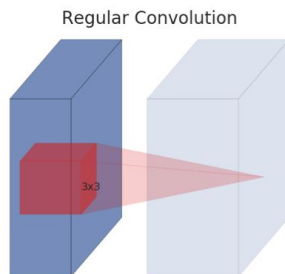
(e) SE_5_2



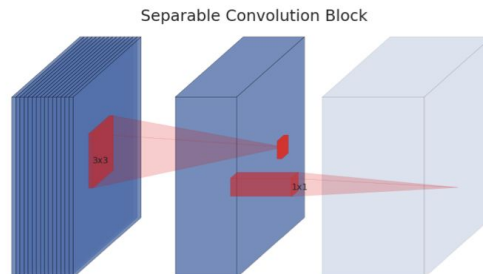
(f) SE_5_3

Bottleneck

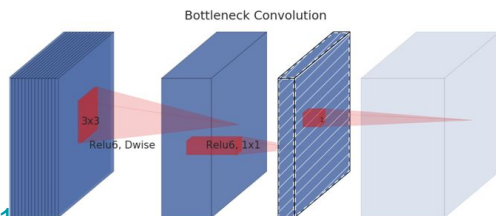
(a) Regular



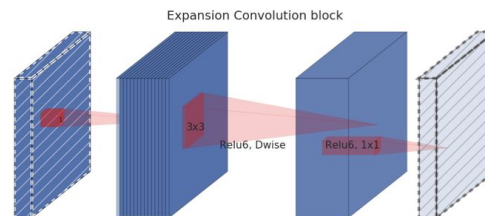
(b) Separable



(c) Separable with linear bottleneck



(d) Bottleneck with expansion layer



Пространство be like



А где профит-то?

Обычная свертка:

Умножений: $H \times W \times C \times K^2 \times N$

Параметров: $K^2 \times C \times N$

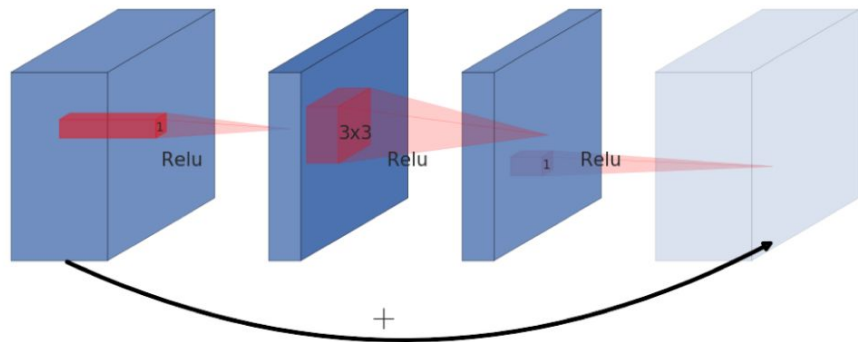
Наш новый велосипед:

Умножений: $H \times W \times C \times K^2$ (depthwise) + $H \times W \times C \times N$ (pointwise)

