



Oberthur Technologies Mobile Communications



Mobile Communications



GIGAntIC™ WUAOW
Best Mobile Application Sesame 2008

FlyBuy Duo
Best Mobile Application Sesame 2007

AngelIC™
Best Mobile Application Sesame 2006

GIGAntIC™
Best Mobile Product Sesame 2005

Oberthur Technologies: Innovative mobile solutions for a dynamic market

As one of the leading global players in mobile communications, Oberthur Technologies provide a range of innovative mobile products, solutions and services that focus on SIMplifying our customers' business and creating mobile opportunities.

In a dynamic mobile environment, Oberthur Technologies has developed and deployed an end-to-end system, from product specification in R&D to card personalization. This approach enables the company to offer unmatched services and cost-effective products with shorter lead-times.

The company's geographical expansions and acquisition strategy have strengthened Oberthur Technologies position in fast-growing markets such as Africa, Asia-Pacific, India and Latin America.

A service-oriented organization

Dedicated marketing, sales and technical support teams work with our worldwide customers on a daily basis, anticipating their demands, making proactive proposals and helping them develop their flagship projects.

A global offer

Managing a global portfolio of SIM platform and applications, the company is able to respond to every customer needs in the market.

Oberthur Technologies is one of the leading companies to design, develop and deliver state-of-the-art Over The Air (OTA) solutions and an ideal partner to grow customer's value-added services and customer relationship management.

Cutting-edge innovation

The company addresses the rapid changes taking place in the mobile ecosystem—mobile contactless applications like transport pass or payment, multimedia SIM and Internet-enabled smart card tokens by turning the SIM card into the critical resource for mobile operators to benefit from new business opportunities.

Additionally, a comprehensive fulfillment, scratch and packaging offer makes Oberthur Technologies end-to-end partner to mobile network operators.



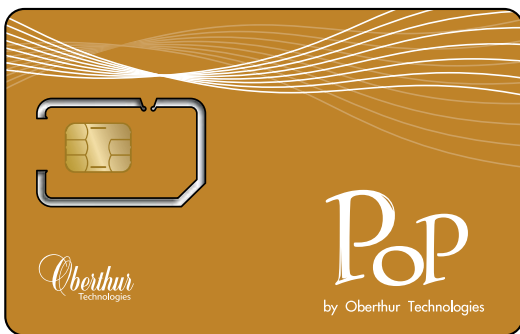
POP

POP by Oberthur Technologies targets the high volume, fast moving SIM market.

In this range, complexity is never a concern as our solution seeks to SIMplify customer's business and help meet their business objectives of growth, reducing cost, increasing speed and providing consistency and sustainability.

POP is a simple and efficient native-based SIM card offer following proven GSM, 3GPP and 3GPP2 standards. The

wide memory range spans card platforms with EEPROM of up to 128k or more. POP offers complete SIM-based solutions via an Application Service Provider (ASP) offer for an efficient outsourcing strategy, in addition to SIM Toolkit browsers and applications, and customized applications and services.



POP Technical features

- Memory range up to 128k
- GSM Release 99
- GSM Remote File Management
- CDMA2000
- WIB 1.2 & 1.3
- Latest 2G & 3G algorithms available

