



**Narendra Naidu, Chairman and Managing Director, Rhino Engineers**

# Advancing Night Tourism with AV Integration in India

**A Conference Session by Narendra Naidu, Chairman and Managing Director, Rhino Engineers Pvt. Ltd. on Large Scale AV Integration of Visitor Attraction Venues**

*In this conference session held during PALM + AV-ICN Expo 2023, titled, 'Large Scale AV Integration of Visitor Attraction Venues', Narendra Naidu, Chairman and Managing Director of Rhino Engineers Pvt. Ltd., took the audience behind mega AV projects integrated to attract large scale visitors in India.*

**N**arendra Naidu started the session by sharing that every big AV project begins with a big thought. He mentioned, "If you have conceived any project in mind, you have to rise above the little things and be a big thinker. Life is too short to think small. Think fast, but beyond horizon. Ideas are no one's monopoly. So, try to implement the ideas that pop on your mind."

But, how to think big? Naidu adds, "Allocating some time to nurture your ideas will help keep the priorities in check. You have to 'buddy up,' which means having a team, col-

leagues, or people to interact with on how to derive the best technologies and the best projects. Choose a specific goal and find the right direction to deviate your thinking levels. Then, identify the path that you will walk to conceive your innovative ideas. Lastly, ground yourself in reality. Dreaming big is not a crime but doing things properly is important to execute your thoughts."



**Narendra Naidu talks about one of India's largest 3D projection mapping shows on Gabbar Hills, Ambaji executed by Rhino Engineers**

### **Integrating Gabbar Hills with 3D Projection Mapping**

Leading the discussion towards large-scale AV integration in a venue like Gabbar Hill in Gujarat, which in Naidu's own words, is "India's Largest 3D Projection Mapping on Natural Surface," Naidu informs the audience about the projectors used during the 3D Projection Mapping at Gabbar Hill. He states, "I conceived this project in 2013. However, I kept waiting for the right time. With this project, we encountered rocky mountain surface in a very rough terrain. The project cost was 13.56 crores. It was commenced in March 2022 and completed in April 2022, which is a matter of pride for any AV consultancy. We are now making the tourists stay back and look at the night attractions. This ultimately helps the market develop local businesses, hospitality businesses, and the vicinity around the areas. So, we visualized the concept and started working with a detailed concept presentation. There is a saying, 'whatever you did, one fine day it is going to pay you back'. Therefore, we focused on the concept and created experiential 3D projection mapping weaved on the natural surface."

Going further, amongst many other things, Naidu informs the audience about the famous Ambaji Temple situated at the Gujarat and Rajasthan border and 3D projection mapping achieved at the venue. He states, "According to the mythology, Ambaji – the divine shakti of Sati, after self-immolation,

was scattered in 51 pieces, out of which, the heart part fell at this place. Ambaji Temple is recognized for its Ambaji Bhadarvi Poonam Fair where around 25 lakh people visit. Not only that, but many people also walk towards their destinations for nights and days during the summers." He adds, "I had a dream to do something big. So, in this venue of 265 m wide and 68 m tall area, I wanted to project goddess Ambaji on a large scale of natural surface. With the approval from the government and the PMO been sanctioned, the project had to be completed in a very short span." He also stated that since the completion of the project, the footfall at Gabbar Hill in Gujarat has tripled. The venue has also been nominated in the Limca Book of Records as claimed by Naidu during the conference and was engineered by Rhino Engineers, integrated by Tricolor Schauspiel India, and inaugurated last year by honorable Chief Minister of Gujarat, **Bhoopendra Patel**.

Naidu claims that India's biggest 3D projection mapping on Gabbar Hills was also the world's first installation of 45,000 lumens RGB laser projectors by Christie. He states, "Iconic building, landmark tower, forts, royal places or even temple shrines have become the surface for the projection mapping. This is a natural huge rock amidst the thick vegetation, located some 4.5 km west of the famous pilgrim town of the Ambaji. The hard rock terrain of over 18,000 sq. mt. around the states' border has been transformed into a

natural canvas (certainly, not a loveable canvas for a projection technology) for one of the best storytelling 3D projection mappings in India with 6 RGB pure laser projectors of 45,000 lumens brightness, gating into the act of luminating 490 m high hill. As massive as it is in size and scale, executing the installation in just four weeks was challenging."

