

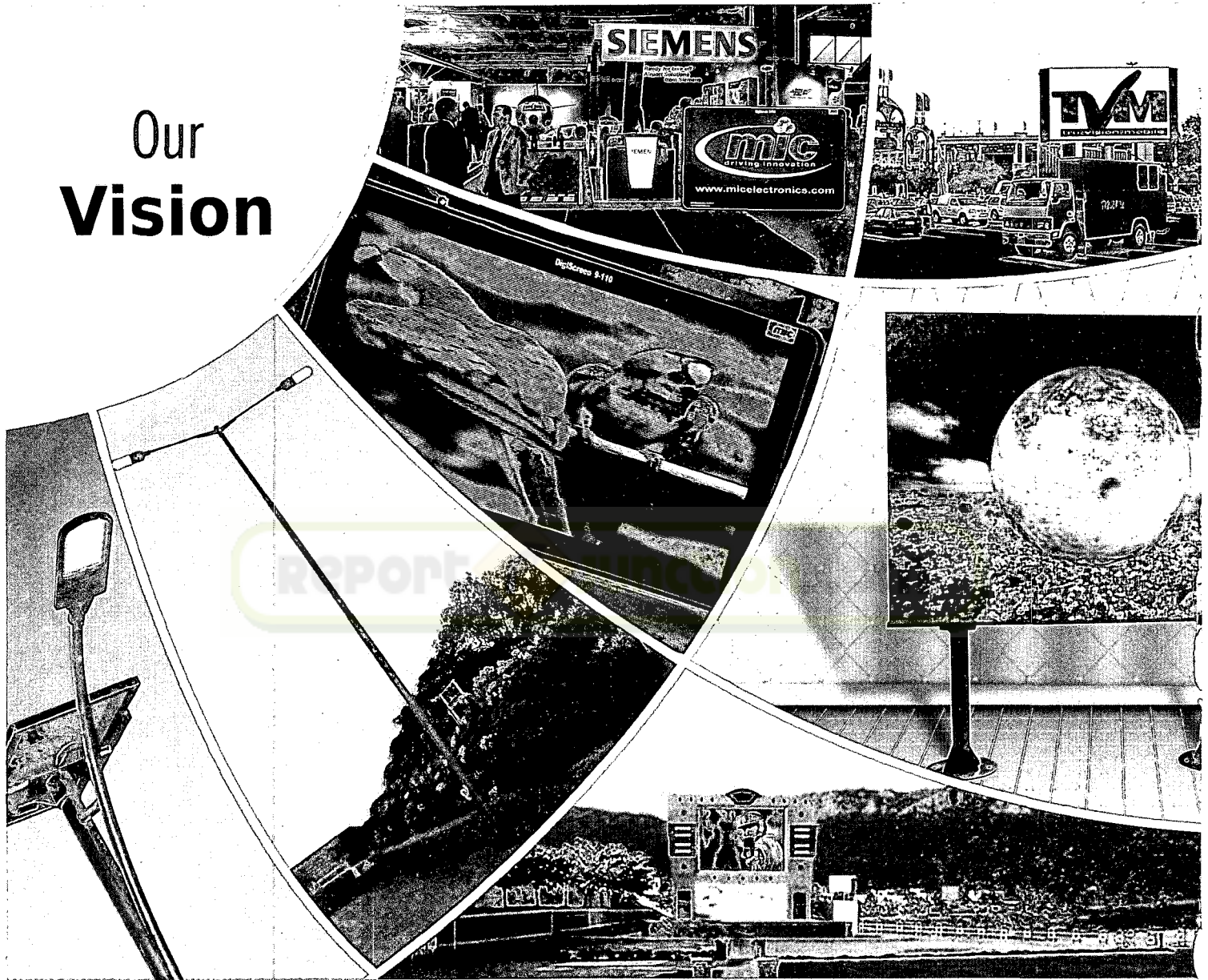
True **Color** LED Display



**MIC Electronics Limited**

19th Annual Report 2006-07

# Our Vision



## A Bold Dream

To be a pioneer and Global Leader in design & development of True Color LED Video Displays, eco-friendly LED Lighting Solutions in addition to the products pertaining to Infotech and Communication benchmarked to global standards.





