



Department of Electronics and Communication Engineering LNCTE Bhopal

Publicity Report of April 2021

- An Online Expert talk session organised by Department of EC LNCTE on” mm Wave Communication: Future of Wireless Network”by Dr. Anand Agrawal, “Assistant Professor, Indian Institute of Information Technology, Kota” on Thursday 01-04-2021 from 11:45AM to 12:45PM) for the students of EC 4th semester LNCTE Students. The session was too Interactive, Informative and interesting for students which deals with next generation of wireless network, 5G & Beyond wireless technology. The session was delivered successfully under the guidance of Dr. Abhinav Bhargava (HOD EC LNCTE), Coordinated by Prof. Santosh Kumar Jha (Assistant Professor).





Recording

Next Generation of Wireless Networks

mm-Wave Communication at 60 GHz



ANAND AGRAWAL

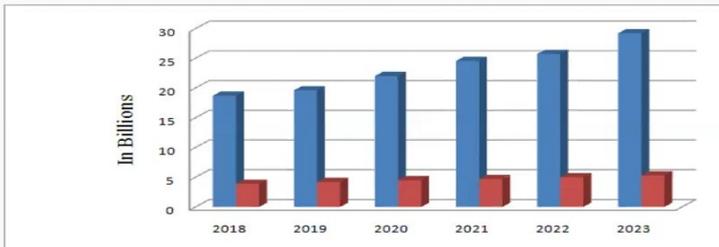
Department of Electronics and Communication Engineering
Indian Institute of Information Technology Kota
MNIT Campus Jaipur
India-302017
Email: anand.ece@iiitkota.ac.in
Webpage: <http://www.iiitkota.ac.in/anand>

Recording

5G AND BEYOND WIRELESS TECHNOLOGY CONTD...

GLOBAL INTERNET USERS AND DEVICE CONNECTIONS GROWTH :⁵





	2018	2019	2020	2021	2022	2023
Device Connections	18.7	19.6	22	24.56	25.72	29.21
Internet users	3.9	4.2	4.5	4.7	5	5.3

⁵<https://www.cisco.com/c/en/us/solutions/collateral/executive-perspectives/annual-internet-report/white-paper-c11-741490.html>

8

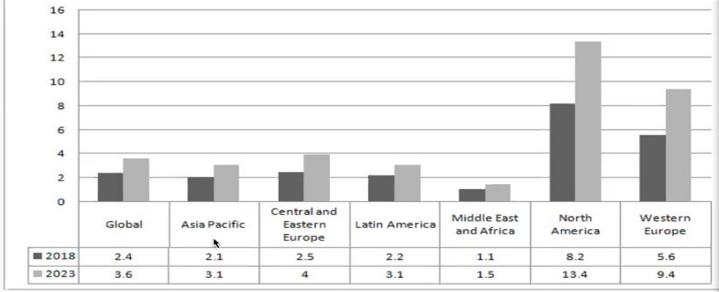
Recording

You are viewing anandagrwal's screen

5G AND BEYOND WIRELESS TECHNOLOGY CONTD...

AVERAGE NUMBER OF DEVICES AND CONNECTIONS PER CAPITA :⁷





	Global	Asia Pacific	Central and Eastern Europe	Latin America	Middle East and Africa	North America	Western Europe
2018	2.4	2.1	2.5	2.2	1.1	8.2	5.6
2023	3.6	3.1	4	3.1	1.5	13.4	9.4

⁷[Online]. Available: <http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visualnetworking-index-vni/white-paper-c11-520862.html>

Participants (266)

Find a participant

- Sanket Choudhary (Me)
- LNCT Faculty 4 (Host)
- anandagrwal (Co-host)
- Dr. Bhanu Pratap Singh LNCT Gr...
- Dr. Abhijeet Gupta (Co-host)
- Saiyed T (Co-host)
- Aditi Saxena 0157EC191011
- (0157EC191053)Jahnavi .
- (0157EC191117)Jamanna kumari
- (141)0103EC191145 Raj Tripathi
- (143)0103EC191147 Ravish Kumar
- (144)0103ec191148 Richa singh
- (150) 0103EC191154 RITURAJ VERM
- (153) 0103EC191157 Roshni Nahar

Invite Unmute

Unmute Start Video Participants 266 Chat Share Screen Record Reactions Leave



Zoom Meeting

Recording

5G AND BEYOND WIRELESS TECHNOLOGY CONTD...

