



We Take Our Customer as Our Partner

**22 Wadi El-Nile St.
El-Mohandseen – Giza
Egypt
Tel.: +2 02 33 03 05 08 – 33 03 05 09
Fax: +2 02 33 03 05 08**

**Website: www.unisoft-int.com
E-Mail : info@unisoft-int.com**

Who We Are

UniSoft is a software development firm, established in January 2007, a subsidiary of Advanced Computer Technologies (ACT) one of the major system integrators in Egypt. UniSoft also belongs to a strong ICT group that is UNIVEST Holding, which has been established in 1993 to consolidate the efforts of some ICT companies that have been providing the Egyptian market with state-of-the-art ICT solutions in various fields since 1985.

UniSoft has been focused on mobile phone applications development and implementation of security applications and protocols of small footprints on hand held devices, related to strong authentication and transaction security, in addition to the necessary server side complements.

UniSoft has been engaged for the first two years, with its outsourcing client, in projects ranging from pilots, experimentations, protocol and algorithm implementations for Mobile PKI, Soft Tokens, Master Card (CAP/MMA) CAA client, SMS security and image processing; on many of hand held devices known in the market. On the server side, UniSoft has carried on J2EE, SOA and DB related applications.

What We Can Provide

1. Mobile Application Development:

UniSoft has strong developed experience in many mobile applications for its customers for various platforms such as:

- Symbian S60 and UIQ.
- iPhone.
- Windows Mobile.
- J2ME.

2. Custom Software Development:

UniSoft can develop custom software addressing customer's special needs, with flexibility that allows our customers to compete effectively in today's markets. UniSoft strives for on-time delivery while maintaining high quality. In addition to custom development, UniSoft can also perform the following:

- Product Re-Engineering:

UniSoft can re-factor its customer's product and keeping its same functional features while enhancing its internal quality in a way that enables flexibility to change and better maintainability.

- Open Source Customization:

With UniSoft's experience in integrated solutions, we can allocate the needed expertise in the open source major applications, get it customized to your needs and integrated with other systems.

3. Offshore Software Development Team Extension:

UniSoft can provide professional IT rescue or long term teams. Provided teams can extend existing customer's software development team and incorporate with customer's development environment. Provided teams typically work based on provided customer requirements specifications and high level design, and would work according to customers own process and measures as required.

4. Security and Cryptography:

UniSoft has been focused on implementations of security applications and protocols of small footprints on hand-held devices, in addition to the necessary server side complements. With focus on Identity Management and Secure Transactions area.

UniSoft possesses deep understanding in the following areas:

- Kerberos.
- PKI.
- SSL/TLS.
- Windows Authentication.
- Identity management solutions.
- Block Ciphers (AES, DES, 3DES).
- Strong Authentication (Time and Event bases One Time Passwords).
- UniSoft's proprietary protocol secure transactions that supports:
 - Strong identity.
 - Non-repudiation – anti replay.
 - Message sequence integrity.
 - Privacy.
 - Message integrity.

5. Localization:

UniSoft can get your product localized for the Middle-Eastern market, even more; you may have chances to open a market for your product in the region through our mother company's network of relations.

6. Testing and QA:

UniSoft can act as your QA agent in the following areas:

- Functional Testing:

UniSoft can act as your QA agent, either through white box testing and code inspection for defects and compliance with your own coding standard, or testing the overall product for compliance with Software Requirements Specifications.

- Performance and Event Based Testing:

UniSoft can build your long term test lap, and perform time based stress testing and accelerated stress testing for your system on different platforms and operating systems.

Why Outsourcing to Us?

In UniSoft, we consider outsourcing not just a strategy of cost reduction, but a strategic service and essential element of growth.

UniSoft has software development focus on mobile applications, mobile application security and encryption algorithms, in addition to custom enterprise software development and utilizing top technologies and tools such as J2EE, J2ME, .NET, Web Services and major database engines.