## Company Information

### Board of Directors

Dr. M.V.Ramana Rao	Managing Director &CEO
Shri.Harsh Mariwala	Director
Shri. Ranjan Kapur	Director
Shri. Somendra Khosla	Director
Shri. Mangilal Kalani	Director
Shri. Anil Goyal	Director
Shri. Y. Harish Chandra Prasad	Director
Shri. N.Srinivasa Rao	Director
Shri. Atluri Venkata Ram	Director
Shri. Vidya Sagar Anisingaraju	Director
Shri. U.Ramakrishna	Director
Shri. L.N.Malleswara Rao	Director

Company Secretary  
**Mrs.G.Bhargavi**

Bankers  
**State Bank of India**  
SIB Saifabad Br., Hyderabad  
**Development Credit Bank Ltd**  
Dr.A.S.Rao Nagar Br., Hyderabad.

Auditors  
**M/S.Pinnamaneni & Co**  
Chartered Accountants  
Hyderabad

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Registrar and Share transfer Agents

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## Letter to Our Shareholders

Dear Shareholders,

The financial year 2006-07 was an important year for MIC and one of the most successful years in the history of your Company. Your Company continued to evolve into a leading global LED Display and LED Lighting solution provider. During the year, the Initial Public Offer of your Company has received an overwhelming response and got oversubscribed by 50 times.

During the year, we have launched India's first 120 inch LED TV and introduced number of LED Display solutions such as perimeter displays for different sports applications, 100mtrs long multicolour ticker with Digital Video Interface (DVI), LED street lighting and emergency lamps for Railways. The R&D focus will be in Networked LED Bill boards with new three in one chip LED for outdoor and indoor applications, 3D stereoscopic LCD/LED Displays, Networked LED lighting, OOH lighting, Street and Industrial Lighting, Lighting solutions for Railways etc.,

To address the growing rental market for LED Video Displays, your company has created a separate business group which will focus in increasing the rental revenues of the company.

Our world's growing appetite for energy demands that individuals, governments and institutions take responsibility for using our energy resources wisely. Your Company can support this new reality by delivering LED technology that vastly increases the energy efficiency of lighting, which reduces electricity demand and helps to protect the environment.

Your company has initiated major steps to become a global company by making investments and tying with various global players around the world that support our desire to become a global leader of the LED Display and LED lighting revolution. The required steps are also initiated for making investments and tying up with global players in Solar and battery technologies which synergises with our LED lighting products immensely.

Over the year, we have strengthened our human resources pool by inducting senior management personnel who have held important positions in large Public and Private sector organisations. With this talented management team, implementing systems to scale up the company in all respects is possible, to meet the new challenges and be successful in the global arena.

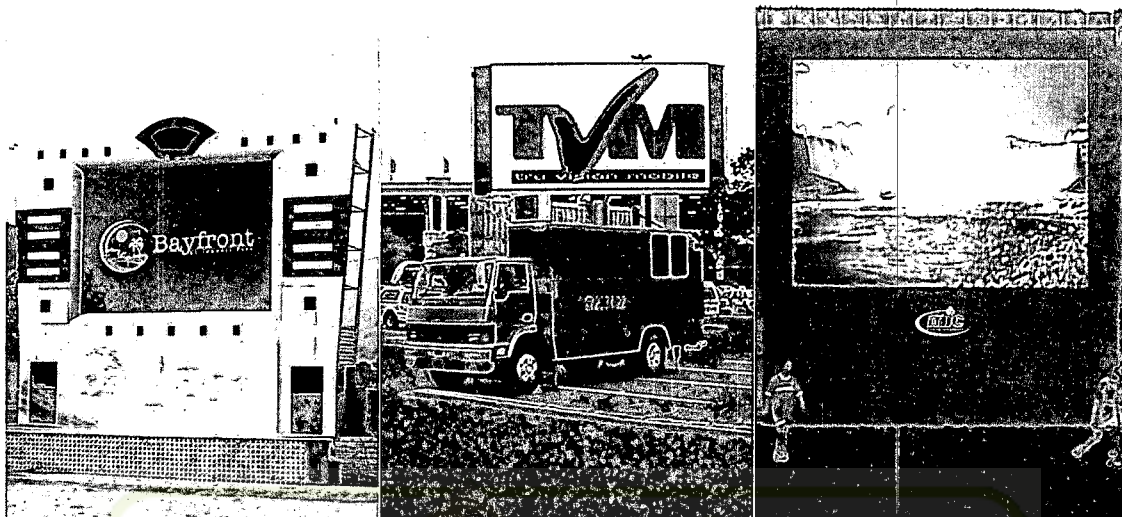
The production facilities at Roorkee has been set up during the year and the state of the art production and testing centre housing automated testing and production facilities is coming up very fast at Cherlapally, Hyderabad to meet the increasing demand for our products.

