



November 2004

# RFID Update

We are providing this document to keep you informed on our latest activities and observations related to **RFID technology**.

Please let us have your comments and feedback. Thank you.

## Recent Activities at Big Chief Partners

We are continuing with device support strategy for RFID router and appliance developer **Blue Vector Systems**.

Peter Winer is providing ongoing advice as a member of the advisory board of **Star Map**, based in London, England. Star Map is an early stage startup that is using location technology to solve critical tracking problems for financial services companies.

Peter Winer is providing strategic and business development advice to **WaveTrend Technologies Ltd.**, also based in London. WaveTrend is a global group investing in Ultra Long Range RFID technology.

Peter Winer is co Chairman of **RFID Developer's Conference**, to be held in San Mateo, November 9/10, 2004. See below for details, as well as an invitation to participate.

Peter Winer was a member of the **Executive Advisory Committee for the Frontline Solutions Conference & Exposition** in Chicago, September 2004. He chaired panel

discussions on RFID Middleware and Web Services, and RFID Networks. See page 2 of this newsletter for a summary of what was discussed in Peter's sessions.

Peter Winer was **Conference Chairman of the Global Supply Chain RFID/GTIN Standards Conference** in Toronto, October 2004. See page 3 of this newsletter a summary of what was discussed in Peter's sessions.

In the world outside RFID, Big Chief has been involved in software development and user interface design for **Determina**, developers of a host intrusion detection system.

We have also been working with **Spancion LLC**, a flash memory products company formed by AMD and Fujitsu, for whom we are providing advice on content management system integration.

## RFID Developer's Conference

Peter Winer is co-chairing the **RFID Developers' Conference, to be held in San Mateo, November 9-10, 2004**.

Peter will be hosting some of the sessions, has designed the conference content and has invited many speakers to the conference.

This Conference is aimed at developers, **system architects, IT managers and executives** from companies considering RFID adoption, or seeking new opportunities in RFID. It aims to teach a broad and deep understanding of how RFID systems work and how to implement them.

It also provides high-level information for **managers and executives** who need to select the best products, platforms and industry standards for their RFID implementation.

Finally, there are sessions for **entrepreneurs and investors** to gain a thorough knowledge of future trends, economic opportunities and the RFID systems landscape.

The Conference agenda takes a mainly technical angle. There are sessions on RFID architecture, RFID mandates and standards, as well as sessions covering

**We want to see you at the RFID Developer's Conference!**

We'd love to welcome you to the **RFID Developer's Conference**. A special price is offered to invitees of Big Chief Partners.

To receive a \$500 discount, register at <http://www.rfid-world.com> and insert Registration Code **DCBCP**.

### *RFID Developer's Conference (contd.)*

issues for RFID in digital identity, e-Commerce, security, authentication, privacy and trust, a session on advanced RFID technology, and an opportunity to query vendors about enterprise application

integration issues. John Orcutt of Blue Stream Ventures is hosting a venture capital session that will tell us who is investing in RFID, and which opportunities VCs see as the most compelling in this space.

#### Frontline Exposition Presentation Materials

We have posted all the slides from our Frontline sessions, as well as previous newsletters providing more detail on RFID Networks and RFID Middleware and Web Services. See: [www.bigchief.com/whitepapers](http://www.bigchief.com/whitepapers)

## Frontline Solutions Conference & Exposition

This Conference focused on Auto ID and mobility technologies, and sought to help bridge the gap between research and implementation by providing insight into applications and case studies for Auto ID. Peter Winer chaired two panels at the Conference covering **RFID Networks** and **RFID Middleware and Web Services**.

### An Introduction

During the past two years, a large number of companies have staked claim to different segments of the RFID infrastructure space. These have included **pure-play startups** that have focused exclusively on RFID as well as **opportunistic companies** moving into RFID from adjacent areas.

The two panels chaired by Peter Winer found a rich vein to be mined in the discussion of whether there is a viable position for new, pure play companies or whether these companies will be eventually sidelined by more established vendors such as IBM, Tibco, WebMethods or BEA Systems.

### RFID Networks Panel

Peter Winer invited pure play RFID companies to this panel. One of these companies, ConnecTerra, also positions themselves in the middleware space.

The panelists take different approaches to network infrastructure solutions for RFID: either with **server-based software** that interfaces with readers, collecting information and processing it for upstream applications; or with **network routers and appliances** that provide similar functionality,

with dedicated hardware instead of server-based software.

The following section summarizes each company's approach. For more detail we recommend you visit each web site, as well as review the panel slides on our web site.

**Bryan Tracey, Chief Architect of GlobeRanger Corporation**, discussed GlobeRanger's iMotion, an edgware platform that enables rapid deployment of RFID and mobile solutions. iMotion offers a software infrastructure layer that resides between the data-collection devices and back-end systems to manage devices, networks, data and processes.

Bryan also described an interesting case study at HD Smith, a wholesale drug company who was the first wholesaler in North America to install an EPC-based RFID system, controlled by iMotion, to track Class 2 controlled drugs. Their next goal is to take on bulk tagging of items so that pharmacies can track the pedigree of items in the retail outlet, with the ultimate goal of replacing barcode processes.

