Airtel delivers a truly transparent network using Esri ArcGIS server-based platform

Client
Airtel

Website
https://www.airtel.in/

Location
Gurugram

Industry
Telecom

Organization Profile

Bharti Airtel Limited is a leading global telecommunications company with operations in 20 countries across Asia and Africa. Headquartered in New Delhi, India, the company ranks amongst the top 4 mobile service providers globally in terms of subscribers.

Solution

ArcGIS

Project Summary

A highly competitive and capital intensive industry, telecom in India is the world's second-largest telecommunications market with a subscriber base of 1.05 billion. In that, Airtel is the largest mobile market share holding company. Airtel has been known for many firsts and innovations to its credit, ranging from being the first Pan India Mobile Service Operator, first Private Basic Telephone Service Provider in India, Largest Mobile Market share in India and many more in its kitty.

For telecom companies in India, the cost of customer acquisition is much higher as compared to retention cost and quality of service is of paramount importance for customer retention. Realising that customer retention is directly related to transparency, Airtel, India's largest telecommunications services provider, thought of implementing a new initiative — Open Network under Project Leap. Under this initiative, for the first time in the industry, Airtel planned to open up its entire mobile network information to its customers through an interactive online interface. The new interface would display Airtel's mobile network coverage/signal strength across India in addition to network site deployment status. The project envisioned to empower customers with a capability to check Airtel's network presence across India and make suggestions on how its network coverage can be improved.

Challenges

Installing network towers is a highly capital intensive process that involves multitude of stakeholders like network planners, RF engineers, real-estate, construction, O&M, business, projects and finance personnel.

Project Leap involved working on system, processes & terabytes of wireless coverage data at different signal strength. For making this customer portal, a CFT team was formed to work on processes, web interfaces, APIs development, data processing and correlation of large RF coverage data and come up with "Know my Network" window for end customer who could see the network developments in terms of existing and new coverage and site presence for Voice and High Speed data connectivity.

Additionally, the solution had to be quickly deployable, capable of providing easy and flexible rollout options, and include an easy-to-use integration system.

Every telecom tower has a location associated with it. The coverage radius of the tower defines area that would be serviced by it and the customer base in that radius defines the capacity needed to serve that particular customer segment. To ensure that the consumers get sufficient coverage from telecom

towers while at home or in motion and to identify the coverage blind spots, there was need for spatial decision making. The tower locations had to be mapped along with their coverage capacities.

Solution

When it came to developing a map based solution, Airtel needed expert help. As the developer of the world's most powerful mapping and analytics software — ArcGIS — Esri became a preferred choice. ArcGIS applies The Science of Where to connect everyone, everywhere through a common visual language. It combines mapping and analytics to reveal deeper insight into data. Esri provides advanced mapping and data analytics services to 137 countries including India.

Esri India provided the ArcGIS Server-based platform to Airtel. The entire application was designed, conceived and hosted within 10 days, which typically takes about 3 – 9 months. It became operational in February 2016.

Impacts

The solution helped Airtel to:

*   Carry out hotspot analysis and network route planning on web.
*   Access to various web services in a thin client with Esri content.
*   Provide GIS based content & user management system.
*   Flexibility to integrate with open source API with a heart of Esri geospatial framework.
*   To perform the raster analysis on telecom coverage files like .grd and .grc.

The most important benefits of this technology have been:

*   Easy rollout.
*   Quick deployment.
*   Easy and flexible enterprise rollout options.
*   User friendly rest API's for easy integration.

Esri ArcGIS Server based platform provides customers "Know my Network" view at State/ District/ Pin code/ Locality level. It resolves other pain areas as well.

*   Helps the customers to know the upgradation happening at their location (Site up-gradation /New site planned). This knowledge enables them to switch the technology.
*   The customers do not need to depend on call center for network update happening in their areas.
*   Customers can offer their location for new site hosting.
*   Helps in identification of the network Service area.
*   Enables creation of sales territories for sales and operation teams.
*   Helps in creation of Smart FOS (feet on street) teams who have complete knowledge of Airtel's network.