$$= \int_{-\infty}^{\infty} f(t) \left[\cos 2\pi \mu t - i \sin 2\pi \mu t \right]$$

$$f(t) = \int_{0}^{\infty} F(y) e^{i \beta \pi y t} dy$$

$$= \int_{\infty}^{\infty} F(\mu) \left\{ \cos a \pi \mu t + j \sin a \pi \mu t \right\}$$

$$F\left(\mathcal{P}(,v)\right) = \int_{-\omega}^{\omega} f(t,z) e^{-i2\pi} \left(\mathcal{P}(t,z) \right) dt dz$$

Inverse,

$$f(t,z) = \int_{\infty}^{\infty} \int_{\infty}^{\infty} F(y,u) e^{i2\pi} (yt + vz)$$

$$dy do$$

A Relationship blus spatial & Frequency

⇒Translation & Rotation:

$$f(x,y) \in \mathcal{L}(x_0,y_0) \iff \mathcal{L}(x_0,y_0) - \mathcal{E}(x_0,y_0)$$

f(x-y) by the exponential shown shifts the origin of the DFT to

 $x = x \cos \theta$, $y = x \sin \theta$

⇒ Periodicity:

In 10 case, 2-0 FT & its inv are infinity page => Unsharp masking, High-boost Filtering 10-4-21 and High frequency - emphasis filtering

Just (xia) = t(xia) - t 16(xia)

-> Homomosphic filtering:

f(x,y) = i(x,y) r(x,y)

= (v1x) q1f

[(v,x)] \(\tau(v)) \(\tau(x)\) \(\tau(x)\)

E (x19) = 14 f(x19) = (VIX) 2 4 (V2 (X1A) =

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 $(u, \nu)_s + (u, \nu)_i + = (u, \nu) + \sum_{i=1}^{n} (u, \nu)_i + \sum_{i=1}^{n$

using tecain) s(u,v) = H(u,v) = (u,v)

= H Fi(a,v) + H Fr(a,v)

$$S(X|Y) = T'' \begin{bmatrix} S(U|Y) \end{bmatrix}$$

$$= T'' \begin{bmatrix} HFi \end{bmatrix} + T'' \begin{bmatrix} HFs \end{bmatrix}$$

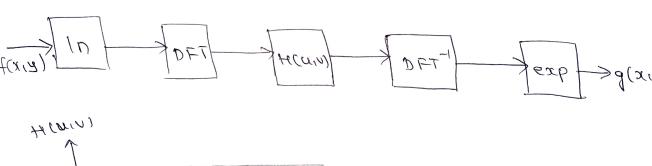
$$I'(X|Y) = T'' \begin{bmatrix} HFs \end{bmatrix}$$

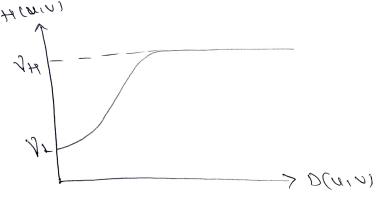
$$Y'(X|Y) = T'' \begin{bmatrix} HFs \end{bmatrix}$$

renerge the blocen

$$g(x,y) = e^{i(x,y)} e^{i(x,y)}$$

$$= e^{i(x,y)} e^{i(x,y)}$$





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