

Public Connectivity | Public Safety | Operational Networks

Bringing the connection to the UK

BAI Communications

Specialists in complex
telecommunications
infrastructure



bai communications

Infrastructure layers



The neutral host model: driving infrastructure investment

The technical and financing challenges of complex telecommunications deployments can be met by a fully funded neutral host provider.

Whether it's staying connected to your business, catching up on the latest headlines, staying entertained with video and gaming, or feeling connected via social media, people expect uninterrupted access to fast wireless data services. Owners of high footfall civil infrastructure, both in the public and private sector, want to ensure high quality and reliable wireless services not only for the general public, but also their customers and employees.

This level of demand has caused challenges to traditional financing models. Historically the public indirectly funded the deployment of telecommunications infrastructure through taxes and telephone bills. As data consumption has skyrocketed, telecommunications networks have increased in complexity in order to meet this demand for data, as well as simultaneously carry additional applications like payment systems, real-time CCTV, and digital advertising.

Answering the question of who funds the significant capital outlay for these pieces of infrastructure is complex; governments face economic uncertainty and competing demands for capital, whilst traditional commercial approaches to infrastructure are being threatened by disruption from new market entrants. Now, more than ever, innovative financing models are required to meet the challenge of this new era in telecommunications.

The fully funded neutral host model has proven an effective approach to meet these challenges. A neutral host deploys shared telecommunications infrastructure that is specifically designed

for simultaneous use by multiple operators, such as Mobile Network Operators and Public Safety agencies. The neutral host absorbs the deployment risk, and most importantly has a clear incentive to build infrastructure that is scalable, easy to upgrade, and delivers the same high quality of service to all users of the network; users who generate the revenue that allows for significant investment at no cost to the taxpayer.

They also serve to minimise the complexity for civil infrastructure owners by:

- Carrying multiple applications on a single network, which is easier to maintain and monitor.
- Providing a single point of contact for the planning and deployment.
- Being responsible for network performance for the full long-term infrastructure lifecycle, creating the incentive and certainty to continue investing in equipment upgrades.
- Acting as the telecommunications specialist, remaining up to date with new technologies.

A single infrastructure provider also brings significant commercial benefits:

- Common infrastructure is leveraged to capture additional revenue at the lowest unit cost.
- The most efficient use of capital; a single high capacity telecommunications networks compared to multiple networks with complex interactions.



Specialists in complex telecommunications infrastructure

Case Study: Connecting New York City - BAI Communications and Transit Wireless

Transit Wireless, a BAI Communications (BAI) company, was awarded the license to build and operate a new telecommunications network carrying commercial cellular and Wi-Fi services in the 278 underground stations of the New York City Subway. This was primarily in response to consumer demand – commuters wanted to be able to use their smart phones and tablets in places the outdoor cellular networks could not reach, staying constantly connected to family, friends, and work.

The transit authority, New York City Transit (NYCT), recognised the benefits of awarding the license to a fully funded neutral host provider. The NYCT remained focused on handling 1.6 billion passenger journeys per year, while BAI manage the deployment on their behalf, providing 100% of the capital and bearing all risk of cost overruns and technology change. In this way it is possible to deliver a state-of-the-art technology solution to the NYCT at no cost to the rider or taxpayer.

In fact, Transit Wireless has created multiple new revenue streams for the NYCT, who participate in the commercial benefits from the provision of the communications services to network users like Verizon, Sprint, AT&T and T-Mobile.

Scheduled for completion in 2016, on-time and on-budget, the deployment includes five mega data-centres networked via a high capacity optical fibre ring. Each of these base station hotels is in-turn connected by optical fibre to between 40 and 80 subway stations, at which point localised station networks, specially engineered for underground environments, provide high quality commercial cellular and Wi-Fi services to passengers on one of the world's iconic mass transit systems.