With more and more organizations recognizing the potential of business process offshore employee leasing, UniSoft's experience and expertise in the ICT field translates this potential into qualified advantage.

Under the supervision of professional consultancy committee, UniSoft outsource professional software development teams that match with each customer's requirements. UniSoft strives to deliver the following benefits to its customers:

- **Quality:**

Recognizing that quality is the major differentiation factor in the software industry, UniSoft is committed to producing highest possible quality of software artefacts and IT services. UniSoft is committed to deliver work that can be measured and evaluated.

- **Flexibility:**

UniSoft's outsourcing model offers customers maximum flexibility gaining all benefits of remote staffing while they have maximum flexibility to increase / decrease working teams in their projects.

UniSoft offers remote fully equipped working environment with qualified IT engineers that are totally on-line with the customer and reporting to him directly as if located in the same company.

UniSoft offers customers competitive advantage to focus on their innovations through offering offshore employee leasing.

Empowered by its group of companies in the ICT field and relations with highly qualified academics, UniSoft is able to head hunt the best callipers in both the work field and academia.

- **Transparency:**

UniSoft is committed to its transparency policy that mandates keeping the customer on the same page with continuous project status reporting, including potential risks / problems and what measures / procedures has been taken to mitigate and overcome these problems.

- **Cost Reduction:**

With high competitive rates, UniSoft is confident of its ability to reduce the customer's cost base substantially.

- **We Take Our Customers as Our Partners:**

We not only provide workforce that fulfils its technical duties, but we take our customers as partners, we become interested in their success, we provide solutions and contribute ideas.

UniSoft has high potential in localizing your products and could provide opportunities for product introduction to the Middle-East region through its network of relations.

Working Environment

- We provide our developers with workstations from a brand name manufacturer (desktop PC or laptop) with at least 1 GB of RAM and a dual-core processing power. Workstations have licensed MS Windows XP or Windows Vista as an operating system, for Linux we use Ubuntu or Fedora.
- Subversion is used as a source code and document repository on a server system, TestLink is used to manage test cases, and jTrac is used for issue tracking.
- Open Office (an open source product from Sun Microsystems) is used for document editing.
- Other needed development and productivity tool license should be provided by the client.
- Each developer is hosted on his own workspace with all team members located at the same place.
- All team members are available for communication through phone, Skype and other instant messaging applications.
- Working hours are flexible and managed by the team leader for each team, normally, working hours are 8 hours + 1 lunch hour per-day between 8:30 am and 5:30 pm (Cairo's local time), Friday and Saturday are weekend.

Our Software Development Process

UniSoft is following a structured software development process, which has been applied successfully to several software development projects.

Given the variety of software development projects UniSoft has been engaged with, the process is highly customizable with customization guidelines so that the process can accommodate for different project types including outsourcing, product development, research and pilot projects.

According to these guidelines, the software development process in application can range between a Scrum or XP like flexible process and a rigged RUP like process according to the project type.

Yet, software development outsourcing mandates flexibility with the customer, accepting changes in requirements and puts emphasis on customer relation rather than fixed contracts and requirements. Therefore, UniSoft is striving for keeping its software development process as much dynamic as possible without compromising the quality of documentation and system's maintainability.

UniSoft is flexible to adapt to the customer's work environment and process. UniSoft staff would be happy to use the same customer tools and even get engaged with the customer process as any of the customer's in-house development team members.

In general, the process advocates the following practices:

- Adherence to the basic tenets of project management discipline.
- Customer involvement and continuous customer feedback should be the theme throughout the process whenever possible.
- Iterative / incremental development with interim deliverables is promoted for reasons of validation and near business value.
- Model Driven Architecture (MDA) in the sense that a full design model should be available and validated prior to coding. As we believe true and long term agility come from good software design.
- Test driven development in the sense that test cases and code unit tests should start before the actual implementation begins and should continue to elaborate along the development activities.
- Collaboration for peer review, team collaboration for peer review activities is promoted whenever possible. The target form this collaboration is not only identifying defects for removal, but also considering better alternatives. This is besides knowledge sharing and risk mitigation benefits.
- Pair programming is promoted as much as possible for reasons like knowledge transfer and turn over risk mitigation.
- Automation that is UniSoft is continuously investing in tools that support, speed up and measure the development process.

