

Netmanias.com: The one and only portal  
dedicated to network and communication in  
Korea

# About Netmanias.com

**Basic information**

**Content**

**Subscribers**

**Team**



# Netmanias.com Basic Information

키워드	5G	4G LTE	C-RAN/Fronthaul	Gigabit Internet	IPTV/UHD	IoT	SDN/NFV	Wi-Fi	Video Streaming	KT	SK Telecom	LG U+	OTT	Network Protocol	CDN	YouTube	Data Center
스폰서 채널	HFR FRONTHAUL	넷비전 MPTCP	스맥 HeNB GW	스프링웨이브 L588 PTP	시에나 데이터센터 상호연결 (DCI)	Korea Communication Review											

## Netmanias.com: The one and only portal dedicated to network and communication in Korea

Netmanias.com, a portal dedicated to network and communication founded in 2002, has been providing a venue for professionals in the industry to obtain and share knowledge on wired/mobile network service/infrastructure, latest trends and key technologies in the network and communication industry for the past 15 years. Netmanias.com's English site launched in 2012.

## Covered Topics: 5G, 4G, X-Haul, Gigabit Internet, IoT, IPTV, SDN/NFV, Korea Operators

As of January 2017, Netmanias.com has more than 47,000 subscribers and 1,100,000 visitors annually.



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**Home Page:** [www.netmanias.com](http://www.netmanias.com)

As of January 2017, Netmanias Korean Site ([www.netmanias.com/ko](http://www.netmanias.com/ko)) has more than **31,000 Korean subscribers** and 610,000 Korean visitors annually.

As of January 2017, Netmanias English Site ([www.netmanias.com/en](http://www.netmanias.com/en)) has more than **16,000 global subscribers** and 500,000 global visitors annually.

# Netmanias.com Contents

## Content Topics

### Network and Communication in South Korea - Services and Infrastructure

#### ■ Key topics relating to South Korean big 3 telcos: KT, SK Telecom, LG U+

- World's best broadband/mobile services
- Informagraphics on wired/wireless subscribers and their behavior patterns
- Innovative network architectures
- What made South Korea the world's best market?
- Strategies for network evolution
- Strategies for service evolution

### Wired/wireless network technologies in the local network

#### ■ Key topics

- Wired/wireless network technologies employed in the local network
- Solutions and equipment from local vendors in the local network

### Analysis of key technologies

#### ■ Key areas

- 5G, 4G
- Backbone/backhaul/fronthaul
- Optical Transport
- SDN/NFV
- IoT
- IPTV/CDN/OTT
- Gigabit Internet

## Content Types

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English 96 Infographics

English 319 News

## Content Readers



**Netmanias' Korean Subscriber and Visitors**



**Netmanias' Global Subscriber and Visitors**

# Netmanias.com Contents Example (Korean)

## NETMANIAS REPORTS

http://www.netmanias.com/ko/?m=board&id=reports

	<b>세계 각국의 5G 현황 분석 (1) - 5G 표준화 현황</b> Global 5G Status (1) - 5G Standardization	Date: 02/20/2017 Tags: 5G	863 2
	<b>우리나라의 IPTV 시장 현황: 2016 Q3</b> Korea Communication Market Data: IPTV 2016 Q3	Date: 12/16/2016 Tags: IPTV, KT, LG U+, SK Telecom, Video Streaming	899 0
	<b>우리나라 이동 3사 LTE 주파수 할당 및 상용화 과정</b> LTE frequency commercialization status in Korea	Date: 11/30/2016 Tags: KT, LG U+, LTE, SK Telecom	2,282 0
	<b>우리나라의 조고속 인터넷 시장 현황: 2016 Q3</b> Korea Communication Market Data: INTERNET 2016 Q3	Date: 11/22/2016 Tags: Gigabit Internet, KT, LG U+, SK Telecom	1,147 0
	<b>우리나라 모바일 분야 시장 현황: 2016 Q3</b> Korea Communication Market Data: MOBILE 2016 Q3	Date: 11/19/2016 Tags: KT, LG U+, LTE, SK Telecom	1,754 0
	<b>데이터센터 상호연결 서비스를 위한 고객 가이드   차세대 DCI 구조: Private Optical Network 구..</b> DCI Architecture Evolution: Building Private Optical Network	Date: 11/16/2016 Tags: Data Center	1,997 0
	<b>KT 5G 마스터 플랜</b> KT 5G Master Plan	Date: 11/10/2016 Tags: 5G, KT	3,103 1
	<b>Korea Communication Review, October 2016</b> Korea Communication Review, October 2016	Date: 09/26/2016 Tags: IoT, KT, SDN/NFV, SK Telecom	1,331 0
	<b>SK Telecom COSMOS White Paper: Evolving Telco Data Center with Software-Defined Tec...</b> SK Telecom COSMOS White Paper: Evolving Telco Data Center with Software-Defined Technologies	Date: 08/17/2016 Tags: Data Center, SDN/NFV, SK Telecom	342 0
	<b>Korea Communication Review, August 2016</b> Korea Communication Review, August 2016	Date: 08/08/2016 Tags: 5G, Gigabit Internet, IPTV, IoT, KT, Korea, SDN/NFV, SK Telecom, Wi-Fi	2,477 0

