

Channel state information compression task

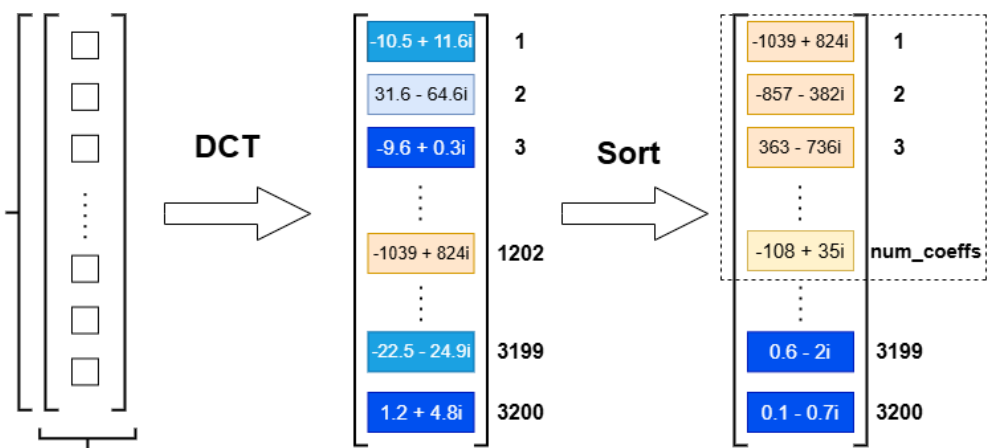
“Main discrete cosine transform values” algorithm

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Compression pipeline

$$N_{TX} \cdot N_f$$

$$64 * 50 = 3200$$



- a bit word containing a number of chosen DCT coefficients



- a bit word containing a pair of numbers of bits used for accurate DCT coefficients representing



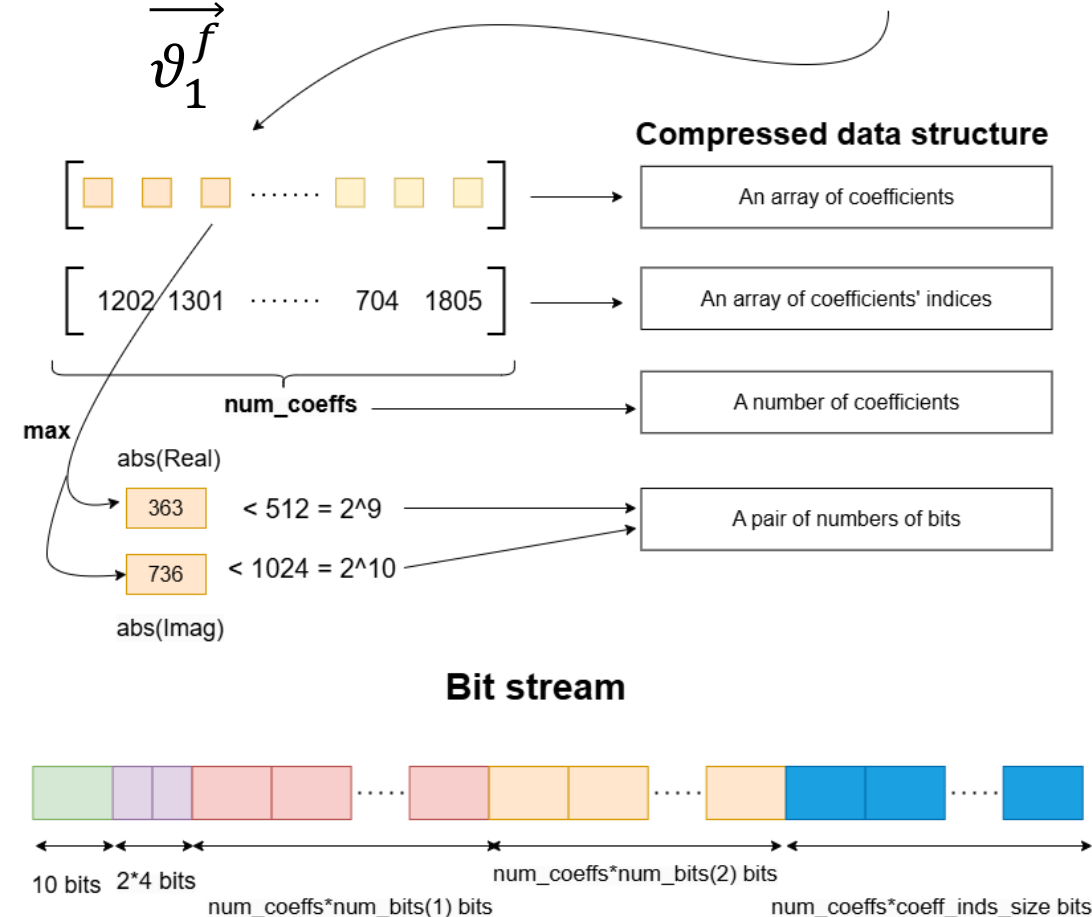
- an array of bit words with length $\text{num_bits}(1)$ representing the values of real components of DCT coefficients



