IEEEXPO Tech Forum 2009

by TAK Mathews

A land area of more than 3 million square kilometers, a population of more than a billion people, more than 20 languages, with more than 1,500 dialects – how do you establish an expo strategy to cover this wide diversity? For that matter, how do you establish a strategy for anything in India?

This was the quandary that G. Raghu and Anitha Raghunath of Virgo Communications found themselves in after two very successful elevator and escalator (E&E) exhibitions organized in 2007 and 2008. It was very obvious that India, even with such diversity and a fast-growing E&E industry, was not ready for a full-fledged exhibition on an annual basis. Yet, there was an evident need for exposure to technical advancements and to dissipate information. Raghu, Anitha and your author spent extensive time brainstorming on a viable approach to extend the reach of International Elevator Escalator Expo (IEEEXPO). Finally, the idea of holding a forum focused on technical workshops and seminars took shape and the Tech Forum 2009 took birth.

The venue of the event was a tossup between Delhi and Chennai (Madras). With Chennai being the headquarters of the top two Indian E&E companies, KONE and Johnson Lifts, as well as the headquarters of ETA MELCO (Mitsubishi), Fujitec and Fermator, it wasn't surprising that Chennai was the first preference for the primary event sponsors.

Chennai, on the southeast coast of India, was a cluster of villages until it came into existence as Madras about 350 years ago. The original architects to the development of Chennai were the Portuguese, who built a port and named it after St. Thomas the Apostle, who is believed to have been martyred here. With the Basilica of St. Thomas, Chennai boasts of having one of only three basilicas worldwide to be built over the tomb of an apostle of Jesus Christ. The development was consolidated later by the British. Today, Chennai is a bustling economy with a broad industrial base in manufacturing, technology and healthcare. Some of the major corporations in their respective sectors that have set up their manufacturing

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Ribbon-cutting ceremony

Lighting the ceremonial lamp

base in Chennai include Nokia, Siemens, Sandvik, Saint Gobain, Brakes India and Sundaram Fasteners. With the presence of five global car manufacturers (BMW, Ford, Hyundai, Mitsubishi and Nissan), three earth-moving equipment companies, one tractor manufacturer, a major tire company and more than a hundred auto-parts companies in Chennai, the city is often referred to as the Detroit of India.

The IEEEXPO Tech Forum 2009 found support from Johnson Lifts, Mitsubishi, Kinetek, Schmersal and Prisma as sponsors, with TAK Consulting taking on the role of honorary advisor. The event was supported by the Builders' Association of India and was scheduled for February 13-14 at the Chennai Trade Center.

The event was inaugurated by S. Audiseshaiah (principal secretary – Public Works Department (PWD), Government of Tamilnadu), C.N. Raghavendran (partner at Architect C.R. Narayana Rao) and M K Sundaram (chairman of the Builders' Association of India). Then, Raguhunath welcomed the guests and thanked the exhibitors. After the lighting of the ceremonial lamp, your author launched the newly formed Elevator and Escalator Safety Trust (ELEVATOR WORLD India, First Quarter 2009). Sundaram gave the introductory speech, followed by the inaugural speech by Audiseshaiah and the keynote address by Raghavendran.

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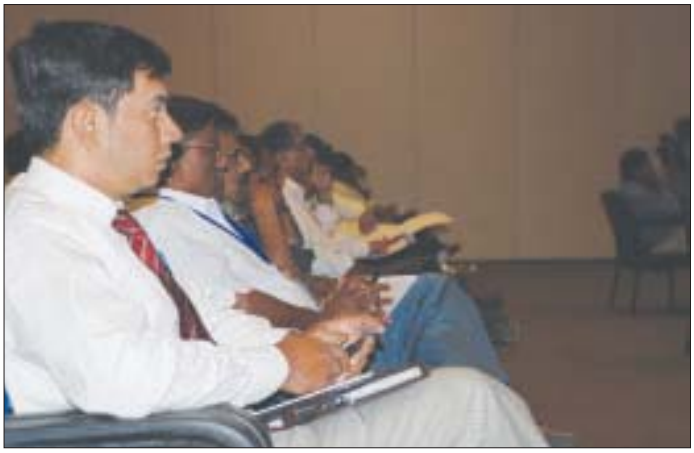
An opportunity to network

The topics of workshops and seminars and the forum schedule were as follows:

