

# toIfreeIndia

*IN BUILDING NETWORKS*



*Consulting and Turnkey Solutions*

# Introduction

**TollfreeIndia Technologies Pvt. Ltd.** has been a leading player in the wireless, wire-line and optical communications space for the past 10 years. It continues to be a leader in the high-tech communication infrastructure space today.

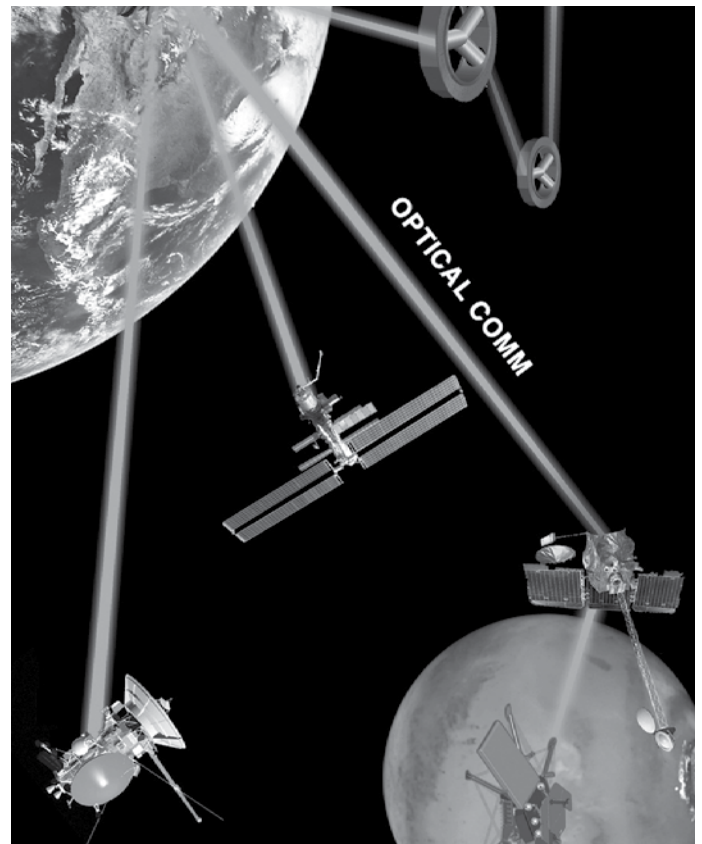
Headquartered in Mumbai, **TollfreeIndia** was founded in the year 2000 as the telecom initiative of the Himatlal Group that was established in the year 1943.

**TollfreeIndia Technologies Pvt. Ltd** is a frontrunner in the high-tech product space consisting of:

- **Telecom & Wireless Solutions**
- **Optical Communications**
- **Satellite Communications**
- **Railway Signalling & Telecommunications**

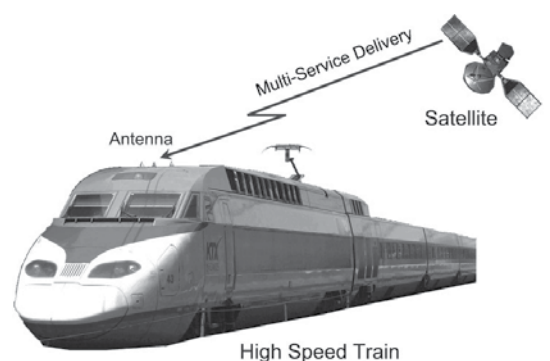
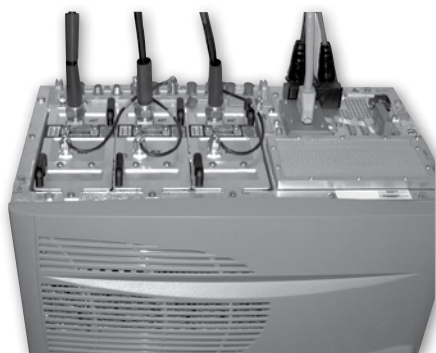
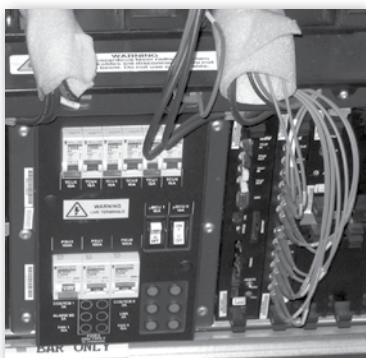
With a strong position in Telecom, Mobile, Wireless, Broadcast and Satellite Communication market segments, **TollfreeIndia** is active in various stages of product lifecycle from consulting to design, supply, installation, commissioning and maintenance of a diverse range of products.