## NETMANIAS TECHNICAL DOCUMENTS

http://www.netmanias.com/ko/?m=board&id=techdocs

	<b>LTE 망에서 IP 주소 할당 방법 II: 두 도시 모델</b> IP Address Allocation Schemes II: A Case of Two Cities	Tags: IP Allocation, LTE	17,114 9
	<b>LTE 망에서 IP 주소 할당 방법 I: 기본</b> IP Address Allocation Schemes I: Basic	Tags: IP Allocation, LTE, PCO	33,112 15
	<b>LTE 과금: Offline</b> LTE Charging: Offline	Tags: CDR, Charging, LTE, OFCS, PCRF	19,143 10
	<b>넷플릭스 스트리밍 방식</b> Netflix ABR (Adaptive Bit Rate) Streaming	Tags: HTTP Adaptive Streaming, Netflix, OTT, Video Streaming	14,233 2
	<b>LTE Policy and Charging Control (PCC)</b> LTE Policy and Charging Control (PCC)	Tags: LTE, PCC, VoLTE	17,817 23
	<b>LTE EMM Procedure: 10/11. Toward Another City</b> LTE EMM Procedure: 10/11. Toward Another City	Tags: Attach, Detach, EMM, GUTI, LTE	13,811 2
	<b>LTE EMM Procedure: 8/9. Handover/Cell Reselection with TAU</b> LTE EMM Procedure: 8/9. Handover/Cell Reselection with TAU	Tags: Cell Reselection, EMM, Handover, LTE, TAU	15,018 5
	<b>LTE EMM Procedure: 7. Cell Reselection without TAU</b> LTE EMM Procedure: 7. Cell Reselection without TAU	Tags: Cell Reselection, EMM, LTE, SIB	17,689 16
	<b>WAN 가속화 기술 분석</b> Analysis on WAN Acceleration Technologies	Tags: Acceleration, Data Center, Deduplication, TCP Optimization, WAN	15,705 6
	<b>YouTube 비디오 요청 및 전달 방식 분석 (360p, 720p)</b> YouTube Video Delivery Process (360p, 720p)	Tags: Google, HTTP, HTTP Progressive Download, OTT, Video Streaming, YouTube	17,958 22

