

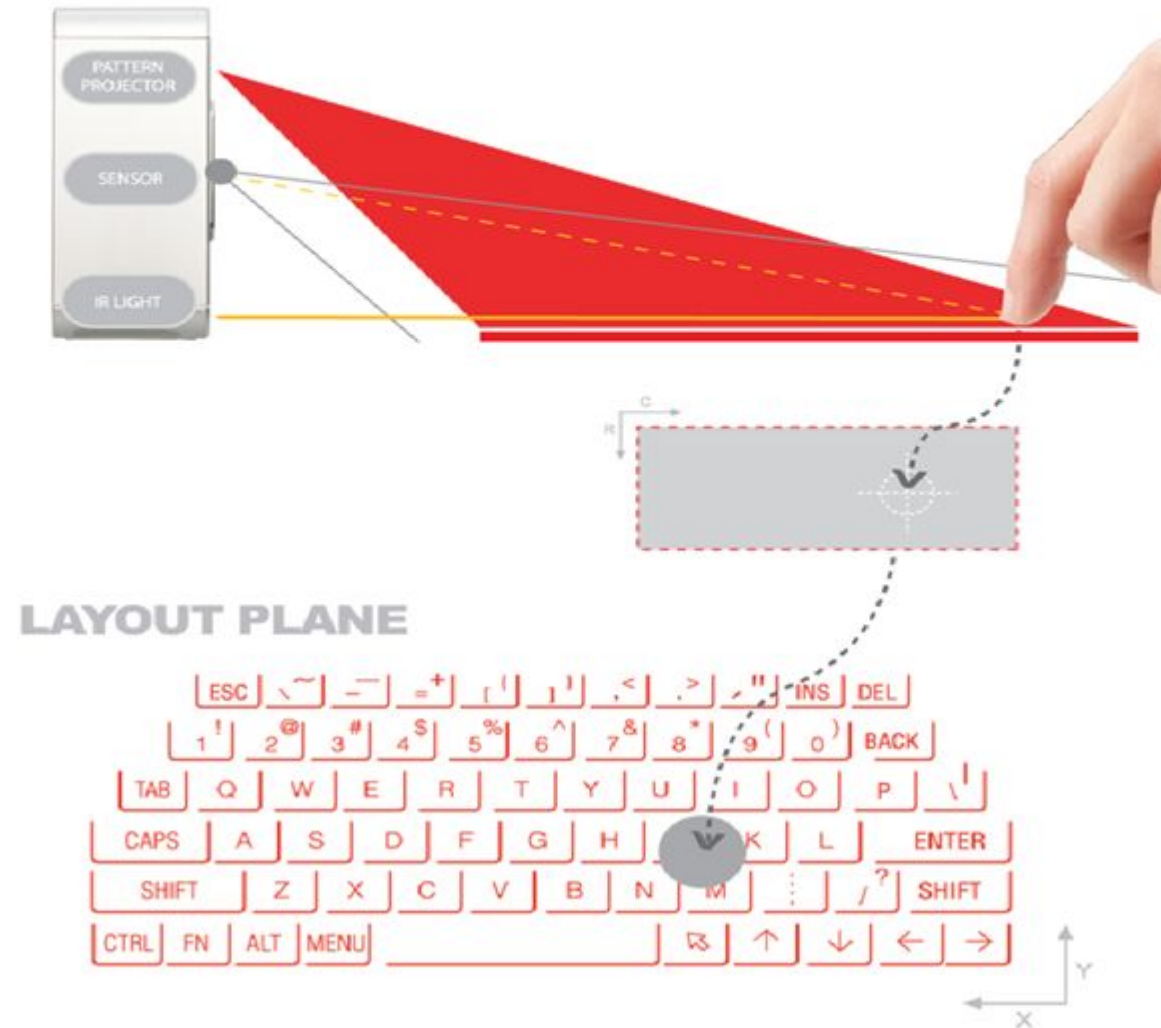
Touch screen and virtual
keyboard

Virtual keyboards

- Virtual keyboards are nonphysical keyboards that produce text on the screen of an electronic device through the device user tapping virtual keys either displayed on the device's screen or projected via laser onto a flat surface.
- These keyboards can provide a significant advantage to those who require a full-sized keyboard to type on a smartphone or netbook or for devices that only use touch screens



Working of Virtual Keyboard



Virtual Projected Keyboard

- Virtual keyboards that project a picture of keys on a flat surface work a little differently from virtual touchscreen keyboard
- Laser-projected keyboards employ additional sensors that project a field, often only a few millimeters, parallel to the image projected on the surface.
- When your fingers disrupt areas of this field, the projected keyboard identifies the key you typed and communicates that information to your computer, which then represents the keystroke on its screen.

