

## Section 2: Virtual Reality: History, Philosophy and Theory#

### 2.2 Origins of virtual reality#

As a three-dimensional computer graphics capability, VR enables the developer to create pictorial representations, abstract or naturalistic, and display them, with apparent depth, on a computer screen. A VR world can simulate the 'real' conditions of a hospital operating theatre, an aircraft landing, or a racing car in a wind tunnel, and it was in just these sorts of simulator scenarios that the earliest VR technologies began to develop.

The earliest, pre-VR, simulators were devised for training personnel in circumstances where 'real-world' training could prove difficult, expensive or safety-critical. Prior to the development of video or computer graphics, simulators were constructed through a combination of mechanical gadgetry and flat illustrations or photographs. For example, an artillery view-finder could be rigged, via mechanical or electrical connections, to a large painted backdrop, representing the target zone, on which the trainee gunner's successful, or not-so-successful, aim could be displayed by embedded lights. The use of video, as it became available, obviously increased the functionality of such systems, enabling alternative backdrops (perhaps different airports in a commercial flight simulator) to be installed fairly easily. However, computer graphics had two fundamental advantages over this approach: flexibility and interactivity.

---