$$\frac{A}{B_1 + B_2 + B_3} = \left(\frac{B_1 + B_2 + B_3}{A}\right)^{-1} = \left(\frac{B_1}{A} + \frac{B_2}{A} + \frac{B_3}{A}\right)^{-1}$$

$$\frac{A}{\sum_i B_i} = \left(\frac{\sum_i B_i}{A}\right)^{-1} = \left(\sum_i \frac{B_i}{A}\right)^{-1}$$

$$\alpha(k,i) = \frac{P(k)P(X_i|k)}{\sum_{k'} P(k')P(X_i|k')} = \left(\sum_{k'} \frac{P(k')P(X_i|k')}{P(k)P(X_i|k)}\right)^{-1} = \left(\sum_{k'} \frac{P(k')e^{\frac{d(k')^2}{-2\sigma^2}}}{P(k)e^{\frac{d(k)^2}{-2\sigma^2}}}\right)^{-1} = \left(\sum_{k'} \frac{P(k')}{P(k)} e^{\frac{d(k')^2 - d(k)^2}{-2\sigma^2}}\right)^{-1}$$

Kde k‘ jde od 1 do počtu pozic obličejů v jednom snímku.
Tedy: $k = 1,\ldots,W_{img}-w+1$

Člen d(k) plyne z definice $P(X_i|k)$

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$