# InterComponentWare

## a Leading International Healthcare IT Solution Provider

### Company and Solution Information
### and
### Examples of Project Activities

American Health Information Community
Consumer Empowerment Workgroup "Hearing"

July 27, 2006

# ICW: A Successful Health Transformation Model from Europe

*(Please see special May/June 2006 supplement of the American Journal of Medical Quality)*

**InterComponentWare (ICW) - Summary Information:**

ICW is a leading international e-health provider founded in Germany with locations in the USA, Austria, Switzerland, and Bulgaria.  ICW delivers components for interoperability solutions for stakeholders in the health care industry, utilizing "connector" technology and the patient-centered LifeSensor®, a technologically advanced, interoperable Personal Health Record (PHR).  As part of a German government-consulting consortium, ICW has rendered consulting services critical to the introduction of the smart card-based e-health card (eCard) in Germany.  ICW also plays an important role in the Austrian eCard project.

ICW presents the latest status of its e-health solutions to interested professional parties at its Berlin Briefing-Center e-health. There, visitors can see a live system demonstration of a fully functional electronic health card system, which already integrates physician practice management and pharmacy information systems. The system also enables the use of value-added applications, such as the ICW personal health record, LifeSensor®. In addition, ICW's networking solutions for medical practices and clinics are also demonstrated, which can work without replacing the existing HIS or PMS software.

**LifeSensor®, ICW's Personal Health Record - Summary Information:**

The patient-owned and controlled LifeSensor PHR was introduced to the European market in 2000. As a PHR capable of true interoperability, it links patients to their medical providers and practitioners and enables the efficient exchange of health-related information. With access to the PHR, authorized physicians can obtain an overview of the entire patient history and other necessary health data.  In addition, the inclusion of eCard functionalities into the PHR application model can enable other relevant benefits; for instance, insurance information and financial functionalities of related processes, such as Health Savings Account management.

With LifeSensor and ICW's SOA architectured connector technologies, authorized practitioners and providers can update medical data directly from their information management software into their patients' PHR and can gather relevant information from the PHR for their electronic records.  Other authorized health professionals who later view this information will have a more comprehensive picture of patients' health history.  Pharmacies and other stakeholders can also be integrated into the LifeSensor network, where they can access available data about prescribed drugs, their interactions and possible intolerances.  A special emergency data set in the health record provides vital information to physicians at home and abroad, which is critical in emergencies, especially when the patient may be unresponsive.

***One of the biggest recent news items from Europe is that a Bavarian physician's network, which utilizes ICW's LifeSensor PHR as vital element in enabling interoperable connectivity, has been recognized as one of the technologically leading "RHIOs" in Germany in an independent study by the University of Erlangen. (More related info can be found below - see Patient Partner Assn.\*)***

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**Quotes to Consider:**

**Dr. Uwe Engelmann, co-founder of CHILI GmbH**: "The future belongs to integrating systems that cover all aspects of sector-spanning communication.  And, because there is hardly a manufacturer who is able to cover such a broad spectrum alone, we looked for a partner with a powerful, open platform for integration in the health care system. We have found this cooperation partner in ICW."

**Lothar Späth, former President of the German State Baden-Wurttemberg**, on the occasion of the opening of the "Briefing Center e-Health" in Berlin, which features ICW interoperability technology, spoke of his conviction that the enormous challenges in the health care system can only be overcome through more competition. To accomplish this, patients first need a better overview of the quality of medical care and treatment results. Späth sees Germany on the right track with the electronic health card: "Innovative healthcare IT applications based on the card infrastructure can improve the quality of medical care and give patients the necessary information. In order to utilize the new infrastructure as soon as possible with many voluntary value-added applications – e.g. electronic (personal) health records – and to quickly achieve noticeable improvements for doctors, patients, and health care insurers, we also need the power of private initiatives and market-oriented business structures in the health care system, e.g. via public-private partnerships."

## Supplemental Support Information (ICW's Real World Examples):

In addition to its important role in the national e-health programs in Germany and Austria, ICW continues to advance healthcare technology solutions that benefit the consumer. ICW leads and/or has joined collaborative efforts in many individual projects in Europe. Here are some examples:

**Walldorf, Germany** - In parallel to publicly funded eCard test regions in Germany, which mandate ePrescribing and contract data management functionalities, ICW is leading a privately funded implementation of e-health infrastructure in Walldorf, which, in addition to meeting the mandated requirements, offers voluntary eCard applications that enable medical data exchange among healthcare delivery and service providers via LifeSensor PHR. In addition, ICW can offer other available capabilities in the Walldorf test region:

**-** Because ICW has integrated pharmacy information systems a pharmacist can perform drug interaction and contraindication checks for newly prescribed drugs against previously recorded prescriptions via LifeSensor PHR.

**-** With its US partner ActivIdentity, ICW has implemented the complete life cycle management of the eCard. The integrated card management system (CMS) and card application management system (CAMS) can manage the entire life cycle of the eCard including initial personalization, changes in insurance data, integration of new applications, and a "card blocking" feature. These capabilities add value, especially to the Health Insurer and other potential value-add stakeholders.

**-** ICW has developed a Software Development Kit (SDK), which makes it possible to link other network/information systems to the eCard solution quickly and conveniently.

