Augmented Reality & Video Service Emerging Technologies

CDN Video Streaming Technology

Prof. Jong-Moon Chung

CDN Video Streaming Technology

CDN Market

CDN Market

❖ **Measuring the CDN Market Value**

- There are many ways to evaluate the
  value of the CDN market

- Evaluation is related to the diverse range
  of CDN industry participants
  - Example of industry participants
    - CSP (Communications Service Provider)
    - Industry manufacturers
    - CDN service providers
    - Content provider

CDN Market

❖ **Measuring the CDN Market Value**

- For CSPs (Communication Service Providers),
  the CDN's value includes improving retail
  service delivery and supporting their efforts
  to win and retain customers

- For industry manufacturers, the market
  value is related to the demand from telcos,
  content providers and other businesses

CDN Market

❖ **CDN Market Size**

- 2016 CDN Market size was $6.05 billion
- CDNs Market Components
  - Content delivery technologies
  - Hardware, Analytics, Monitoring
  - Encoding, Transparent caching
  - DRM (Digital Rights Management)
  - CMS (Content Management System)
  - OVP (Online Video Platform), etc.

CDN Market

❖ **CDN Market Size**

- CDN Market Estimations

  - Expectations to grow to
    $23.22 billion by 2021

  - Predicted 30.9% CAGR from 2016 to 2021
    - CAGR (Compound Annual Growth Rate)

CDN Market

❖ **CDN Service Providers**

- Akamai has about 110,000 servers over the world. Akamai's service includes cloud computing, HD video delivery, etc.

- Amazon Cloudfront delivers static and streaming contents. Amazon Cloudfront works seamlessly with other Amazon Web and Cloud Service solutions
  - S3 (Simple Storage Service)
  - EC2 (Elastic Compute Cloud)

CDN Market

❖ **CDN Service Providers**
- CDNetworks has POPs (Point of Presences) in 6 continents, including 20 POPs in China. World's 3rd largest, and Asia's #1, full-service provider

- Level 3 supports a comprehensive encoding suite for video data, and intelligent traffic manager services (i.e., load balance)

CDN Market

❖ **CDN Service Providers**

- Limtlight has 6,000 servers at 75 POPs (Points of Presence), and more than 30 regional content delivery centers in the U.S., Europe, and Asia

- ChinaCache is a CDN market leader in China, which has 127 POPs and 11,000 servers in China. CDN services include hotlink protection, custom CNAME for SSL and Purge All.

CDN Market

❖ Telcos with a CDN resale agreement

CDN Provider	Operator (Market Region)
Akamai	Verizon (US), NTT Communications (Japan), du (UAE), Telekom Malaysia (Malaysia)
CDNetworks	Andorra Telecom (Andorra), MegaFon (Russia), Telecom Italia Sparkle (Italy), SingTel (Singapore)
ChinaCache	China Mobile (China), HGC (International)

CDN Market

❖ Telcos with a CDN resale agreement

CDN Provider	Operator (Market Region)
EdgeCast	AT&T (US), AAPT (Australia), Deutsche Telekom ICSS (Germany), Dogan Telecom (Turkey), Pacnet (Asia Pacific), Telus (Canada)
Jet-Stream	Telenet (Belgium), Ziggo (Netherlands)
Level 3	Internexa (South America), MWeb (South Africa), STC (Saudi Arabia)
Limelight Networks	Bell Canada (Canada), Bestel (Mexico), Bharti Airtel (India), XO Communications (US)

CDN Video Streaming Technology

Reference

References

- "Content Delivery Functional Architecture in NGN," Telecommunication Standardization Sector of ITU, White Paper, Sep. 2010.

- "Content delivery networks: Market dynamics and growth perspectives," Informa Telecoms & Media, White Paper, Oct. 2012.

- Cisco, Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, [Online] Available from: http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white_paper_c11-520862.pdf [Accessed June 1, 2015]

- MarketsandMarkets, "Content Delivery Network Market by Type (Standard/Non-Video & Video CDN), Core Solution (Web Performance Optimization, Media Delivery, Cloud Security), Adjacent Service, Service Provider, Organization Size, Vertical, and Region - Global Forecast to 2022," [Online] Available from: https://www.marketsandmarkets.com/Market-Reports/content-delivery-networks-cdn-market-657.html#utm_source=PRNewswires&utm_medium=Referral&utm_campaign=PRNewswires [Accessed Mar. 4, 2018]

References

- Akamai, [Online] Available from: http://www.akamai.com/ [Accessed Mar. 2, 2018]

- LimeLight, [Online] Available from: http://www.limelight.com/ [Accessed Mar. 2, 2018]

- Level 3, [Online] Available from: http://www.level3.com/ [Accessed Mar. 2, 2018]

- CDNetworks, [Online] Available from: http://www.us.cdnetworks.com/ [Accessed Mar. 2, 2018]