Perception: Sensors for Mobile Robots

Why do roboticists need to know about sensors?

- *It’s the key technology for perceiving the environment*
- *Understanding the physical principle enables appropriate use*

Understanding the physical principle behind sensors enables us:

- *To properly select the sensors for a given application*
- *To properly model the sensor system (e.g., resolution, bandwidth, uncertainties)*
- *To define the needs in collaboration with sensory system suppliers*
Example B21, Real World Interface
Example Robart II, H.R. Everett
Savannah, River Site Nuclear Surveillance Robot
BibaBot, BlueBotics SA, Switzerland

- Pan-Tilt Camera
- Omnidirectional Camera
- Sonar Sensors
- Laser Range Scanner
- Bumper
- IMU (Inertial Measurement Unit)
- Emergency Stop Button
- Wheel Encoders