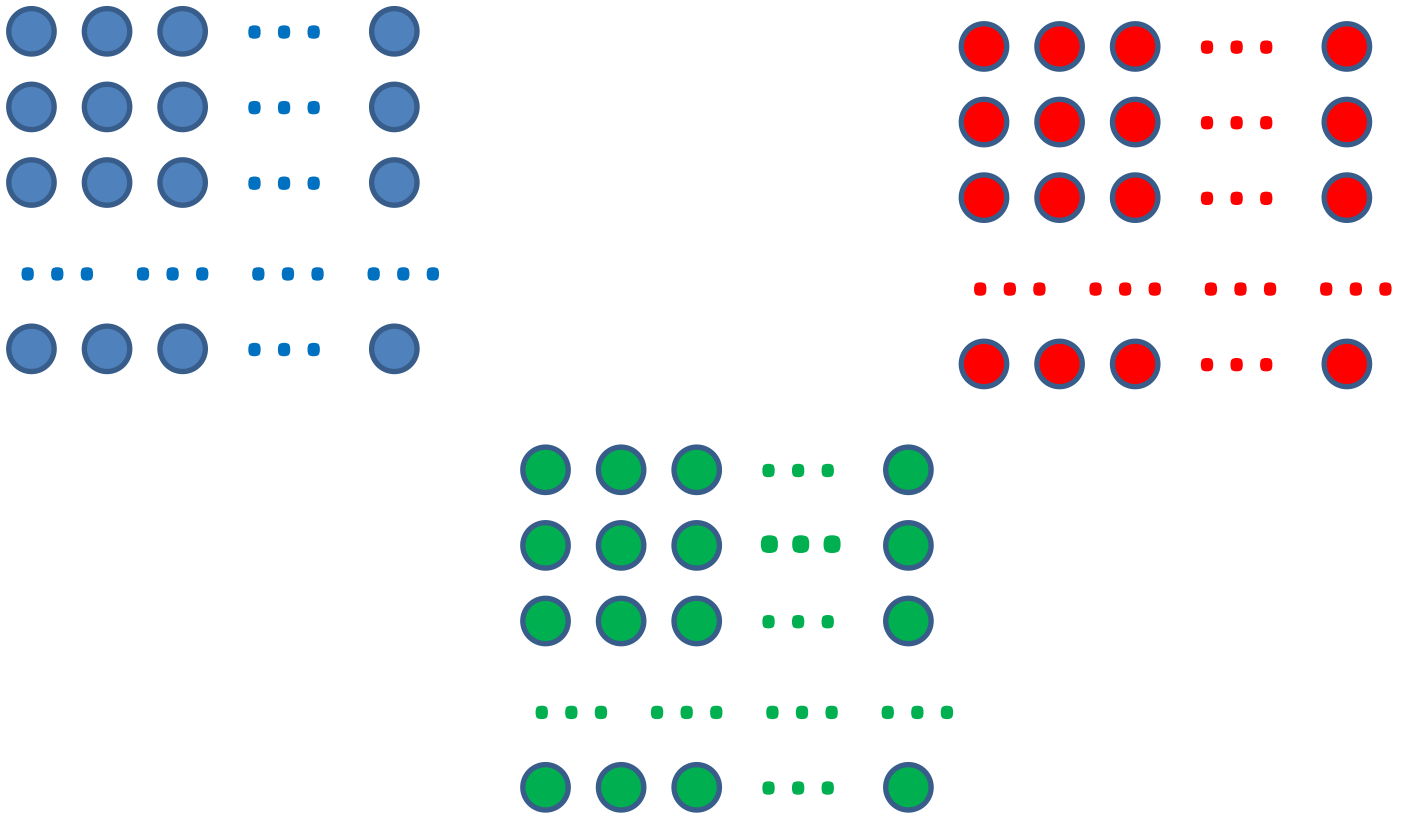
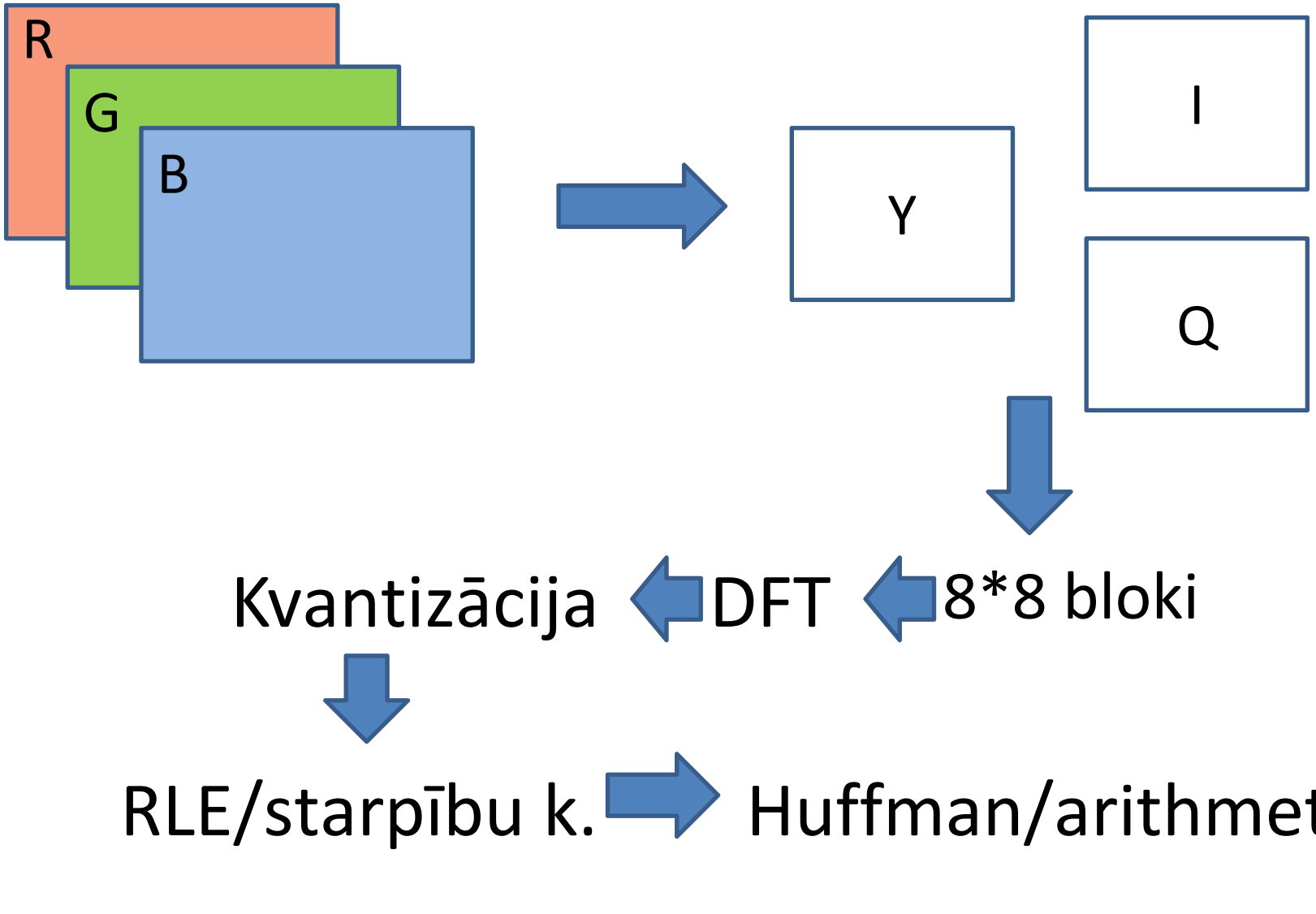
# JPEG formāts

