We have an image nxn such that only K scn2 elements in it are non-zero, where t is known. and locations of the non-zero elements are also known.

a) We have a set of only in Discrete Courier transforms

DFT:

$$f(u,v) = \frac{1}{\sqrt{w_1 w_2}} \sum_{x=0}^{w_1-1} \sum_{y=0}^{w_2-1} e^{-\frac{j 2\pi ux}{w_1}} e^{-\frac{j 2\pi vy}{w_2}} xf(\pi,y)$$

Now we know f(u,v) values for m(u,v) pairs.

sewis) Now we can write the above equation as,

Now we can write the active of
$$w_i$$
 is w_i is w_i is w_i is w_i is w_i is w_i in w_i i

anisi is a variable which is a real.

Now we have k variables and mile, v) pairs.

... Note that for a particular pair (0, v) (borneros)

we will have two equations in the K variables.

· Since f(U,v) is a complex and RHS is also complex we can compare

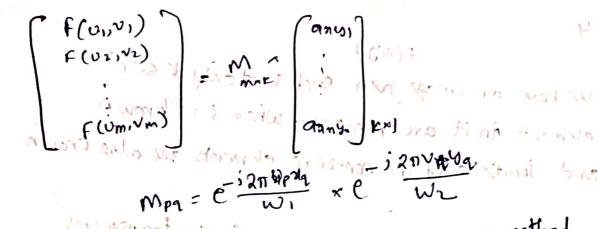
real and imaginary parts of the significant

.. For a pair (u,v) we have Requalitions in K. variables

: for m pairs (u,v) pairs we have 2 m equations in

.. We our left with am equations with k variables linear equation.

we can solve only when am > K



-> linear equation can be solved by using any method. out of the 2m equations take adject K linearly independent aquations to solve for k usuables,

- (the Minimum possible value m is will have more variables thorn avaible equations. Hence we can't find soln 91 m < k/2. Therefore minimom value is [x/2]. When Great John Color Co
 - c) No, the above described method doesn't work if Coordinates are Unknown.
- con known then all the elements in making M will be unknown "Wewill get a non-linear equation and nood
 - variables incl -> Prope The above method assumes that (alisti) are known
- -> Mentore the above method works that when coordinates are of nown . I want in view ring a car . Ich in form (civi) paires are france I am requestions in

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