\***Patient Partner Assn, a Munich based "RHIO"**, is a collaborative interoperability project which represents 348 general practitioners and specialists, nine (9) pharmacies, ten (10) nursing services, three (3) physiotherapists, and three (3) rehab facilities. The medical service providers of the network use LifeSensor PHR to exchange information on their patients. Authorized medical professional participants have access to extensive information on their patients in a shared online database. Patients also have the option of appointing their physician, pharmacist, or other person of trust to issue access authorizations to their LifeSensor PHR.

*Just recently, the Patient Partner Association has been recognized as one of the technologically leading "RHIOs" in Germany in an independent study by the University of Erlangen.*

**Partnership for the Heart** – ICW is collaborating in the implementation of a program which includes utilization of Remote Patient Monitoring (RPM) via the LifeSensor platform at Charité hospital, one of the oldest hospitals in Europe.

The program and accompanying clinical study, publicly funded by the German Federal Ministry of Economy and Technology, is scheduled to start in 2007 and will be performed in the Berlin-Brandenburg region over 12 months with 400 cardiac insufficiency patients. The randomized controlled study, initiated by Charité hospital, will compare conventional therapy with a new type of treatment plan that includes remote medical homecare monitoring, and will evaluate if the new treatment plan can contribute to increasing the health care quality for patients with chronic heart failure while reducing the costs at the same time.

**Rhön Hospitals** – ICW is collaborating to provide interoperability solutions to one of the largest private hospital networks in Europe, enabling medical data exchange between and among the network's varied facilities, locations and disparate systems.

ICW offers an innovative networking solution that connects existing but, until now, isolated hospital information systems with each other without requiring the replacement of existing software. This means no time-consuming data migration or extended and expensive staff training programs. Relevant data from the referring doctor's examinations and diagnoses can be exchanged via the LifeSensor PHR to the ICW hospital networking solution. Patient information is available upon patient admission to the hospital. Information from the hospital can similarly be placed in the patient's LifeSensor PHR, so the family physician or specialist has the latest information and can implement subsequent treatment requirements. This networking solution can strengthen the relationship between referring physician and hospital, as doctors provide up to 90 percent of a hospital's capacity. As physicians are more closely integrated in the flow of information, in addition to enabling better patient care, this will also have a positive effect on hospital-physician loyalties.

## ICW has also been involved with the following programs:

**Breast cancer project at University of Tubingen** integrates LifeSensor PHR.  In the course of cancer treatment, large amounts of dispersed patient data are generated.  To help bridge this information gap, the University of Tubingen radiology department – one of the leading radiology groups in Germany – has implemented complementary technologies that allow access to all of an oncology patient's stored medical data in their OnkoPath oncology information system and seamlessly integrates LifeSensor PHR, enabling authorized medical personnel "outside the University system" to view and add treatment information, resulting in better patient management, care and treatment outcomes.

**Asthenis' product ODSeasy, a Breast Cancer Disease Management (DM) solution** has been integrated with LifeSensor PHR into a DM Program designed to improve breast cancer outcomes and care management.  Up-to-date information is documented by the participating clinics and specialists who provide initial and follow up care.  The data is uploaded via link to the LifeSensor PHR. More than 80 breast cancer centers are currently using ODSeasy and LifeSensor.

**Future Sports, a major German fitness center network offers LifeSensor Fitness Assistant** in all of their branches, which encourages monitoring and professional trainer interaction.  The LifeSensor module includes training plans, exercise descriptions, endurance tests and progress monitoring.  Therapy and rehab plans can also be incorporated.  Results can be monitored by health professionals, especially those that have integrated into the customer-specific training program. Together with the available LifeSensor Nutrition Assistant, an effective preventive weight management can be designed.

**PREVENT**: a structured program for business people that frequently travel abroad, including many SAP senior executives. The health data gathered in special medical check-ups is stored in the web-based LifeSensor PHR, where it is accessible "anytime and anywhere".

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## Other ICW Highlights:

**With its partners, ICW has developed a comprehensive electronic health card solution.**
Interoperability with ICW's hospital networking solution and the web-based health record LifeSensor has been proven in comprehensive laboratory tests and field tests. Plans call for the eCard solution to be enhanced and adapted according to relevant decisions of the Gematik, the German Association for Health Care Applications for the Electronic Health Card, to assure comprehensive efficiencies and highest security.

**ICW offers integration of the CHILI webserver into its hospital networking solution.**
With the integration of the CHILI webserver with the ICW hospital networking solution, physicians can access DICOM image data in a uniform viewer including digital images and videos recorded during an endoscopy or with a microscope, as well as computer tomographies, magnetic resonance tomographies, x-ray and ultrasound images.  Images available in the widespread DICOM standard can be viewed and edited as usual: e.g., the physician can zoom in the image, set the contrast and perform measurements. CHILI's remote radiology functions can now be used comfortably via ICW's virtual patient record. For a teleconference regarding a patient, the involved physicians simply select the corresponding virtual patient record and call up the desired image and connection with a mouse click.

**Cisco Systems and ICW enter cooperation arrangement.**
Beginning in Germany, Cisco and ICW are jointly developing a special health care router to give physicians, pharmacists and other medical service providers easy access to the e-health card's IT infrastructure. The companies will offer, by the end of 2006, a one-box solution, combining the Cisco integrated service router (ISR) with ICW connector technology. With an integrated firewall and the support of virtual private networks (VPN), this solution will enable fast and secure data exchange with the healthcare IT infrastructure and healthcare networks.

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For more information, please visit ICW websites: **www.us.lifesensor.com** and **www.us.icw-global.com**
Or contact Mark Wallin at **mark.wallin@icw-global.com** ; or call **610-363-6613**.