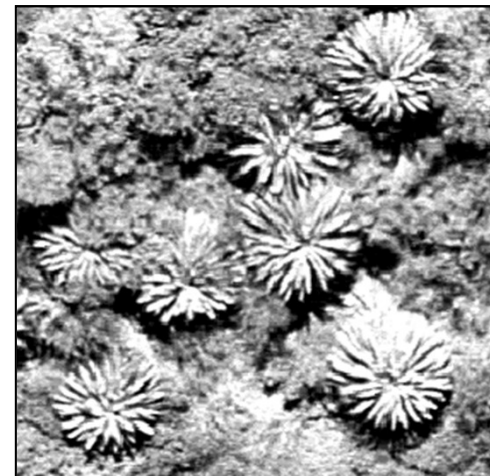
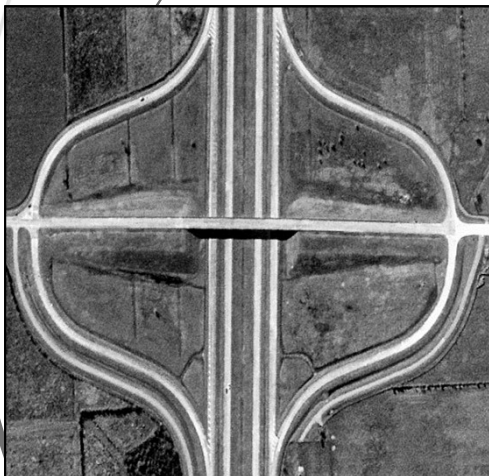
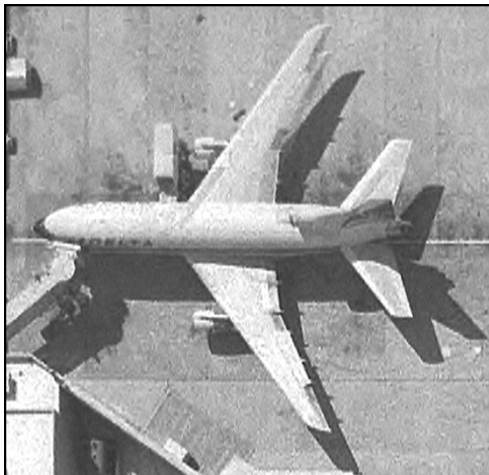


Elements of Image Interpretation - Shape





Elements of Image Interpretation

Shadow:

- Shadow reduction is of concern in remote sensing because shadows tend to obscure objects that might otherwise be detected.
- However, the shadow cast by an object may be the only real clue to its identity.
- Shadows can also provide information on the height of an object either qualitatively or quantitatively.

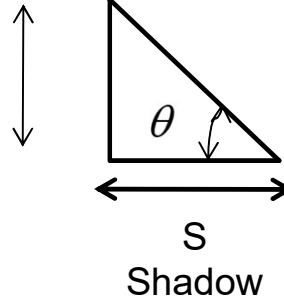
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- Shadow – usually a visual obstacle for image interpretation
- Gives height information about towers, tall buildings

H
object



$$\tan \theta = \frac{H}{S}$$

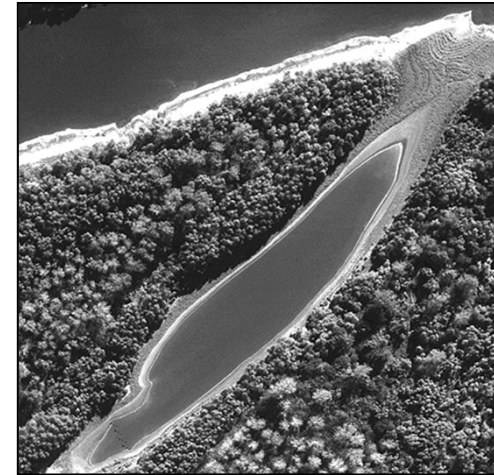
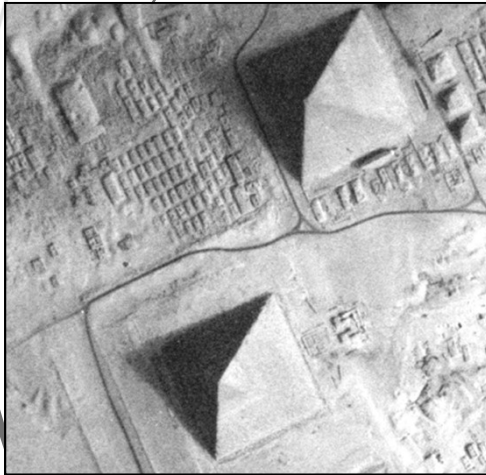
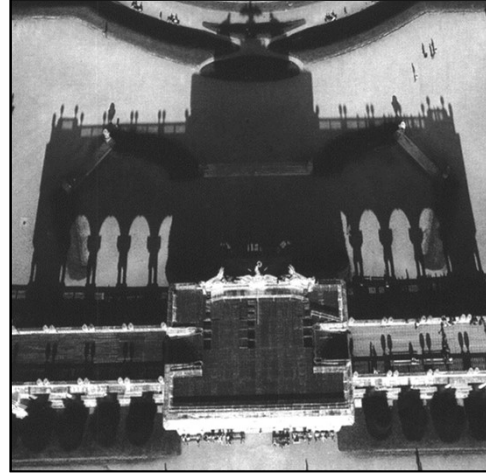
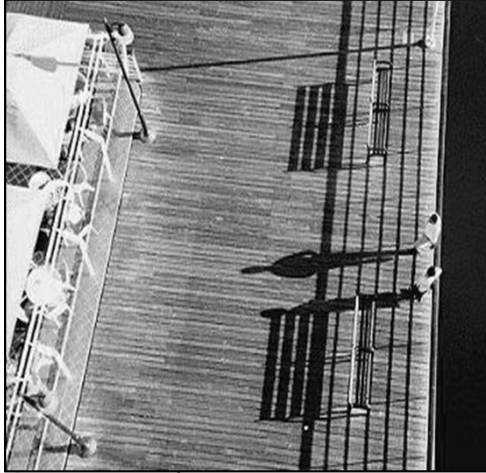
- Band of EM spectrum recorded by RS system may be displayed in shades of grey ranging from black to white

