Working Definition

A broadly-deployed aggregate computing/communication application and/or application-consumption system, that is deployed over a local (L-IoT), metropolitan (M-IoT), regional (R-IoT), national (N-IoT), or global (G-IoT) geography, consisting of (i) dispersed instrumented objects ("things") with embedded one or two-way communications and some (or, at times, no) computing capabilities, (ii) where objects are reachable over a variety of wireless or wired local area and/or wide area networks, and, (iii) whose inbound data and/or outbound commands are pipelined to or issued by a(n application) system with a (high) degree of (human or computer-based) intelligence.

Working Definition of Sensors :

Sensors are active devices that measure some variable of the natural or man-made environment (e.g., a building, an assembly line, an industrial assemblage supporting a process).

Working Definition of Actuators :

An actuator is a mechanized device of various sizes (from ultra-small to very large) that accomplishes a specified physical action, for example, controlling a mechanism or system, opening or closing a valve, starting some kind or rotary or linear motion, or initiating physical locomotion. An actuator is the mechanism by which an entity acts upon an environment.

Object :

- An object is a model of an entity.
- An object is distinct from any other object and is characterized by its behavior.
- An object is informally said to perform functions and offer services

Objects have the following characteristics :

- have the ability to sense or actuate
- are generally small (but not always)
- have limited computing capabilities (but not always)
- are energy/power limited
- are connected to the physical world
- sometimes have intermittent connectivity
- are mobile (but not always)
- of interest to people
- managed by devices, not people (but not always)

Object Classification