SNS COLLEGE OF TECHNOLOGY

Coimbatore-35.

An Autonomous Institution

COURSE NAME : 19ITT302   INTERNET OF THINGS

III YEAR/ V SEMESTER

UNIT – II FUNDAMENTAL MECHANISMS & KEY TECHNOLOGIES

TOPIC - STRUCTURAL ASPECTS OF IOT

UNIT II FUNDAMENTAL MECHANISMS & KEY TECHNOLOGIES

Identification of IoT Objects and Services- Structural aspects of IoT-Environment Characteristics-Traffic Characteristics-Scalability-Interoperability-Security and privacy -Key IoT Technologies :Device Intelligence - Communication Capabilities - Mobility Support - Device Power –Sensor Technology -RFID Technology - Satellite Technology - IoT Enabling Technologies- WSN, Cloud computing, Big data Analytics, communication protocols, embedded systems

STRUCTURAL ASPECTS OF THE IoT

- Environment Characteristics
- Traffic Characteristics
- Scalability
- Interoperability
- Security and Privacy
- Open Architecture

STRUCTURAL ASPECTS OF THE IoT

Environment Characteristics :

➢ Low power
➢ Low cost
➢ Significantly more devices than in a LAN environment
➢ Severely limited code and RAM space
➢ Unobtrusive but very different user interface for configuration
➢ Requirement for simple wireless communication technology.

STRUCTURAL ASPECTS OF THE IoT

Traffic Characteristics :

❑ The characteristics of IoT/M2M communication is different from other types of networks or applications.

❑ For example, cellular mobile networks are designed for human communication and communication is connection centric; it entails interactive communication between humans (voice, video), or data communication involving humans (web browsing, file downloads, and so on).

STRUCTURAL ASPECTS OF THE IoT

Scalability :

❑ The goal is to make sure that capabilities such as addressing, communication, and service discovery, among others, are delivered efficiently in both small and large scale.

STRUCTURAL ASPECTS OF THE IoT

Interoperability :

❑ Because of the plethora of applications, technology suppliers, and stakeholders, it is desirable to develop and/or re-use a core set of common standards.

STRUCTURAL ASPECTS OF THE IoT

Security and Privacy :

❑ When IoT relates to electric power distribution, goods distribution, transport and traffic management, e-health, and other key applications, as noted earlier, it is critical to maintain system-wide confidentiality, identity integrity, and trustworthiness.

STRUCTURAL ASPECTS OF THE IoT

Open Architecture :

❑ The goal is to support a wide range of applications using a common infrastructure, preferably based on a service-oriented architecture (SOA) over an open service platform, and utilizing overly networks (these being logical networks defined on top of a physical infrastructure).