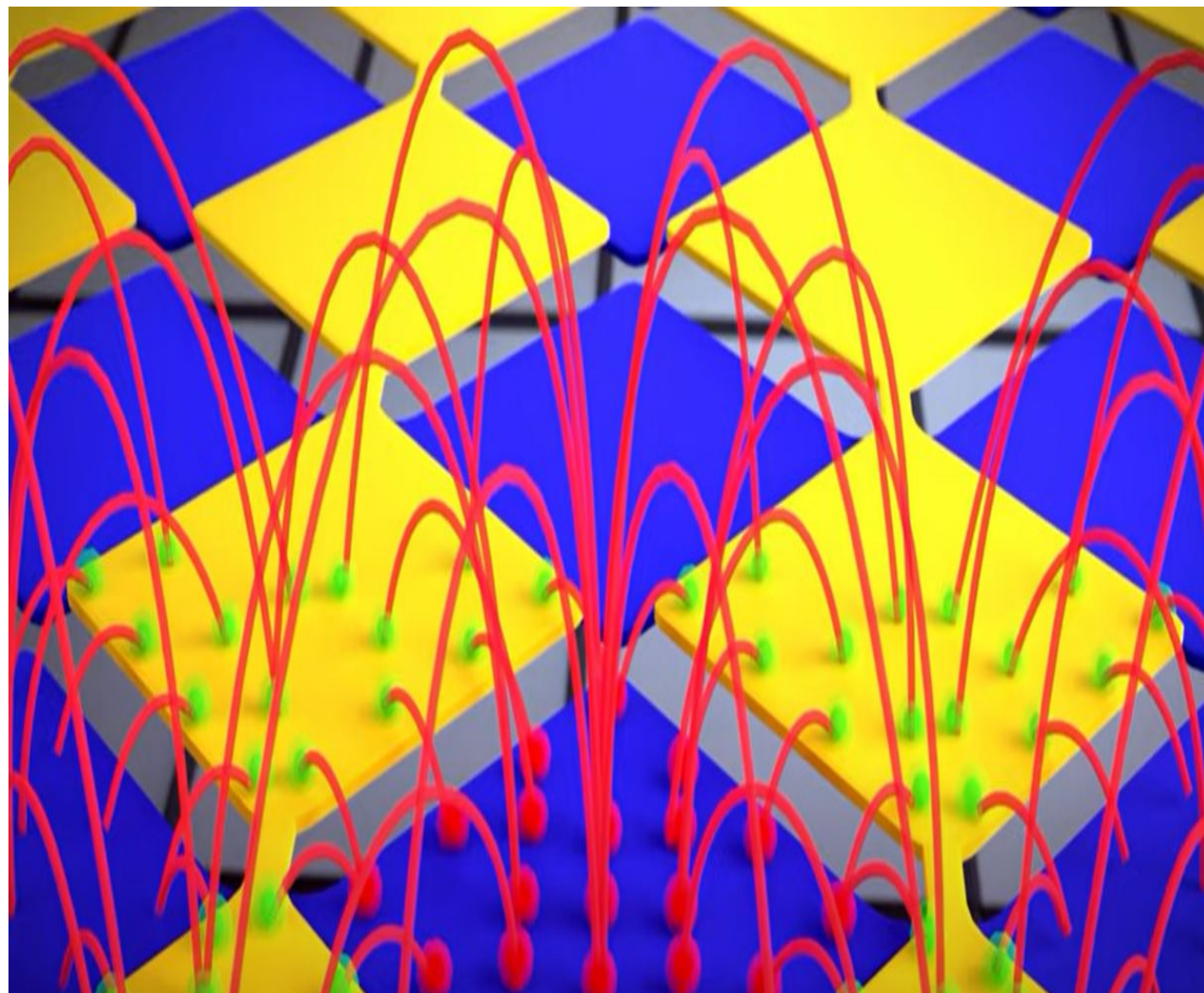
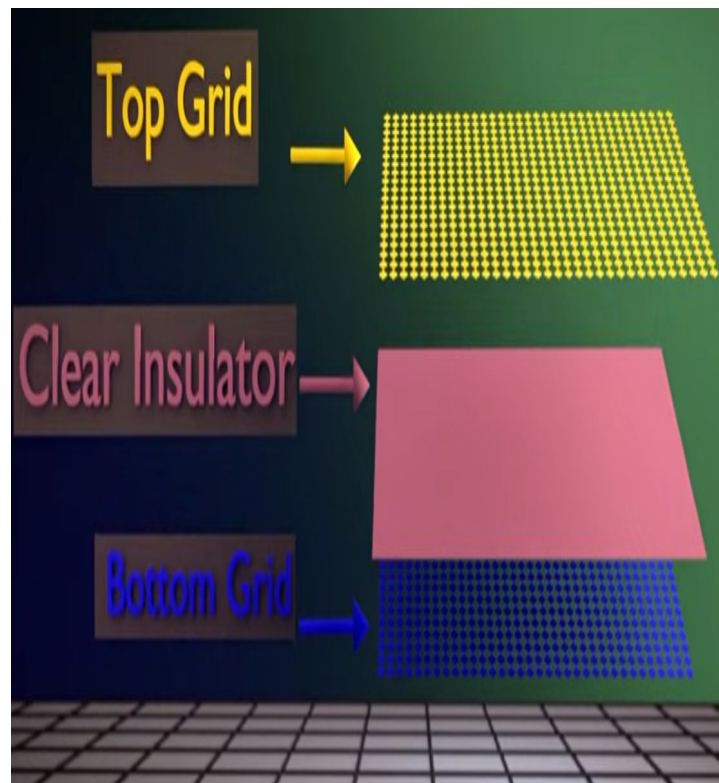
Virtual Touch screen keyboards

- Virtual touchscreen keyboards employ the same idea as projected keyboards but without the laser. Beneath the surface of the touchscreen, your device detects changes in the voltage when your fingers touch the screen. Depending on the change in voltage and the location of the change, the device then determines which button you touched or which key you tapped.