KEY FEATURES 5G:

5G: Three Key Features
You are muted. Press Alt+A to unmute your microphone, or press and hold the SPACE key to temporarily unmute.

1 Million/KM² Connections 1 ms Latency 10 Gbit/s Peak Speed

14

Participants (265)

Q. Find a participant

- Saiyed T (Me)
- LNCT Faculty 4 (Host)
- anandagrwal (Co-host)
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- Dr. Abhijeet Gupta (Co-host)
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- (143)0103EC191147 Ravish Kum...
- (144)0103ec191148 Richa singh
- (150) 0103EC191154 RITURAJ V...
- (153) 0103EC191157 Roshni Na...

12:17 PM 4/1/2021

Zoom Meeting

Recording

5G AND BEYOND WIRELESS TECHNOLOGY CONTD...

AVERAGE MOBILE NETWORK CONNECTION SPEEDS BY REGION AND COUNTRY:⁸

	2018	2019	2020	2021	2022	2023
Global Speed (in Mbps)	13.2	17.7	23.5	29.4	35.9	43.9
Asia Pacific (in Mbps)	14.3	18	24.7	32.4	39	45.7
Latin America (in Mbps)	8	11.2	15.7	21.1	24.8	28.8
North America (in Mbps)	11.6	27	34.9	42.4	50.6	58.4
Central and Eastern Europe (in Mbps) ⁸	12.9	15.7	21.3	30.3	36.1	43
Middle East and Africa	6.9	9.4	13.3	17.6	20.3	24.8

⁸[Online]. Available: <http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visualnetworking-index-vni/white-paper-c11-520862.html>.

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- (150) 0103EC191154 RITURAJ V...
- (153) 0103EC191157 Roshni Na...

12:12 PM 4/1/2021



- An **Online Expert talk** session organised by Department of EC LNCTE on” **Converting an idea into Reality for brighter future**” by **Mr. Mohammad Tahseen**, “**Web & Mobile Application Developer (An LNCT Alumni)**” on **Thursday 08-04-2021** from **02:45PM to 03:45PM**) for the students of EC 4thsemester LNCTE Students. The session was too Interactive, Informative and interesting for students which deals with how to search good jobs, how we should prepare to do campus, what else can be done except Jobs etc. The session was delivered successfully under the guidance of **Dr. Abhinav Bhargava (HOD EC LNCTE)**, organised by **Prof. Varsha Rajoria (Assistant Professor)**.

Department of **Electronics & Communication** ISTE CHAPTER LNCTE

Topic of Expert Talk
"CONVERTING AN IDEA INTO REALITY FOR BRIGHTER FUTURE"

Thursday, 8 April 2021

Organiser
Prof. Varsha Rajoria
Coordinator
Dr. Abhinav Bhargava

EXPERT
MR. MOHAMMAD TAHSEEN
Position: Working as a Web and Mobile Application Developer. And Founder of the Split Money App.

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Recording You are viewing Tahseen Quraishi's screen View Options

Who has a dream to work in a **call centre** or **tech support**?

Split Money

Tahseen Quraishi

Audio Start Video Participants 217 Chat Share Screen Record Reactions Leave



Zoom Meeting

Recording

Who am I?

Split Money

Participants (215)

- DA Dr. Aparna Gupta (Me)
- LF LNCT Faculty 9 (Host)
- Tahseen Quraishi (Co-host)
- DM Dr M Zahid Alam (Co-host)
- (0157EC191053)Jahnavi .
- P (135)_0103EC191139_Pratik jain
- GR (143)0103EC191147 Ravish Kum...
- GR (144)0103ec191148 Richa singh
- (150) 0103EC191154 RITURAJ V...
- (160)_0103EC191164 Sanskar Si...
- (S) (161)_0103EC191165 Sanu Kumar
- (167) 0103EC191171 Shreya Ku...
- (193)0103EC191197Yash jain
- 01 0103EC 191183 Sumit Kumar

6:32 PM 4/8/2021

Zoom Meeting

You are viewing Tahseen Quraishi's screen

Recording

Try to find out your interest?

