**Watermarks**

Image watermarking is a new challenging field that involves principles and techniques from a range of diverse disciplines.

Watermarks have been proposed for Copyright Protection of digital images, audio and video and, extensively, multimedia products.

Watermarks are digital signals that are embedded into other digital signals (carriers). The carrier signal is not affected strongly by such an embedding (watermarks are invisible).

A watermark should represent exclusively the copyright owner of the product and can be detected only by him/her.

Watermarks should not be removed by pirates. Watermarks must be robust to any product modification that does not degrade its quality. Resistance against any intentional attack is required

In a watermarking scheme one can distinguish between three fundamental stages Watermark generation, aims at producing the watermark pattern using an owner and /or image dependent key

Watermark embedding, can be considered as a superposition of watermark signal on the original image. Watermark detection, performed using watermark correlators or hypothesis testing

Digital Watermarking System



Watermarking Category- embedding approach

 Spatial domain-based scheme

 Low computational complexity

 Lower robustness

 Frequency domain-based scheme

 Need more computation

 Provide better robustness