



wavocom

communications engineering



Case Study



Sport Lisboa e Benfica
deploys a Wi-fi solution on
Luz Stadium

“The solution to be implemented had to handle radio resources in order to surpass the existent sources of interference, since it is an uncontrollable and congested environment.”

Objectives

Deployment of a Wi-Fi solution allowing mobility, load capacity, quality of service, scalability and security.

Challenge

The solution to be implemented had to handle radio resources in order to surpass the existent sources of interference, since it is an uncontrollable and congested environment. Moreover, it was mandatory to have the network control from a centralized location, and that control is agnostic regarding the type of data traffic, enabling easier growth without having to resize the entire network.

QoS policies would have to be implemented in order to prioritize voice and video traffic.

The solution’s planning, concerning both radio and networking characteristics, should be able to overcome the inherent difficulties of covering a stadium (which structure is fundamentally composed by steel and concrete).

Wavecom’s engineering team had to provide a solution allowing such entities as Benfica’s TV and Media Professionals to, expeditiously, transmit and manipulate heavy multi-media content in a continuous way.

Security was also a key point, given the extreme level of competitiveness of a sports club such as Sport Lisboa e Benfica and the sensitive information that is conveyed in this type of Wi-Fi network. Security was, from the very first moment, a major concern in this project.

“Security is safeguarded by the most advanced security techniques. The entire solution is centrally managed, allowing the network manager to know accurate statistics of the equipment’s usage..”

Solution

A solution supporting both Single and Virtual Cell technologies was deployed. These technologies allow a better usage of Wi-Fi radio resources.

Since the entire network operates on the same radio channel, there is space for an increase in services using the remaining channels. This implies an increase of capacity for its double or triple. Furthermore, expanding the network’s coverage area becomes extremely easy, consisting of just adding an AP at the desired location with no need to re-dimension the entire network as with other technologies.

Leveraging from Single Cell’s technology, this solution eliminates Handoffs, which is very interesting when dealing with data sensitive to variations in latency, such as voice and video.

The final solution consists of a central controller, located at Luz Football Stadium in Lisbon, and APs distributed along the Stadium and also at Caixa Futebol Campus, Benfica’s training center and young football academy, in Seixal.

Client’s Testimonial

Advantages: Solution’s performance; Satisfaction with the planning, deployment and support given to the solution.

(UPCOMING)

“Since the installation of the wireless network by Wavecom, we have been using it as our main communications system in the Benfica TV offices and studio areas. The solution has been dealing perfectly with our capacity and coverage needs: We have been increasing services and number of people running on top of it as well as dealing with frequent changes and dynamics on offices and studios space, and the network as been supporting all of it, with no performance degradation we can complain off.

The WiFi network is a must for Media working areas, we’ve began covering these areas with the cooperation of Wavecom, dealing with the challenges each area presents, applying the best suited solution for each one.



“The team plays its home matches in the Luz Stadium with a capacity of 65647 spectators. Benfica is the club with most paying supporters in the World and the 22nd wealthiest.

It is the most successful football club in Portuguese competitions, with 67 titles and has won, among others, 2 UEFA Champions Leagues. “



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Final Remarks

Security is safeguarded by the most advanced security techniques. The entire solution is centrally managed, allowing the network manager to know accurate statistics of the equipment’s usage.

SLB

Sport Lisboa e Benfica is a Portuguese sports club based in Lisbon, Portugal.

Founded on 28 February, 1904, Benfica is one of the biggest clubs in Portugal. The team plays its home matches in the Luz Stadium with a capacity of 65647 spectators. Benfica is the club with most paying supporters in the World and the 22nd wealthiest.

It is the most successful football club in Portuguese competitions, with 67 titles and has won, among others, 2 UEFA Champions Leagues.

Wavecom

Established in 2000, Wavecom is an engineering company with a strong component of Integration and Development, which supports a portfolio of solutions in the fields of Wireless Networks and Unified Communications.

Wavecom is characterized by solid expertise, versatility and competence in the design and implementation of turnkey systems and applications, integrated and customized to the needs of each client.

The knowledge and experience accumulated over the years, due to the number and complexity of the implemented projects, strengthen the multidisciplinary experience of our technical staff, representing the value of Wavecom, differentiating it in the market.



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About Wavecom:

Wavecom was established in 2000 and has three core fields of activity: Wireless Networks and Networking, Unified Communications and R&D.

Our core business consists of the development and integration of telecommunications solutions, specialized in Radio and Unified Communications technologies. The company started its activity as a telecommunications integrator specialized in Wireless, expanding then its activity to the Unified Communications field.

Beside Portugal, the company is also present in Cape Verde and Brazil. Wavecom is the market leader for wireless connections in unlicensed band and has developed the major VoIP project (Open Source) in Europe.



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