As required by the natural rocky hillock surface, the installation demanded the best possible projected image. Naidu explains, "Nothing less of 4K image could be adjusted to this event. It was therefore, recommended to rope in Christie D 4K RGB pure laser projectors that come with the 45,000 NC lumen brightness apart from the all-in-one stack of the project. Total of six DK 4K 40 RGB projectors are deployed in the application, which means a whopping figure of 2,70,000 lumens on the rock. The projectors are mounted on two specially constructed towers of 5 m each. One tower is fitted with two projectors horizontally while second tower has four projectors stacked into a 2\*2 matrix and protected by the weatherproof enclosure. These are placed about 120 m away from the Gabbar projection site, making it an ideal distance to display optimum visuals on the hills on uneven and dark surfaces. Furthermore, the installation augmented the heavy dust laser projection with around 20 units of 280-watt LBT moving head fixtures along with the solitaire GOBO light image projector from Martin Audio. Keeping audio in mind, the team deployed 5.1 surround sound system with the turbo sound and system and the pair of clock technique DSP – DM 8500 and DM 8008, powered by the Lab Group and interface by Bearing Gun UMC – 1820 device."

**The hard rock terrain of over 18,000 sq. mt. around the states' border has been transformed into a natural canvas for one of the best storytelling 3D projection mappings in India with 6 RGB pure laser projectors of 45,000 lumens brightness, gating into the act of luminating 490 m high hill.**

## Reviewing the inventory used at Gabbar Hills –

- Christie D 4K RGB pure laser projectors
- 2 units of LPS Laser of 24-watt
- 20 units of 280-watt LBT moving head fixtures in the vegetated area
- GOBO light image projector from Martin Audio
- DSP Clock technique DM8500 and DM 8008 USB audio interface of Bearing Gun
- Amplifier from the Lab Group

## Integrating cutting-edge technologies around the Statue of Unity

Highlighting his big dream to transform visitor attraction venues and night tourism in India, Naidu emphasized on the latest installation around the Statue of Unity, ideated to attract more visitors. He states, "Ensuring that the money is invested rightly and protected for the public, we spent days and nights for three years and have proven that India can also have best technologies and attractions. In fact, the honorable Prime Minister also tweeted that this is one of the best shows. Now people visit the Statue of Unity not merely for the Statue, but to see the lighting of the dam, **Glow Garden, Motifs, Valley of Flowers, Cactus Garden, Butterfly Garden, Shoolpaneshwar Temple, Orientation Center**, and the entire stretch of gantries lighting around it. People even visit the venue to see the lighting during the Narmada Ashtakam's aarti at Shoolpa Natural Ghat."

To suffice an unparalleled experience to the visitors with the new introduction of technologies and a variety of concepts, Rhino Engineers' team accommodated attractive, dynamic, and innovative audio-vidéo technology at the venue for night tourism and sustainability. Naidu expresses, "The Government of Gujarat and Government of India has motivated and permitted us to work with the technologies that have never been seen before and because of that, the footfall of venue has increased to as high as 50,000 visitors during the holidays and even 1 lakh per day during the Diwali season."

Naidu takes the audience through a quick scan of the projects delivered around the Statue of Unity. From Maze Garden to other important projects executed, he reflects on the concept and the final installation delivered at the venue. Some of the projects included **Shrestha Bharat Bhavan, Circuit House, Sardar Sarovar Dam, Jungle Safari,**

