Touch screen technology has been on the rise these past few years. When a
device is said to be “touch screen”, it means that the device can be controlled through
direct touch and that there are no need for buttons. Developers have been making
everything from cell phones, to computers, to televisions touch screen. Most people
enjoy the ability of “feeling ownership”\(^1\) of their gadgets – they get to directly control the
device through their sense of touch. Many phone companies have started developing
products that involve a touch screen mechanism. Samsung, for example, started
making all of its latest devices with touch screen interface.

The first touch screen phone was called IBM Simon Personal Communicator and
it was invented in 1994\(^2\). The IBM Simon introduced the touch screen interface to the
market and it was very successful. It had absolutely no buttons on it and it was relatively
small compared to the other phones of its time. Some drawbacks of the phone were
that it was heavy, very rare, and it was hard to carry around. Although the IBM Simon
had many disadvantages, it was the first smart phone of its kind and it introduced a very
unique and successful idea to the market.

Many, many new devices have been built with an integrated touch screen
interface since 1994. It is the new style in cell phones, and everyone wants one. They
are user friendly and considered high tech. There are many different types of touch
screen cell phones. Resistive touch screens have a top layer made of polyester
plastic and a bottom layer of glass. The two layers are then separated by an “insulating
membrane.”\(^3\) When pressure is applied to this screen, the polyester layer pushes
against the glass layer and the system acknowledges that the screen has been
touched. Capacitive touch screens are primarily composed of multiple layers of glass
that behave like conductors of electricity. These screens are a little more developed and
therefore they can be touched multiple times at once. Infrared touch screens use LEDs
(light emitting diodes) and light detectors called photocells. Whenever the screen is
touched, the light beams emitted from the LEDs are interrupted, and therefore touch is
recognized. Another type of touch screen is the Near Field Imaging touch screen. These

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2. [http://www.retrocom.com/bellsouth_ibm_simon.htm](http://www.retrocom.com/bellsouth_ibm_simon.htm)
screens are surrounded by an electromagnetic field and can sense when objects are moving closer towards them because the electromagnetic field gets disrupted. The final type of touch screen is Surface Acoustic Wave. This type uses sound to recognize touch. The phone constantly transmits ultrasonic sound waves across the screen, and touch is identified when the waves are disrupted.\(^3\)

All the new technology has greatly contributed to society, however it has some experts concerned. A recent study done by Stanford University performed on October 23, 2010 showed that touch screen cell phones have up to 18 times more bacteria than a public bathroom toilet handle. They also found that touch screen cell phones are more likely to transmit flu-causing viruses. Scientists at Stanford performed another experiment and concluded that 30% of a virus on a touch screen phone will be transferred on to one’s finger when the virus is touched.\(^4\) This study raised many concerns.

According to a study published in *Journal of Applied Microbiology*, “viruses can easily be transferred [to one’s finger] from nonporous glass surfaces.”\(^5\) Many touch screens phones fall under this category. CBS News Medical Correspondent Dr. Jennifer Ashton did a demonstration that showed how easily touch screen phones accumulate bacteria. “Before long, [the phone] is covered with bacteria, viruses, germs,” she says.\(^6\) Medical experts worry that the increasing usage of touch screen phones might lead to the spread of diseases and influenza.

Seeing that most of the studies done show that touch screen cell phones tend to accumulate a lot of bacteria, one can hypothesize that touch screen cell phones contain more bacteria than regular screened cell phones.

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