

ARGELA, SUN'S PRINCIPAL ISV PARTNER IN TURKEY, REMOVES PHYSICAL BOUNDARIES OF TELECOM WITH ITS CONVERGENCE GATEWAY PLATFORM

Customer: ARGELA Technologies

Industry: Telecommunications

Project Background and Key Challenges:

- In the past, mobile and fixed network operators could only offer services to their local market because of the limitations of traditional telecom technologies. When they wanted to extend their services beyond their local market, they had to incur high service costs since they had to use the network infrastructure of other operators in those regions.
- In a world where the communications networks evolve towards an all-IP architecture, ARGELA Technologies, the leading telecom technology provider of Turkey, was looking for devising a solution to help the network operators expand their market beyond geographical boundaries, by combining its extensive experience and expertise in telecom infrastructures and applications.

Solution:

- To this aim ARGELA Technologies developed its Convergence Gateway, and became the first patent owner and implementer of a solution which was more and more occupying the agenda of the technology companies across the world.
- Running on Sun platforms, ARGELA Convergence Gateway is used by the Northern Cyprus mobile operator KKTCELL to launch converged GSM and IP based services, which enables KKTCELL to expand its services to subscribers across the world and to create an internationally recognized brand name.
- The same solution is also used by Turkish Telecom in Turkey and by Astelit Life in Ukraine.

Business Results:

- With Convergence Gateway, KKTCELL subscribers can initiate calls, or use text or video based services wherever they are, provided that they have IP connectivity.
- In a world where the communications networks evolve towards an all-IP architecture, KKTCELL subscribers can access telecommunications services while they are traveling off-limits places without having to pay excessive costs for the international services.
- While Convergence Gateway seamlessly integrates with operator's existing charging and billing applications, various charging methods such as credit card, post-paid or prepaid, continue to apply as they are for all the services, traditional or new.
- Subscribers do not have to have a separate account from a VoIP operator to initiate IP originating and/or IP terminating calls; they can use their existing operator account and unique number to access the traditional or new services provided by the operator.

Application Vendor:

ARGELA Technologies

Sun Technologies

- Solaris/SPARC/Version 10
- Solaris/SPARC/Version 9/Solaris Ready Certified
- Solaris/X86/Version 10/
- Sun Java Enterprise System/Sun Java™ System Cluster/Version 3.1

With its patented Convergence Gateway solution, ARGELA enables telecom operators to offer their existing and new services to global customers cost-effectively.

A Platform to Remove the Physical Boundaries of Telecom

ARGELA is a leading technology company which develops new generation telecommunications solutions and provides network infrastructure components, convergence gateways and service delivery platforms for the telecommunications industry. Being the third company in Turkey to gain Sun Microsystems Principal Partnership status, ARGELA benefits, at the highest level, from the technical expertise, technology and solutions of Sun Microsystems and offers Sun solutions to its customers in a more comprehensive and effective way.

By combining its extensive experience and expertise in telecom infrastructure technologies and applications, ARGELA Technologies focuses on devising a solution to help the network operators expand their market beyond geographical boundaries in a world where the communications networks evolve towards an all-IP architecture. Ayse Erinc, ARGELA's Deputy CEO and Chief Operations Officer, says: "Both fixed and mobile network operators were offering their services within a limited geographical area which defined the boundaries of their markets. Today, however, it's possible for them to offer their services globally, to the whole world. Until recently, telecom operators didn't have the access to an infrastructure which enables them to offer these services beyond their physical boundaries. Converging telecommunications and Internet technologies, we developed ARGELA Convergence Gateway to help telecom operators open their infrastructure and make them independent of geographical constraints and access networks, and to let subscribers access the services no matter where they are in the world and no matter which mobile device they use.