## NETMANIAS TECH-BLOG

http://www.netmanias.com/ko/?m=board&id=blog

	<b>KT 인공지능 TV '기가지니 (GIGA Genie)' 출시 - AI 시장 경쟁 시작</b> KT unveils AI TV 'GIGA Genie', triggering fierce competition in the market	Date: 02/02/2017 Author: 도미선 @ Netmanias Tags: 5G, AI, Gigabit Internet, IPTV/UHD, IoT, KT	1,545 0
	<b>차세대 데이터센터 연결 (DCI) 구조: Private Optical Network 구축</b> Ciena's Proposal for DCI Implementation	Date: 01/02/2017 Author: 시에나코리아 Tags: Data Center	573 0
	<b>KT 소용인터넷 전략 - NB-IoT를 중심으로</b> KT's IoT strategy - focused on NB-IoT	Date: 01/02/2017 Author: 도미선 @ Netmanias Tags: IoT, KT, NB-IoT	2,612 1
	<b>통신사가 바라보는 5G 네트워크 기술과 산업 방향</b> 5G network technologies and future envisioned by telcos	Date: 12/21/2016 Author: 도미선 @ Netmanias Tags: 5G, IoT, KT, SDN/NFV, SK Telecom	3,015 0
	<b>SK 텔레콤 최진성 CTO의 Connected Car와 자율주행차에 대한 견해</b> SK Telecom's CTO Alex Choi's view on 5G Connected Car	Date: 12/06/2016 Author: 도미선 @ Netmanias Tags: IoT, SK Telecom	1,698 0
	<b>KT 5G 추진전략: 추진 상황, 시스템/단말, 서비스, 주요 기술</b> KT's 5G Strategy: Standard, System/Device, Services and Technologies	Date: 12/02/2016 Author: 도미선 @ Netmanias Tags: 5G, IoT, KT, KT 5G-SIG	3,901 3
	<b>통신사의 TV 매출액, 인터넷 서비스 매출액에 다가갔다 - KT와 LG U+</b> KT's TV Service Revenue quickly catching up with Internet Service Revenue	Date: 11/24/2016 Author: 손장우 @ Netmanias Tags: IPTV, KT, LG U+	2,497 2
	<b>SD-WAN 2.0: 기업 가상 사설망의 새로운 옵션</b> SD-WAN 2.0: Building A Better SD-WAN	Date: 11/09/2016 Author: Prayson Pate @ ADVA Optical Networking Tags: Data Center, SDN/NFV	1,591 3
	<b>SK 텔레콤의 첫 LoRa 상용서비스 출시, 그리고 2016 IoT 국제 전시회에서 소개한 IoT 서비스들</b> SK Telecom's IoT services introduced at the 'IoT Korea Exhibition 2016'	Date: 11/07/2016 Author: 도미선 @ Netmanias Tags: IoT, LoRa, SK Telecom	3,697 3
	<b>오픈 하드웨어와 소프트웨어로 통신사업자의 유선 액세스망 구축하기</b> Building Software Defined ISP Using Open Hardware and Software	Date: 09/28/2016 Author: Reza Toghraee @ ArpaWare Tags: Gigabit Internet, SDN/NFV	2,269 0
	<b>오픈 네트워킹, 화이트 박스 스위치 - 이제는 현실이다.</b> Open Networking, White Box, Bare metal Switches What are the Risks?	Date: 09/27/2016 Author: Reza Toghraee @ ArpaWare Tags: Data Center, SDN/NFV	2,049 0
	<b>SK Telecom의 SDRAN (DU 기능 분리 및 서버화) 상용망 검증 - 5G를 위한 큰 걸음</b> SK Telecom and Nokia Implement World's First Cloud-based Radio Access Network in a Commercial LTE Net...	Date: 09/25/2016 Author: 손장우 @ Netmanias Tags: 5G, C-RAN/Fronthaul, LTE, SDN/NFV, SK Telecom	5,238 0
	<b>Opinion: 북유럽의 전통 강호들 (에릭슨, 노키아)이 중국의 신룡 거대 세력 (화웨이)의 독주를 막...</b> Can Nordic rivals stop the Chinese juggernaut?	Date: 09/14/2016 Author: Rajat Kochhar @ Ericsson Tags: 5G, IoT, LTE	3,616 2

# Netmanias.com: Contents Sample (English)

[SK Telecom' 5G R&D Activities and Ecosystems - 2016 Q3](#)

09/19/2016

[Nokia's D-RAN/C-RAN Evolution Architecture](#)

09/13/2016

[5G IOT Security](#)

09/05/2016

[AT&T's CORD - the ultimate architecture born after decades of innovation in the communications network](#)

08/31/2016

[5G Internet of Things](#)

08/30/2016

[SDN/NFV-based vCPE Services by AT&T, Verizon and KT](#)

08/22/2016

[Who will be the world's first operator to deploy a nationwide IoT network?](#)

04/21/2016

[How ready is KT for 5G Olympics?](#)

03/13/2016

[Network Architecture Evolution from 4G to 5G](#)

12/31/2015

[Brief Survey - Operator's View on 5G C-RAN/Fronthaul Redefinition](#)

12/07/2015

[E2E Network Slicing - Key 5G technology : What is it? Why do we need it? How do we implement it?](#)

11/27/2015

[KT 5G Network Architecture](#)

10/15/2015

[Mobile Network Architecture for 5G Era - New C-RAN Architecture and Distributed 5G Core](#)

10/06/2015

[5G network as envisioned by KT - Analysis of KT's 5G network](#)

11/03/2015

[5G POC \(Test, Trial\) Status in Korea](#)

09/18/2015

[KT's E2E 4G LTE and FTTH Network Architecture](#)

09/04/2015

[Netmanias Interview with KT at MWC 2015: KT's demonstrations of LTE-H and LTE-U](#)

03/30/2015

[SK Telecom's Network Evolution Strategies \(3\) - RAN Architecture Evolution Strategy](#)

10/27/2014

[SK Telecom's Network Evolution Strategies \(2\) - Inter-cell Coordination Evolution Strategy](#)

10/13/2014

[SK Telecom's Network Evolution Strategies \(1\): Carrier Aggregation Evolution Strategy](#)