Split Money

Participants 225

6:41 PM 4/8/2021

Zoom Meeting

You are viewing Tahseen Quraishi's screen

Recording

Google

top 10 jobs in 2021

About 3,46,00,00,000 results (0.62 seconds)

Here are 10 jobs you should choose in 2021 to earn big bucks and get rich quickly:

- Data Scientist. Several reports agree that 'Data Scientist' is the sexiest job of the 21st century. ...
- Product Manager. ...
- Cloud Architect. ...
- Full Stack Developer. ...
- Big Data Engineer. ...
- DevOps Engineer. ...
- Blockchain Developer. ...
- Mobile Application Developer.

10 highest-paying jobs of 2021 that can make you rich ...

6:43 PM 4/8/2021



Zoom Meeting (Locked) Recording

Google list of language need to learn for mobile application development

About 1,36,00,00,000 results (0.75 seconds)

Programming Language You Can Consider For Your Mobile App Development

- Scala. If JavaScript is one of the most known, Scala is one of the newest programming languages available today. ...
- Java. ...
- Kotlin. ...
- Python. ...
- PHP. ...
- C# ...
- C++ ...
- Objective-C.

More items... + 19-Aug-2020

<http://zeesim.com> - the-best-programming-languages-for-...
The Best Programming Languages for Mobile App ... - Zesium

Split Money People also ask

Tahseen Quraishi

6:51 PM 4/8/2021

Zoom Meeting (Locked) You are viewing Tahseen Quraishi's screen View Options

Learning Sources



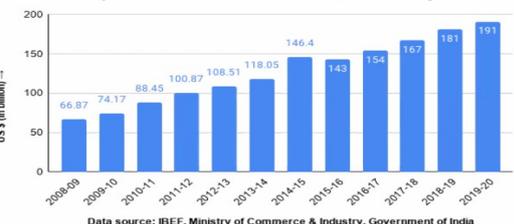
Split Money

Audio Start Video Participants 210 Chat Share Screen Record Reactions Leave

6:54 PM 4/8/2021

Zoom Meeting (Locked) Recording You are viewing Tahseen Quraishi's screen View Options

Graph 1. Market size of India's IT industry



Year	Market Size (US\$ in billion)
2008/09	66.87
2009/10	74.17
2010/11	88.45
2011/12	100.87
2012/13	108.51
2013/14	118.05
2014/15	146.4
2015/16	143
2016/17	154
2017/18	167
2018/19	181
2019/20	191

Data source: IBEF, Ministry of Commerce & Industry, Government of India

Split Money

Audio Start Video Participants 213 Chat Share Screen Record Reactions Leave

6:48 PM 4/8/2021



- An Online Expert talk session organised by Department of EC LNCTE on "Indian space revolution and future opportunities" by Mr. Nitesh Kumar Agrawal, "Researcher, Dept. of Avionics, Indian Institute of Space Science and Technology, Thiruvananthapuram, Kerala" on Wednesday 28-04-2021 from 11:45AM to 12:45PM for the students of EC 4th semester LNCTE Students under the guidance of Dr. Abhinav Bhargava (HOD EC LNCTE), Coordinated by Prof. Rohit Kumar Rathor (Assistant Professor).

LAKSHMI NARAIN COLLEGE OF TECHNOLOGY EXCELLENCE, BHOPAL

Department of Electronics and Communication Engineering

Expert talk on
**Indian Space Revolution
and Future Opportunities**

Wednesday,
28 April 2021

ISTE & CSI CHAPTER LNCTE

Speaker
Niteshkumar Agrawal
Researcher,
Department of Avionics, Indian Institute of
Space Science and Technology,
Thiruvananthapuram, Kerala, India
(Former researcher at LCU, China)

Coordinator
Dr. Abhinav Bhargava
Prof. Rohit Kumar Rathor

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Zoom Meeting

Recording...

Participants (158)

Dr. Bhanu Prata... LNCT Faculty 8 Dr. Abhijeet Gup... 0103EC191136... 0103EC191021...

0103EC191011... 0157EC191026... RIDDIM JAIN 01... 0103EC191056... 0103EC191037...

Dr. Vivek Jain Kumar anukul... Sachin Kumar Jha 0103EC191113... 0176EC191037...

