CONVERGENT SOFTWARE

For immediate release

Convergent Software Develops Industry's First RFID Encoded Data Diagnostic Tool

CHIPPENHAM, UNITED KINGDOM, 31 January 2008 - - Convergent Software Limited announces the release of the industry's first diagnostic tool[1] to test the compliance of RFID encoded data. The diagnostic tool, targeted for the airline baggage handling application, is the first of a series of such diagnostic tools being developed by the company.

Until recently, the focus on RFID open systems applications was on the technology itself and on supporting the minimum of encoding. A number of application standards have been published, or are in the process of development, that call for sets of optional data to be encoded on the RFID tag. Recent announcements by a number of RFID Integrated Circuit manufacturers now provide such a capability in the ISO/IEC 18000-6C tag (also known as EPCglobal™ Class 1 Generation 2). Greater encoding capacity is a feature of long-established RFID chips such as ISO/IEC 18000-3.

The innovative software from Convergent Software consists of two modules intended to help end-users in the air transportation sector with project planning and analysis of RFID tags.

The **encoding simulator** is fully compliant with IATA's RP1740C RFID standard for baggage handling. It enables airlines, airports, and project managers to simulate the encoding of RFID tags. The memory capacity can be adjusted to candidate tag products and real baggage handling data is encoded to produce the byte stream to be encoded in the RFID tag. The RP1740C standard provides a number of optional data elements. The simulator allows the user to select these elements and rank them into a priority sequence. This particular feature is useful because a number of fields are variable length and the simulator encodes the most important fields up to the capacity of the selected memory.

Although the simulator provides a useful tool at the beginning of an RFID project, it can be used time and time again to evaluate the encoding capabilities as new tags come on the market, or for encoding additional data to meet business requirements.

The **diagnostic tool** addresses one of the challenges of RFID technology. This is to ensure that data is properly encoded on the tag in a compliant manner with an application standard. Its major feature is that it identifies potential encoding errors in the following features:

- Data validation to be compliant with the application standard
- Data compaction
- Encoding of data formats and object identifiers
- Syntax to be compliant with the ISO/IEC 15962 encoding rules
- Whether a sub-optimum compaction scheme has been used

The software produces HTML reports showing the results of encoding and decoding. The error reports from the diagnostic tool provide an electronic record of the errors found so that these reports can be exchanged between the airport and airline implementing the RFID data capture application and the organisation responsible for creating the error.

The diagnostic tool has been designed to improve the robustness of RFID technology by addressing a neglected part of applications – the encoding of data. It provides another tool to improve the robustness of RFID technology in open systems applications, where an organisation reading the content of the RFID tag has to rely on accurate encoding of data sourced by a different organisation.

[1] According to internal survey

About ISO/IEC 15962
ISO/IEC 15962 provides a set of data encoding rules for RFID tags. These rules have been designed to support the encoding of data from different application domains, so that legacy data used in bar code can easily be applied to RFID, and new types of data can be applied to RFID tags. The ISO/IEC 15962 encoding rules are independent of both the application data and the particular RFID tag architecture. This means that various types of application can be supported. Besides the IATA application, the encoding rules have so far been adopted in the library community and in the automotive industry. The different types of tag architecture are supported through a mechanism called a *Tag Driver*, which understands the formatting rules of different types of tag. This enables the encoded byte stream to be organised correctly, even to the extent of selectively locking some of the data.

ISO/IEC 15962 (and its companion standard ISO/IEC 15961, dealing with application commands), were first published in October 2004. Both the standards are currently being revised by ISO to support new encoding techniques and tag architectures that have been developed since the first publication.

About Convergent Software Limited
Convergent Software Limited is working at the leading edge of developing encoding and decoding software for RFID applications. Its principals have over 30 years experience with AIDC technology and computing. Convergent Software is currently working with partners on developing encoding simulators, diagnostic software, and component tool sets for RFID systems. The Managing Director of Convergent Software Limited, Paul Chartier, is Project Editor of ISO/IEC 15961 and ISO/IEC 15962 and other International Standards for RFID technology.

For more RFID-related information and details of the software, write to info@convergent-software.co.uk and visit the company's website at http://www.convergent-software.co.uk

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