IEEEXPO TECHFORUM 2009 February 13, 2009	
Introduction Speech	M K Sundaram, Builder's Association of India
Inauguration Speech	S. Audiseshaiah, IAS, Principal Secretary, PWD, Tamilnadu.
Key note address	C N Raghavendran, Partner Architect – C. R. Narayana Rao
Greener Elevators – Challenges in India	M. Balasubramanian, General Manager Design & Development, Johnson Lifts Ltd.
MRL Lift Technology	Liebig Hartmut, Managing Director, LM Lift Material GmbH
Door Solutions for High Rise Elevators	Marcello Personeni, Vice President – Marketing, Sematic Italia spa
Automatic Doors and Traction Machines For Elevators – "Available Technology For A Complex Theme"	Giuseppe Cavozza, Sales Manager, PRISMA Srl
Future developments in elevator safety technology – "Electronics and Software replace electromechanical safety devices"	Klaus Steinweg, Key Account Management – Elevator Technology, Schmersal GmbH
Ropeless elevators with linear switched reluctance motors	V. Chandrasekar, Asst. Professor / EEE, Arunai Engineering College, Tiruvannamalai
Understanding the Benefits of AC Permanent Magnet Gearless Technology	Dan Walsh & Palvinder Hayer, Kinetek Inc.
IEEEXPO TECHFORUM 2009 February 14th, 2009	
Challenges faced by the Vertical Transportation industry in India	Pravin Rao, Dy. General Manager, ETA Melco. Engg. Co. P Ltd.
The European lift market and the Italian excellence	Fabio Liberali, Elevatori magazine & Mr. Massimo Bezzi (EFESME)
Indian Standards and Codes	M.A.J. Vinod, Jt. Director, Bureau of Indian Standards, Southern Region
Panel discussion – "Challenges - Installations of Elevators"	K. Subramaniam, technical Adviser, Johnson Lifts Ltd., T. Subramanian, Dy. General Manager, ETA Melco. Engg. Co. P. Ltd. R. Kumar, Managing Director, Navin Properties, Chennai M.K. Sundaram, Chairman, Builders' Association of India, Southern Centre, Chennai
Fundamentals of Elevatoring	TAK Mathews, TAK Consulting Pvt. Ltd.
Valedictory address by	M. Sekar, Dean, College of Engineering Guindy, Anna University, Chennai

Attendees enter the hall.



Taking notes

Participants prepare for technical sessions.

Most of the papers were well researched and generated a lot of interest. The panel discussion, with a face-off between the E&E industry and representatives from the client group, triggered a keen debate and revealed a major communication gap between the parties.

From the time of its conceptualization to the time the event was actually held, the global economic scenario had turned upside down. The exponential growth to which Indian companies had grown accustomed had slowed down to single figures or even low double figures. This cast doubts on the possible success of the event.

Yet, at the final count, the first event of this kind in India, attracted more than 1,500 visitors and succeeded in meeting its objective of ensuring a neutral platform for sharing information and technological advancements, and addressing issues and concerns.

The successful event was concluded with the valedictory address by M. Sekar (dean at the College of Engineering, Guindy).

Opening Address: M.K. Sundaram
(Chairman, Builder Association of India)

Sundaram

A hearty welcome and good morning to all of you. On behalf of everyone of us, I take this opportunity to welcome our chief guest, Mr. S. Audiseshaiah and our eminent architect and guest of honor Mr. Raghavendran, who, when we invited him to do the keynote address, agreed immediately. I also welcome our sponsors, Johnson Lifts, Mitsubishi, Kinetic, Schmersal India, and Prisma, and I also welcome Mr. TAK Mathews, my brother builders, students and faculty from various engineering colleges.

Continued economic growth and demand for land space make us look for more and more vertical growth in building construction. The more vertical growth, the more the need for efficient, safe and speedy access to the heights. Every building is built with a purpose. One of the main aspects of the punctual success of the building is the elevator system. I would say that the elevator is the lifeline of any high-rise building. Hence, from the basic planning stage itself, care should be taken to consult the professionals in deciding the location, space, size, numbers and type of the elevators to be installed. These factors will change with the type of use, whether it is an office building, an institution, a commercial complex, a hospital or a residential building. Today elevators are put in to use not only for human beings, but also for parking vehicles at open terraces. Over a period of time, research and development have brought in a lot of changes in the elevator technology. It is high time for the people involved

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in research and development in the elevator industry to suggest the best use of resources available to us. Systems like variable-voltage, variable-frequency enable us to substantially save on power consumption. To cater to the present day's requirement, high-speed elevators are introduced. We shall always keep in mind the safety and the least maintenance in the long run. As a member of the builders' community, I look forward to and am sure this seminar will bring together the researchers, manufacturers, academic people and the end users to share their views and create a better system for the future.