POP Applications

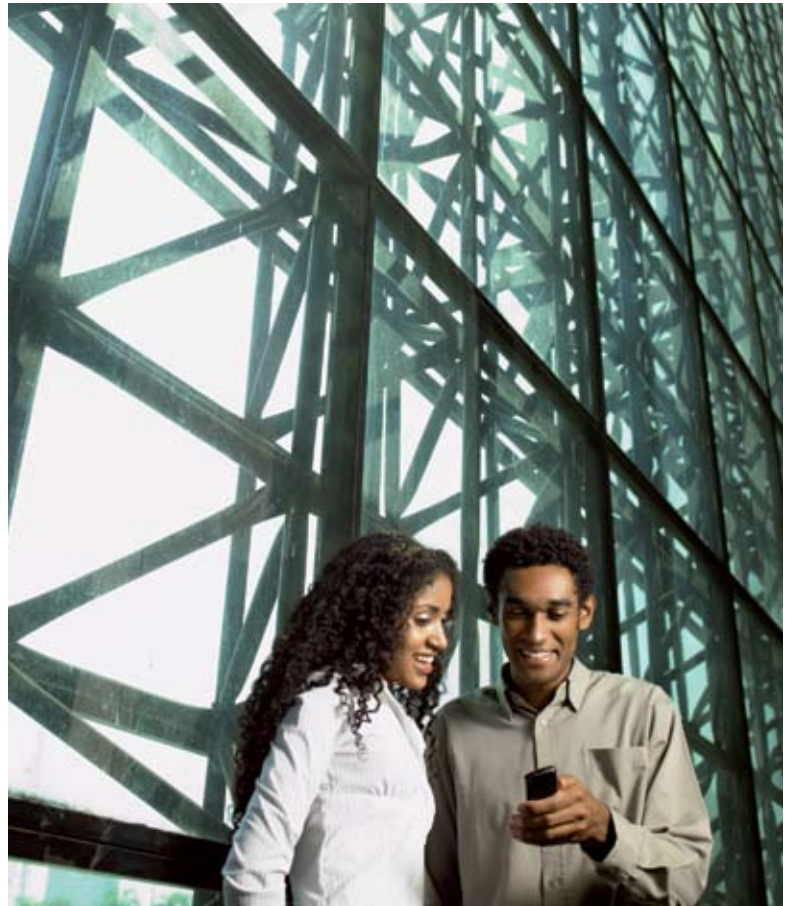
- Roaming: (U)SIM based client that ensures that traveling subscribers are connected to the best-preferred network in other countries.
 - IOD, Information On Demand is (U)SIM-based client implements a simple STK menu to offer access to a basic set of information.
 - WIB: Wireless Internet Browser is a (U)SIM-based thin client that implements a common, user-friendly interface for Value Added Services (VAS). Close partnership with SmartTrust.
 - Welcome message: simple application to pop up a message at start up whatever handset used.
- Get access to a larger applications offer with our JAZZ offer.

JAZZ

JAZZ by Oberthur Technologies offers a platform of unlimited services for sustainable mobile growth.

JAZZ benefits from Oberthur Technologies Java™ experience and field-proven interoperability. Designed to help mobile operators to develop and optimize their services strategy, the range includes Java-interoperable, off-the-shelf applications and Over The Air (OTA) card management solutions ensuring reliability, accessibility and scalability.

JAZZ is Oberthur Technologies' most widely deployed 2G and 3G product range and as such is ideal for extensive services offers or 3G roll-out. This Java-interoperable platform combines robustness and performance, and is designed for the delivery of security services. Memory capacities from 32k to 256k are available, and the range facilitates access to an extensive catalogue of mobile services as well as easy migration to higher memory.



Jazz Technical features

- 3GPP Release 5 compliant
- Interoperability: passed 3GPP Test Suite 51.013
- Multi-applicative card based on Java architecture and 2 logical channels
- Standard administrative commands (3GPP TS 102.222) for scalable card management
- Optimal dynamic memory management with automated defragmentation
- Dynamic applets and files administration based on standardized 23.048 protocol & GlobalPlatform 2.0.1
- Security Domains Management for external application offer
- Device Management to store operator-specific phone settings for simplified handset management
- State of the art security with SPA/DPA certification of main 2G algorithms
- On Board Key Generation, OMA WIM 1.2 for wireless public key applications and cryptographic algorithms are available on Java 2G & 3G PKI products

Jazz Applications & Browsers

SIM applications and browsers are software embedded in the SIM. They can be:

- Seamless for end users, for example 'Roaming management' applets
- Interactive, for example 'Incoming call management' applet











JAZZ Applications & Browsers are:

- developed in Java Card™ using industry standards (for example GSM 11.11, GSM 11.14)
- interoperable
- compatible with all handsets
- communicating with handsets (through events and pro-active commands)
- manageable OTA under operator control: activation/disactivation, configuration, content customization

They are now easily accessible with our SIM Shortcut applet which provides quick, easy, interoperable access to the SIM menu. With products from 2k up to 200k, and more than 10 years of experience in application development, we add smart features to the (U)SIM to help operators:

- Reduce churn
- Generate more ARPU (SMS, voice calls, data)
- Reduce costs
- Increase traffic in POS

Our portfolio of 50 SIM applications and browsers is organised in ten families.

