

## Press release

Cooperation with the University of Bremen

### **Ambient Systems' intelligent RFID reduces fruit and vegetables spoilage**

Enschede (NL), 10 September 2008 – A fifth of all fruit and vegetables go off before they reach supermarket shelves. A shelf life model created by the University of Bremen aims to reduce this in the future. Ambient Systems is providing the implementation technology with its third-generation active RFID solution. As a first step in this cooperation, a research team recently programmed the first RFID tags for real-life testing. These so-called Shelf-Life SmartPoints measure the temperature during transportation and storage and calculate the quality and shelf life of the goods. The result is used to optimise logistics processes based on the “First Expire – First Out” principle and is available from September as part of the Ambient Product Series 3000.

According to the US Food and Drug Association (FDA), which has its headquarters in Rockville, 20% of all perishable food are wasted during transport. Ambient's active RFID tags with incorporated shelf life model, where every type of fruit and vegetable is assigned an individual model, aim to reduce this loss. “The self-monitoring of logistic processes is one of our main areas of work,” says Dipl. Ing. Reiner Jedermann, Research Associate at Microsystems Center Bremen (MCB). “The shelf life model was developed as part of the ‘Intelligent Container’ research project. Up until now, transferring the findings to practical applications has failed due to the price and performance of standard RFID technologies.”

#### **Capabilities of Ambient's SmartPoint were the decisive factor**

After a meeting in March, Reiner Jedermann showed immediate interest in cooperating with Ambient, because compared with other solutions its technology provides considerably more capabilities. Ambient SmartPoints provide sophisticated sensing and logging capabilities that communicate with Ambient's easy to install all-wireless networks. Most importantly for the University of Bremen, SmartPoints are specifically designed to implement sophisticated business rules such as the shelf life model.

Before shipment, SmartPoints with incorporated shelf life model are placed in individual pallets and crates with perishable goods. During transportation and storage these SmartPoints continuously measure temperature and potentially other conditions. Based on these measurements, SmartPoints calculate remaining shelf life and wirelessly communicate this information to Ambient's networks at various points in the supply chain. SmartPoints also trigger alerts when the product quality is in danger of getting below the recommended range. "Instead of a flood of irrelevant data, logistics companies receive highly relevant information that enables them to ship out food products with the shortest remaining shelf life. This is the best way to reduce waste and increase profitability in the food supply chain," explains Reiner Jedermann. "We thereby optimise temperature-controlled transport, such that the goods reach the supermarket shelves in perfect condition."

### **Quality on track for everyday applications**

"Ambient's products are already used by many supermarkets to monitor temperatures in refrigerated areas.", says Eelco de Jong, Marketing & Sales Director at Ambient Systems. "Especially given the recent discussions on global food shortages, we are delighted to develop a product that is reducing food spoilage." As members of the Cool Chain Association, the project partners are working in close collaboration with the Chairman, Robert Arendal: "The Shelf-Life SmartPoint perfectly meets the requirements of our members, who transport food using temperature-controlled methods, and paves the way for entirely new approaches in the logistics chain." As part of the cooperation, pilot projects with temperature-controlled transport of perishable goods will be carried out later this year.

(3469 characters, including spaces)

### **Ambient Systems B.V.:**

Ambient Systems, based in Enschede (NL), provides third-generation active RFID solutions to improve process quality and efficiency in distribution, transport and industry. Unlike conventional active RFID solutions, Ambient uses intelligent SmartPoints to locate, monitor and protect goods and persons. Robust all-wireless networks enable management by exception at considerably lower costs than traditional solutions. Over 100 customers around the world including Sitos, Cargill and the Australian Institute of Marine Science use solutions from Ambient Systems. Ambient Systems' products are distributed by a constantly growing network of distributors and partners.

For more information please visit [www.ambient-systems.net](http://www.ambient-systems.net).

### **Microsystems Center Bremen (MCB), University of Bremen**

A shelf life model for online monitoring was implemented by Microsystems Center Bremen (MCB). As an application-orientated research institute of the University of

Bremen, the MCB is currently developing the Intelligent Container ([www.intelligentcontainer.com](http://www.intelligentcontainer.com)) as a quality control system for food.

### **Cool Chain Association asbl, Luxembourg**

The Cool Chain Association has set itself the goal of optimising the cool chain and bringing together all logistics partners involved with temperature-sensitive goods on this common issue. Members of the CCA come from all over the world and are all either directly or indirectly involved in cool chain logistics. The Cool Chain Quality Indicator, developed by the CCA in collaboration with Germanischer Lloyd, is a standard for the industry which is regarded as a criterion for optimum transport or the best possible means of storage.

Dipl. Ing. Reiner Jedermann  
Research Associate  
Institute for Microsensors, -actors and -systems (IMSAS)  
University of Bremen, Dept. 1: Physics / Electrical Engineering  
Otto-Hahn-Allee, Gebäude NW 1, Raum Ost-2130  
D-28359 Bremen  
Tel: +49 (0)421 218 – 4908  
Fax: +49 (0)421 218 – 4774  
E-mail: [rjedermann@imsas.uni-bremen.de](mailto:rjedermann@imsas.uni-bremen.de)  
Website: <http://www.imsas.uni-bremen.de>; <http://www.mcb.uni-bremen.de>

### **Press contact:**

#### **Ambient Systems**

Eelco de Jong  
Capitool 22  
7521 PL Enschede  
The Netherlands  
Tel.: +31 (0) 53 4614702  
E-mail: [eelco.dejong@ambient-systems.net](mailto:eelco.dejong@ambient-systems.net)  
Website: [www.ambient-systems.net](http://www.ambient-systems.net)

#### **Maisberger**

Martina Eder  
Kirchenstrasse. 15  
81675 Munich  
Germany  
Tel.: +49 (0) 89 41 95 99 26  
Fax: +49 (0) 89 41 95 99 12  
E-mail: [martina.eder@maisberger.com](mailto:martina.eder@maisberger.com)