At **TollfreeIndia**, we provide our customers with unique and comprehensive **Neutral Host** in building networking solution – a **Unified Communications Architecture**. Here, we aim to integrate multiple technologies and services on a unified backbone, whilst provisioning for evolution in



product design and services, giving the end user maximum choice of operators and services with high availability and seamless scalability.

We specialize in offering customized products and services to builders and facility owners based on their requirements and are committed to the highest quality standards and customer satisfaction with a strong focus on cutting edge advances in technology.



**Railway Signalling & Telecommunication And Cellular Base Station Equipment**

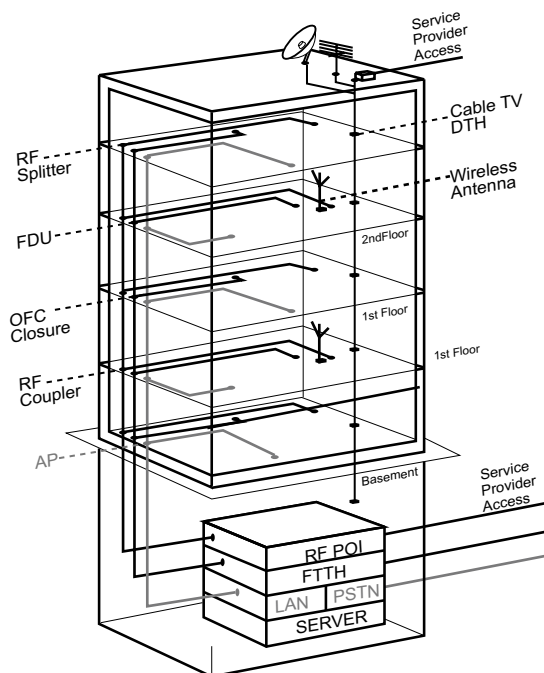
# TollfreeIndia IBS (In Building Solutions)

With over a decade of wireless and wire-line experience, **TollfreeIndia** offers an unparalleled and unbiased approach to **In-Building Solutions** - solutions that provide a highly scalable networking infrastructure for multiple technologies and multiple service providers along with seamless management of the network resources.

We recognize the complexities of indoor and outdoor communication requirements, and our focus is on cost-effective network planning and reliable system engineered solutions.

## What is IBS (In Building Solution)?

In-building communication networks provide a solution to previously inaccessible and zero coverage areas as well as weakly networked or covered areas. This is done by distributing connectivity to areas that need it the most, such as malls, hotels, airports, stadiums, metro and railway stations; office & residential buildings, elevators, food courts, bars, restaurants, meeting areas, conference rooms, parking lots, playgrounds, recreational areas, basements, service areas and common areas - virtually anywhere within your facility.



**TollfreeIndia POI**

High quality IBS infrastructure provides uninterrupted communications allowing technology consumers (visitors / tenants / home & office owners) seamless access to various services such as:

- CDMA, GSM, WCDMA-3G & LTE4G Cellular Networks
- Wi-Fi & Wi-MAX Wireless Broadband
- PSTN & DSL Wire line Broadband
- LAN & WAN Networking
- Audio & Video EPABX
- High Definition Digital Cable TV & Satellite Channels (DTH)
- Video on Demand

Superior indoor coverage dramatically improves the user experience by offering better speech quality; call continuity (no dropped calls) and steady traffic of video and data at bandwidth necessary for broadband services like 3G and Wi-MAX.