0157EC191022... 0103EC191100... 0103EC191125... 0103EC191114... 0103EC191106...

0157EC191022... 0103EC191100... 0103EC191163... 0103EC191159...

Unmute Start Video Security Participants 158 Chat Share Screen Reactions More End

Type here to search

12:57 28-04-2021



Zoom Meeting | You are viewing NITESHKUMAR AGRAWAL's screen

India's first Satellite..

- India launched its first satellite **Aryabhata** in 1975 from Kapustin Yar.
- Named after the great Indian astronomer of the same name.
- Aryabhata** was built to conduct X ray astronomy, aeronomics, and solar physics.

Participants (201)

Dr. Vivek Jain (Joining...)

In the Meeting (201)

- LNCT Faculty B (Host, me)
- NITESHKUMAR A... (Co-host)
- Dr G Kumar (Co-host)
- Dr,Abhijeet Gupta (Co-host)
- Dr. Bhanu Pratap Sing... (Co-host)
- Dr.Soni Changlani EC ... (Co-host)
- Rahul Sharma (Co-host)
- Rohit Rathor EC Lnct ... (Co-host)
- Soheb Munir (Co-host)
- (0103EC191103) KISHAN SINGH

Zoom Meeting | You are viewing NITESHKUMAR AGRAWAL's screen

Facts

- The budget of ISRO stands at < \$2 billion against ≈ \$20 billion of NASA, excluding private players like **SpaceX** (Elon Musk's), **Blue Origin** (Jeff Bezos' (Amazon)), **Boeing**, etc.
- Global space market is around \$350 billion.
- ISRO has a less than 2% share in world space industry.

Participants (205)

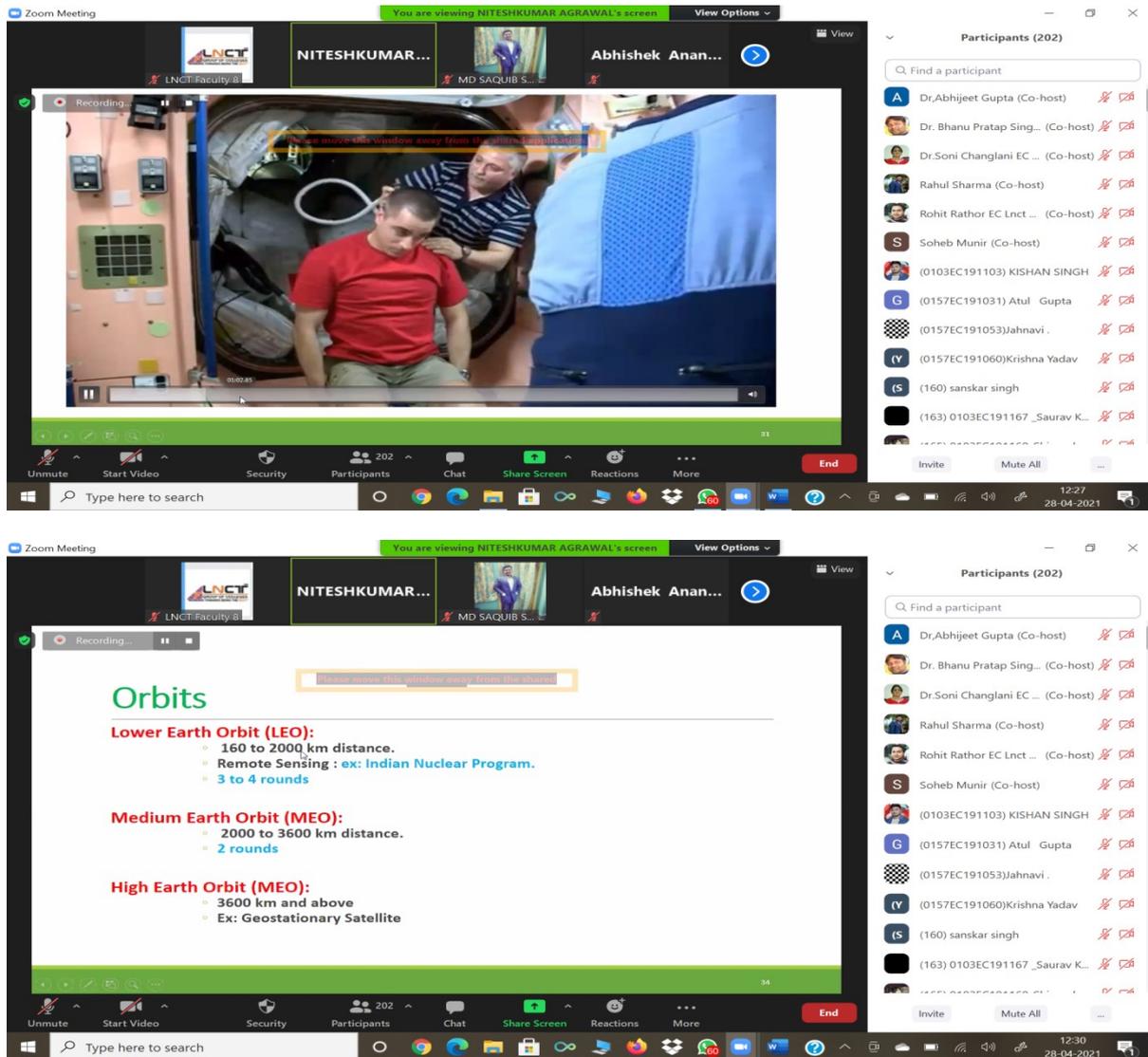
- Dr,Abhijeet Gupta (Co-host)
- Dr. Bhanu Pratap Sing... (Co-host)
- Dr.Soni Changlani EC ... (Co-host)
- Rahul Sharma (Co-host)
- Rohit Rathor EC Lnct ... (Co-host)
- Soheb Munir (Co-host)
- 0157EC191082 Prakhar Lohiya
- (0103EC191103) KISHAN SINGH
- (0157EC191031) Atul Gupta
- (0157EC191053)Jahnvi.
- (0157EC191060)Krishna Yadav
- (157)0103EC191161 Sagar sriva...

