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# Delivering scalable performance for mobile Internet access

UCOPIA Communications powers its WLAN hotspots with Intel® Xeon® processor E5-2600 product family



## Challenges

- **Highly scalable performance.** UCOPIA needed high-performance and highly scalable CPU and disk capacity to support parallel login and authentication to its Wi-Fi gateways from thousands of mobile users
- **Secure storage capacity.** It needed to ensure its solutions for mobile Internet access remained compliant with EU legislation on data retention by providing scalable, secure storage
- **Faultless first time.** It was looking for consistently reliable technology that would enable its business customers to provide immediate mobile Internet access to end users every time

## Solutions

- **Scalable servers.** UCOPIA selected high-performance servers from Wortmann running on the Intel® Xeon® processor E5 family
- **Optimized storage.** Storage capacity was provided by the Intel® Solid-State Drive (Intel® SSD) 320 Series

## Impact

- **Customer satisfaction.** UCOPIA can provide mobile Internet access in a wide variety of market segments and meet intense but intermittent demand for login and authentication of users
- **Improved cost-performance ratio.** Internal assessments show that UCOPIA has reduced the costs associated with poor reliability by up to 30 percent
- **Sustainable growth.** UCOPIA continues to grow its customer base and counts some of Europe's biggest brands among its clients



“The Intel-Wortmann configuration gives us the CPU and disk capacity that our business and our customers demand. A 100 percent Intel® technology-based configuration also creates a more reliable framework for our Linux\*-based software and delivers the consistent performance and reliability we are looking for.”

*Didier Plateau,  
CEO,  
UCOPIA Communications*

## Meeting the demand for constant connectivity

Until 2008, mobile Internet was growing steadily but slowly. But that year the smartphone became common property and demands for mobile Internet took off.

Didier Plateau, CEO of UCOPIA Communications, one of Europe's leading vendors of secure mobility solutions to businesses, has experienced the explosive rate of growth at close range. “In 2004, one of our earliest customers wanted a solution that could provide 100 corporate users with mobile Internet access. Today, their solution has to handle more than 10,000 concurrent users. Another customer is seeing the number of connections at its exhibition center increase by 30 percent a year. It's a very fast-growing market segment.”

Founded in 2002, UCOPIA has experienced yearly growth of 30 percent over the last four years. It provides mobility solutions for secure WLAN access and guest connections for companies, hotels, educational institutions, sporting venues, and exhibition centers, among others. Headquartered in Paris, the company now has employees in Denver, London, Munich, and Milan and serves more than 10,000 customers across Europe through its network of more than 350

resellers. In 2013, more than 300 million users connected with UCOPIA.

## The challenges of temporary access

Providing guest or temporary access to the Internet presents very specific challenges. First of all, there are the legal ramifications. Any organization providing Internet access remains ultimately responsible if their end users break the law – for example, by illegally downloading music or videos.

To make sure its customers are not exposed to potentially expensive fines and lawsuits, UCOPIA's solution provides robust, traceable authentication and provisioning services. It allows its customers to define end-user profiles, associate them with different access rights and tariff models, and track and trace all user activity.

In addition, to comply with the requirements of EU Directive 2006/24/EC on data retention, the solution captures data such as user profiles, IP addresses, and information about the connection, including time and duration, and stores it for at least 12 months. The solution also has CSPN first-level security certification and is the only product certified in France by the National Agency for Information System Security (ANSSI).



## Reliable, scalable, and high-performance mobile Internet access

### Delivering fault-free performance

Then there are complex demands for scalability, performance, and reliability. Plateau explains: "If you think about a sports stadium, there may be 50,000 or 80,000 people turning up in 15 minutes. So the solution could have as many requests for login and authentication in a very short space of time."

UCOPIA's solution stores everything that happens on the network in an SQL\* database: who connected, when, where, what device they used, and which URL they visited. When thousands of people connect concurrently, it creates significant write operation in the database and requires immediate high storage capacity and a very fast hard disk.

The solution has to work faultlessly from the beginning. "When we're working with clients who run temporary events, we don't have the opportunity to go in the next day and fix the solution if there are any hiccups," says Plateau. "Even in retail and hospitality, any downtime in our solution represents a lost opportunity for our client. A hotel guest doesn't care if the Wi-Fi works again after he has checked out."

Finally, UCOPIA's solution needs to be extremely reliable. With 1,500 solutions sold in the past year and more than 8,000 in production, monitoring and supporting unreliable or unstable systems becomes prohibitive.

### A secure, scalable solution

UCOPIA's expertise is in developing and delivering the software for operating Wi-Fi gateways and managing, authenticating, and securing mobile Internet access. However, to make the software easier to deploy through its network of resellers, it is preinstalled on relevant hardware, including high-performance blade servers

from Germany's Wortmann. The servers are powered by the Intel Xeon processor E5-2600 product family, and include 600 GB Intel SSD 320 series.

The servers can then be installed between Wi-Fi network (WLAN) and an organization's LAN. Its centralized architecture, standard technology, and modular expansion options provide both the high performance and scalability that UCOPIA's customers need. One server can serve up to 30,000 WLAN users simultaneously.

Plateau explains the company's choice of hardware: "The Intel-Wortmann configuration gives us the CPU and disk capacity our business and our customers demand. A 100 percent Intel configuration also creates a more reliable framework for our Linux\*-based software and delivers the consistent performance we are looking for. There's no problem with drivers for new network cards, for example, and the Intel SSD gives us the scalable storage we need."

### Monetizing mobile Internet

An additional benefit of UCOPIA's solution is that it enables customers to monetize the solution and create new revenue streams from onsite mobile Internet access. "Our customers include football stadiums that offer goal replays from a different camera angle, retailers that deliver targeted in-store advertising, and hotels that provide relevant local information. Once they capture and secure personal data, there are any number of opportunities to deliver additional services, provided they have the reliability and performance we provide," says Plateau.

"We also have customers who use our solution to manage their 'bring your own device' (BYOD) policies," he continues. "The authentication and provisioning aspects of our service mean they can develop access rights based on both the individual user and device they are using. It helps solve one of the biggest problems that IT departments are currently trying to address."

### Spotlight on UCOPIA

UCOPIA Communications is a leading producer of mobility solutions for secure WLAN access and guest connections for businesses, hotels, retailers, educational institutions, hospitals, exhibition centers, sporting venues, and local authorities. The company's products offer certified security and high scalability, are easy to administer, and comply with the legal requirements of the EU.

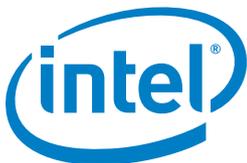
### Planning for future growth

Since moving to Intel® architecture in 2009, UCOPIA has seen its cost-performance ratio improve, with the costs associated with non-reliability reduced by approximately 30 percent. The Intel name has also helped the sales process. "We tell our global customers that we use Intel and it creates confidence," says Plateau. "Large customers usually ask what server we provide. Once we tell them it's based on Intel Xeon processors, they move on to the next question."

"We are in a market segment that moves very quickly," he concludes. "We have to provide for and handle new requirements, so we need the best tools and support. That includes our hardware. Working with Intel, understanding its roadmap for future development, and deploying world-renowned products give us confidence that we can pass on to our customers."

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