# Izejas dati



8 biti (0-255) katrai no RED, BLUE, GREEN

# JPEG kopsavilkums

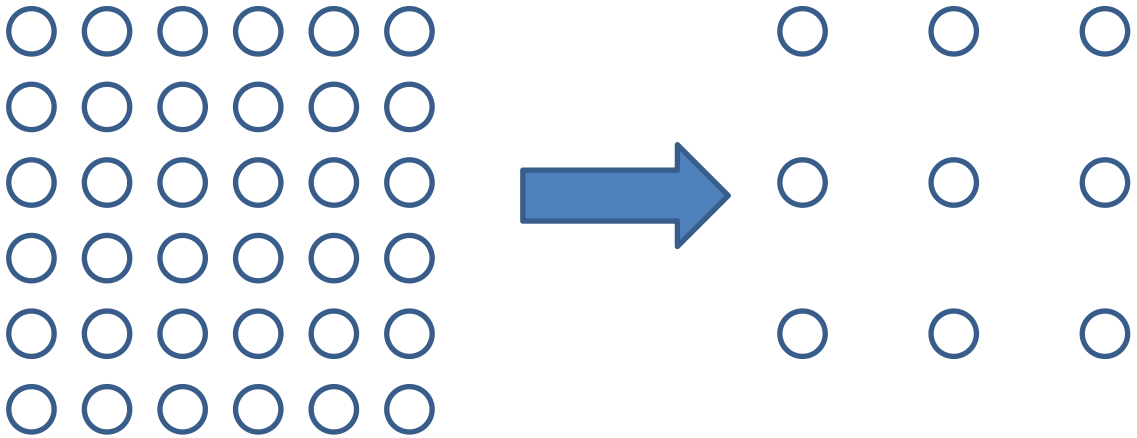


# 1. solis

- Y = 0.3 Red + 0.59 Green + 0.11 Blue
- I = 0.6 Red – 0.27 Green – 0.32 Blue
- Q= 0.21 Red – 0.51 Green + 0.3 Blue