10/07/2014

[LTE RAN Architecture: Cell site and LTE BS, B/F-Hauling, Coordination, Comparison and Case Study](#)

08/06/2014

[HFR's Mobile Fronthaul Solutions for LTE-A Era](#)

08/01/2014

[Netmanias Interview with HFR - Fronthaul Solutions for LTE/LTE-A C-RAN \(Cloud RAN\)](#)

05/27/2014

[Evolution of Mobile RAN Architecture in LTE/LTE-A Era \(C-RAN\)](#)

04/16/2014

[Fronthaul Size: Calculation of maximum distance between RRH and BBU](#)

04/01/2014


The screenshot shows the Netmanias website interface. The main article is titled "E2E Network Slicing - Key 5G technology : What is it? Why do we need it? How do we implement it?". Below the article title, there is a table titled "Table 1. Most compelling use cases for 5G".

5G Use Case	Example	Requirements
Mobile Broadband	4K/8K UHD, hologram, AR/VR	High capacity, video cache
Massive IoT	Sensor network (metering, agriculture, building, logistics, city, home, etc.)	Massive connection (200,000/km <sup>2</sup> )
Mission-critical IoT	Robot control, autonomous driving, automated factory, smart-grid	Mostly immobile devices Low latency (175 ms, motion control 1 ms) High reliability

Below the table, there is a diagram titled "Figure 1. Network slicing: Why do we need it?". The diagram illustrates the transition from a single 4G network to multiple 5G networks through network slicing. It shows how a single 4G network is divided into multiple 5G networks, each serving different service/device and service/industry requirements. The diagram includes labels for "4G Network", "5G network", "Service/Device", "Service/Industry", "Mobile Broadband", "Mission-critical IoT", and "Massive IoT".

# Netmanias.com Korean Subscribers • Email Newsletter

## Telecom Operators

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**841** subscribers@sk.com 

**507** subscribers@lguplus.co.kr 

...

**10+ companies**

## SI / Integrator

230@Samsung.com (SDS)  
111@Sicc.co.kr  
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78@Lgntel.com  
60@Snetsystems.co.kr  
39@Teletron.co.kr  
33@Lgcns.com  
27@Hanwha.com  
26@Opasnet.co.kr  
23@Ringnet.co.kr  
20@Lginnotek.com  
19@Networkons.com  
16@Globaltelecom.co.kr  
16@Pndinc.co.kr  
...

**50+ companies**

## Local Vendors

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**710**@Lge.com

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67@Pantech.com  
59@hfrnet.com  
59@Dasannetworks.com  
54@Igericsson.com  
48@Solid.co.kr  
48@ubiquoss.com  
38@Innowireless.com  
61@Innowireless.co.kr  
53@eluon.com  
50@Contela.com  
46@Ntels.com  
38@humaxdigital.com  
36@Uangel.com ...

**200+ companies**

## Korean Office of Global Vendors

54@nokia.com (한국인)  
46@cisco.com (한국인)  
33@Huawei.com (한국인)  
18@Anritsu.com (한국인)  
16@Hpe.com (한국인)  
14@Lghitachi.co.kr  
12@Juniper.net (한국인)  
...

**50+ companies**

## Research/Organization

**406**@etri.re.kr

... **20+**

## Professor/Students:

177@kaist.ac.kr  
155@yonsei.ac.kr  
96@Snu.ac.kr  
202@korea.ac.kr  
...

**60+**

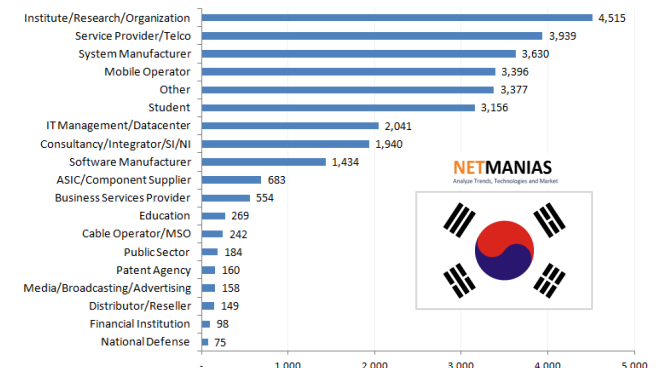
## IDC Service Providers: 50+

23@Skcc.com | 19@Cdnetworks.com/cO.kr | 19@poscoict.com | 15@navercorp.com  
| 4@Sejongtelecom.net | 14@hyundai-autoever.com | 13@Kinx.net | 10@Tbroad.com ...

