# COMPARISON OF TELEC OM OEM VENDORS

**Dr Sreekumar D Menon**

**D Litt,PhD,MPhil,MBA,MSc,MS,PGDLL&AL,PGDMM,PGDPM&IR,PGDPC,PGDDM,MIMA,ACT(UK),FDP(IIM)**
**Faculty Member ,RTTC ,BSNL, Trivandrum**

**Introduction:**

Telecommunication equipment (also called communication equipment)is hardware used for the purpose of telecommunications. Since 1990's the boundary between telecom equipment and IT hardware has become blurred as a result of the growth og the internet and its increasing roles in the transfer of telecoms data.

The telecommunication equipment can be broadly broken down into the following categories: Public switching equipment, Transmission equipment and Customer premise equipment. The World's five largest router and switch vendor leadership as per global service provider survey are :CISCO systems, Huawei Technologies, Nokia networks, Juniper networks and ZTE corporation.

The World's largest mobile phone handset vendors are: Samsung, Apple, Huawei technologies,Oppo,,Vivo,Xiami,LGElectronics,ZTECorporations,Lenova, TCL, Meizu, Micromax and Sony.

OEM is the abbreviation of Original Equipment Manufacturer .It is a broad term whose meaning has evolved over time. In the past OEM is referred to the company that originally built a given product ,which has then sold to other companies to rebrand and resell over time, However the term is more frequently used to describe those companies in the business of rebranding a manufacture's product and selling them to end customers.

A hardware OEM might require a vendor's products –servers or storage system , and rebrand and resell the vendor's equipment without modification. Alternatevely it may incorporate and bundle those vendor's products with its own technology for resale. Vendors such as IBM and HP offer this type of hardware OEM.Attimes, major hardware vendors will themselves enter OEM arrangement to supplement their product line.

A software OEM ,on the other hand typically enter another software vendor's technology in to its own applications. As with hardware OEM relationships, software OEM arrangements can fluctuate. Auto desk for instance, offers an embeddable version of its auto cad software for its OEM partners, but also embedded visual data analysis. Sequence from Tableau and OEM arrangement .The software parts are handled by TCS ,Infosys Telecom and Hi-Tech,HCL .

The World's largest telecommunication equipment vendors are : Ericsson, Nokia network(Alcatel,Lucent), Huawei Technology, Cisco system, ZTE corporation etc.

Telecom equipment can be broadly broken down into the following catogories.:Public switching equipement,Analog Switch, Digital Switch, Transmission equipment ,Transmission lines, Optical fiber, Base TransreceiverStation, Multiplexes, Local loops, Communication satellites, Customer

premises equipment, private switches, AN, Modems, land line telephones, Answering machines, Teleprinters,fax machines, pagers, Routers etc.

**Ericsson**:Their telecommunication equipment comprises of optical and microwave networks, routing and switching products that are simple ,single and sealable and which allow to handle broad band group and ensure a smooth evolution to all IP.

Products: IP Edge-Comprises the system and functions that deliver a high QoE for the services that customersdemand..These systems are placed between the metro and core or more precisely at the edge of IP core.

The following is the list of products on the IP edge family.: SE family,SSR800family,SP415/420,NERT OPEMS

Microwave networks:It includes : MINI-LINK TN, MINI-LINK CN, MINI-LINK PT

MINI-LINK LH, Macroni LH

WiFi: With the acquisition of better network,Ericsson has gained a leading position in carrier –grade wi-fi equipment both in terms of installed base and product portfolio.

Indoor and outdoor access points

Controllers

Management

**IP Broadband network Management**: It offered improved service delivery and performance while lowering cost.

Ericsson IP Transport NMS, Service on family, NET OP EMS

**Optical transport:**

The Optical transport product family is based on SPI 1400 POTP and MHL 3000 long haul DWDM platforms.SPO1400 provides a full blended combination of transport technology in single.Cost effective platform addressing current and future needs of access ,metro and core transport works.MHL3000 is focussed on delivering high performance ,long haul photonic scalability in core network.

SPO 1410 POTP-Metro access/Aggregation,SPO140POTP-Metro access/Aggregation and core,Macroni MHL3000-core photonic networks.

**Nokia:**

The Nokia are helping operators enterprises and Governments meet the increasing demand of the connected world and capture its opportunities .Their four network businesses are enabling a new type of network, converging mobile and fixed broadband access ,IP routing and optical network with the software and services to optimise network performance-

*Mobile networks, *Fixed networks, *Optical networks,*Application and analytics

Featured solutions :Security, Voice over LTE(VOLTE), Air frame data control solution, Fast Mail

Featured product:LTE/LTE-advanced, Cloud packet core, Small packets, Fixed networks, IP routing , Optical network

**Wireless Network:**

LTE FDD, LTE TDD, Single RAN, GSM and UMTS, Mobile packet core, Small cell,Single OSS, Telecom Energy

**Fixed network:**

Transmission network,Accessnetwork,Carrier IP, Fixed network single OSS

**Cloud core network:**

CS& MS, Cloud core, Convergent data,LOT connect management platform, Single OSS

**Carrier Software:**

CRM, Revenue Management , Big Data Analysis

**I T Infrastructure:**

- Fusion Service Server
- Ocean star storage
- Fusion cloud ,cloud computing.