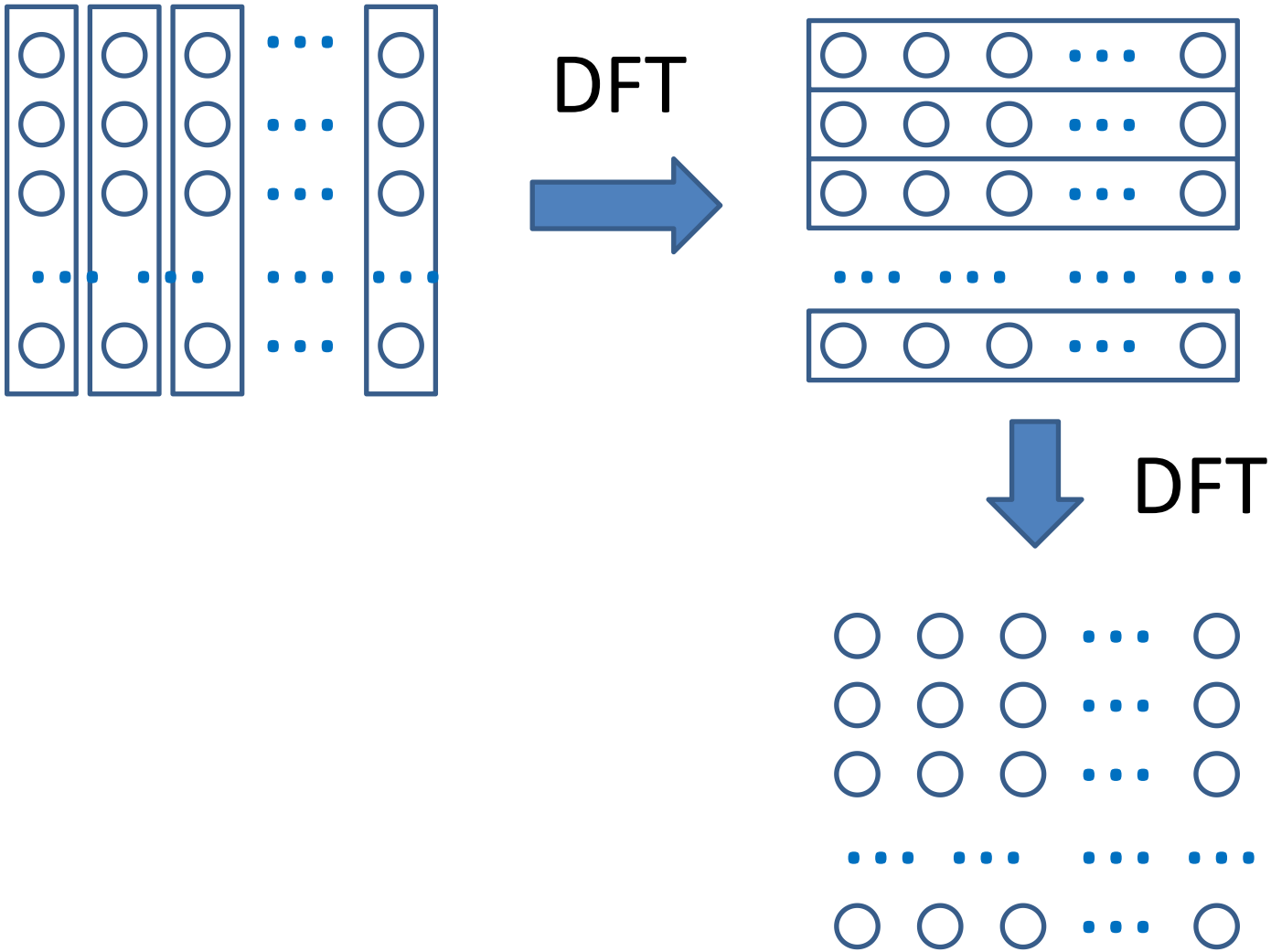
Y – gaišums; I, Q - nokrāsa

# 2. solis



- I, Q plaknes izretina;
- Katru plakni sadala 8*8 blokos.

