IDEATION PHASE

DEFINE THE PROBLEM STATEMENT

PROJECT: <u>A GESTURE BASED TOOL FOR STERILE BROWSING OF RADIOLOGY IMAGES</u>

- Computer information technology is increasingly penetrating into the hospital domain.
- A major challenge involved in this process is to provide doctors with efficient, intuitive, accurate and safe means of interaction without affecting the quality of their work.
- Keyboards and pointing devices, such as a mouse, are today's principal method of human—computer interaction.
- However, the use of computer keyboards and mice by doctors and nurses in intensive care units (ICUs) is a common method for spreading infections.
- Even though voice control also provides sterility, the noise level in the operating room (OR) deems it problematic.
- Our solution for this problem is the use of hand gestures as an alternative to existing interface techniques, offering the major advantage of sterility.
- In our work we refer to gestures as a basic form of non-verbal communication made with the hands.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS - 1	Doctors	Perform surgery by sterile browsing of radiology images	The gestures may be misinterpreted	Camera may detect multiple persons in the OR	Frustrated

| PS - 2 | Nurses | Perform surgery by sterile browsing of radiology images | It may predict wrong under bad lightings | Camera hardly detects images in darkness | Anxious |