

## CASE STUDY

# **HOW MER GROUP ACHIEVED 100% NETWORK CONTINUITY ACROSS AN UNDERGROUND RAILWAY NETWORK**



See how the MER Group in Chile was able to bring network continuity to all stations in Santiago's underground railway network more efficiently using iBwave Design.

## ABOUT MER GROUP



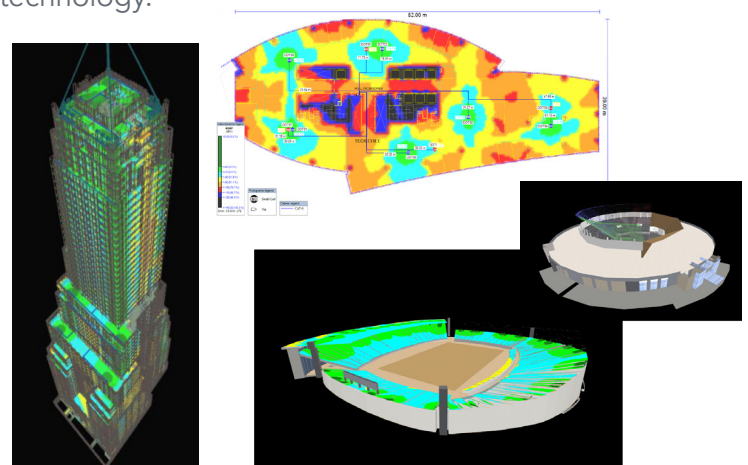
MER Group is a Public international company based in Israel with development, manufacturing, marketing and installation of high technology solutions for the telecommunications, HLS and emergency services industries.

Through its subsidiaries in Latin America, Mexico, Chile, Peru, Colombia the company installs broadband infrastructure for customers around the world, engineering services, planning and construction services for renewable energy projects and invests in natural gas pipeline projects in Israel. Some of the company's clients, as Municipal entities, Commercial companies, Banks, Sensitive Sites and communications operators. The company owns the telecommunications tower manufacturing plants, as well as the software and electronics development centers.

## INTRODUCTION

In Chile, the MER Group was commissioned by one of the biggest operators to bring LTE 1900 MHz and 2600 MHz technologies to the underground railway network in Santiago. The project had a massive scope - with 18 stations at 3000 square meters each, surveys and significant pre-planning were essential to meeting the KPIs of the operator.

The primary goal of this project was to ensure network continuity of service across all stations. There was also the opportunity to upgrade existing frameworks and KPIs with more advanced technology.



## THE CHALLENGES

**Design Time Optimization:** With a project of this magnitude, optimal time management was essential to ensuring things went smoothly. There were many tasks to complete to prepare the network design: compiling the necessary equipment, link budgets, and bill of materials, all needed to be finished before the next step in the design could begin.

**Managing Material Lists and Budget:** It might be obvious, but designing a network for eighteen railway stations requires a lot of materials and components. Some stations required unique equipment due to the geography and architecture of their infrastructure. Others were more straightforward, but regardless of complexity, all equipment and costs needed to be accurately documented and accounted for. And since the project was so big - comprehensive documentation was essential to keeping things organized and within budget.

**Ensuring 100% Network Continuity:** As mentioned above, the goal of this project was to guarantee continuous network connection at each railway stop across the whole grid. That meant having strong connectivity in between each stop as well. With limited time and budget, the project could not afford overdesign or inaccurate predictions, so the design plan had to be properly finalized before deployment could begin.

## THE SOLUTION

### iBwave Design Enterprise

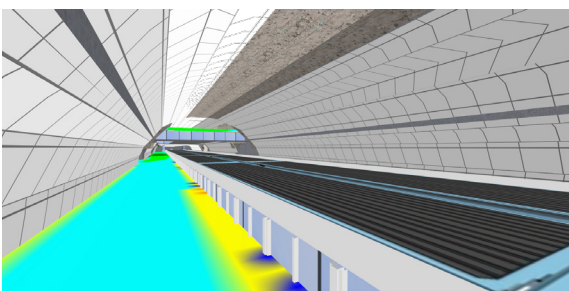
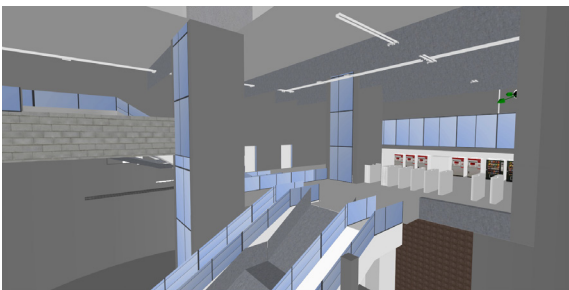
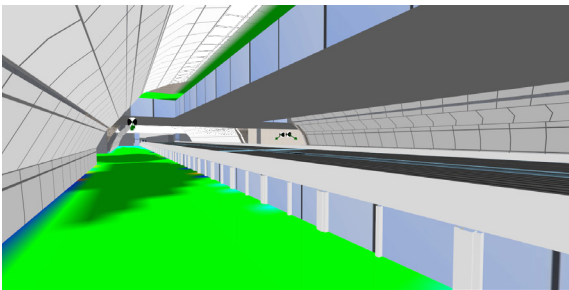
The most productive way to deliver all of your wireless network projects. With multi-technology, multi-building support, advanced 3D modeling, coverage and advanced capacity simulations for increased network densification, iBwave Design Enterprise is the most powerful software to design large and complex in-building wireless networks.