Administration		Manage SIM card settings and SIM-handset interaction
Roaming		Propose roaming solutions for end users and optimize revenues
Connectivity		Ensure, manage and optimize connectivity for end users
Secured services		Use the SIM as a secure element for storage and transaction
M2M		Embed applications for machine to machine environments
Data management		Enable customers to manage their personal data (e.g. contacts, SMS)
Call control		Ease end users' ingoing and outgoing call management
SIM browsing		Create, manage and update embedded value-added services (VAS)
Mobile advertising		Provide and manage advertising content through the mobile phone
Multimedia		Use the SIM to access and manage multimedia content for end users

OPERA

OPERA by Oberthur Technologies embodies future trends, advanced product offerings and innovations. The range focuses on ensuring that our customers take the lead in mobile convergence.

The OPERA range is based on the powerful combination of 3G GlobalPlatform 2.1.1 and Java Card 2.2, advanced Java 3G products providing security, partnership and innovation. These features enable mobile operators to make a leap forward in 3G mobile services strategy and capitalize on new opportunities.

This range is enriched with complete and dedicated 3G offers including products for mobile TV or NFC roll-outs. Moreover the product range is completed with services such as a 3G OTA platform for OTA administration and powerful applications, including fast 3G phonebook backup.



Opera Technical features

- Multi-application capability with 3GPP Release 6 USIM
- SUN™ Java Card™ 2.2 (including Java Card RMI)
- Global Platform 2.2 for advanced card administration
- State of the art security with hardened operating system and SPA/DPA evaluated 2G and 3G algorithms
- Up to four logical channels
- Multi-USIM with various PIN management options
- Support of BIP/CAT-TP for fast card-server communication.
- Optimal dynamic memory management with automated defragmentation
- 3GPP Release 6 23.048 OTA management for post-issuance card management
- 3GPP Release 6 administrative commands
- On Board Key Generation, OMA WIM 1.2 for wireless public key applications and cryptographic algorithms on demand
- MBMS/GBA for mobile TV applications
- ISIM application for accessing operator's IP Multimedia Subsystem
- EAP SIM/AKA application for authentication over IP-based networks

Opera Applications

- **Mobile TV:** Specifically dedicated to deploy secure Mobile TV services, OPERA 3G Mobile TV cards are part of the OPERA range and benefit from a hardened operating system which matches the stringent requirements of Conditional Access System (CAS) providers. OPERA 3G Mobile TV provides mobile operators with not only a highly secured security element but also with a trust enabler allowing all players in the Mobile TV value chain to secure their revenues.
- **EAP SIM & EAP AKA:** Respectively the SIM and USIM variants of the Extended Authentication Protocol. They allow (U)SIM based authentication to be carried out across IP networks, both fixed (xDSL) and wireless (WiFi). This application enables secure access to operator services such as instant messaging, push to talk, mobile office or voice over IP.
- **SIM Token:** With the rise of identity fraud on the Internet, enterprises and banks use One Time Password generators. Similarly, the SIM Token application provides a password that is valid only once to any mobile phone user, and which can be checked by Oberthur Technologies' authentication server.



OPERA products

Smart Card Web Server (SCWS) WebSIM by Oberthur Technologies.

SCWS allows the evolution of the (U)SIM from a medium to enable SIM toolkit services to a central mode to connect to IP networks. Powerful applications are offered to the operators with SCWS:

Catalogs

Local and remote content can be optimized to enhance the on-line purchasing of music, videos or any other multimedia content.

Attractive user interface for secured web applications

The (U)SIM plays the role of a security module authorizing electronic transactions. SCWS offers a user friendly interface to favor on-line payments (air tickets, banking services, etc.)

Communication clients

SCWS favors instant messaging, e-mailing or even micro-blogging. Communication applications enable potential growth of revenues for operators.

Dynamic OTA management allow the operator to manage SCWS content under his control. By inserting a (U)SIM in a standard handset, end-users will have direct access to a set of rich multimedia services.



SCWS

- Web services with exciting user-experience
- Secure environment for sensitive applications

GIGAntIC™

Create new services, expand your business.

The GIGAntIC™ range (Sesame Award for Best Mobile Product in 2005) combines the standardized high speed protocol and Megabytes of Flash storage with the unrivaled security features of our 3G Advanced (U)SIM cards, thus allowing mobile operators to propose innovative and ARPU-generating multimedia services. With GIGAntIC, end-users access dynamic web content, store their preferred mobile TV movies, save their emails in a secured area of the (U)SIM memory. GIGAntIC really opens up a new world of opportunities.