Premises that are equipped with high quality In-Building Solution infrastructure provisions for seamless open standard connectivity interfaces in tandem with a highly optimized network for: Cellular Service Providers, Internet Service Providers (Wire-line Broadband, Wi-Fi and Wi-MAX), Cable TV Operators, Direct To Home Satellite Broadcasters, IPTV Distribution Companies, and other technologies bringing about the mobility and accessibility needed for today's connected community.

# TollfreeIndia IBS Advantage

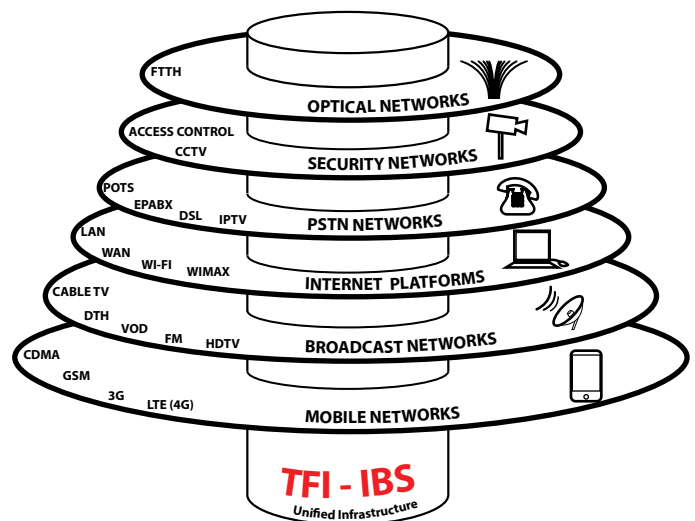
Most building owners are faced with a myriad of In-building wireless and wire-line coverage issues – most importantly, future enabling your facilities communication infrastructure.

**TollfreeIndia** takes the time to understand your specific requirements and fulfills them by customizing a solution that is right for you.

Our multi-disciplinary engineering approach ensures a professional solution by provisioning for top of the line Cellular RF, Wireless, Wire-line, and Optical telecommunication design, installation, supervision and management. We custom design a system that provides your tenants with continuous coverage for their business and personal needs and provide you with the **reliability and flexibility** expected from an investment of this caliber. **TollfreeIndia IBS** is a multi-service engineered indoor communications networking infrastructure with a **Unified Communications Architecture**, which will cater to all your existing and future communication needs.

Our Unified Communications Architecture employs a multi-disciplinary engineering approach in order to support a diverse range of existing and future enabled communication technologies and services. We ensure the implementation of passive, active and hybrid technologies for optimum indoor coverage and guarantee effortless management with low CAPEX & OPEX.

Ultimately, we work toward customer satisfaction



by providing seamless access to all communication technologies with a wide range of service providers.

**TollfreeIndia** can consult on 3rd party solutions as well as custom design, install, commission and maintain a fully scalable and comprehensive In-Building **Unified Networking Infrastructure** solution that meets the needs of today's increasingly demanding customers.

Our team of professionals and specialists will ensure:

- All aesthetics including structural and engineering designs are preserved as per original approved plans keeping in mind the dynamic mechanical and electrical needs of various projects.
- A single homogenous network supports all existing and future services and technologies that support multiple service providers so that there is no need for duplication of networks and additional cabling works. All the service providers commonly share one single **TollfreeIndia IBS infrastructure**.