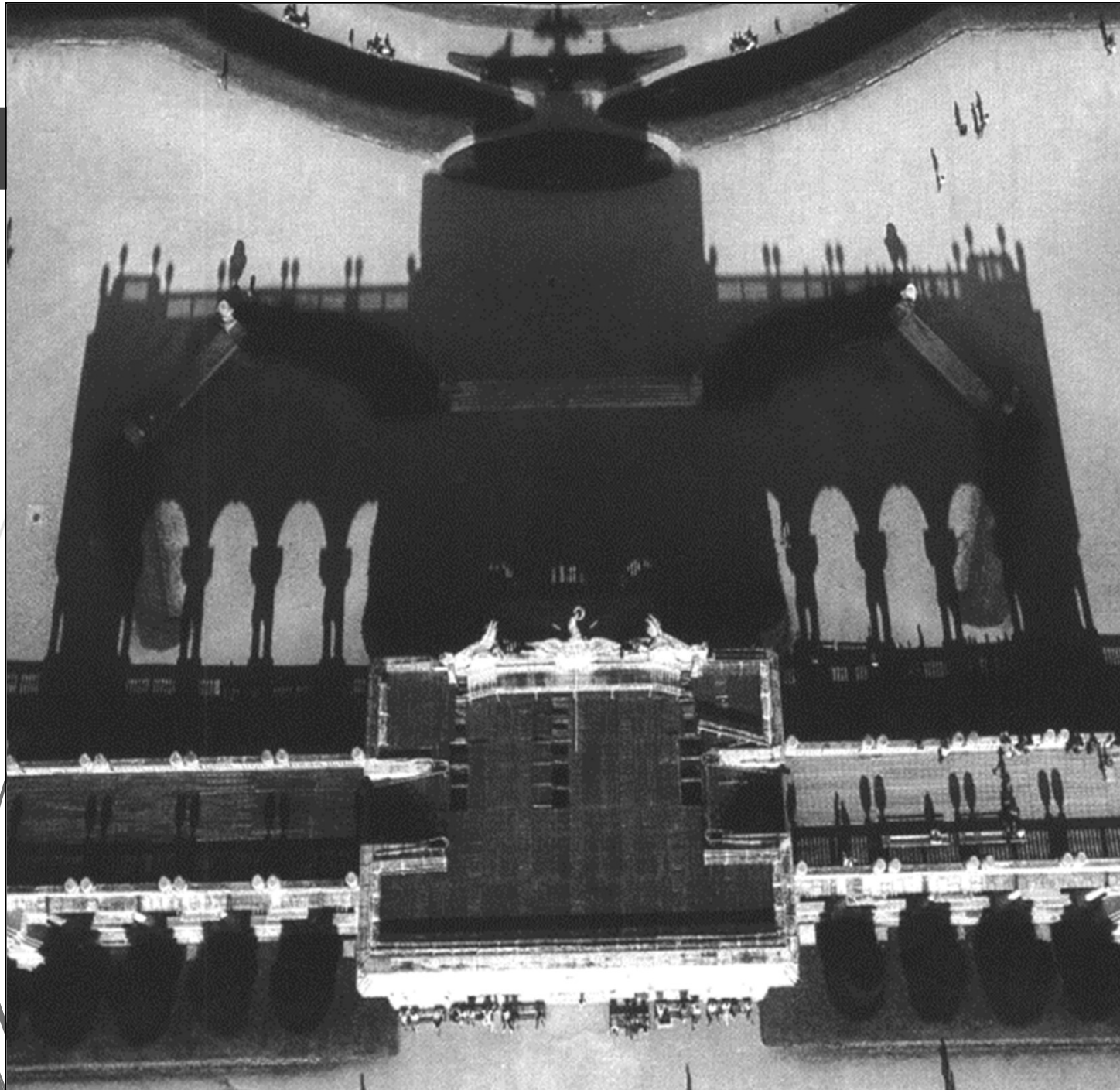
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The effect of using Shadow element





ماهي الاجسام الموجود في الصورة ادناه ؟ Shadow



الان ومن خلال استخدام خاصية الظل هل تمكنت
من التعرف على ماهي هذه الاجسام



Elements of Image Interpretation

Tone and color:

- A band of EMR recorded by a remote sensing instrument can be displayed on an image in shades of gray ranging from black to white.
- These shades are called “tones”, and can be qualitatively referred to as dark, light, or intermediate. (Humans can see 40-50 tones).
- Tone is related to the amount of light reflected from the scene in a specific wavelength interval (band).