GIGAntIC

- Memory capacity from Megabytes to Gigabytes in a standard (U)SIM format
- Secure Flash memory totally controlled by the operator



FlyBuy

Public transport, payment, e-ticketing, smart posters, data exchange: with FlyBuy, the mobile world goes contactless.

Positioned as a leader in the contactless market, Oberthur Technologies has delivered millions of contactless chips embedded in smartcards and passports. Oberthur Technologies know-how has already been demonstrated in the many applications where contactless technology is present—payment, transport, identity for healthcare and driving licenses, to name but a few.

Following the company's long-held vision of innovation, contactless applications are now becoming mobile. FlyBuy is the SIM-centric solution for mobile operators to gain access to the opportunities of the contactless world and to develop innovative and revenue-generating services.



FlyBuy

- SIM-centric NFC solution
- Supports standard transport & payment applications
- OTA management services of NFC applications

Success story

Oberthur Technologies provides the end-to-end solution for Payez Mobile, including:

- SIM cards
- OTA platform
- Personalization services

AngellC™

Oberthur Technologies made a breakthrough in convergence technology enabling current mobile subscribers to plug a SIM USB key into their PC or laptop to place and receive calls from a PC soft-phone using the subscriber's mobile phone number. Bringing together the features of mobile services with the benefits of internet VoIP and messaging services, the solution can use virtually any broadband-connected PC, while maintaining security and mobile operator control via the same smart card-based authentication.

AngellC won a Sesame Award for the Best Mobile Application at Cartes 2006.

AngellC

- Extend mobile providers' services onto the Internet
- Enable PCs to securely handle mobile VoIP calls using a mobile phone SIM



Success story: Mobitel launches M:Stik

Slovenia is a country of 2 million people that joined the European Union in 2004. In this trade-oriented economy, business is often international. As a result, a high proportion of Slovenian business people need convenient and cost-effective methods of communicating home from abroad.



Services & Solutions

Key differentiators for operators in competitive environments.







A constant threat to operators today is missing loyalty from subscribers resulting in high churn rates and inconsistent revenue. The ability to retain subscribers only based on cheap call rates and quality speech service is no longer enough and certainly no differentiator in a competitive environment.

Oberthur Technology offers a wide range of products to sustain, grow and enhance quality offerings and in turn help operators to reduce churn.

Oberthur Technologies has for many years offered turnkey solutions to operators in all markets.

Solutions family

As an answer to a growing need for revenue supporting services, Oberthur Technologies offers operators a suite of six product families. Each family contains solutions that can be tailor made to fit the operator's needs and requirements. The flexibility to customize all solutions ensures product can be adjusted and integrated to fit POP, JAZZ and OPERA markets.

Device Management		Solutions to configure, update and manage subscriber SIM and handset remotely. Essential tools for subscriber retention and to improve data revenue.
Browsers		Flexible and smart SIM menu solutions, offering fast and reliable access to the operator's value added services. Key building blocks to strengthen revenue.
Messaging & Community		Services that offers a range of popular applications like chat, messaging, email and other high volume and revenue generating solutions.
Location-based services		Solutions based on popular content and location. Location based services are geared for the full product range—POP, JAZZ and OPERA markets.
Roaming services		Roaming services offers operators an avenue to strengthen profit when subscriber travels abroad. Controlling the subscribers roaming pattern has direct impact on bottom line.
Payment & Security		With massive growth in transactional services across the globe, Payment & Security solutions are fast becoming a growing market for operators. Many years of experience in banking, security and the mobile business have matured Oberthur Technologies product range as the best of its kind.

SIMplicate

SIMplicate is part of the device management family and it offers full capability to back-up 2G/3G SIM and handset personal data (contacts, notes, task and events) in their operator's server.



With SIMplicate one can keep personal data safe. Oberthur Technologies offers a flexible and customizable set of solutions managing 2G and 3G phonebooks to fit the needs of the market:

With SIMplicate one can keep personal data safe. Oberthur Technologies offers a flexible and customizable set of solutions managing 2G and 3G phonebooks to fit the market needs:

- SIMplicate Nano is an application downloaded over-the-air in a few seconds.
- SIMplicate Standard ensures the integrity of a (U)SIM phonebook by saving it in a secured place, accessible at any time.
- Unified SIMplicate is the ultimate backup solution that synchronizes both (U)SIM and mobile phonebooks, calendars, notes etc. for SyncML-enabled handsets.