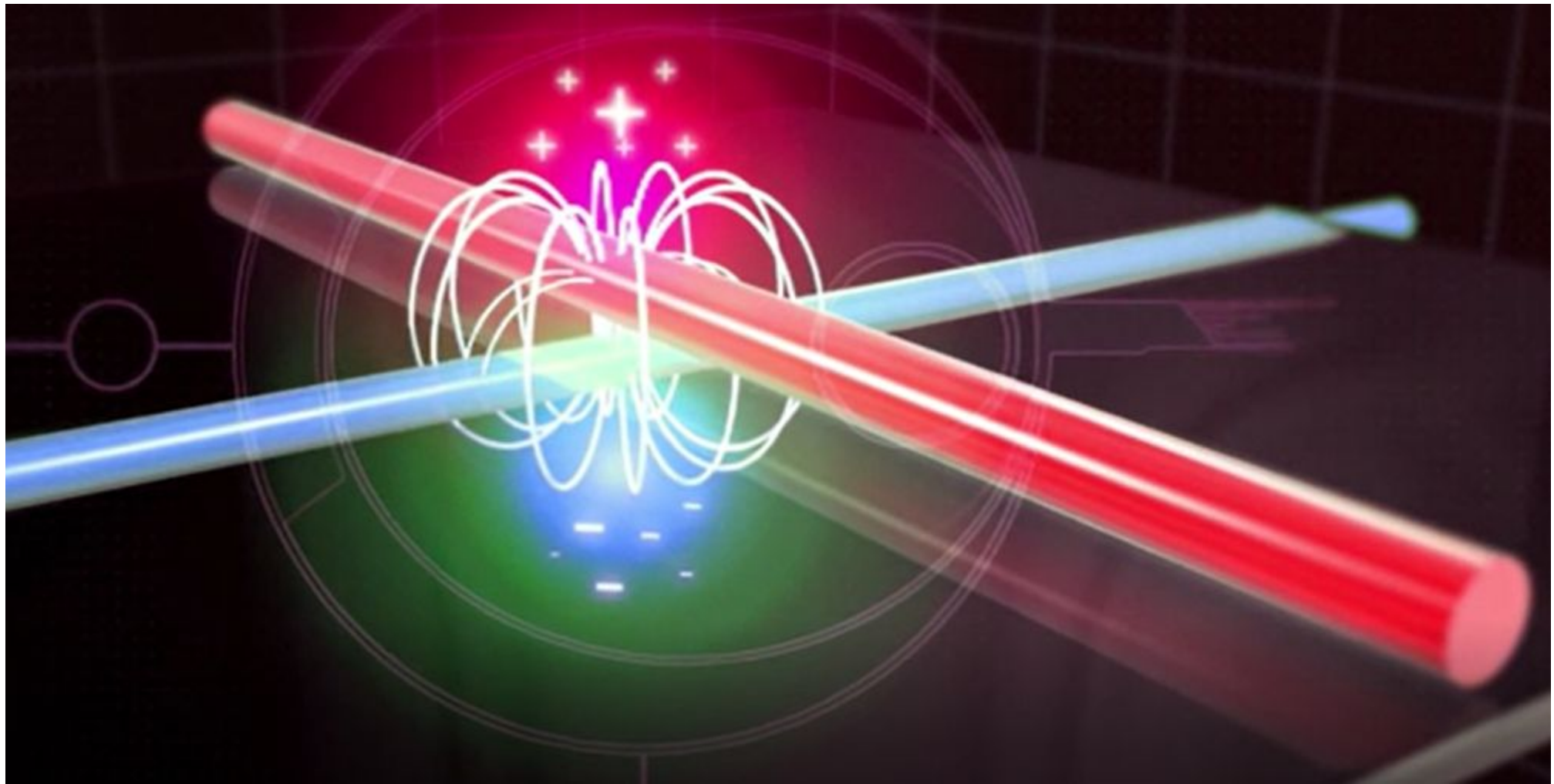
Touch Screen

- Invisible electric field pop out of the glass screen in a grid pattern
- Electric fields are monitored by sensors at the side of the phone
- screens work by constantly monitoring the electrical field of the screen. Since your body conducts electricity, touching the screen alters this field, and the system can detect that change and use it to determine where you touched









Advantages and Disadvantages

Advantages:

- full-sized keyboard
- lighter, they take up less, or no, additional space.

Disadvantages:

- Not feeling the keys physically
- With virtual projected keyboards, you won't be able to type on anything other than a flat surface
- You also can't rest your hands on either type of keyboard while you think of what to type; by doing so, you could type a string of nonsensical letters.