



CASE STUDY

MARKET: MSO

REGION: EMEA

COMPANY: ZIGGO

## ZIGGO HOTSPOT PROJECT: “THE NEXT STEP TO AN EVEN BIGGER LIVING ROOM”

By partnering with Alcatel-Lucent, Ziggo has built the largest and densest Wi-Fi hotspot network in the Netherlands, providing mobile wireless broadband access for Ziggo’s customers.



Ziggo is the largest cable operator in the Netherlands, providing cable television (digital and analog), broadband Internet, and telephone service to both residential and business customers. The service provider started operations in 2007 as a result of a three-way merger between @Home, Casema and Multikabel.

In 2011, the Company passed 4,202 million homes, 1.5 percent more than in 2010, and earned close to 1.5 billion euros in revenue, a 7.4 percent increase from the year before. Ziggo provided television service to all of its 3 million customers – almost 2.2 million of these with digital television – about 1.7 million with broadband Internet, and more than 1.3 million with telephony services. About 1.3 million customers are subscribed to the All-in-1 bundle.

## CHALLENGES

- Ziggo determined that extending services to their internet customers outside their homes using Wi-Fi technology would improve customer experience and increase brand loyalty. How to achieve this in a scalable and secure manner without impacting the quality of experience (QoE) was the question.

## SOLUTION

- To provide the best service, Ziggo developed a secure, community Wi-Fi service based on its own network infrastructure in consultation with Alcatel-Lucent.
- A Wi-Fi Core Network, including the Alcatel-Lucent 7750 SR WLAN Gateway and Motive Authentication, Authorization and Accounting (AAA) Server were integrated into the existing Ziggo network.
- The Alcatel-Lucent 7750 SR offers interoperability, security and flexibility via soft GRE, managed user QoE and inter-access point mobility, along with accounting and policy.
- The groundbreaking end-to-end architecture simplifies operational costs and easily integrates with existing platforms.

## BENEFITS

- Better return on investment, resulting from proven and trusted lightRadio™ technology designed to create “one architecture for all”, contributing to the highest efficiency in OPEX, while setting the stage for new revenue models.
- Better end-user QoE, verified by the high percentage of users who adopted the service.
- An architecture fully certified by Cable Europe Lab that easily integrates with other operator coverage projects, such as the Ziggo Dome stadium.



## THE CHALLENGES

### Security

Using private Wi-Fi routers to create public hotspots is not a new concept. These hotspots can have several important disadvantages, however, in that they can be hard to use and may have quality and security issues. To provide better QoE, Ziggo had the following requirements of its solution:

- Each hotspot had to be entirely compartmentalized from the customer network to guarantee maximum security and privacy.
- Guest users roaming on the Wi-Fi network should not impair customers' Internet experience in any way.
- The hotspot should have sufficient range to allow guest users proper freedom of movement.
- No more than 20 guest users should be allowed on the hotspot at any given time.
- A single login should automatically grant access to all Ziggo Hotspots.

### Evolution

To ensure the network could evolve over time, Ziggo was willing to deploy an innovative architecture, provided it was backed by Cable Europe Lab certification.

## THE SOLUTION

Leveraging Ziggo's customers base and the 7750 SR Wireless LAN Gateway, Alcatel-Lucent proposed its unique lightRadio Wi-Fi architecture, which is rapidly being adopted for Carrier Wi-Fi deployment in the cable sector and is fully supported by Cable Europe Lab organization (see recommendation CEL-TR-WIFI-V1.0).

### Innovative Technique

Innovative services require innovative solutions. Alcatel-Lucent proposed Ziggo adopt a groundbreaking solution using the soft GRE tunneling protocol between subscribers' cable modems and existing Wireless LAN Gateways, transparent to intermediate elements such as the cable modem termination system (CMTS).

The Alcatel-Lucent 7750 SR WLAN gateway has the scalability to terminate soft GRE tunnels from the thousands of Wi-Fi hotspots and smoothly integrates the end user's new community session via a single sign on, as secure and policy enabled connectivity within Ziggo's overall service platforms. Wi-Fi handover is seamless and, furthermore, the use of Alcatel-Lucent lightRadio Wi-Fi technology across different business projects, such as Wi-Fi access in Ziggo Dome Stadium, ensures a

“one architecture for all” approach that simplifies operations, reduces OPEX and paves the way for total urban coverage.

This solution required the capabilities of the subscriber modems to be enhanced, and Alcatel-Lucent co-operated with Broadcom to provide the required functionality in their chipset.

## WHY ALCATEL-LUCENT?

### Customer Relationship

Alcatel-Lucent employed a consultative approach for the Ziggo Wi-Fi hotspot project. As the incumbent provider of IP technology, Alcatel-Lucent had unparalleled understanding of Ziggo’s request and partnered with them to

create a custom solution. This also meant the ensuing integration project and implementation phases were tailored to Ziggo’s requirements.