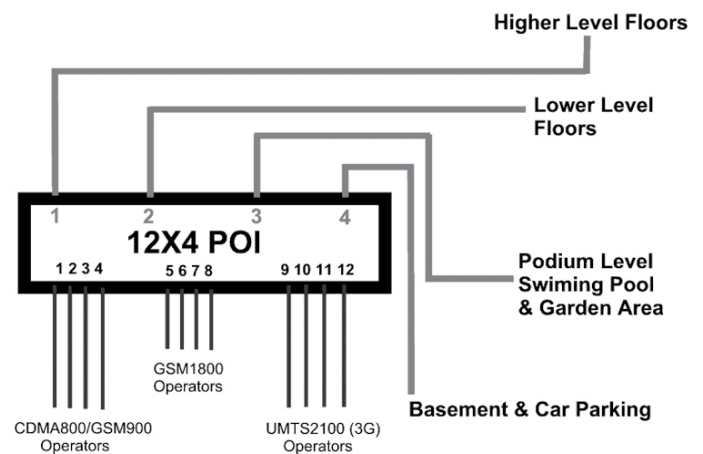


RF Components for IBS

- Our network planning allows the premise owner to implement a single communications path and offers a single point of interconnect for various service providers. Once the **TollfreeIndia IBS communication** architecture is implemented in your premises, it is future ready and will not require rewiring to accommodate new service providers or new technologies.
- Our architecture addresses scalability, technology upgrades, hardware and software well in advance.
- **TollfreeIndia IBS infrastructure solutions** can be enabled for single or multiple Cellular Network Service Providers, single or multiple Wi-Fi, Wi-MAX and Internet Service Providers, single or multiple Cable TV & DTH Service Providers.
- **TollfreeIndia IBS** is a multi-service flexible infrastructure platform based on Open Interface Standards that you will require for optimized network coverage at your facilities for all your communication needs including Cellular, Wireless RF, Wire-line Copper or Optical Communication.
- All our products and services are backed by technical and engineering support.



RF Connectors



### Benefits to Building / Premises Owners:

- Opportunity for dedicated and managed in-building coverage capability.
- A single point of interconnect infrastructure system that supports current and future wireless, wire-line, optical, voice, data and multimedia services; including hardware provisioning for connectivity to almost any communication, broadcasting & networking system.
- Ability to deploy wireless LAN, cellular network with uniform coverage or customized coverage solutions as per requirement.
- Increased productivity through seamless access to: voice, video, security and other critical applications across your building space within the campus.
- Tenant / Customer satisfaction and retention ensured.
- Return on investment\* within 3 to 5 years.

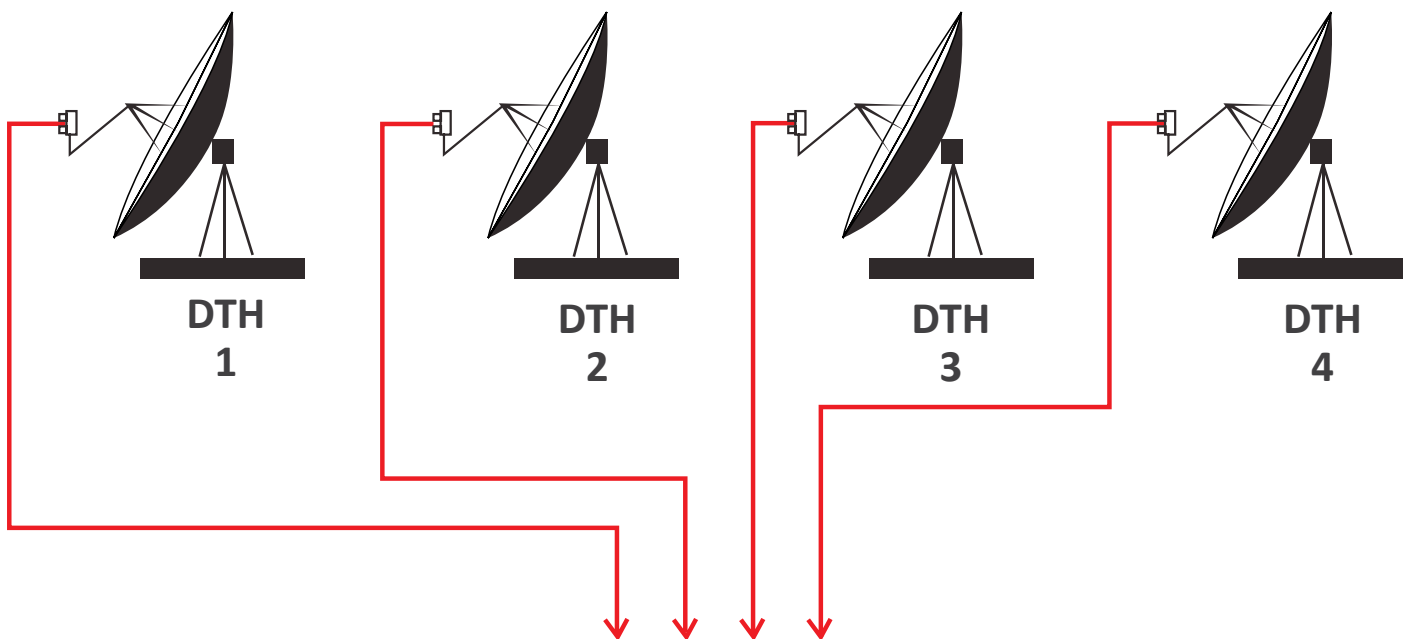
\*ROI applies only to owners of large commercial premises where certain traffic and footfall is achieved. Please speak to our specialists for additional details.