I thank once again the dignitaries, delegates, sponsors, students of the colleges and the institutions who have sponsored them and my dear fellow builders who have accepted our invitation and made this event a success.

Thank you

Inaugural Address: S. Audiseshaiah, secretary, PWD, Government of Tamilnadu

Audiseshaiah

Mr. M.K. Sundaram, chairman of BAI, southern center; Mr. Raghavendran, a well-known architect of Chennai; director of Virgo, Ms. Raghunath; Mr. Mathews; builders; exhibitors; media persons; and friends, it is my privilege to be in your midst today and also to inaugurate the exhibition held in conjunction with the workshop that will be there for the next two days.

In fact, I was wondering whether we need an exhibition for elevators and escalators. Then, what I came to know after coming here is that it is not the escalators and elevators, but the technology that has developed that is being exhibited today. I understand from the earlier speakers that the technology has been changing dramatically and this is something which has to be exhibited as well as the information shared with users and among the manufacturers. I don't know whether I can speak about the elevators and escalators, except for the fact that I know how to use the elevators and escalators. Therefore, I was just thinking whether the exhibition can, may be it is inappropriate, but still I thought you should touch the machinery that is being used in the construction industry and to know the type of technology that has gone in to this construction machinery, if it is possible, I think, during your workshop discussions.

Today, all over the world, we have been witnessing extensive use of machinery in the construction industry. This used to be the case in the developed countries in the past, but you also see the extensive use of machinery in developing countries and some of the underdeveloped countries. In fact, before I was in the public works department, where construction is the main activity, I used to wonder how things happen during construction elsewhere, not particularly in India. You know, you just don't see what is going on inside;, the machinery creates wonders, and in a few months time, you see a massive building. I am sure the technology contributed a great deal to the construction industry.

I happened to be in Dubai a couple of months back. I think everyone knows the way metro rail construction is done in Dubai; it's amazing! You don't see labor at all, only machinery, which is mounted on the top. Everyday, about 500 meters length of railing is being installed. Even in buildings, I have seen the escalators and lifting machinery positioned on the roof top getting things done. This is a great advancement.

There is absolutely no doubt in it. Of course, there is a general perception that if you use more machinery, you would be replacing laborers, but I don't really think that perception is right. In fact, there are certain areas where you have labor-intensive activities where it is necessary to have the labor. Also, in our context, replacement is certainly not a desirable change; we need more employment to be going to the labor market, and more and more labor should be involved in construction. But, there are certain areas in construction where you need to have machinery, advanced machinery, to really get certain advantages;, say, for instance, the economy, where precision, avoiding time overruns and even for green building accreditation.

I was just going through some of the requirements for green building accreditation. If you look at those prequalifications or requirements, it is very clear that unless you put the machinery in place, it is very difficult to get the needed type of precision and environmentally friendly construction process. Therefore, it is very important that machinery plays a big role.

It is my understanding that when you use more and more machinery in construction, besides all the advantages you know, it also gives laborers an opportunity to upgrade their skills. You know, when you employ your labor along side machinery, there is a kind of competition for the laborers to learn more and upgrade their skills, or otherwise they will be out of jobs. Therefore, the machinery also helps laborers upgrade their skills. That is my understanding, and I am sure you will also agree with me. Therefore, these are the days when you have to optimize the use of machinery and get all the advantages. This also a great thing you would be doing for the country.

With this, I just thank all of you for giving me the opportunity to come here and see some of our old friends. I am sure that this exhibition will go well, there will be a lot of business for the exhibitors, and there will be a lot of knowledge about the technology presented to the users of ele-

vators and escalators. So, at the end, this is going to be a good event. I wish the entire program a great success.

Once again, thank you very much.

Keynote Address: C.N. Raghavendran
(Partner, Architect C R Narayana Rao)


Raghavendram

It is a great pleasure to be here and, particularly, a great honor to share the platform with Mr. Audiseshaiah and Mr. Sundaram. The former, as briefly mentioned, is one of the most highly respected administrators in the state, and I had an opportunity to briefly know him. I am extremely happy to say that he is a man with a golden hand. Today under his leadership and guidance, the state is witnessing some valuable and prestigious building projects, medical colleges and many other constructions that are coming up. The state assembly complexes is a one-in-a-lifetime kind of building, and Mr. Audiseshaiah is actually guiding the whole development. It is such a great honor to be sharing a platform with him.

