

Intranet & Extranet

Intranet

- **Definition**
 - An Intranet is a private computer network that uses Internet protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization's information or operations with its employees
 - Authenticated users of the organization can access the database system, search engines, directory and can distribute documents and workflow
- **Advantages**
 - Help employees to quickly locate information and application relevant to their roles and responsibilities
 - Standard interface allowing "access from anywhere"
 - Can serve as a powerful tool for communication within an organization(both horizontally and vertically)
 - Permits information to be published

Extranet

- **Definition**
 - An Extranet is a private network that uses Internet protocols, network connectivity, and possibly the public communication system to securely share part of an organization's information or operations with suppliers, partners, customers, or other businesses.
 - Can be viewed as part of a company's Intranet that is extended to users outside the company.
 - It is basically a "private internet with Internet connectivity"
 - Only registered users can navigate
 - It requires security and privacy
- **Advantages**
 - Can improve organization productivity
 - Allows information to be viewed at times convenient for external users.
 - Information can be updated instantly
 - Can improve relationships with customers.

Ad-hoc Network

- **WANET**
 - A wireless ad hoc network is a decentralized type of wireless network. The network is ad hoc because it does not rely on a pre existing infrastructure, such as routers in wired networks or access points in managed (infrastructure) wireless networks.
- **MANET**
 - A mobile ad hoc network is a continuously self-configuring, infrastructure-less network of mobile devices connected without wires. Each device in a MANET is free to move independently in any direction, and will therefore change its links to other devices frequently.
- **VANET**
 - A Vehicular Ad-Hoc Network) is a technology that uses moving cars as nodes in a network to create a mobile network. VANET turns every participating car into a wireless router or node, allowing cars approximately 100 to 300 metres of each other to connect and, in turn, create a network with a wide range.
- **PAN** (Personal Area Network)
- **BAN** (Body Area Network)

Pros and Cons of Ad-hoc Networks

- **Pros**
 - No expensive infrastructure must be installed
 - Use of unlicensed frequency spectrum
 - Quick distribution of information around sender
 - No single point of failure.
- **Cons**
 - All network entities may be mobile ⇒ very dynamic topology
 - Network functions must have high degree of adaptability
 - No central entities ⇒ operation in completely distributed manner.
- **Simulators**
 - OPNET, NetSim , NS2, OMNeT++ and NS3.