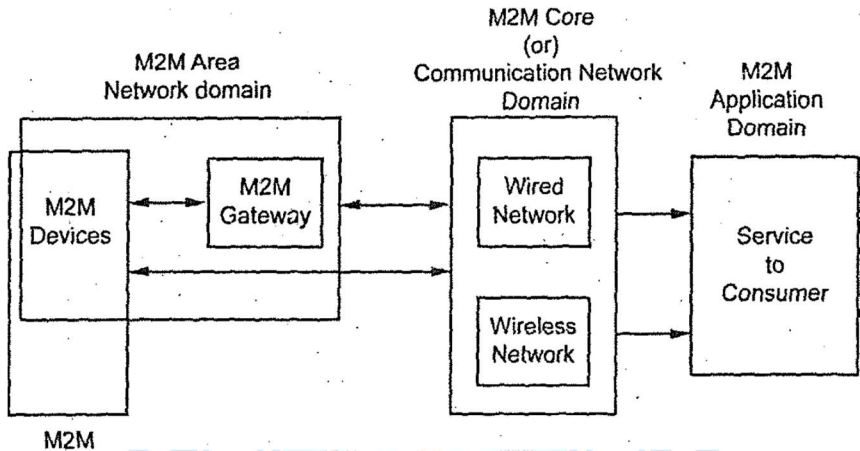


M2M System Architecture

M2M System Architecture



Area Networks

- M2M area network comprises of machines or nodes which have embedded hardware modules for sensing, actuation and communication.
- The various communication protocols that can be used for M2M local area networks such as ZigBee, Bluetooth, ModBus, M-Bus, Wireless M-Bus, Power Line Communication (PLC), 6L0WPAN, IEEE 802.15.4 etc.
- These communication protocols provide connectivity between M2M nodes within an M2M area network.

Gateways:

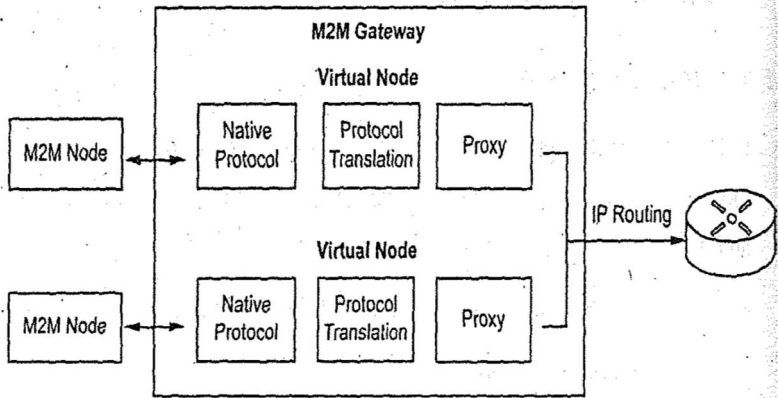


Fig 11.2 Block diagram of an M2M gateway

- To enable the communication between remote M2M area networks, M2M gateways are used which bridge one or more locally networked devices to a wired or wireless broadband connection. The local network can be wired or wireless.
- M2M gateway acts as a proxy performing translations from/to native protocols to/from Internet Protocol (IP).

(ii) M2M Core (or) Communication Network

The communication network can use either wired or wireless networks (IP-based) while the M2M area networks use non-IP based communication protocols that is, the M2M nodes

ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY within one network cannot communicate with nodes in an external network.

(iii) M2M Applications

The M2M data is gathered into point solutions such as enterprise applications, service management applications, or remote monitoring applications. M2M has various application domains as follows:

- Smart metering,
- Home automation,
- Industrial automation, and
- Smart grids.