Success story



Oberthur Technologies provides an end-to-end convergent phonebook backup solution for Orange Senegal:

- *SIM phonebook backup at Point of Sales*
- *Synchronization of contacts, calendar, notes, agenda of Orange subscribers*

This convenient service prevents subscribers using multiple solutions.

Mobile commerce suite

Mobile commerce suite is part of the Payment & Security family and provides bank facilities in the SIM. It offers money transfer, e-Topup, mobile banking, payphone services.

Mobile commerce services offer a secure and convenient mean for payment using a mobile handset with the card acceptance capabilities. Mobile commerce leveraging on secured and friendly STK services enable the mobile operator, in partnership with banks, to easily deploy money or airtime transfer.

Mobile commerce—use your handset for your airtime or payment transactions:

- from a merchant to a client
- from a client to a merchant
- from one client to another
- among users within a company

Success story

Oberthur Technologies has a strong track record together with a long list of operators launching services across the globe.

This innovation enables subscribers to transfer airtime and money securely to friends and relatives in rural and remote areas. M-commerce is becoming a key differentiator in the emerging markets and Oberthur Technologies is a front runner in this space.

CardPackaging Services

Delivering cards, conveying value, strengthening brand awareness.



Oberthur Technologies provides a large range of attractive, practical and personalized packaging in order to help operators enhance and promote their mobile solutions with maximum effect on their end-users.

In line with the latest market trends, Oberthur Technologies developed a large variety of fully secure solutions, ranging from simple packages and card carriers to more sophisticated packs designed to convey a high-end image for mobile applications and services.

Secure end-to-end industrial processes, from design and conception to distribution and logistics

According to Oberthur Technologies manufacturing standards, all packages are produced in a total security in order to guarantee the perfect confidentiality on information and to ensure logistic tracking, with controls performed at every step of the packaging process from development through creation and fulfillment.

Oberthur Technologies offers a large range of end-to-end distribution services designed to value and simplify the transport and the delivery of mobile solutions.

Based on long term expertise in packing and logistic flows, Oberthur Technologies defines the best distribution strategies to deliver packaging solutions either directly to the end customers or to operators' shops and warehouses.

Tailor-made packaging to accompany customers in specific developments

For special requirements, Oberthur Technologies works closely with its customers as a partner, acting in the conception, design and creation phases. The company provides technical and creative expertise including raw material conception, format and size choices, as well as customized contents that make any solution totally unique!



A complete range of customization services for packaging (drawings, 3D models, mock up) are proposed to operators to support them in the creation of any new packaging idea, from concept to product development.

Scratch Cards

A comprehensive product range of secure scratch cards and innovative features designed to meet telecom operators' strategies in terms of innovation, customer retention and revenue contribution.

With its global manufacturing setup and years of experience in the Scratch Card business Oberthur Technologies is a trusted advisor in supplying a full range of scratch cards to the global market.

ISO format scratch cards offer with individual wrapping—standard solutions



Custom format scratch cards offer with batch wrapping—cost efficient solutions



Custom format scratch cards are a new cost-efficient scratch card concept based on Oberthur Technologies' expertise in and knowledge of lottery products. These multi-PIN solutions save warehouse space and transport costs and give the customer the opportunity to push very low airtime using a highly secure product. Custom format scratch cards can be delivered in wrapped batches only.

Innovative features to create additional usage with a direct impact on card consumption

Based on its experience and expertise in the manufacturing of secure printed products, Oberthur Technologies have developed attractive features that allow telecom operators to meet the various customer expectations and behaviors with a direct and positive impact on customer retention and revenue generation:

- Scratch cards including game or loyalty feature: In addition to the PIN code, a game is inserted on to the paper scratch card. Different games are available from figure collection to point collection.
- Collector cards: the opportunity to create ranges of collectable cards illustrating special events (soccer, golf, tennis players).

Value-added services

Offers to optimize and simplify day-to-day scratch card management. To facilitate and optimize the management of telecom operators' prepaid systems in a fully secure IT environment, Oberthur Technologies offers turn-key services including PIN code management, game management, e-tracking and data management.

Global expertise, Local solutions



www.oberthur.com



Oberthur Technologies respects the environment.

The number of printed brochures produced by the company has been significantly reduced to save paper. Printed documents are produced on FSC-certified paper using aqueous inks to reduce environmental impact. Datasheets are available in electronic format only.

Electronic documentation can be downloaded in PDF format here:

<http://downloadservice.oberthurcs.com/>