Zoom Meeting | You are viewing NITESHKUMAR AGRAWAL's screen

Rocket Parts

Participants (204)

- Dr,Abhijeet Gupta (Co-host)
- Dr. Bhanu Pratap Sing... (Co-host)
- Dr.Soni Changlani EC ... (Co-host)
- Rahul Sharma (Co-host)
- Rohit Rathor EC Lnct ... (Co-host)
- Soheb Munir (Co-host)
- (0103EC191103) KISHAN SINGH
- (0157EC191031) Atul Gupta
- (0157EC191060)Krishna Yadav
- (160) sanskar singh
- (163) 0103EC191167 _Saurav K...
- (165) 0103EC191169 _Shivanshu...



- An **Online Expert talk** session organised by Department of EC LNCTE on” **Virtualization in Telecom**” by **Mr. Sudhakar Pandey, Head-RAN Intelligent Operations, Rakutan Mobile Inc., Tokyo, Japan**” on **Thursday 29-04-2021 from 01:30 to 02:30 PM**) for the students of **EC 4th semester LNCTE** Students. The session was too **Interactive, Informative and interesting** for students which deals with **Virtualization in telecom, ETSI Network Functioning, Open Ran reference Architecture** with many more things. The session was delivered successfully under the guidance of **Dr. Abhinav Bhargava (HOD EC LNCTE)** coordinated by **Prof. Vini Shreni (Assistant Professor)**.



Organized by :

Lakshmi Narain College of Technology Excellence, Bhopal
Department of Electronics & Communication Engineering



“ Expert talk on
Virtualization in Telecom ”



Thursday, 29 April 2021
1:30PM to 2:30PM

ISTE CHAPTER LNCTE

Speaker

Mr. Sudhakar Pandey

Head - RAN Intelligent Operations
Rakuten Mobile Inc.
Tokyo, Japan



Organisers:

Dr. Abhinav Bhargava
Prof. Vini Shreni



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About me

SUDHAKR PANDEY



- 18+ years of experience in managing Large scale Telecom & Information Technology (IT) project development & operations
- Played a key role in both project and Operations that can productionize and operate the underlying platform & Application in a product centric approach.
- delivered operational efficiency by reducing infrastructure spend over traditional and legacy operational approaches and transforming to Distributed DevOps.
- Good knowledge in 3g , 4G, 5G , IP , EMS , Cloud , Product management & principal research on emerging technologies
- Play a key Role in – TATA , Global cloud exchange , Reliance JIO / Airpsan
- Presently Working with Rakuten Mobile Inc –Head –RAN Intelligent Operations –Tokyo Japan