I must congratulate Virgo Communications for creating a platform like this. Though I have been in the field of architecture for almost 35 years, it is news to me to know that there are almost 300 elevator manufacturers in the country. It is quite relieving and it shows how vastly the market has grown and where we are today despite the current, hopefully temporary, slowdown phase. I am sure the path ahead for this industry is quite glorious, and it will lead to lot of elevation, bringing new technology and creating better utilities for people who use buildings.

As an architect and having worked in several major cities in the country, I have seen one major problem that the urban plan has faced in the growth of the city. Our cities have been growing phenomenally, urbanization is taking place at a rapid pace and lot of employment opportunities are available in cities, which have become economic engines for the growth of the country despite India being vastly agricultural. Despite efforts by planners, we find that the growth of cities has not been as desirable as it would have been in terms of environment, traffic, health and safety, and many other factors. Eventually, it boils down to how we use the land. The land is limited, and with the given area of land, we have to fulfill and accommodate the vastly growing, diverse kind of use that the cities are expected to support.

I am a strong advocate of tall buildings. This is because, unlike three or four decades ago, when we did not have the technology for (particularly fire) safety for tall buildings, today the situation is vastly different – we have seen considerable improvement in the technology for fire safety and therefore, in advocating tall buildings, I feel that the land area can be freed up for more garden space. This can help people's lungs, create a play area for children, the possibility of wider roads for traffic and so on. The city's new master plan recognizes this development. In fact, certain height restrictions have been removed, and taller buildings beyond the city limits are also being permitted. These are good signs. As opposed to vast horizontal growth, which creates massive infrastructure problems, the vertical growth is the order of the future in all cities of India. Therefore, elevators and escalators have to play a very important role in the growth of cities. Massive growth is ahead of us, and it is such a great time to be in business in India. As mentioned by some of the earlier speakers, I have also been witnessing an induction of technology by leaps and bounds in the last couple of years.

Today, the gap between the best technology in the world and what is available in India has narrowed, and the best of technology is not far from our reach where demand insists. Safety levels, energy efficiency, travel comfort, lift hoisting technology, safety equipment and leveling accuracy in elevators have been commendable. This provides for a great opportunity for the end user and for architects to specify and look at the best adoptable solution for each of their problems.

The lift industry in India has been quite innovative. The introduction of machine-room-less elevators, for instance, has been quite fast and impressive. It has changed the way many architects think about planning buildings, particularly planning of their top terraces. These technologies, combined with energy efficiency and safety, have really taken the elevator technology in India to a great level. In fact, I would like to perhaps suggest that the elevator industry thinks of green elevators that are more eco-friendly, consume less power and give greater outputs. It is not that it is not here – it is already here, as all the variables of drive motors contribute to power savings. Power saving is a great national contribution. This kind of development is indeed good for the country.

I remember designing Nehru Stadium in Chennai almost about a decade and a half ago. We had a massive challenge. This stadium was to be designed to meet international broadcasting standards, meaning that the lighting levels at horizontal plane and vertical planes had to be above minimum specified limits to enable color TV cameras to capture the players and broadcast. The lighting was a challenge, and we did not have an appropriate lighting solution in India at that time. The best manufacturer in India at that time offered a solution, and we accepted that. Though at that time that was best and latest in the country, a few years later, I had an opportunity to visit a convention organized by the same manufacturer in the

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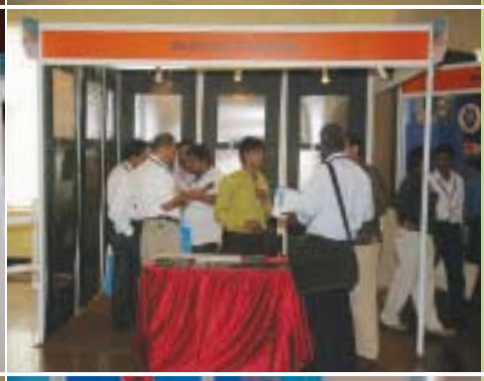
Exhibitors



Facts About
TECH FORUM 2009

Exhibition

- Total exhibit space: 1,500 square meters
- Total number of visitors: approximately 1,200 (mainly from south India)
- International visitors included those from China, the U.S., the U.A.E., Qatar, Germany, Korea, Japan, Italy and Belgium
- Number of companies participating: 30 companies (primarily from India, but also the U.S., Italy, Germany, China and the Netherlands)

Technical Presentation

- Number of attendees: Approximately 150-200 people for each session
- Attendees included builders, architects, elevator consultants, students and others from the elevator and escalator industry

Other Information

- This was the first technical forum of its kind to be held in India.
- This event gave large buyers of equipment (like builders and major OEMs) an opportunity to share a single platform and highlight the difficulties and business challenges they each face. Many solutions where suggested and appreciated.
- Students from educational institutes, such as engineering and architecture schools, had an opportunity to learn about elevators and related technology through a special session by TAK Mathews on "Fundamentals of Elevatoring."
- The Builders' Association of India (Southern Center) became involved with the event since its leaders believed that this technical forum would be highly beneficial for their members and many members attended the expo and seminar. They expressed their extreme delight at being a part of this event.