**Highly focused on  
network and  
communication industry**

## Netmanias Korean Subscribers

**31,000+**



# Netmanias.com Global Subscribers

• Email Newsletter

**NETMANIAS**  
 Analyze Trends, Technologies and Market

## Telecom Operators (5,000+)

(회원 10인 이상)

통신사	회원수					
MCI		15	Telkom Indonesia		25	
3UK	17	Mobifone		26	Telstra	15
Aircel	10	Mobily		10	Telus	11
Asia Pacific Telecom	20	Mobinnet		12	Tigo	11
AT&T	57	MTN		26	TIM Brasil	11
Axiata	18	MTS		10	Tiscali	10
Bell Canada	18	Nextel		11	T-Mobile	23
Bharti Airtel	30	Ooredoo		25	True	10
BT	20	Orange		111	Turk Telecomm	24
Cablevision	10	Packet-1		10	Turkcell	20
China Mobile	32	Reliance		245	U Mobile	10
China Telecom	26	SFR		15	Verizon	71
CHT	68	Singtel		12	Viettel	51
Claro	12	Smart		12	VNL	12
Deutsche Telekom	32	Smartfren		23	VNPT	18
DTAC	12	SoftBank		26	Vodafone	108
DU	12	Sprint		21	Yemen Mobile	10
EE	14	STC		39	YTL	15
Entel	11	Swisscom		10	Zain	20
Etisalat	16	Taiwan Mobile		20		
Far EasTone	10	Tata Teleservices		15		
Globe Telecom	10	Tatacommunications		20		
Hutchison	14	Tele2		10		
Idea Cellular	18	Telecom Italia		23		
Internux	10	Telefonica		51		
KDDI	21	Telenor		33		
M1	10	Telia Company		10		
Maxis	17	Teliasonera		10		

## Integrator, SI/NI, Consulting

(회원 20인 이상)

인테그레이터, SI, 컨설팅	회원수
Accenture	20
Aricent	140
GlobalEdge	62
HCL	83
Inttechservices	81
Mitel	35
Netas	26
Sasken	35
Techmahindra	117
WIPRO	81

## Global Enterprises

(회원 20인 이상)

다국적 기업	회원수
advaoptical.com	23
alcatel-lucent.com	138
broadcom.com	26
ciena.com	44
cisco.com	239
commscope.com	23
coriant.com	25
ericsson.com	807
exfo.com	39
HP/HPE	86
huawei.com	564
intel.com	102
motorolasolutions.com	27
nokia.com	587
oracle.com	35
parallelwireless.com	31
qti.qualcomm.com	51
radisys.com	36
rohde-schwarz.com	23
viavisolutions.com	38
ZTE	87

Highly focused on network and communication industry

Netmanias Global Subscribers

16,000+

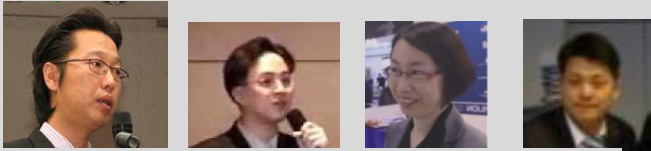


**NETMANIAS**  
 Analyze Trends, Technologies and Market

Key Words	5G	4G LTE	C-RAN/Fronthaul	Gigabit Internet	IPTV/Video Streaming	IoT	SDN/NFV	Wi-Fi	KT	SK Telecom	LG U+	Network Protocol	Samsung
CHANNELS	HFR <sub>FRONTHAUL</sub>	Netvision <sub>MPTCP</sub>	SMEC <sub>HeNB GW</sub>	Springwave <sub>1588 PTP</sub>	Korea Communication Review								

## All with more than 15 years of experience in the fields

### Four editors



Harrison J. Son   Chris Yoo   Michelle M. Do   Tomas Shin

#### Select topics and create content

- All with 15+ years of experience in network consulting for local and global clients
- 30+ contributors

#### Internally, we:

- Analyze the latest global and local trends and technologies
- Discover key content topics

#### Externally, we:

- Communicate with global and local vendors on a regular basis
- Attend global and local conferences and exhibits and interview key figures

### Site development and operation



Leon Choi   Soojung Lee

#### Platform development

Dedicated to development and operation of Netmanias.com for the past 12 years

#### Platforms developed

- Content management system
- Subscriber management system
- Target marketing system: Analyze Subscriber behavior patterns through interworking of the above two systems

### Content globalization



Yoonhee Son

#### One in-house linguist for content globalization

- Dedicated linguist in Seattle, WA, USA
- With + 15 years of experience in IT globalization and localization (Google, Microsoft, Tableau, etc.)
- Translating all content posted on Netmanias.com for the past five years