

An aerial photograph of Hai Phong city, Vietnam, taken during sunset. The sky is filled with dramatic, colorful clouds in shades of blue, purple, and orange. The city below is illuminated by the warm light of the setting sun, with several high-rise buildings and a construction crane visible. The foreground is dominated by a dark grey and black geometric shape that overlaps the city image.

**HAI PHONG  
CITY, VIETNAM  
CASE STUDY**



## OVERVIEW

Haiphong is a major industrial city and the second largest city in the northern part of Vietnam. Hai Phong is also the center of technology, economy, culture, medicine, education, science and trade in the northern coast of Vietnam. Furthermore, it is the third largest city in Vietnam. Hai Phong city traces its origin to its 1887 founding as a seaport province by colonist of the French Colonial Empire. From 1954 to 1975, Hai Phong served as the most important maritime city of North Vietnam, and it became one of direct-controlled municipalities of a reunified Vietnam with Ha Noi and Ho Chi Minh city in 1976. In the 21st century, Hai Phong has merged as a trading gateway, modern, green industrial city of Viet Nam, oriented to become the third special-class city of Viet Nam in 2030 or by 2050 at the latest.



## REQUIREMENT

Vietnam Post and Telecommunications Group (VNPT) wanted to deploy a scalable and seamless network for its residents in the downtown area which included Opera house, central park, historical monuments, bus stand, convention centre and a nearby beach, that could be tweaked as per the changing trends. They also wanted to monetise the network by displaying advertisements on the free public WiFi infrastructure. Moreover, it has 36 million subscribers across 58 provinces in Vietnam which made the deployment difficult.



## HOW WE HELPED

- ▀ Deployed 100 outdoor access points that are able to accommodate 40-50 concurrent users each.
- ▀ Centrally managed controller with a single dashboard to control all access points
- ▀ Customised captive portal with ad space
- ▀ Cost effective solution
- ▀ Access point Monitoring
- ▀ A reduction in network fault calls
- ▀ Ability to remotely control, monitor and troubleshoot
- ▀ Seamless and scalable WiFi
- ▀ Manage user logins and control the usage
- ▀ Discourage multiple logins by the same user
- ▀ Bandwidth management
- ▀ Policy management

# HAI PHONG CITY, AREA WIFI CASE STUDY

*Hai Phong, being the commercial capital of Vietnam, wanted to deploy Free WiFi for its residents. It had over 36 million subscribers across 58 provinces at the time of deployment which increased the difficulty of the installation.*

Wifisoft's public WiFi infrastructure along with Wi-FiLAN Cloud helped VNPT deploy one of the largest public WiFi network in Vietnam. Vietnam Post and Telecommunications Group (VNPT) is one Vietnam's largest telecom and Internet companies providing voice and data connectivity to over 36 million subscribers in all 58 provinces. VNPT also provides postal services including mail, parcel, domestic and international express mail, newspaper and magazine distribution. Its telecom division offers voice, data, internet and other value-added services deploying an advanced network infrastructure and many other IT

# HAI PHONG CITY, AREA WIFI CASE STUDY

solutions. The products and services are based on cutting-edge network infrastructure with modern telecommunications network to meet the diversified demands of its customers.

VNPT, a state-owned telecom company in Vietnam, wanted to setup a public WiFi network in the heart of Hai Phong city in North Vietnam. Hai Phong is one of the busiest harbours and is gateway for commerce for the north region. The city officials wanted to project Hai Phong a modern city to attract investors and multi-national companies. To this effect, it wanted to deploy a public WiFi network for its residents in the downtown area which included Opera house, central park, historical monuments, bus stand, convention centre and a nearby beach. Total of 100 outdoor access points had to be deployed each capable of handling 40-50 concurrent users. All access points had to be centrally managed and monitored using a web-based dashboard. They also wanted to control the user policies centrally to limit speed and time used for free WiFi. Finally, the top management wanted weekly reports to analyse the usage of WiFi and Internet access to keep track of bandwidth usage and customer feedback.

In addition, VNPT was also looking to monetize this WiFi network by running advertisements on the free public WiFi. To differentiate itself from its competition, VNPT wanted to deploy in-session and interstitial advertisements so they could maximize the advertisement revenue while the users are browsing using free WiFi.

VNPT engaged Wifisoft to deploy the city-wide WiFi network with the help of local system integrator in Hanoi. Wifisoft and SI were instrumental in deploying a robust and cost-effective WiFi network using the UniMax Smart AP technology and WiFi LAN Cloud. The outdoor access points were deployed on electric poles within the city and connected to the city-wide fibre optics backbone. Each AP was connected to 10 Mbps backhaul which guaranteed a seamless and fast browsing experience for the end users.

All Smart APs were centrally managed using WiFi LAN Cloud dashboard which allowed VNPT engineers to centrally manage and monitor the health of the network round-the-clock.

Any network outage was immediately reported to the network team so engineer could be dispatched to rectify the problem within an hour. WiFi LAN Cloud provided a branded and mobile-friendly splash page designed specially based on VNPT approved design. The splash page allowed users to browse the free WiFi for 1 hour after which the user had to purchase prepaid vouchers for additional access.

Wifisoft also deployed Hotspotclicks advertisement solution to insert banner advertisements on user's phones and laptops which the user was browsing the public WiFi network. Hotspotclicks

*“ Modern, well organized immigration & customs. Everything flows very nicely. Facilities exceed expectations. This is an airport for tourists and they do exceed in all ways. Comfortable, easy to navigate. Well done again! The WiFi made my life easy. Its easy to operate and didn't disconnect even once (like many other Airport networks do!)*

**- L Baker**

United States

Traveller Review on 12th November 2016





employed the content injection and adoption technology that seamlessly inserted customer friendly ads in the user's web content. The ads for Hotspotclicks were also managed through the WiFiLAN cloud dashboard and VNPT had complete control on how and when the ads would be displayed.

Any changes to the network could be done centrally and the changes were automatically pushed to the entire network within 15 minutes. This allowed VNPT engineers complete command-and-control on the network 24 hours a day and 7 days a week. WiFiLAN also generated real-time and historical reports for the management so the senior managers were able to review the network usage each week.

Lastly, Wifi-soft engineers trained over 30 VNPT engineers, technicians on various topics like WiFi technology, network deployment, troubleshooting, portal page design and many other topics related to management of public WiFi networks.

### **Deployment Diagram**

The figure below shows the network diagram for the VNPT network. VNPT wanted to tunnel the traffic from the central NOC in the Hai Phong data center. Each Smart AP was programmed to tunnel the traffic back to central NOC from where it was connected to the Internet.

The Hotspotclicks server resided centrally in

the data center and was designed to inspect http traffic and perform content injection in the html streams.

Wifi-soft and Vietnam SI were able to deploy the city-wide network within 3 months. The entire network catered to a population of around 300,000 residents who used the network regularly. The system recorded over 50,000 unique logins each day and users were downloading over 1 TB of data on a busy day.

VNPT received a lot of media coverage for the first of its kind public WiFi project in Vietnam. The city officials took special interest in the project since the project was showcasing the progress of the city and its readiness for the 21st century.

Excerpt

<https://en.wikipedia.org/wiki/Haiphong>