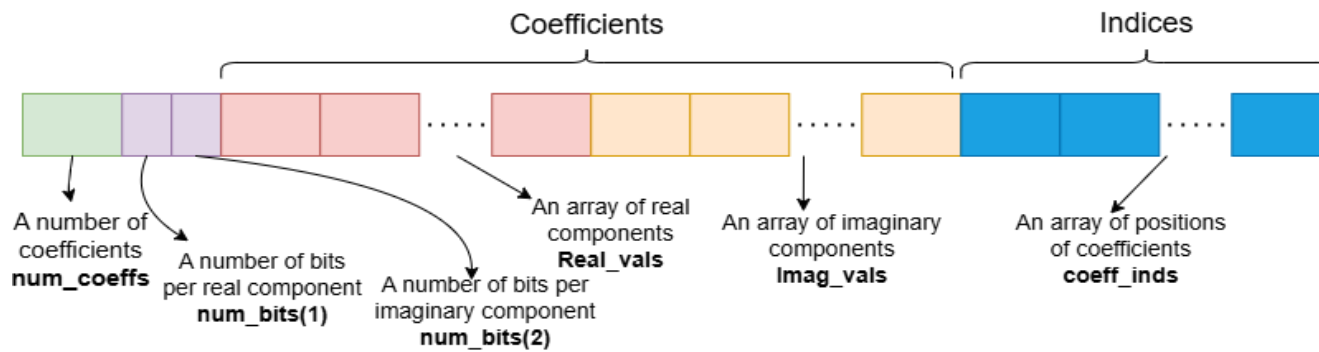
- an array of bit words with length $\text{num_bits}(2)$ representing the values of imaginary components of DCT coefficients



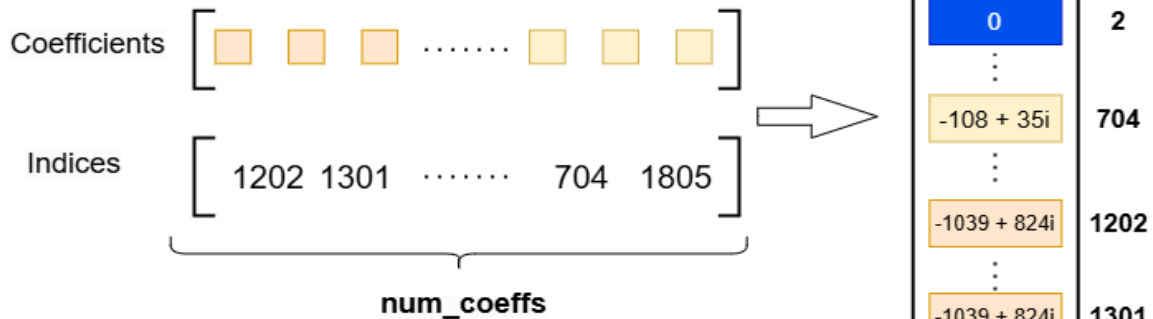
- an array of bit words with length $\text{bit_size_coeff_inds}$ representing the values of initial positions of DCT coefficients



Bit stream



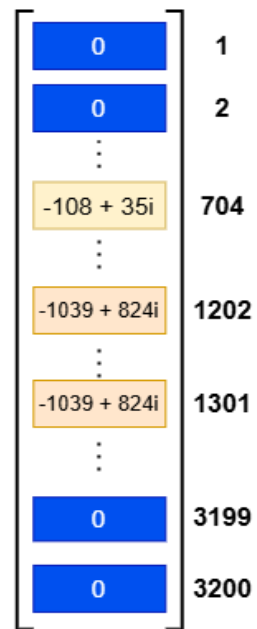
Real_vals + 1i * Imag_vals:



$$\widehat{\vartheta}_1^f = \begin{bmatrix} \square & \square & \dots & \square & \square \\ \square & \square & & & \square \\ \square & & \ddots & & \square \\ \vdots & & & \ddots & \vdots \\ \square & & & & \square \\ \square & & & & \square \\ \square & \square & \dots & \square & \square \end{bmatrix} \begin{matrix} \vdots \\ \vdots \\ \vdots \\ \vdots \\ \vdots \\ \vdots \end{matrix}$$

N_{TX}

N_f



Decompression pipeline

The result of the comparison