# 3. solis



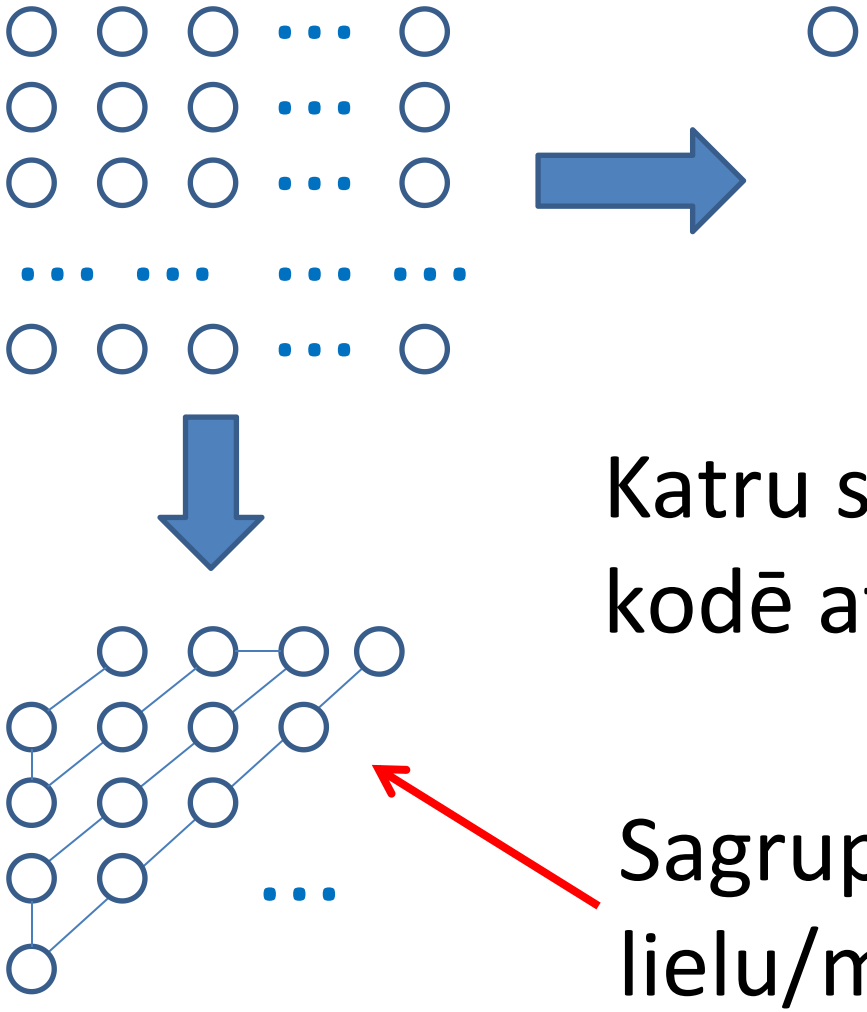
# 4. solis

- Kvantizācija, dalot $x_{ij}$ ar $a_{ij}$:

$$a_{ij} = \begin{bmatrix} 16 & 11 & 10 & 16 & 24 & 40 & 51 & 61 \\ 12 & 12 & 14 & 19 & 26 & 58 & 60 & 55 \\ 14 & 13 & 16 & 24 & 40 & 57 & 69 & 56 \\ 14 & 17 & 22 & 29 & 51 & 87 & 80 & 62 \\ 18 & 22 & 37 & 56 & 68 & 109 & 103 & 77 \\ 24 & 35 & 55 & 64 & 81 & 104 & 113 & 92 \\ 49 & 64 & 78 & 87 & 103 & 121 & 120 & 101 \\ 72 & 92 & 95 & 98 & 112 & 100 & 103 & 99 \end{bmatrix} \cdot Q$$

Q-kvalitātes parametrs

# 5.solis



Katru sastāvdaļu kodē atsevišķi

Sagrupē svārstības ar lielu/mazu periodu.

# 6. solis

Stūru komponentes:

1. Starpību kodēšana:

x, y, z, t, u, v, ...

x, y-x, z-y, t-z, u-t, v-u, ...

2. Huffman/arithmetic.

# 7. solis

Pārējās komponentes:

1. Run length encoding (RLE):

x, x, x, y, y, z, z, z, z, ...

(x, 3), (y, 2), (z, 4), ...

2. Huffman/arithmetic.