I would like to take this opportunity to thank all the shareholders of MIC, my fellow board members, our clients, business associates and all our employees who have made significant contributions in making this company a global LED solutions provider.

With Best wishes for the New Year

**Dr. M.V. Ramana Rao**  
Managing Director & CEO

## LED Video Displays ...a Realistic Perspective



The Out Of Home(OOH) mass communication media is transforming itself, from the traditional techniques involving bill boards, hoardings, cut-outs, wall posters, banners, news paper advertisements, ad-campaigns etc., conveying a pre-fixed information and aptly called as static advertisements, to dynamic media utilizing LED video displays.

The True color LED video display contains light emitting diodes (LEDs) of three basic colors Red, Green and Blue to form a pixel. Such pixels are placed in matrix to form a module. LED modules are then arranged in a matrix to form LED display. By controlling the glow and intensity of each LED digitally, images are produced on the LED Display screen.

Video display screens are essentially gigantic television screens comprising of full-color LED matrices. These screens have all the capabilities of a home television set. Current LED technology enables the screens to be bright and their images to appear with a high-definition resolution. LED video screens can be made as large as desired and can be installed indoors or outdoors fixed or mobile, although, like message reader boards, the majority are placed outdoors unlike LCD, plasma, CRT televisions, LCD projection system where these apparatus work only indoor or in the dark. The LED screens are of any size, any shape, any color, any time, any format OOH displays.

The market for full-color video LED signs is expanding rapidly and is no longer confined solely to high-revenue-generating industries. In addition to the well known use of LED video screens in sports stadia, at music concerts, as spectacles, and as billboards, moderately sized screens are used at trade shows, in transportation hubs, and at retail establishments.

The enormous applications of these LED video displays also popularly known as LED video walls include Sports Stadiums, Sport-events, Sports Perimeter Ground Displays, Outdoor Advertising & Entertainment, Billboards, Mobile Billboards, Product Launches, Digital Theatres, Theme Parks, Indoor Advertising & Entertainment, Shopping malls, Convention Centers, Airports, Bus & Rail stations, Universities etc.



## **LED Video Displays** ...a Realistic Perspective

### **NEW GENERATION NETWORKED DISPLAYS**

Networked Display Boards are multi-located display devices operational with centralized information & control. Networked Display Boards are mainly useful for conveying the latest information in terms of text messages, graphic messages and also still, animated & video clippings to the targeted viewers located at any specific area at any given time from Centralized Information Control Room.

In LED Video displays either networked or stand alone, advertisers can change their messages online instantaneously. This is truly the next revolution in out-of-home advertising. Not only are digital displays nimble, but they also allow outdoor Ad agencies to sell the same real estate more than once, which has its own obvious appeal. This has become very popular and is a commercial success in USA.

It's possible that given the mobile lifestyle of today's consumers, billboards can reach more people more reliably than TV commercials. A survey released by the Association of National Advertisers and Forrester Research USA found that 78% of advertisers think traditional TV commercials have become less effective. Since TV audiences are so fragmented, outdoor ads are a surer way to reach more people more frequently than other forms of advertising.