POI Application Block Diagram



RF Cables

# TollfreeIndia DTH Solutions



The Indian DTH (Direct to Home) space is a rapidly emerging industry. Doordarshan was the first to introduce DTH in India in July 2006 with its DD-Direct+ DTH Services. Since then an increasing number of DTH Service Providers have joined in the fray, such as Dish TV, Tata Sky, Big TV, Airtel Digital, Sun Direct, Videocon and many more.

As of January 2011 there are more than 35 Million DTH subscribers in India and growing at the astounding rate of more than 1 million subscribers per month or 35% annually. In the next few years, India is slated to reach the number one position for the country with the maximum number of DTH subscribers.

Due to the influx of several entrants in this space, customers now have a wider choice of service providers. Of course, with choice comes the need to adopt technologies and services that allow flexibility in choosing your options with ease, using exceptional technology for DTH networks, which include satellites, multiplexers, broadcasting center, modulators, encoders and DTH receivers.

In terms of technology, the process starts with DTH service providers leasing Ku-Band transponders from the satellite.

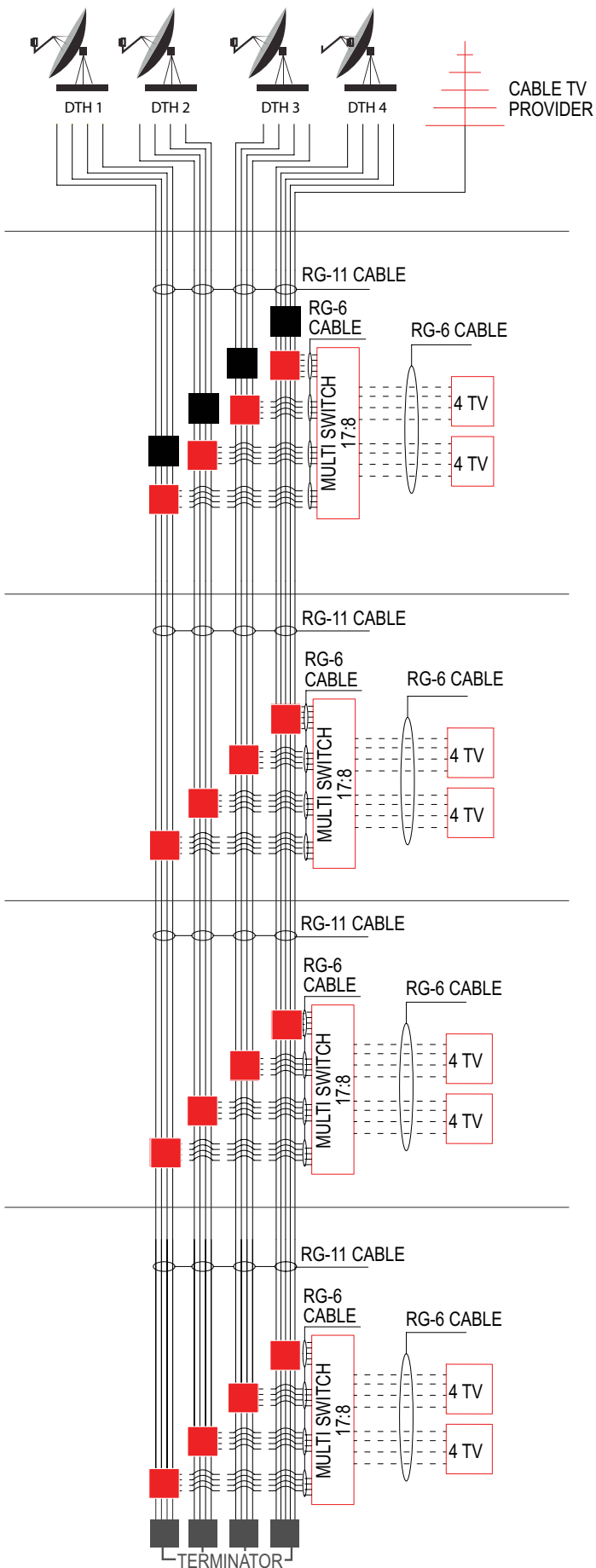
Thereafter, an encoder gets into the process of converting video, audio, and data signals into the digital format. Once this is done, the multiplexer mixes these signals and the service provider then uplinks it to the leased transponders on the satellite which in turn beams the signal wide enough to cover the Indian footprint.

## Standard DTH Set Up For Individuals:

Users install a small dish antenna (either on the terrace or mostly in their balconies), run cables into their homes and using a set-top-box; they decode the mixed signals, thus receiving TV channels from a single service provider. Access in this case is restricted to a single DTH provider.