This software development process is a major asset to UniSoft, therefore, its improvement is a continuous effort, as we are continuously looking for better measures and tools; and good part of that is listening to our customer's experiences which have been always beneficial for both sides.

UniSoft has been also engaged with Software Engineering Competence Centre (SECC) (a government supported agency in Egypt) in an effort that aims to standardize and enhance UniSoft's software development process.

UniSoft was being trained by SECC in a software process improvement program called SPIG in which UniSoft has achieved a high score.

Commitment to Quality

UniSoft envisions quality throughout the software development process. At the top level, customer values and qualities influence the stress on certain quality perspectives. To UniSoft, "Quality Perspectives" are the characteristics and attributes that identify quality and these include Security, Usability, Maintainability, Variability, Performance and Reliability.

In turn, the software development process itself is continuously inspected to make sure it has these qualities and to make sure it is able to drive these desired qualities to the end product. That is each artefact is a product on its own, that should adhere to quality measures for the quality perspectives that apply.

For example a document, an SDS for instance, from the security perspective we should ask; who should read it? Who can edit it? Is the classification of the document made clear as part of the document? etc...

The same security perspective when applied to a code product reflects in another set of questions; does the code follow writing secure coding guide lines? Does it have technology specific pitfalls? etc...

Quality assurance procedures, audit lists and tools are applied throughout the development process to make sure the process is performed as stated on the right order and on time.

Quality control includes peer review procedures, check lists and rigorous testing. The peer review discipline target is not only identifying and fixing defects as early as possible, but also considering better enhancements and alternatives. For outsourcing engagements, our customers can provide their version of "coding convention", "best practices", "standard document structure" and other template documents that is in order to allow them to retain the same measures for all of their software artefacts.

Testing is typically used to verify the requirements, design, system units and the final integrated system. Component and integration testing are incorporated in the process to make sure the required functionality is working as expected. Testing scenarios are also influenced again with the quality perspectives identified including security, usability, maintainability, variability, performance and reliability to make sure the final qualities were successfully delivered to the end product.

Although UniSoft has its own quality management process assets, we are always open to applying the customer's quality assurance measures and methods.

Technical Skill Set and Technology Areas

UniSoft possesses core competence in the following areas:

- Symbian S60 and UIQ native application development.
- Windows development in general including Win 32 API, MFC, WTL and .Net (C#).
- SOA including XML related technologies, Web Services, Glass Fish ESB / Biztalk server.
- iPhone, application development.
- Windows mobile application development.
- J2ME CLDC 1.x MIDP 2.x Screen mode and Canvas mode applications, HTTP, HTTPS, TCP communication and Push technology.
- Java card.
- PKI / Cryptography; which includes algorithm implementation, application and communication with CA servers. The main applications are on J2ME, Symbian & UIQ.
- WURFL / Device Atlas libraries.
- Dynamic password clients; on Windows Desktop (Win 32), IE (COM) and FireFox plug-ins, Windows Mobile 6 (.Net compact framework 2), J2ME and Black Berry.
- Fax ITU-T30 protocol, analogue modem AT commands and Fax application.
- PDF document manipulation using Java iText library.
- Java based Web technologies: J2EE application servers (Tomcat, Glass Fish, Websphere 6.x), JSP / Servlet, Hibernate, Struts, JSF, Java Persistence API. Utilized for n-tier applications with Oracle, MySQL, DB2 back end databases.
- Dynamic languages Perl, Python and PHP.
- Oracle OCI interface based applications on Windows and Unix platforms.
- Design Patterns on the application and Enterprise level.
- Telecom related application experiences, billing systems, OSS / J and Radius implementations.