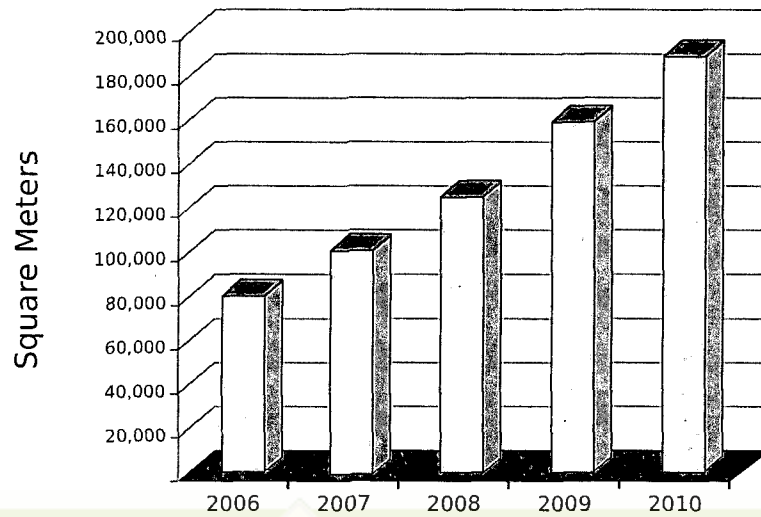
On one selling point the outdoor industry is on solid ground; much improved metrics. The challenge has been not just to deliver the size of an audience that sees an ad but to determine how many in the audience notice it. This has been carried-out with the help of 'Npod', a GPS based device, where this gadget counts the number of passings by of a particular onlooker whose results are very encouraging when compared to viewing of static billboards. As the target consumers are increasingly outdoors, out-of-home ads are a surefire way to get our message to them.

It is in billboards that the LED video screen has come into its own as a new kind of media platform for advertising. The electronic billboard is a powerful interface between advertiser and the public- people who barely give a traditional billboard a passing glance may be more compelled by the dynamic display of an LED billboard. One study showed that 94% of people passing moving-message billboards could recall them while only 43% could recall non-moving billboards, another study documented sales increases of 107% for products advertised on moving-message billboards and only 54% for those on static signs (cited in S. McIntyre 1999). Since the digital billboards are electronic and digitally controlled, there are always new ways to adjust the operations and content in order to maintain a fresh mode of presentation.

### **MARKET FORECASTS**

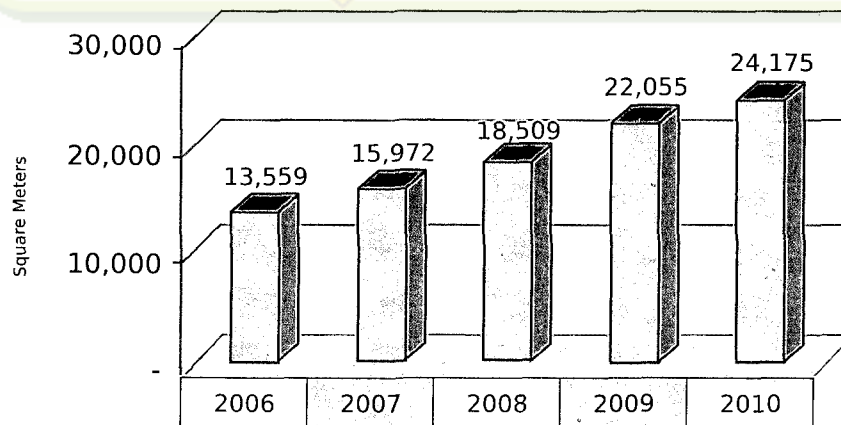
The Outdoor market forecast is heavily influenced by the need to support a modest 10%- 11% yearly sales growth coupled with a 10% decline in yearly pricing. Due to the acceptability of the newer LCD technology in the Indoor market, the Outdoor market will outperform it in Square Meters produced. The charts below present what the distribution of the Outdoor and Indoor units from 2006-2010 might look like based on the current distribution model.

