Differentiate between Object space and Image space method

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| **Object Space** | **Image Space** |
| 1. Image space is object based. It concentrates on geometrical relation among objects in the scene. | 1. It is a pixel-based method. It is concerned with the final image, what is visible within each raster pixel. |
| 2. Here surface visibility is determined. | 2. Here line visibility or point visibility is determined. |
| 3. It is performed at the precision with which each object is defined, No resolution is considered. | 3. It is performed using the resolution of the display device. |
| 4. Calculations are not based on the resolution of the display so change of object can be easily adjusted. | 4. Calculations are resolution base, so the change is difficult to adjust. |
| 5. These were developed for vector graphics system. | 5. These are developed for raster devices. |
| 6. Object-based algorithms operate on continuous object data. | 6. These operate on object data. |
| 7. Vector display used for object method has large address space. | 7. Raster systems used for image space methods have limited address space. |
| 8. Object precision is used for application where speed is required. | 8. There are suitable for application where accuracy is required. |
| 9. It requires a lot of calculations if the image is to enlarge. | 9. Image can be enlarged without losing accuracy. |
| 10. If the number of objects in the scene increases, computation time also increases. | 10. In this method complexity increase with the complexity of visible parts. |

**Electric Tablet:-**

A tablet surface has a grid of wires embedded in it, with each wire spaced at a distance of ¼ to ½ inch from the other. When you use a stylus or puck on the tablet surface, it generates an electromagnetic signal that interacts with this grid of wires.

The electrical pulses applied in sequence to the wires in the grid induce an electrical signal in a wire coil in the stylus or puck. This signal strength is measured, and based on the strength of the signal, the position of the stylus can be determined accurately.

In addition to the position, the signal strength is also used to determine whether the stylus is near, far or touching the tablet surface. When the stylus is within ½ inch from the tablet, it is taken as "near". If it's touching the surface, it's considered "touching", and if it's beyond ½ inch, it is considered "far".

When the stylus is "near" or "touching", a cursor is displayed on the screen to provide visual feedback to the user. This allows the user to accurately see where they are writing or drawing.

The information about the position and status of the stylus is transmitted to the computer at a rate of 30 to 60 times per second. This enables the computer to track the movement of the stylus in real-time and provide an accurate representation of the stylus's movement on the tablet surface.

Overall, this technology allows for precise and accurate input on a tablet surface, making it an excellent tool for digital artists, designers, and other professionals who require accurate and responsive input.

Resistive tablet:-

The tablet is just a piece of glass coated with a thin layer of conducting material. When a buttery-powered stylus is activated at certain position, it emits high-frequency radio signals, which induces the radio signals on the conducting layer. The strength of the signal received at the edges of the tablet is used to calculate the position of the stylus.

**Precision Inline CRT**

The sentence refers to two different types of cathode ray tubes (CRTs) used in older computer monitors: delta-delta CRT and precision inline CRT (also known as shadow mask CRT).

Delta-delta CRTs were commonly used in older monitors and had a disadvantage of producing blurred or distorted images due to the overlapping of electron beams.

Precision inline CRTs, on the other hand, improved upon this drawback by incorporating a shadow mask that separated the electron beams, thereby eliminating distortion and improving image quality. However, in doing so, there is a slight reduction in image sharpness compared to delta-delta CRTs.

Therefore, the sentence means that precision inline CRTs (which incorporate shadow masks) have eliminated the drawbacks of delta-delta CRTs (which produce distorted images), but at the cost of slightly reduced image sharpness

| **Sr. No.** | **Basis** | **Beam Penetration** | **Shadow Mask** |
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| 1. | Colors produced | In this method, there is the production of only four colors i.e., red, green, yellow, orange. | In this method, there is the production of millions of colors. |
| 2. | Color dependency | As in this method only four colors are produced it is because of the speed of the electron gun. | As in this method millions of colors are produced because it depends upon the intensity value of the three available guns. |
| 3. | Number of electron guns used. | In this method, only one electron gun is used. | In this methods, three electron guns are used; i.e red, green and blue. |
| 4. | Picture quality | As we know in this different colors and shades are not possible. So, it’s picture quality is poor. | As we know in this different colors and shades are possible. So, it’s picture quality is quite good. |
| 5. | Realistic view | This method is not suitable for providing the realistic view. | This method is suitable for providing the realistic view. |
| 6. | Resolution | This method provides high resolution. | Whereas, this method does not able to provide high resolution. |
| 7. | Cost | It is cheaper than shadow mask method. | It is an expensive method. |
| 8. | Application | It is used in random scan system to display color. | It is used in raster scan system to display color |