## TollfreeIndia DTH Solutions: A Neutral Host Distribution System

TollfreeIndia is delighted to introduce a Neutral Host DTH Platform which enables multiple DTH Service Providers to beam on a unified backbone whilst provisioning for evolution in product design and services, giving the end user maximum choice of operators and services with high availability and seamless scalability (moving from a single service provider to multiple providers) without making any changes to their existing cabling set up. It's as simple as changing your set-top-box!



### The TollfreeIndia DTH Solutions Advantage:

- Enables single or multiple DTH Service Providers + Cable TV Operator or Terrestrial TV broadcaster to deliver their services simultaneously to viewers in various units of a dwelling.
  - The subscriber is free to select a DTH Service Provider of his choice for each of the DTH Terminal Points provided at their home / facility.
  - A Common Antenna System will be deployed for multiple DTH providers in a building / facility.
  - Ensures that the building external and internal aesthetics remains the same as per original plans as no additional wires / antennas need to be installed
  - Solutions offered range from: (a) Co-axial cable for smaller buildings, (b) Complete optical solution or (c) A hybrid solution for multi-storied skyscrapers.
  - Standard DTH Receivers can be used by the end user
  - Entire solution is backed by pre-sales and post sales services like site survey, network design to supply of components & systems to actual installation, commissioning and maintenance.
  - Standard DTH MDU (Multi Dwelling Unit) Networks or Networks with remote monitoring and remote management facility can also be offered
  - All equipments and systems supplied by TollfreeIndia IBS are from European and South Korean / Taiwanese manufacturers and ensure high standards of availability.
- To learn more about TollfreeIndia Cellular IBS Solutions, TollfreeIndia DTH Solutions or TollfreeIndia Unified Communications Architecture and to work out the optimal network solutions for your facility, please contact us.



DTH Set Top Box & Antenna



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