SNS COLLEGE OF TECHNOLOGY

Coimbatore-35

An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

19ECE308- WIRELESS TECHNOLOGIES FOR IOT

III ECE / VI SEMESTER

UNIT 1 – OVERVIEW OF INTERNET OF THINGS

TOPIC 6 –Examples of IoT

A fitness tracker wearable band

- Track steps, distance, calories burned and active minutes
- See stats and time with a bright OLED tap display
- Automatically track how long and how well you sleep and set a silent, vibrating alarm
- Personalize with interchangeable metal, leather and classic bands
- Get calls, texts and calendar notifications at a glance when the phone is in a defined range.

Smart Watch

Samsung Galaxy Gear S Smartwatch Features	Apple Watch	Microsoft Wrist Band 2
• Two-inch curved display • Ability to make a phone call (completely independent of an actual smartphone) or send a text • Wi-Fi and Bluetooth connectivity options • GPS enabled • S Health App measures heart rate and UV monitors and informs the wearer of a good time to eat, when he/she has had enough exercise and a good time to take rest • Has navigational features to assist walking	• Apple iSmartwatch has Apps like Nike + Running to track morning or evening runs and health and fitness. It can: ○ track walks ○ measure heart rate ○ make payment using a payment wallet ○ enable listening to songs while exploring parks without the phone ○ enable chat with family ○ update email ○ find a taxi ○ update news ○ navigate for long car trips ○ control Apple TV ○ set reminders for baseball games to be watched	• Fitness tracking • Can help with productivity by displaying email, calendar and message notifications • Works with Windows phone, iOS devices and Android devices • Sensors: Optical heart rate, 3-axis accelerometer, gyrometer, GPS, ambient light, UV, skin temperature, capacitive sensor, galvanic skin response, Barometer

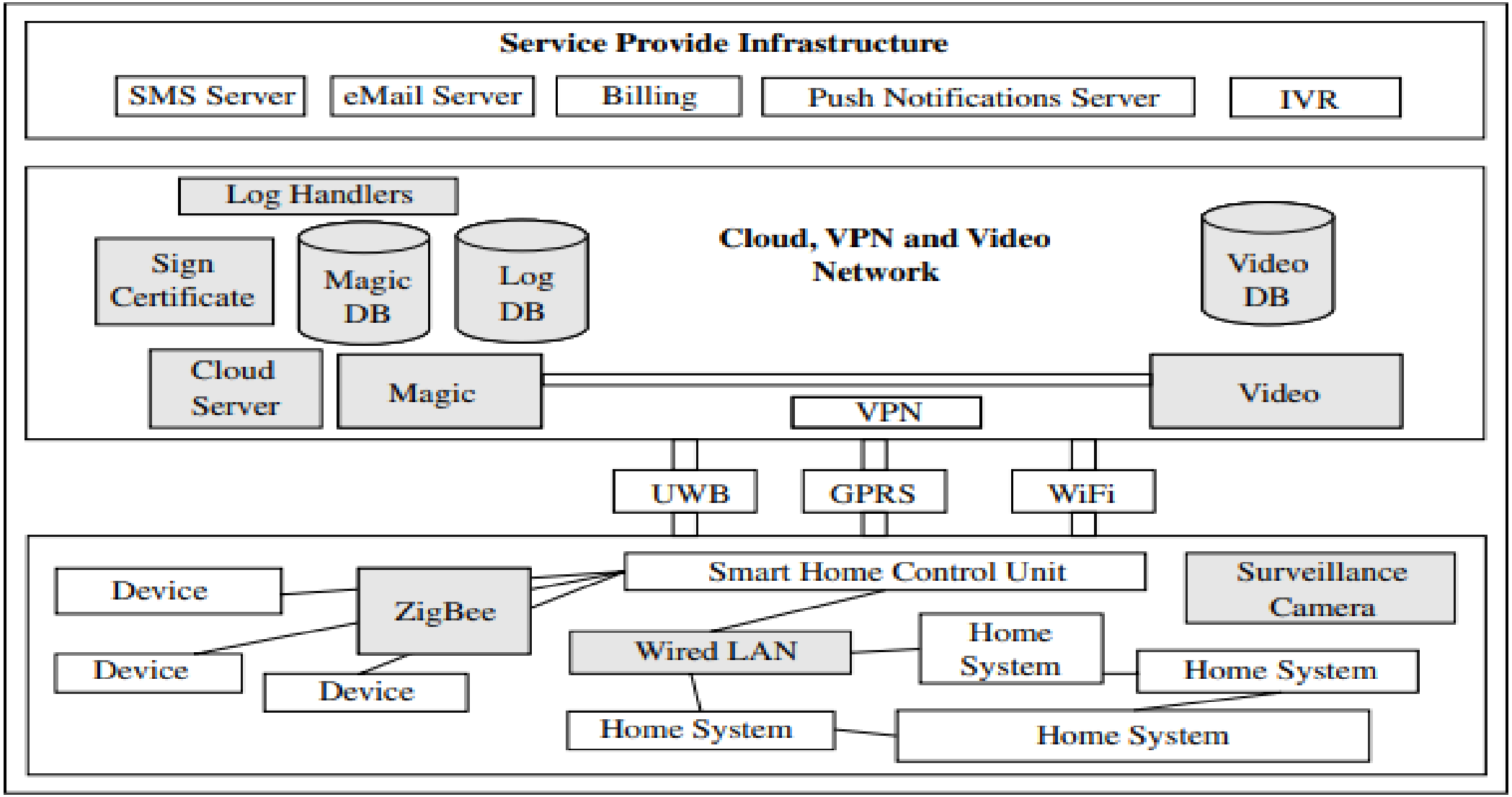
Smart Home

Sensors and actuators manage a smart home with an Internet connection. Wired and wireless sensors are incorporated into the security sensors, cameras, thermostats, smart plugs, lights and entertainment systems. Do-it-Yourself (DIY) sensors and actuators, include smart plug, motion detector, door/window detector, smoke detector, energy meter interface (electric, gas, water), remote control (built-in authentication), smart relay, surveillance camera, Wireless Hi-Fi speakers, HUE LED lights, electric utility meter etc.[24]

A connected home has the following applications deployed in a smart home:

- Mobile, tablets, IP-TV, VOIP telephony, video-conferencing, video-on-demand, video-surveillance, Wi-Fi and internet
- Home security: Access control and security alerts
- Lighting control
- Home healthcare
- Fire detection or Leak detection
- Energy efficiency
- Solar panel monitoring and control
- Temperature monitoring and HVAC control
- Refrigerator network with maintenance and service centres
- Automated meter reading

An architectural view of cloud based IoT platform for smart home



4layer architectural framework at CISCO for a city