

Rider Connectivity | Public Safety | Transit Operations

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# Bringing wireless to transit

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**BAI Communications**

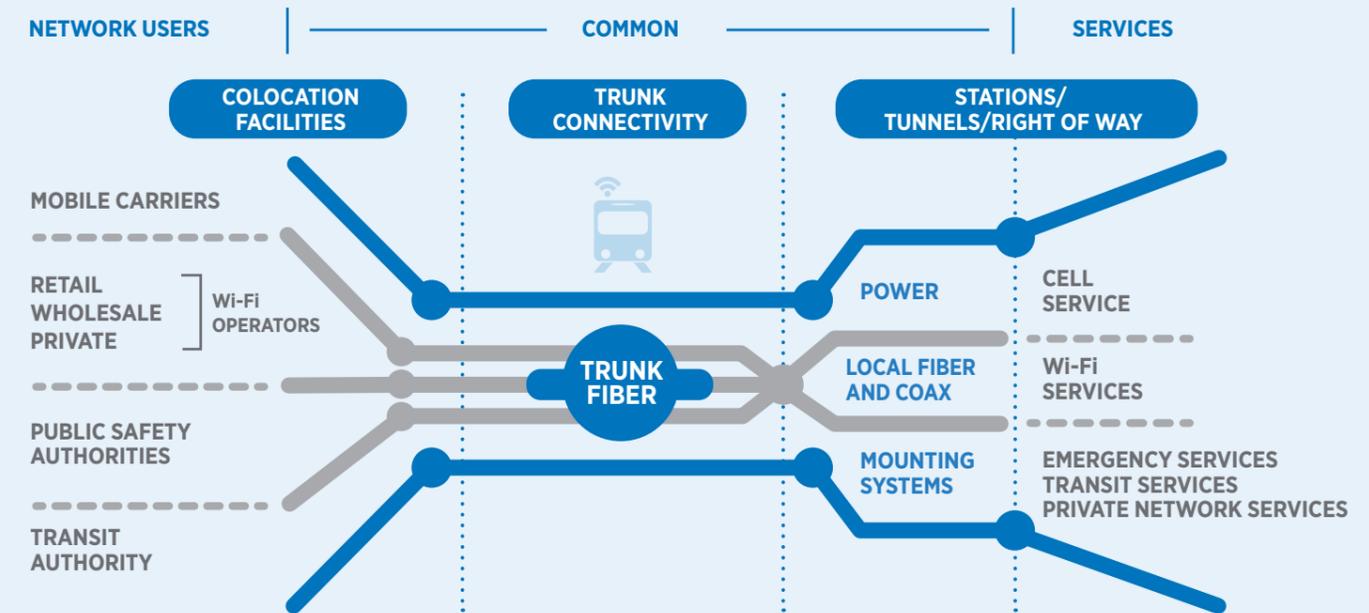
Bringing the connection to your journey



bai communications



# The Common Network Paradigm Shift



Across the globe, BAI Communications (BAI) delivers advanced wireless services to large scale transit networks – improving outcomes for transit operators and enhancing the travel experience for passengers.

All through one shared communications network that enables 2G, 3G, 4G/LTE, Wi-Fi, public safety and transit services, with substantial cost and operational benefits for transit operators and other network users such as mobile carriers, public safety authorities and businesses operating in the transit system.

Demand for access to wireless services is increasing exponentially. Across cities – in cafés, stadiums, public spaces, malls and more – mobile wireless communication is now ubiquitous, and citizens have come to expect automatic connection wherever they go. One of the hardest places to provide wireless service is where people spend a lot of time. And that is a city's or region's transit network.

This is where BAI steps in. With proven technical and commercial expertise that draws upon a best-in-class system design, BAI implements wireless networks across some of the most complex transit networks in the world.

Our business model is designed to significantly increase Transit Authority efficiency and revenue and improve the commuter experience, safety and security.

High-speed broadband – delivered via carrier 3G/4G services plus public access Wi-Fi networks – brings significant benefits to both passengers and Transit Authorities.

In a transit system there are many applications that can be delivered very economically and securely through the use of common network elements.

