

Prospects of Data Uptake on OTT Services: Opportunities and Threats for the Telecommunications Industry

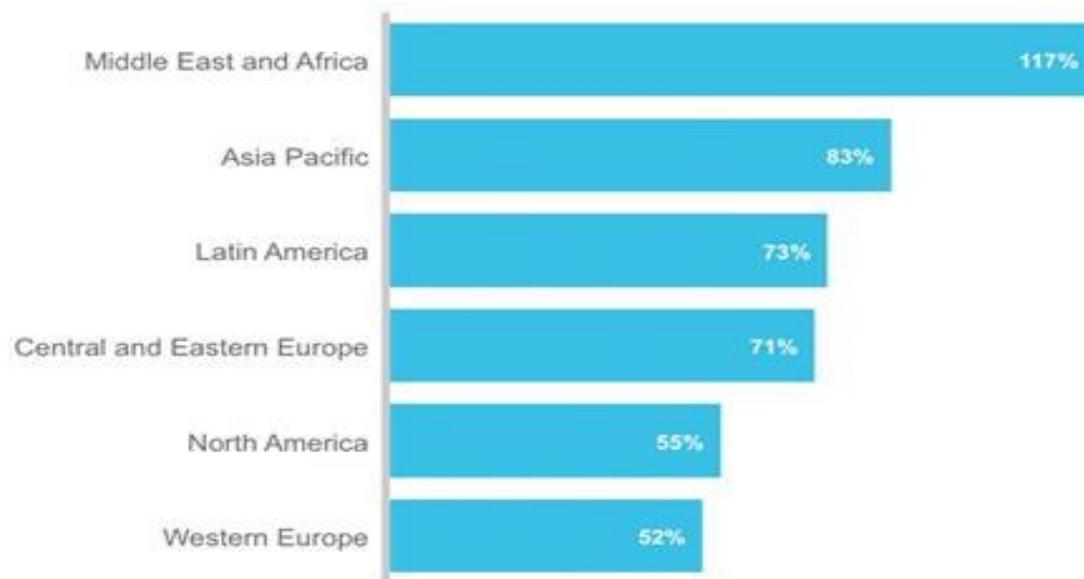
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- * Future of OTT Services
- * Types of OTT Voice/VoIP services
- * Security Concerns
- * Threats and Opportunities
- * Case Studies
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2015 Review