*iBwave Design provides precise tools to design solutions tailored to the current requirements of mobile operators in Chile.*

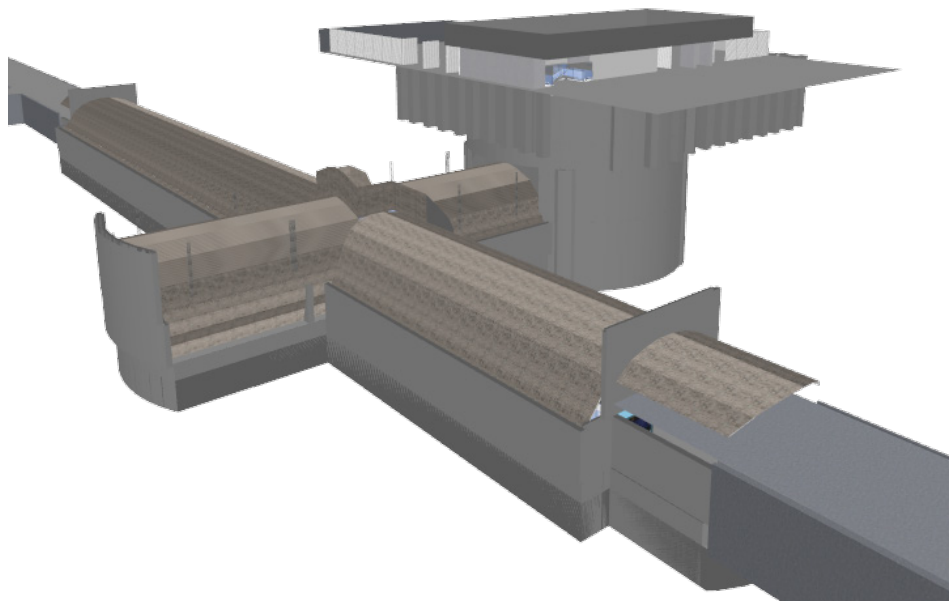
- MER Group -

## THE RESULTS



### 100% Network Continuity Achieved

- ✓ Decrease in delivery times of project documentation by **30%**
- ✓ Reduction of required troubleshooting and maintenance
- ✓ Precise design that reflects actual measurements



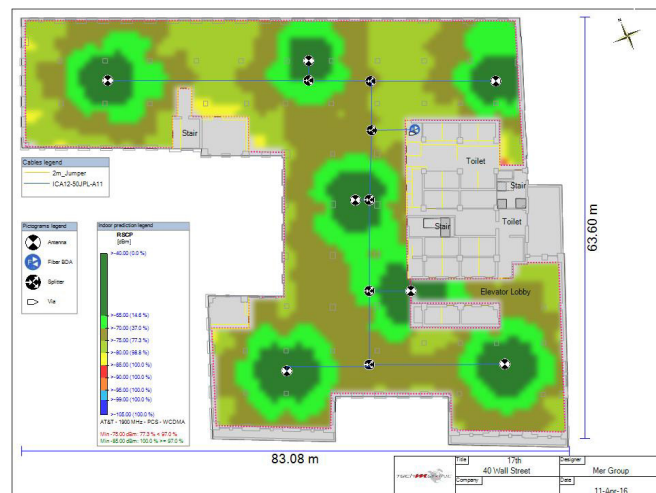


# THE RESULTS

Here's how iBwave Design helped MER Group Chile overcome the challenges presented:

**Accurate Prediction:** With a built-in component database and support for many different network technologies, iBwave Design's propagation and optimization models proved to be reliable and effective at ensuring network continuity. This meant less risk of having to re-optimize or overdesign the network caused by incorrect predictions. MER Group depended on the design reflecting the actual measurements of the network, and iBwave was there to ensure that was the case.

**Easily Generated Reports and Data:** MER Group was able to compile equipment lists, bill of materials, and link budgets hassle free thanks to iBwave Design's built-in report documentation tools. These reports take seconds to generate and come in the file format of your choice for easy archival and visualization. MER Group saved a lot of hours by using this feature, and the benefits translated into a 30% decrease in project documentation delivery times.



iBwave Design's powerful prediction capabilities ensure accuracy in your designs and reduces costs by avoiding overdesigning.

The Underground Railway in Santiago is now fully operational, with 100% continuity across the network. MER Group and iBwave are proud to have successfully collaborated on this project and are looking forward to working together on future endeavors.

To learn more about how iBwave Design can help design networks for a variety of use-cases, visit our product page on [www.ibwave.com](http://www.ibwave.com).

Find out how MER Group Chile is one of the market leaders in the telecom industry at [mer-group.com](http://mer-group.com).

## About iBwave

iBwave Solutions, the standard for converged indoor network planning is the power behind great in-building wireless experience, enabling billions of end users and devices to connect inside a wide range of venues. As the global industry reference, our software solutions allow for smarter planning, design and deployment of any project regardless of size, complexity or technology. Along with innovative software, we are recognized for world class support in 90 countries, industry's most comprehensive components database and a well-established certification program. For more information visit [www.ibwave.com](http://www.ibwave.com)



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