



XBOX 360.....HOW KINECT WORKS!

In 2010, Microsoft unveiled a new Xbox 360 accessory it said would change the way gamers played. The Kinect was the first motion controlled gaming system that didn't require a controller, instead allowing players to use their whole body to move the game. The Kinect uses a complicated system of sensors, lasers and cameras to detect a player's gestures and actions. Using your hand as the controller, swinging an imaginary light saber or trying to copy the dance moves of Justin Bieber are just some of the ways the Kinect allows us to play. But how does it work?

First, there is a regular RGB camera, which uses the typical technology found in . It simply acts like a basic webcam, and records the room. When needed, the Kinect uses this camera to display your image in the game. The more complicated camera relies on infrared light to work. One of the lenses on the Kinect is actually emits infrared light which covers the area where the player stands. The camera sees these waves as they bounce off people and objects in the room. If the infrared light is brighter (but invisible to the human eye), the object is closer. As parts of your body move, the Kinect encodes information in that light as it goes out, then measures the changes in the brightness of the infrared light as it reflects off of the moving parts of your body.

The information that comes into the camera is instantly processed by some really smart software. It identifies shapes that could be human by heads and limbs, so your Kinect doesn't think your armchair or your cat are the ones trying to play *Dance Central*. This software already understands how a human body can move, so it knows your head can't turn 360 degrees on your neck, and it captures movement through more than 48 points of articulation.

The Kinect software has been programmed with more than 200 possible poses, so it has an idea of where your body is probably going to go, too. This is especially important in two-player games where one player might move in front of the other, or a piece of low furniture might block the camera's view of your legs. The game software that you load for gameplay knows how to access the data that is processed by the Kinect cameras and software and use it to control the gameplay. Hence you become the game controller.