With legacy systems, the only way for telecom operators to extend their coverage is to build infrastructures in new areas by installing cables and base stations, or to cooperate with other operators in those areas to use their infrastructure. In which case, they have to pay high usage fees to the infrastructure owners and impose the additional cost upon the subscribers. Furthermore, it means that they are still limited with the physical coverage area of the cooperated operator. On the other hand, ARGELA's Convergence Gateway innovation, which runs on Sun Microsystems platforms, meets this need in a revolutionary way. Providing a border management functionality between wireless and fixed networks and Internet, this technology allows for traditional services as well as many other new services to be provided to the subscribers, regardless of whether they are under fixed, mobile or IP coverage. With ARGELA Convergence Gateway, provided that the subscribers have IP connectivity, they can access their traditional telecom services even if they are out of the traditional coverage of the operator.. In addition, Convergence Gateway seamlessly integrates with the existing infrastructures, charging, billing, messaging and security systems and other applications of the operator.

Despite the fact that this technology has been in the agendas of the technology companies across the world for a long time, ARGELA became the first company to obtain the patent of the solution (through American Patent Office) and to integrate it with the infrastructure of several operators, including Turkish Telecom and Turkcell in Turkey, KKTCELL in Northern Cyprus, and Asetit Life in Ukraine. Ayse Erinc emphasizes that KKTCELL, amongst these operators, was an exemplary case: "Such a solution means a lot for operators like KKTCELL, which operates within a limited geographical coverage area. The population of Northern Cyprus is only 120 thousands. With traditional networks, KKTCELL is limited by this geography and population. With Convergence Gateway, however, KKTCELL can create an international brand name and offer its services to the subscribers anywhere in the world."

New Opportunities for Operators and Subscribers

With ARGELA Convergence Gateway, the subscribers of mobile and fixed network operators can now initiate calls wherever they are, within a virtual environment. They can easily initiate or receive calls over the Internet, using the same number (their own telephone number) and same account

(prepaid or postpaid alike). This solution is perfectly in line with today's popular communication services trends such as "single number, single account," "anywhere, anytime," or "any infrastructure, any terminal." Powered by Sun servers, the network infrastructure provided by ARGELA combines high performance, reliability and scalability with a single, integrated solution. The subscribers don't have to have a separate account from a VoIP operator to initiate IP originating and/or IP terminating calls, using their existing mobile or fixed phone number and their operator account. They can share their phone numbers with their relatives or friends living abroad, and they can make multimedia conversations. Within this virtual environment, traveling users can initiate calls from wherever they are. They can even add messaging and video support to those calls. In addition to telephony, Convergence Gateway supports messaging technologies such as SMS, MMS, video and USSD, and allows the operator to use its existing charging and billing systems for these new services, regardless of whether the subscriber is using a prepaid or postpaid account. For network operators, the key benefit of ARGELA Convergence Gateway is enabling them to reach new markets across the world, without being restricted with their

traditional local market. With Convergence Gateway, network operators can offer virtual SIM cards and phone numbers in any market in the world. ARGELA Convergence Gateway also offers following key benefits for corporate customers:

- Allows total telecommunication services to be provided to corporate customers with services that are accessible around the world, rather than only answering their local telecommunication needs and applying high charges for international calls and roaming.
- Presents them an alternative option for offloading their office traffic over IP, rather than costly fixed cellular terminals.
- Corporations can utilise their corporate directory allowing and encouraging all their employees to use the easy to use click-to-dial feature of Convergence Gateway, reducing their virtual network traffic costs.

For individual subscribers, the key benefits are as follows:

- Extends the subscriber's account to cover their VoIP service needs; subscribers do not have to have a separate account from a VoIP operator to initiate IP originating and/or IP terminating calls; their operator account is sufficient, prepaid or postpaid.
- Subscribers can initiate calls where ever they are, provided that they have IP connectivity.
- Subscribers can be accessed where ever they are, provided that they have IP connectivity.
- All using the same unique number, same account.
- Various charging methods, credit card, post-paid or prepaid continue to apply as they are; they do not need to provide their credit card details, etc. to another operator.
- Subscribers can access their traditional 'mobile' for 'fixed' services even they are out of the traditional coverage of the operator, allowing them to access

these services while they are traveling off-limits places without having to pay excessive costs for the services.