Mobile Data Traffic Growth in 2015



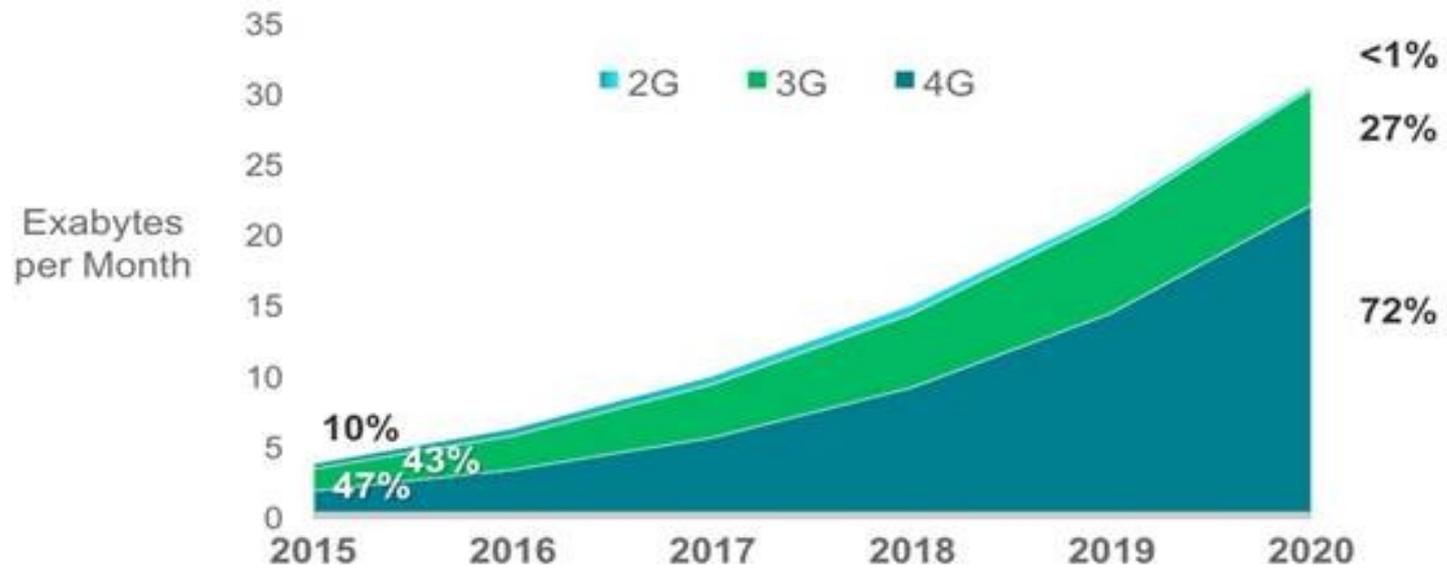
Source: Cisco VNI Mobile 2016

Future of OTT Services

Mobile data traffic will reach the following milestones within the next 5 years:

- * ● The average global mobile connection speed will surpass 3 Mbps by 2017.
- * ● The total number of smartphones (including phablets) will be nearly 50 percent of global devices and connections by 2020.
- * ● Because of increased usage on smartphones, smartphones will cross four-fifths of mobile data traffic by 2020.
- * ● 4G connections will have the highest share (40.5 percent) of total mobile connections by 2020.
- * ● 4G traffic will be more than half of the total mobile traffic by 2016.
- * ● More traffic was offloaded from cellular networks (on to Wi-Fi) than remained on cellular networks in 2015.

Global Mobile Traffic by Connection Type



Three-fourths (75%) of the world's mobile data traffic will be voice/video by 2020.

OTT APPS ARE EATING THE WORLD



Types

- * Non nomadic VoIP

- Office SIP/IP PBX based telephony. Eg., – Avaya, SNOM, Cisco, 3cx, Asterix etc.

- * Nomadic/Mobile VoIP

- VoLTE
 - VoWi-Fi

Security Concerns

- * Hacking possibilities
- * Older firewalls may not recognize VoIP packets
- * Security Patches
- * Flaws from OS

Threats

- * Telecommunications Industry
 - Heavy infrastructural investment already deployed.
 - Decline in revenues
- * Government
 - Decline in revenues

Opportunities

- * Telecommunication Industry

- Increased Productivity
- Lowered cost of infrastructure
- No geographical boundaries
- More local and international traffic
- Ability to provide more unified cloud based service eg. E fax.

- * Local Economy

- Increased partnerships between device vendors, mobile operators, and OTT service providers – more job creation.
- Adaptability to changing world and technological trends– education.
- Opportunity for young developers to broaden their technological horizon.

Case Studies on Regulations

*United States

911 Services: Providers of "interconnected" VoIP services – which allow users generally to make calls to and receive calls from the regular telephone network – do have 911 service obligations; however, 911 calls using VoIP are handled differently than 911 calls using your regular telephone service.

Portability: The FCC requires interconnected VoIP providers and telephone companies to comply with Local Number Portability (LNP) rules.

Calling Records: The FCC limits interconnected VoIP providers' use of customer proprietary network information such as your telephone calling records, and requires interconnected VoIP providers to protect it from disclosure.

Universal Service: The FCC requires interconnected VoIP providers to contribute to the Universal Service Fund, which supports communications services in high-cost areas and for income-eligible telephone subscribers.

Accessibility: Interconnected VoIP providers must contribute to the Telecommunications Relay Services Fund used to support the provision of telecommunications services to persons with speech or hearing disabilities and offer 711 abbreviated dialing for access to relay services. Providers and equipment manufacturers also must ensure their services are available to and usable by individuals with disabilities, if such access is achievable.

Cont'd

- * Malaysia
 - Complete framework for regulations
 - Technical Attributes
 - Customer Access arrangement
 - Quality of Service
 - Complaints procedure
 - An Application Service Provider (ASP) license must be obtained

Recommendations

- * Decision-making process must be transparent. Regulation should foster deployment, capital investment, and competition. Regulatory decisions should be made in a timely fashion, incorporate flexibility, and should encourage innovation and competition
- * Avoid imposing traditional/legacy regulations on VoIP and IP Networks. A light regulatory approach is appropriate, especially where competition takes root. Greater regulation is appropriate only when it will protect users and where competitive opportunity is not taking place, but should be reduced as competition is established.
- * Work to promote achievement of social policy objectives such as law enforcement, and other national interests – but drive these objectives in an evolutionary manner, relying whenever possible on industry-developed standards, moving toward achievement of these goals consistent with the capabilities of the technology without stifling the service in the meanwhile.
- * User should be able to run applications of their choice and to attach any devices that they may choose on underlying networks consistent with the user's service plan

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