### Advanced Architecture

Many vendors offer IP or wireless solutions, however, Alcatel-Lucent leadership in both these domains offered Ziggo superior flexibility. The lightRadio Wi-Fi architecture has become a de-facto standard and is fully supported by the Cable Europe Lab organization.

### Partners Ecosystem

Alcatel-Lucent interacted with Broadcom, which allowed them to develop their new chipset that incorporates soft GRE in cable

modems. To provide Ziggo with more options, Alcatel-Lucent is also working with other chip providers, such as Intel.

## THE BENEFITS

### Better return on investment

A generic, hypothetical study on Wi-Fi community service in dense areas conducted by Alcatel-Lucent shows the service helps to increase customer retention. By lowering yearly churn from 10 percent to 8 percent, the investment can be recouped in less than 2 years. This can be reduced further if additional revenues are brought in from other use cases.

Additionally, the Alcatel-Lucent 7750 SR is a proven and trusted workhorse for operators, who use the same platform for a great variety of services. Together with lightRadio technology, the solution is designed to create “one architecture for all” and contributes to the highest efficiency in OPEX, while setting a path to new revenue models.

### End-User Experience

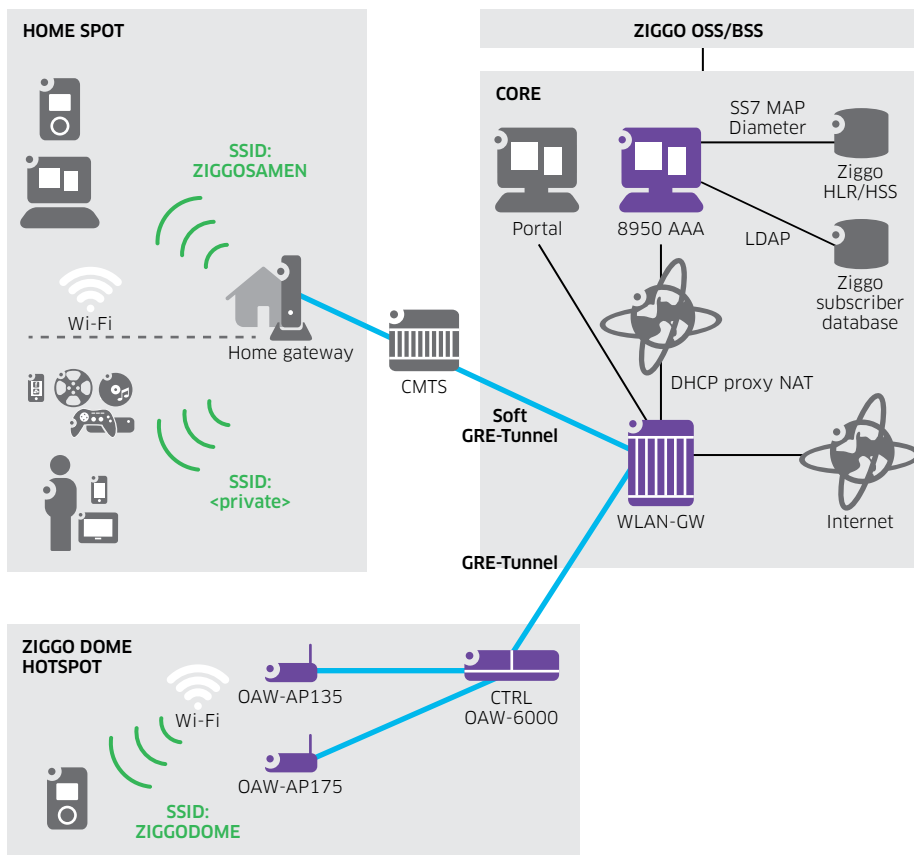
Ziggo customers are recognizing the benefits of this service: Almost every subscriber is joining the grid, offering an open Wi-Fi interface to other Ziggo customers and enjoying Wi-Fi ‘on the go’.

## SUMMARY

When committing to offer the best end-user experience, Ziggo made it clear that service expansion – such as mobile Wi-Fi access – is key to increasing customer loyalty.

During second half of 2012, Ziggo conducted a successful trial of 18,000 homes in Gröningen, the Netherlands. In addition to community Wi-Fi, Ziggo deployed the service in its Stadium, Ziggo Dome.

The Alcatel-Lucent solution turned Ziggo’s installed base of Wi-Fi capable residential gateways in private homes into public Wi-Fi hotspots, taking advantage of their existing infrastructure to offer subscribers secure and reliable mobile broadband access.



*“We are confident that the community Wi-Fi service we have built with Alcatel-Lucent is the first great step toward extending our services to customers outside their homes in a simple, reliable and secure way. The trial has already demonstrated that even with multiple subscribers accessing the Wi-Fi connection at the same time, speeds and quality are not compromised.”*

**Heleen Elferink, Director Networks and Systems Development, Ziggo**