



Discover What's Possible™

# Microwave Office Success Story

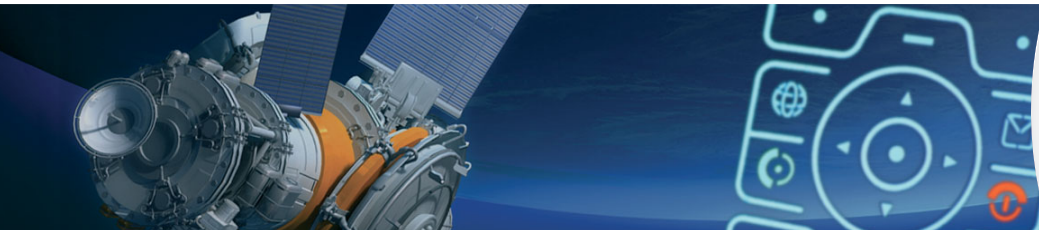
## Speed and Intuitive UI of Microwave Office Enable Anritsu Designer to Meet Demanding Requirements of Test Equipment Market

### Customer Background

Anritsu Company ([www.us.anritsu.com](http://www.us.anritsu.com)) is the American subsidiary of Anritsu Corporation, a global provider of innovative communications test and measurement solutions for more than 110 years. Anritsu provides solutions for existing and next-generation wired and wireless communication systems and operators. Anritsu products include wireless, optical, microwave/RF, and digital instruments as well as operations support systems for R&D, manufacturing, installation, and maintenance. Anritsu also provides precision microwave/RF components, optical devices, and high-speed electrical devices for communication products and systems.

### The Design Challenge

The test and measurement (T&M) equipment market is a particularly demanding branch of the communications industry because designers of communications products require the utmost in precise, accurate, repeatable, stable test



equipment in order to deliver their end products to market and ensure that they comply with today's complex, exacting communications standards. For the design of Anritsu's own T&M equipment, I use Microwave Office to quickly and efficiently design optimum microwave circuits on ceramic substrates. I use AWR software to design the hardware that generates and measures the real-world signals that the AWR software itself simulates. In other words, I use AWR to take "virtual" to reality.



Example T&M equipment from Anritsu

**Customer:**  
Anritsu Company  
**Application:**  
Test Equipment  
**AWR Products:**  
Microwave Office® design suite



“The efficiency gained in the design flow enables our designers to consider effects in much more detail than we were ever able to do before in the timeframe available. The result has been superior product performance at an affordable price in a very demanding market.”

*Justin Magers  
RF/Microwave Design Engineer  
Anritsu Company  
Test & Measurement Division  
[www.us.anritsu.com](http://www.us.anritsu.com)*

## The Solution

### What design problem did AWR software help solve?

Today's competitive communications market has narrowed the window of opportunity for new products, and at the same time the complexity of the new generation of devices utilizing a proliferation of standards is driving a need for faster, more efficient design processes in order to accurately predict performance and deliver communications products to market quickly and efficiently. The steep learning curve of many EDA products discourages engineers from using simulation effectively as a tool in the design process. With Microwave Office software, that hurdle is non-existent. Its intuitive user environment coupled with its robust and accurate simulation engines enabled me to include simulation as part of my design process, helping me complete my design faster and more accurately.

### Why did you choose Microwave Office?

Microwave Office is more intuitive to use compared with competitive products. Of course, the interface wouldn't be as significant a differentiator if the accuracy of AWR's models and simulation engines were not also first-rate. Also, I like the ability to have the layout associated with the circuit – it reduces human error (mistakes). The layout tool makes layout a lot less complicated than using a traditional CAD package, which serves to streamline my entire design process.

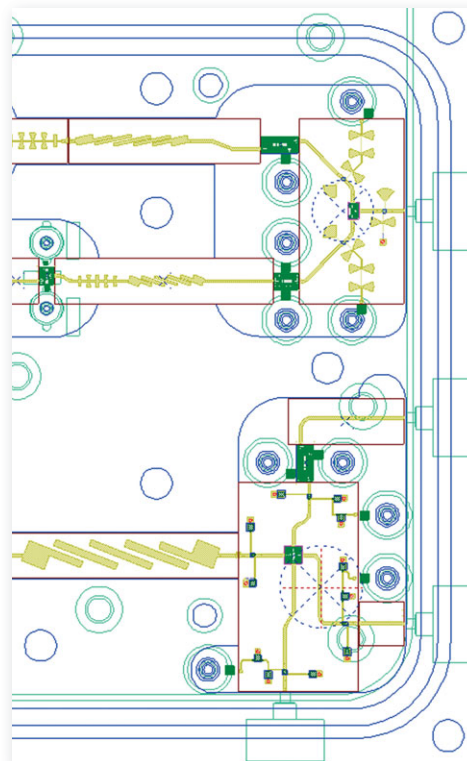
### What were the key benefits of using AWR software?

With other tools, the steep learning curve acts to discourage engineers from using simulation effectively as a tool in the design process. In terms of Anritsu, a significant differentiator that Microwave Office software provides to users is its intuitive interface and completeness of design flow. I believe many other engineers in my division are using Microwave Office as well because of these reasons.

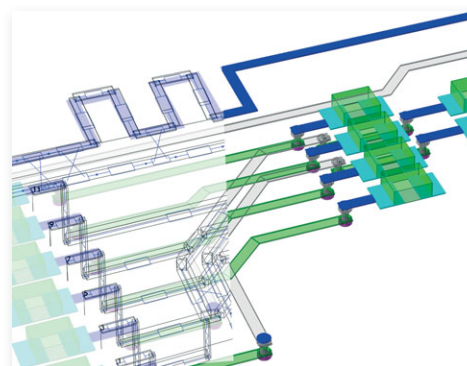
## Product Overview

Microwave Office design suite is the industry's fastest growing microwave design platform because it provides users with superior technology, flow, and choice. Microwave Office design suite offers unparalleled intuitiveness-of-use, powerful and innovative technologies, and unprecedented openness and interoperability, enabling integration with best-in-class tools for each part of the design process. Microwave Office software includes all of the essential technology: linear and non-linear circuit simulators, EM analysis tools, integrated schematic and layout, statistical design capabilities, and parametric cell libraries with built-in design-rule check (DRC).

The 2007 product release delivers key productivity improvements, including innovative new technologies like ACE™, the industry's first automated circuit extraction technology. Microwave Office software enables developers to improve productivity, shorten design cycle time, and speed products to market.



*Microwave Office layout*



*ACE technology for modeling your most complex interconnects*



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