## Reviewing the list of projects executed around the Statue of Unity:

Name of Project	Scope Of Consultancy
Shrestha Bharat Bhavan	Dynamic RGBW LED Facade Lightings
Circuit House	Dynamic RGBW LED Facade Lightings
1.3 KM Sardar Sarovar Dam	25 Minutes Ornamental Laser, Light & Sound show
Jungle Safari	CCTV Surveillance & Network System
Children Nutrition Park	Digital technologies, AR/VR, 3D Projection, Hologram, Interactive LED Screens, 5D theatre & Other cutting edge tech games & Facade lighting
Hillock & Roadside	Green Lightings tree
Vishwa Van	Dynamic RGBW LED Facade Lightings
M&VC Building, Connecting Bridge, Wall of unity, Ticket Counter and Canopy	Dynamic RGBW LED Facade Lightings
Jungle Safari Plaza	PA System
Palm Island	More than 450 Innovative Glowing Palm Trees
Food Courts	Dynamk RGBW LED Facade Lightings
Ekta Mall Main Gate	Gujrati, Rajasthani, Kathiawadi Handicrafts blinking - Slogan of "Unity in Handicrafts Diversity"
Ekta Dwar	LED Screen with Dynamic HD Content (Welcome to Statue of Unity & Thank You, Visit Again) in 7 international and 10 regional languages.
Dymanic Road Signage	10 X 10 ft, Dance and Garba Illuminated Panels
Valley Of Flower & Bharat Van	Dynamic RGBW LED Facade Lightings
India's First Glow Garden	LED Illuminated Trees, Animals and Flowers, Interactive dancing floor circles, Selfie points, State of Art Parachute, Dynamic fountains & Palm Trees, etc.
Gora Bridge	Dynamic RGBW LED Facade Lighting and Pixel Lighting
Street Decorative Lights	India's First Innovative RG6W Illumination Motifs 495 Nos. on streetlight of 10KM
Street Decorative Lights	India's First Innovative RGBW Illumination Gantries 48 nos. on streetlight of 10 KM
Valley of Flowers	Dynamic Panel -View Point 1 to entrance at valley with slogan of "Unity in Bio-Diversity - Valley of Flowers" and from viewpoint 1 to flower of Kevadiya Jurassic Park (Letters) with Dinosaur element
Cactus Garden	India's Largest Illuminated Signage 5X57 Meters
Butterfly Garden	India's Largest Illuminated Signage 5 X 67 meters
Ekta Garden	India's Largest Illuminated Signage 5 X 52 Meters
Reva Bhavan	Green Lights Tree Illumination on Reva Bhavan
Maze Garden	Innovative & Cutting-Edge LED Screens AV Show
Kamalam Nursery	Curved Projection & 360° Hologram AV Show
Miyawaki Forest	Curved Projection & Illumination AV Show
Cactus Garden	Life size hologram AV Show
Jungle Safari	India's Biggest Augmented Reality LED Screen Show
Shoolpaneshwar Ghat	25 Min Aqua Screen & Musical fountain in three languages.
Shoolpaneshwar Temple	Dynamic Lighting & Attractive Motif Lights.



**Golden lighting effect at Cactus Garden at Statue of Unity, Ekta Nagar, Kevadia, Gujarat**

Children Nutrition Park, Hillock & Roadside, Vishwa Van, Wall of Unity, Ticket Counter and Canopy, Jungle Safari Plaza, Palm Island, Food Courts, Ekta Mall Main Gate, Ekta Dwar, Dymanic Road Signage, Valley Of Flower, Ekta Garden, Cactus Garden, and Butterfly Garden, Bharat Van, Glow Garden, Gora Bridge, Street Decorative Lights, Valley of Flowers, Reva Bhavan, Kamalam Nursery, Miyawaki Forest, Cactus Garden,

Shoolpaneshwar Ghat, and Shoolpaneshwar Temple. He mentions, "Children Nutrition Park is created to educate the children through the technology like AR/VR, 3D projection, hologram, interactive LED screen, 5D theatre, mirror image, and other cutting-edge technologies that have been installed." He adds, "Who would have thought there can be a sound and light show at a dam too. The light and sound show at Sardar Sarovar

Dam runs for 1.3 km \* 60 m width. 2.5 km away from this, there is a weaving gallery to communicate with the technical guys using TX-RX. Furthermore, a 25-minute aqua screen musical fountain was also installed in three languages for the visitors."

**Conclusion**

With the new advancements rising every day, there's a need for every AV installation provider to stay updated too. People get uninterested in visiting the same old ambience every time and therefore, as claimed by Naidu, the teams are working hard to re-vamp things to give visitors a new feel every time they visit. He shares, "It's not a one-day event. The show is happening every day where 285 queues are being given for every song and there are 25 songs to be played at the venue. It's not easy but the teams put in all the efforts to make it possible." Overall, Naidu expressed his joy to be a part of such a huge project and deliver finest results along with the team to make it one of the exceptional attraction venues through digital technology.

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