BAI Communications

With operations in Australia, USA, Canada, Europe and Hong Kong, BAI is at the heart of some of the most innovative technology around, technology that is keeping people connected. BAI and its portfolio of companies have decades of experience in the deployment and operation of high availability telecommunications networks. We offer a portfolio of products

and services tailored to individual civil infrastructure owners' operational requirements, and specialise in designing and building indoor and outdoor neutral host and multi-band Distributed Antenna System (DAS) networks that enable cellular and Wi-Fi connectivity in areas with less than adequate coverage, as well as venues that require increased capacity. BAI is owned by CPPIB, one of the world's largest and fastest growing institutional investors.



London

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Delivering innovative solutions globally

Global reach, local capabilities: BAI Communications UK

BAI Communications is headquartered in Sydney, and has recently opened an office in London to extend its reach to Europe from Australasia and North America.

Contact us today for more information on BAI, and to discuss how our innovative funding model and telecommunications experience can assist with your infrastructure deployment.



Hong Kong



Sydney

BAI Canada, Toronto

BAI Canada is extending cellular, Wi-Fi and fibre network coverage to all Toronto Transit Commission (TTC) 1.7 million daily subway and rail commuters. BAI Canada is working with the TTC to provide a complete coverage solution, from the design and build phase through to the ongoing operation and maintenance of the network.

By project completion, BAI Canada will have rolled out to Toronto's 61 underground subway stations, all 65 corresponding aboveground platforms, as well as mezzanines, walkways, passageways and stairs, and functions as a single point of contact for all of Toronto's licensed wireless service providers to extend their mobile services to all subway users.

RFE, Hong Kong

RFE has designed, built, installed and maintained communications systems for the Hong Kong MTR Corporation Ltd (MTR) for 20 years. The Hong Kong network is one of the world's busiest rapid transit railway systems - 1.6 billion passengers per year over 218 km - and RFE continues to deliver market-leading solutions for cellular technology installations, continuous essential radio systems upgrades, and critical sub-system updates to the network.

RFE also works closely with the Hong Kong government on diverse communications projects including the upgrade of emergency services radio systems, re-broadcasting systems in car tunnels, as well as an integrated cellular network in the central government office complex. RFE has also built indoor radio networks in airport terminals, convention centres and major shopping complexes.

CPPIB

Canada Pension Plan Investment Board (CPPIB) is a professional investment management organisation that invests the funds not needed by the Canada Pension Plan (CPP) to pay current benefits on behalf of 19 million contributors and beneficiaries. In order to build a diversified portfolio of CPP assets, CPPIB invests in public equities, private equities, real estate, infrastructure and fixed income instruments.

Headquartered in Toronto, with offices in Hong Kong, London, Luxembourg, Mumbai, New York City and São Paulo, CPPIB is governed and managed independently of the Canada Pension Plan and at arm's length from governments. At 30 June 2016 the CPP Fund totalled C\$287.3 billion.

E N Q R W S 7 41 Street & 7 Avenue Exit →



Europe

BAI Communications
Portland House
Bressenden Place, London
SW1E 5Rs
United Kingdom

Director: Malcolm Keys
malcolm.keys@baicomcommunications.com
Switch: +44 7947 372 525
baicomcommunications.com

Australia

Head Office
BAI Communications
Broadcast Australia
Hostworks
Level 10, Tower A
799 Pacific Highway
Chatswood NSW 2067
Australia
Switch: +61 2 8113 4666
Fax: +61 2 8113 4646
baicomcommunications.com

Hong Kong

RFE
Suite No. 2101-05, 21/F
6 Shing Yip Street,
Kwun Tong
Kowloon, Hong Kong
Switch: +852 2857 3698
Fax: +852 2856 9000
www.rfe.com.hk

USA

Transit Wireless
1350 Broadway
3rd Floor
New York, NY 10018
USA
Switch: +1 212 931 9020
Fax: +1 646 852 6351
transitwireless.com

Canada

BAI Canada
33 Bloor Street East,
Suite 403
Toronto, Ontario
M4W 3H1
Canada
Switch: +1 646 852 6352
baicanada.com



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a bai communications company



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