- Subscribers can start enjoying new services such as instant messaging and presence, video calling, file sharing etc.

Sun Standard in Telecommunications World

Being one of Principal Partners of Sun Microsystems in Turkey, ARGELA is also pioneering the migration to Sun Solaris 10 operating system. When building its infrastructure, ARGELA worked in close collaboration with Sun Microsystems, and the company is successfully implementing its solutions as the customers also use Sun technologies extensively. In its infrastructure, ARGELA Technologies use clustered Sun servers, in particular those powered by Niagara and AMD Opteron series processors, and many of the telecom customers of the company are utilizing high performance Sun systems in their IT infrastructure.

Ayşe Erinc expresses that ARGELA, as a software provider, generally develops platform independent solutions based on the unique infrastructures and needs of the customers, but they are happy to work with Sun Microsystems and use Sun platforms, thanks to Sun servers' extensive use in the telecom industry with high performance and accessibility. Erhan Lokman, R&D Director of ARGELA Technologies, adds: "Sun platforms we use are recognized as reliable solutions and widely preferred within the telecom industry. When developing solutions, we also use third party components, including "software stack," which are third party software, as well as interface cards for network connections. These components are also highly compatible with Sun hardware and OS platforms. As Sun addresses such needs of the telecom industry perfectly, we can implement our solutions without any difficulty. These third party components work seamlessly on our network switches."



"Convergence Gateway means a lot for operators like KKTCELL, which operate within a limited geographical coverage area. The population of Northern Cyprus is only around 120 thousand. With traditional networks, KKTCELL is limited by this geography and population. With Convergence Gateway, however, KKTCELL can create an international brand name and offer its services to the subscribers anywhere in the world."

Ayşe Erinc

Deputy CEO and Chief Operations Officer,
ARGELA Technologies

"Sun platforms we use are recognized as reliable solutions and widely preferred within the telecom industry. When developing solutions, we also use third party components, including "software stack," which are third party software, as well as interface cards for network connections. These components are also highly compatible with Sun hardware and OS platforms. As Sun addresses such needs of the telecom industry perfectly, we can implement our solutions on Sun platforms without any difficulty."

Erhan Lokman

Director of R&D, ARGELA Technologies

Sun Microsystems - Türkiye

Since its inception in 1982, a singular vision - The Network is The Computer(tm) - has propelled Sun Microsystems, Inc. to its position as a leading provider of industrial-strength hardware, software, and services that make the Network. Sun Microsystems' products and services cover all business sectors including Telecom, Finance, Manufacturing, Retail, Media, Education/Research, Defense Industry and Government. Sun can be found in more than 100 countries and works directly or develop solutions with local partners, in order to fulfill the needs and requirements of its customers with its high quality products and services. Sun's integrated, open platforms reduce the risk and cost of implementation projects, providing its customers with timely, cost-effective solutions which make complicated technology infrastructures easily manageable. Sun Microsystems' products, technologies and services include Java technology, Java Enterprise Software System, enterprise servers, desktop systems and workstations, and database systems. With its partners in the iForce Program, Sun delivers proven vertical and horizontal solutions in all industries. While Sun's Java technology plays an important role in shaping the Internet sphere, Sun Solaris is the most widely used UNIX operating system worldwide.

ARGELA Technologies

With its main office in Istanbul, Turkey, and subsidiaries in San Francisco, USA, Ankara, Turkey and Dubai, ARGELA develops new generation telecommunications solutions and provides network infrastructure components, convergence gateways and service delivery platforms for the telecommunications industry. Being the third company in Turkey to gain Sun Microsystems Principal Partnership status, ARGELA benefits, at the highest level, from the technical expertise, technology and solutions of Sun Microsystems, and offers Sun solutions to its customers in a more comprehensive and effective way. For more information about ARGELA please visit www.argela.com.