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U.S. and meet the business' president. It was then that I told him to not look at India like you can pass 30-year-old products on to our country – please share your latest products with our country. Don't look at India as a poor country. India is a country that can absorb technology like any other. Barely three years ago, we thought that we had installed the best lighting solution in the country at Nehru Stadium, but it was actually 30-year-old technology.

I think that companies are bringing us their latest technology in the lift industry today. I must congratulate Indian lift manufacturers for introducing it in this important area, and I think with the kind of growth the cities will have in the future, the lift industry has a tremendous opportunity and potential. In this context, conferences like this are extremely important. As I said, despite being in the trade and profession for such a long time, it is still confusing when it comes to specifying lifts. There is different criteria from different manufacturers, and you have different solutions for the same traffic situations. Therefore, opportunities like this are the source of knowledge and information for everyone, especially for people like this.

Valedictory Address: Dr. M. Shekar
(dean, Faculty of Engineering, Guindy)

I would like to thank the organizers for calling me here during the closing session. Usually, the closing session will be the one for which people may not want to stay. But I am really happy to see so many people here, though I can clearly see that that is because of the previous lecture by TAK Mathews. I wish we had professors like him in our university. I was telling my friend Mr. Tukaram of the builders' association that I was feeling bad that many of our students missed coming here and listening to the lecturers.


Shekar

As you can see, this is one area where all the disciplines are required – civil engineering, mechanical engineering, electrical engineering and more. Engineering students and architects have obviously come a long way in the elevator industry. As you look at how elevators used to be, it is clear to see how very modern and aesthetically superior elevators have come into the field.

I congratulate the builders' association for having put effort toward bringing this particular event to Chennai. I only wish more people could benefit from this. Of course, if the video is available, I would be happy to circulate it amongst our students.

There was a time when people did not get to see elevators or escalators, but these days they are a common sight in all malls and other buildings. The shortage of space all around has necessitated that one look out for vertical expansion, and this means you have to look for elevators.

I have another problem because I am in an association of the old boys of this 215-year-old institution. Though they are 70-plus-year-old students, they still love to attend the meetings. For them, even climbing one floor is difficult. They need an elevator for even one floor, and that is why we are installing one in our association building. I am closely associated with the construction.

The previous speaker's points were well apt and applicable, because one has to be very careful in planning such as the space required for the elevator lobby, waiting time and speed. These factors are important in the construction of any building.

A lot of technology change has happened in the elevator industry. Last year, Hitachi came out with an earthquake sensor built in the elevator system itself, with another located in the machine room. It will sense the earthquake and its intensity prior to its occurrence, and if need be, it will make the elevator non-operational. I also wish to mention sensors that measure wind force and the sway that the building is likely to face during a hurricane. Of course, today's technology is there, and we utilize and exploit the technology for improving our day-to-day lives.

Yet, in our country, we have a hidden fear of reaching our destination when we get in to an elevator. I read on the Internet that in the U.S., there are more deaths due to car accidents than elevator or escalator accidents. Accidents are more probable on an escalator than in an elevator.

As a teacher, I am really thankful to the organizers. I really salute them for thinking of the students and inviting them. I only wish that many more of our students from my institution could have attended and benefited by this.

I used to have a grudge about to the lack of response to the technical meetings, especially to those held in Chennai. Maybe not enough publicity is given. At the next venue, Fairpro is going on, and people can be attracted from there, too, to see our things. I hope the event managers are planning to do that.

Intellectually, our students are all great. Now you can see that you can't compare the intellectual level of current students with that of our own times. However, creativity and the objective thinking have to be developed in them. Interest must be created in them. That is a big task for our academicians.

I thank the organizers for helping us call our students to this seminar, and it is a real boon to Chennai's students. I thank the organizers for bringing this event to this city. I hope that in the coming years, similar events will be organized in Chennai and we will have more response from the public of this city. Again, I thank those who thought it fit to call me to this valedictory function. I appreciate the efforts, and I know it would have been a nice thing.