CONFIDENTIAL 2

00:02:26

Go to Settings to activate Windows: 00:50:50

Virtualization & Containerization



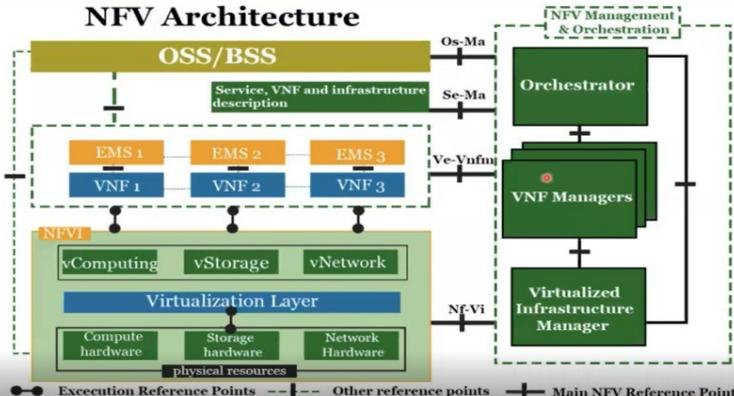
Rakuten Mobile

00:01:17

Go to Settings to activate Windows: 00:51:59

ETSI Network Function Virtualization Architecture

NFV Architecture



The diagram illustrates the ETSI Network Function Virtualization (NFV) Architecture. It is divided into two main sections: the left side represents the service and virtualized network function layers, and the right side represents the management and orchestration layers.

- Service and Virtualized Network Function Layers:**
 - OSS/BSS:** The top layer, providing Service, VNF and infrastructure description.
 - EMS (Element Management System):** Consists of EMS 1, EMS 2, and EMS 3, which manage VNF 1, VNF 2, and VNF 3 respectively.
 - NFVI (Network Function Virtualization Infrastructure):** Consists of vComputing, vStorage, and vNetwork.
 - Virtualization Layer:** Sits between the NFVI and physical resources.
 - physical resources:** Consists of Compute hardware, Storage hardware, and Network Hardware.
- Management and Orchestration Layers:**
 - Orchestrator:** Manages the overall NFV environment.
 - VNF Managers:** Manage individual VNF instances.
 - Virtualized Infrastructure Manager:** Manages the virtualized infrastructure.

Legend:

- Execution Reference Points
- Other reference points
- ⊕ Main NFV Reference Point

00:23:26

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Go to Settings to activate Windows: 00:27:50



The slide displays the OpenRAN Reference Architecture. At the top, there are two clouds: 'OAM/NMS' (Operation, Administration, and Maintenance / Network Management System) and 'AI/ML Apps'. Below these, a 'System Integrator' box contains three 'APIs' blocks, each with 'Software' underneath. The hardware layer consists of three units: 'RU' (Radio Unit), 'DU' (Distributed Unit), and 'CU' (Central Unit). Arrows indicate 'Fronthaul' between RU and DU, 'Midhaul' between DU and CU, and 'Backhaul' from CU. An 'Air Interface' arrow points to the RU. Management and Control arrows connect the top clouds to the System Integrator. The Viber interface shows a contact named 'Sudhakar Pandey' and a Windows taskbar at the bottom.

The slide is titled 'Monolithic Architecture vs Non-Monolithic Architecture'. It features two images side-by-side. The left image shows a large, single stone pillar with intricate carvings, labeled 'Monolith' and 'Rock Cut Insitu Pillar Kailash Temple - Ellora'. The right image shows a tall, multi-tiered stone tower with a dome, labeled 'Non-Monolith' and 'VijayStambh - Chittorgarh - Rajasthan'. A large green square with a white letter 'M' is overlaid on the right side of the slide. The presentation footer includes '00:35:55', 'ALTIOSTAR PROPRIETARY & CONFIDENTIAL', and 'ALTIOSTAR'.