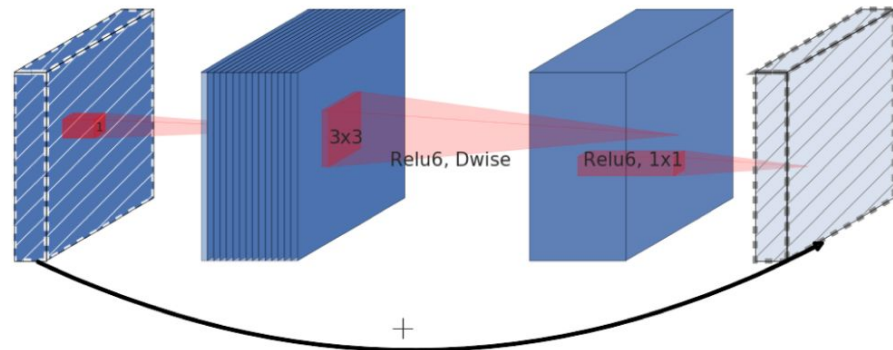
Параметров: $K^2 \times C + C \times N$

Выворачиваем ResNet наизнанку

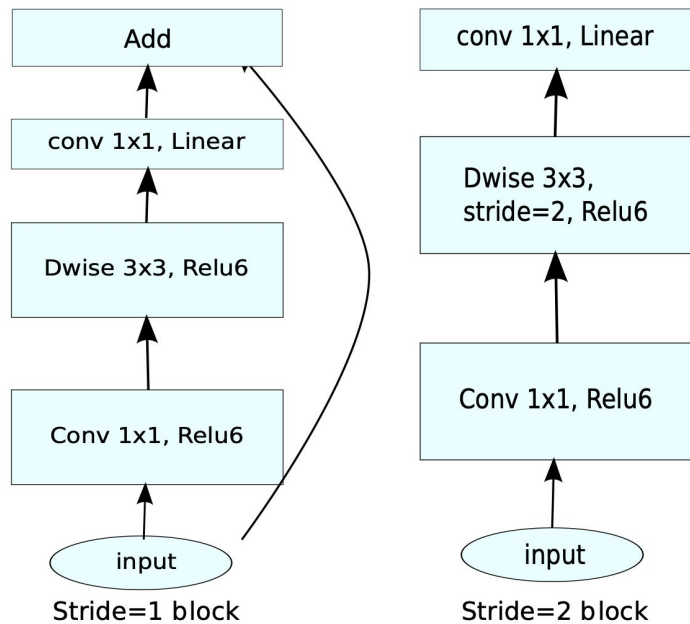
(a) Residual block



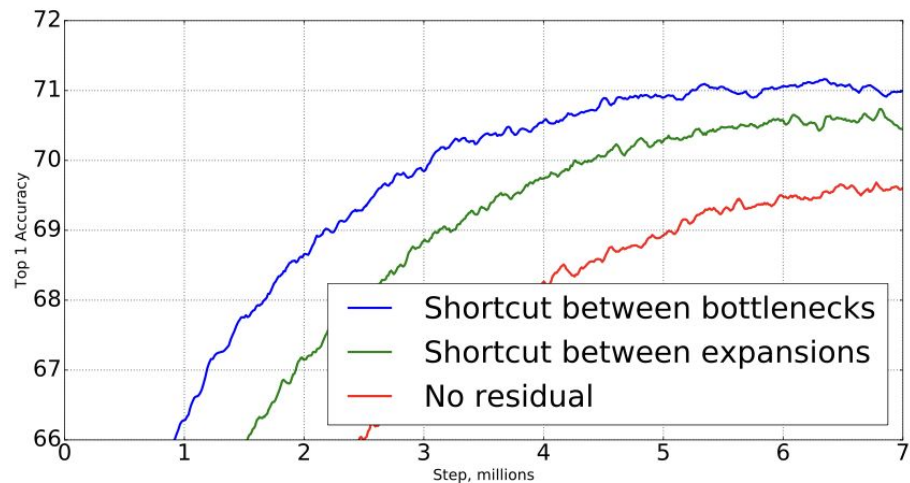
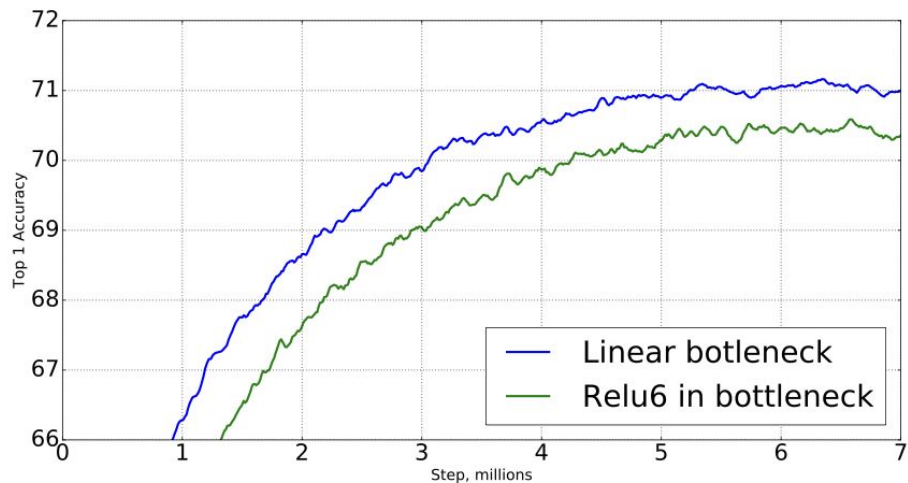
(b) Inverted residual block