Elements of Image Interpretation

- **Tone and color:**
 - Color-combining techniques can be used to create color composite images from individual bands.
 - Humans can distinguish the difference between thousands of subtle colors.
- **Colour**
 - more convenient for the identification of object details

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Jensen (2000)

Tone

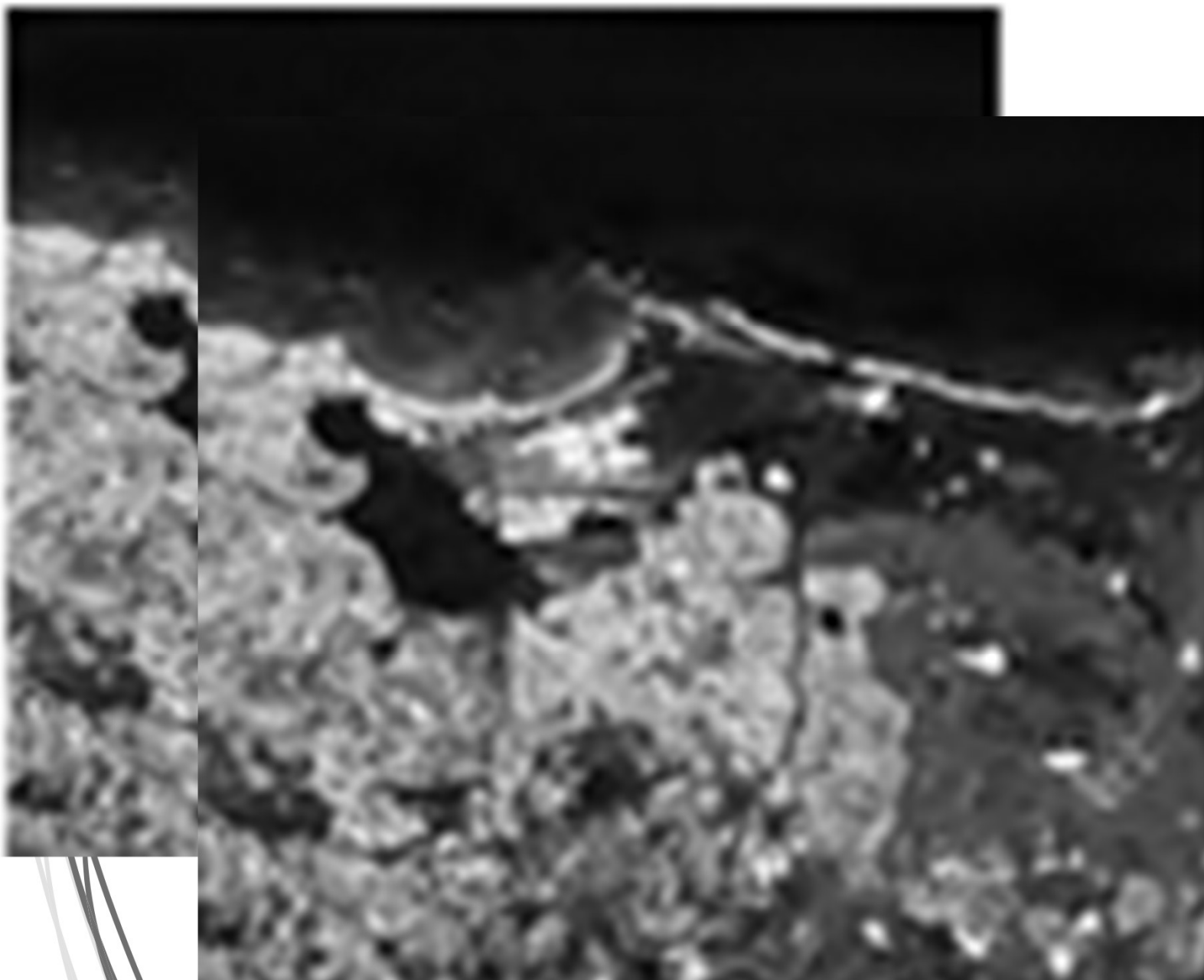


Color

الالوان تعطي تمييز اخر لمعرفة الاجسام وان كانت لها نفس اللون او بلون مختلف



Elements of Image Interpretation - Tone and Color





Elements of Image Interpretation

➤ Texture:

- Texture refers to the arrangement of tone or color in an image.
- Useful because Earth features that exhibit similar tones often exhibit different textures.
- Adjectives include smooth (uniform, homogeneous), intermediate, and rough (coarse, heterogeneous).