### Projected Outdoor world market in Sq/meters



Source: EDG Research, March 2006

### Projected Indoor world market in Sq/meters



Source: EDG Research, March 2006

#### Conclusions:

LED signs are more than electronic versions of their static counterparts. Their programmability allows for targeted marketing and interactivity, and, like websites, they can be networked and updated remotely with fresh, topical content. These features of LED signage may one day seem indispensable to the majority of commercial end users, as computers now seem indispensable for businesses of virtually every size and type. The market is open and the products readily available; widespread application of LED signs could transform the nature of outdoor commercial signage. This transformation would be an international phenomenon.



## LED Lighting Systems

...Futuristic Eco friendly lighting



A Light Emitting Diode (LED) is a semiconductor device which converts electricity into light.. LED lighting has been around since the 1960s, but is just now beginning to appear in the residential market for space lighting. At first white LEDs were only possible by "rainbow" groups of three LEDs -- red, green, and blue - - by controlling the current to each to yield an overall white light. This changed in 1993 when Nichia created a blue indium gallium chip with a phosphor coating that is used to create the wave shift necessary to emit white light from a single diode. This process is much less expensive for the amount of light generated.

LED Lights are mercury and flicker free, dimmable, more rugged, damage resistant having exceptional properties like directionality, specific color and efficiency when compared to compact fluorescent (CFL) and conventional incandescent bulbs.

The important aspect of LED lighting is considerable Energy saving, which can be achieved through application of low voltage and current to giveout the required light output with additional feature of dimmability to reduce energy consumption further.

### LIGHTING ENERGY FACTS

In 2005 the electricity consumed by lighting was 2 650 TWh worldwide, about 19 % of the total global electricity consumption.

Carbon dioxide emissions were 1775 million tonnes, of which approximately 511 million tonnes in IEA member countries.

More than one-quarter of world's population uses liquid fuel (kerosene) to provide lighting. The World Bank intends to change these conditions with a program launched to provide lighting for the 250 million people in sub-Saharan African who have no access to power. Similar programmes are also underway in India.

Worldwide demand for lighting fixtures is forecast to increase around six percent per year through 2010 to US\$98 billion. This increase is because of accelerating global economic growth, which will stimulate construction and manufacturing activity, the two principal determinants of lighting fixture demand.

# [LED Lighting Systems]

...Futuristic Eco friendly lighting

## Light Emitting Diodes

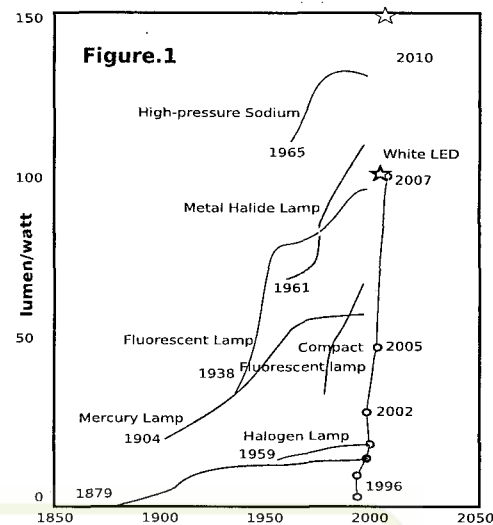
Fig.1 shows the rapid growth in White LED technology when compared to the slow growth in other lighting sectors like incandescent, halogen, mercury vapor, fluorescent lamp, metal halide lamp etc.

The technology trends reveal that lumen per watt output of white LED will reach 200 by 2010 out performing all other technologies. At the same time the cost per lumen output is falling steadily making LED lighting more affordable.

According to one scenario

LED's share of lighting market:

- ▶ 50% of all illumination by 2025
- ▶ Solid state lighting could reduce global energy use for lighting by 50% by 2025



## Conclusions

With the maturing of technology and affordability the writing on the wall is clear that the LED lighting is going to rule the roost of future lighting requirement.