**Huawei:**

Huawei Technologies Co ltd is a Chinese multinational networking and telecommunication equipment and services company. It is the largest telecommunication equipment manufacturer

In the world, having undertaken Ericsson in 2012.During the first several years the company's business model consisted mainly of resetting private branch exchanges (PBX) switches imported from HonkKong.The company's first break through came when it launched its C8008 program controlled telephone switch. In 1997 ,Huawei was its first overseas contract providing fixed line network provides to Hongkong company .Later that year they launched its wireless GSM-based products and eventually expanded to offer CDMA and UMTS.

Huawei delivered one of world's first LTE/EPC commercial networks. The company launched the first end to end 100G solution from routers to transmission system that same year to help meet the rapid growth of network traffic and enhance router efficiency and reliability.

Huawei is organised around three core business segments :1) Telecom carrier networks-building telecommunication networks and services .2) Enterprise Business- Providing equipment ,software and services to enterprise customers .3) Devices ,manufacturing electronic communication devices.

Huawei offers a variety of network technologies and solutions to help telecommunications operators expand the capacity of their mobile broadband networks.Huawei's core network solutions offer mobile and fixed soft switches ,plus next generation home location register and IMS( Internet protocol Multimedia Subsystem) They assists content service providers looking to migrate from copper to fibre with solutions that support XDSL,Passive optical network(PON) and next generation PON(NGPON) on a single platform . The company

also offers mobile infrastructure ,broadband access and service provider routers and switches(SPRS). Huawei software products include service delivery platforms (SDPs),BSS,Rich Communication suite and digital home and mobile office solutions.

**Cisco system Inc:**

It is an American multinational corporation technology company that designs, manufactures and sell network equipments worldwide. It is the largest networking company in the world. Cisco's product and services focus on three market segments.1) Enterprise and service provider. 2) Small business .3) Home.

**Corporate market**: Refers to enterprise networking and service provisders.Enterprise networks – for the range of routers ,switches ,wireless systems, security systems, WAN acceleration, energy and building management systems and media aware networks.

Collaboration- IP video and phones, Telepresence ,Health presence ,United communications. Call centre systems, Enterprise social networks and mobile applications.

Data centre and virtualization- Unified computing ,Unified Fabric, Data centre switching,storage networking and cloud computing.

IP NGN (Next Generation Networks)- High end routing and switching for fixed and mobile service provider networks, broadcast video contribution/distribution, entitlement and content delivery systems.

**Small Business:**

Small business include home business and start-ups: 1) Routers and switches.2)Security and Surveillance.3)Voice and Conferencing .4) wireless. 5) network storage system

Home user : Broad band and Flip video

**Products**:1) Data Centre products: a) Nexus switches. b) MPS.c) United Computing system.

2) Routers: a) 800 series) Integrated service router(ISR). C) 2500 Series) ASR.e) Network convergence system) Carrier Routing System.

3) Security Appliances: a) ASA5500, b) Plx 500 series, c) CISCO Security Manager ,d) Email security management Appliance(SMA)

4) Catalyst switches: a) Teleworker /Remote connectivity ,b) CISCO wireless LAN products.

**ZTE:** ZTE Corporationis a Chinese multinational telecommunications equipment and systems company.It operates in three business units .

1.Carrier networks

2.telecommunication:products are wireless, exchange access, optical transmission and data telecommunication gear, mobile phones and telecommunication software.

3.Offers products that provide value added services such as video on demand and streaming media .

ZTE is also aprovider of core routing and core network elements such as : GGSN(GSM/UMTS),PGN(LTE/EPC) ,PDSN(CDMA)

ZTE ZxRIO -Series care switches and core routers. MPLS routers: Base stations, some of them developed with OBSAI-Open Base Station Architecture Specific Time –Division Long –Term Evaluation,CDMA based EVDO equipment.

ZTE Soft Technology: As a subsidiary of ZTE corporation,ZTE soft engages in ICT industry and specialises in providing comprehensive BSS/OSS,Big data solutions and services to global telecom operators and ICT ,smart city and industry solutions and services to enterprises and governments.

**ZTE telecom India Pvt Ltd:**

ZTE Telecom India Private Limited provides distributes telecom equipment and system. The company also provides repair, support and maintenance services for its telecom equipment. ZTE Telecom India Private Limited was formerly known as ZTE kangxum telecom Company India private Limited(1n 2003) .

Network operators equipments: a) TelephoneSwitches) Legacy WAP and MMSC equipment ,c) WiMax Products

In India one association is there named TEMA(Telecom Equipment Manufacturers Association of India). All Indian origin companies are registered in this associations, but MNC of outside India origin are not registered in this associations.

**References:**

1. COAI site
2. Various companies site from Google search .

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