Still, if the required skill set is not available in UniSoft's current staff, we are relying on three channels for recruiting talented software developers, in addition to the technical knowledge building plans for the existing staff:

- The wide footprint of our holding company (UNIVEST) in the IT industry should enable us to spot out talented people.
- Our strong relation with the academia.
- UniSoft's staff web of relations.

Projects:

Project	Summary	Platforms
UniTel Health Insurance Contact Center	Software for a call center for medical applications. (<i>prototype only</i>)	.NET technologies
Projects and Financial Research automation for the ministry of interiors	An application that manage the process and information of the ministry financial year budgets. (<i>under development</i>)	.NET technologies
Removable Storage Protector	Floppy / USB storage encryption using windows driver framework.	Windows DDK
Soft Token	The application layer on top of an OTP library.	Windows Mobile, PC, IE browser and Fire Fox utilizing WTL, COM and Fire Fox plug-ins
Several Proof Of concept and research projects	Proof of concept in several areas including: MS GINA, Tying applications to system ID, VISA dynamic CVV, Time Based One time Passwords and SMS triggering.	Windows Mobile and Windows XP
Soft Token	The application layer on top of an OTP library for strong two factor authentication.	
UniSoft Requirements and Test Management Suite	A requirements management and traceability application with test case management for test design, version control and recording of testing results.	J2EE, JSF, Dojo, Hibernate 3, AJAX and JAVA Script
Mobile PKI J2ME & UIQ Clients	A mobile client SDK and applications for a proprietary Mobile PKI server.	J2ME, Symbian and UIQ Utilizing related PKI and block cipher APIs
Client Authentication Application (CAA) as part of CAP/MMA	An implementation of master card CAP/MMA CAA specification. CAP/MMA generates dynamic codes that conveys the owner of the mobile software and may convey the transaction amount.	J2ME utilizing related block cipher APIs
Secure SMS	A secure SMS P2P push technology implementation with P2P strong identity, anti-replay, message sequence integrity, message integrity and encryption. In addition to message compression. Based on a partial implementation of UniSoft secure transaction layer API for mobile devices. UniSoft has filed a patent for its SMS security innovation.	J2ME
Smart Home Mobile extension	A mobile interface for monitoring and controlling of existing Smart Home system.	J2ME client & Java Servlets with FFMpeg
Streaming Server for Mobile Phones	A Camera streaming application on iPhone 3G.	iPhone, Java Servlets with FFMpeg
Fax Gateway	Document consolidation, preparation for Faxing, and Faxing gateway. Through it, the user can send faxes to any fax machine.	J2EE with JAX-WS web service interface, iText, Rfax component, Hibernate and Struts

Package Manager (Phase I + phase II)	Instant application for building and packaging server that allows per-customer build options, including resource personalization.	J2EE, RMI, with several command line scripts and tools; Hibernate and JSF
Migration from Oracle to DB2 server	Migration and code modification for application DB layer based on Oracle and MySQL to DB2.	Oracle and DB2
A card browser for J2ME, BlackBerry & PC	A rich GUI application on top of a provided core library.	J2ME in canvas mode, LWUI user interface library, WTL
Template Utility	A special XSD editing and manipulation desktop utility for medical Continuity of Care Record (CCR).	J2SE Swing, XPATH and SAX/DOM related APIs
Migration from Tomcat applications to Websphere Application server	Migration and code modification for Tomcat applications to Web Sphere application server, including Web Services and security model needed modifications.	J2EE (Tomcat 5.5 and Websphere 6.1)
Open Source development tools integration	Integrating software process tools for issue tracking, test management and code review.	Perl, PHP, J2EE and Web services

References

- Diversinet (<http://www.diversinet.com/>).
- ACT (<http://www.act-eg.com/>).
- UniTel.