### Public connectivity

- Voice and high speed broadband through 2G/3G/4G cellular and free, wholesale, roaming and subscription Wi-Fi

### Public safety

- Help point intercom services, video surveillance, LTE-PS

### Transit applications

- Fare payment systems
- Remote condition monitoring
- Back office/enterprise systems
- VoWi-Fi/PTToWi-Fi
- Passenger information systems (PIS)
- Digital signage
- Heat mapping
- Beacon technology applications

### Common network elements used

- Fibre networks - trunk and station
- Data Centre/Base Station Hotel colocation facilities
- Remote nodes for cellular, Wi-Fi and DMR
- Power
- Conduit and ducts
- Equipment mounting systems

### Sensible transit solutions

Passengers can work, study, interact with their friends through social media or simply enjoy a variety of online services.

For Transit Authorities, wireless connectivity can enhance the performance of the rail network and reduce operating costs whilst increasing passenger numbers and customer satisfaction levels. It eliminates dead zones to enable the delivery of real-time information to all passengers – whether it be timetabling and ticketing updates, news on delayed services, important emergency service or public safety information. It can enable monitoring, video surveillance, advertising delivery, entertainment services, employee communications, private network functionality, crowd behaviour measurement and many more possibilities.

It's all made possible through BAI as a network builder, operator and investor working in partnership with the Transit Authority.

# Delivering innovative solutions globally

Toronto



London



New York



Hong Kong



BAI has an unparalleled track record across the globe in delivering secure, future-proof wireless solutions to Transit Authorities.

We custom design each network to suit the local environment, and deliver measurable benefits to the Transit Authorities and their customers.

BAI has implemented wireless solutions in two of the largest underground transits in North America – including New York’s iconic subway network and Toronto’s TTC subway – as well as in Hong Kong’s MTR.

## **Transit Wireless, New York**

Transit Wireless, a BAI company, provides a neutral host wireless network within the New York City subway system, one of the largest subway systems globally. The wireless network provides connectivity to more than 2.6 billion passenger rides each year as well as facilitating many transit operational applications through the deployment of cellular, Wi-Fi and fibre services to 279 underground stations.

## **BAI Canada, Toronto**

BAI Canada is licensed by the Toronto Transit Commission to fund, deploy and operate a neutral host wireless network, providing cellular, Wi-Fi and fibre services to some 69+ stations and connecting tunnels. The train network has an annual ridership of over 500 million. Services provided include cellular, Wi-Fi and transit applications.

## **RFE, Hong Kong**

RFE, a BAI confined space coverage systems company, has over nearly 20 years designed and built subway wireless networks for a number of Asian transit operators including Hong Kong’s MTR system where recently a multi band MIMO network has been deployed in the West Island line system allowing commuters to experience world leading data services of up to 300 Mbps.



### The BAI advantage

By engaging BAI to deliver wireless and fibre connectivity to your transit network, you will gain access to the very best technical experts and infrastructure.

BAI delivers:

- Substantial cost and revenue benefits for the Transit Authority
  - Alternative funding approaches possible; BAI is a willing investor
  - One construction cost to be borne for all services
  - Revenue share or other license fees
- Commercial simplicity through single point of contact to various users of the networks including mobile carriers
- Proven capacity to integrate cellular, Wi-Fi, transit and public safety communication networks, securely
- Future-proofed systems to satisfy an ever-growing demand for wireless connectivity
- A consultative approach to design

### How the BAI system works

BAI's fibre and wireless connectivity solutions are facilitated through best in class DAS technology and fibre to the edge Wi-Fi architecture to achieve maximum performance and customer experience – now, and in the future.

Colocation services are provided for all network users to simplify point of interface and operational needs. Typically, due to the confined space within transit networks, BAI Data Centres/Base Station Hotels are located externally in secure, resilient, fault-tolerant facilities with redundant power and air-conditioning. A city transit network may need a number of these base station hotels, reducing congestion within station precincts and enabling mobile carriers to efficiently perform maintenance without disruption to the transit operations.

A trunk fibre network is deployed to connect Base Station Hotels with stations and tunnels in the transit system.

### About BAI

BAI is a global leader in funding, designing, building and operating confined coverage wireless networks. We draw on over 80 years of experience in delivering innovative, premium solutions across a range of industry sectors.

With offices in Australia, USA, Canada, Europe and Hong Kong, BAI is an agile and responsive company that forms close relationships with the Transit Authorities with whom we work.

As well as providing cellular and Wi-Fi coverage in mass transit subway venues, we also boast a critical communications team that provides communications services for emergency and public safety authorities and private networks.

### Contact us today

Speak to us today about your goals for wireless connectivity within your rail network. We will help you track the right course for your future wireless deployments.

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