Результат



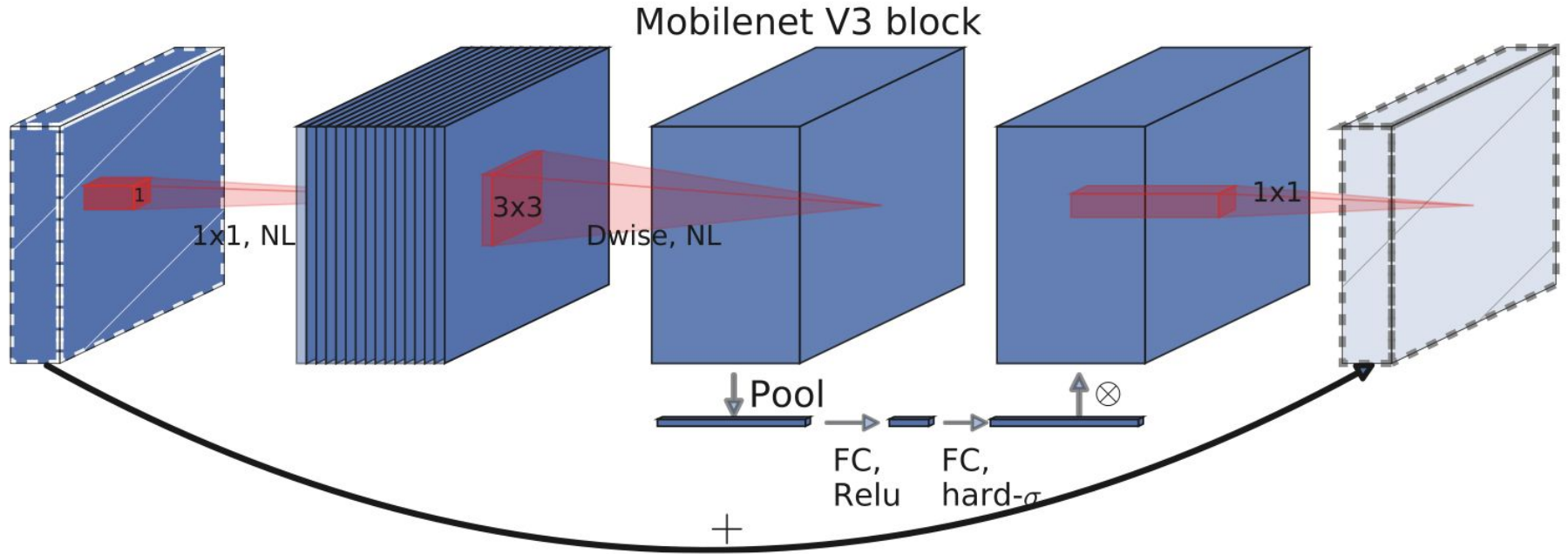
(d) Mobilenet V2



(a) Impact of non-linearity in the bottleneck layer.

(b) Impact of variations in residual blocks.

Combine the shit together (MobileNetV3)



А получим-то что?