**Prasad Putta, CEO of OAT Systems**, discussed his company's OAT Foundation Suite, which, combined with their consulting services, claims to provide everything needed to take RFID out of the box and into production. They position themselves as the "RFID Solutions Company" offering consulting expertise, a platform standard, and, in the OAT Foundation Suite, a complete software solution.

### *Frontline Solutions (contd.)*

**Ken Traub, CTO of ConnecTerra**, discussed RFTagAware, his company's software infrastructure system for developing and deploying RFID applications. The system offers server based processing for RFID data and shows how applications can share data but remain insulated from changing infrastructure. They claim their approach offers a clean separation of infrastructure and application business logic, and addresses scale by pushing processing, but not application code, to the edge of the network.

**Anurag Mendhekar, CEO of Blue Vector Systems**, showed how his company takes the network appliance rather than the system software route. His company's appliance-based solutions, they believe, allow companies to get started quickly with a small deployment, and then migrate to more complex implementations while remaining insulated from disruptions resulting from technology changes. Their solution can plug into existing IT investments allow new processes to be bought online easily. They believe this allows companies to address the cost and operational complexities of moving smoothly from pilot to production system.

### RFID Middleware and Web Services Panel

The biggest players in RFID Middleware and Web Services have been established companies working to leverage existing platforms and applications in the new RFID context. This has prompted a debate about the need for dedicated middleware and application integration in the RFID space.

Each vendor on this panel offered a different mix of product functions to solve the problem of delivering RFID information to enterprise applications.

**Jeff Flammer, Director of Manufacturing & Retail Solutions, BEA Systems**. BEA Systems is a major application infrastructure software company and Jeff talked about how BEA's flagship product, the WebLogic Platform solution is positioned in the RFID space. He demonstrated how the WebLogic platform can be used to accelerate the return on investment in RFID by offering Application Platform Suites as an integration layer.

**Andrew Savitz, Director RFID Solutions & Industry Alliances, webMethods**, offers the webMethods Enterprise Services Platform, which also provides a layer of integration between RFID data and enterprise applications. He described how webMethods was chosen as the middleware provider for RFID pilot projects at the DoD and for the OSD's Weapon Systems Integration Project, where passive RFID tags were used to track assets as they left the DoD's distribution center.

**Vijay Sarathy, Group Marketing Manager, RFID Infrastructure Solutions, Sun Microsystems**, described how Sun offers software, hardware, systems architecture, plus services, partnerships, consultants and support. He talked about the RFID-enabled Sun Java System, to become available in July of 2005. He also described the RFID test centers Sun has established to offer real-world testing environments, and he described a variety of interesting RFID Sun pilot projects. He underscored the need for an experienced partner, like Sun, to help test RFID implementations.

We recommend that you visit each web site, as well as review the panel slides on our web site for more details.

## Global Supply Chain RFID/GTIN Standards Conference

### Global Supply Chain RFID/GTIN Standards Presentation Materials

We have posted all the slides from our Global Supply Chain sessions, including vendor presentations.

See:

[www.bigchief.com/whitepapers](http://www.bigchief.com/whitepapers)

This Conference was held in Toronto, Canada, and was co-chaired by Peter Winer, who helped design the conference content and invited many of the presenters. The Conference brought together over 150 senior executives, almost all of whom were from companies adopting RFID, with over half of them being manufacturing organizations of one kind or another.

The conference focused on new **GTIN (Global Trade Item Number)** standards, emerging RFID technologies and mandates, security, implementation and infrastructure issues, as well as how RFID technology can be applied in real-world scenarios. The Conference program sought to make recommendations for RFID deployment challenges. The importance of GTIN and its relationship to latest smart RFID technologies was discussed, particularly with regard to product traceability initiatives.

Food distribution was addressed as a good market example for product traceability – and the specific example of the partnership between food distributors, retailers and the Canadian government to track and trace contaminated food batches was analyzed.

### Vendor Interviews

Peter Winer interviewed representatives of Home Depot, Embarcadero Systems, and Imperial Oil/Esso to ask questions relating to retail, transportation, and distribution in turn. A summary of each interview follows.

**Embarcadero Systems, Keith Dierkx, Senior Vice President of Operations.** Keith has responsibility for delivering ESC's IT services and solutions. Prior to ESC, Keith was Savi Technology's Vice President of Strategic Markets and Business Development. He also spent 14 years with IBM, specializing in transportation, logistics and supply chain companies, was a Technology Board Member for the Auto-ID Center at MIT, and is a widely published author on the subject of supply chain performance.

Embarcadero Systems provides solutions for the maritime and transportation industries.

Keith described how they have benefited from using Auto ID technology to increase automation, get more reliable information, and make real-time decisions based on gathered data. They have also recognized the potential extensibility of RFID solutions to grow with different demands such as security, electronic seals, etc.

He described how his company combines RFID with other technologies such as GPS and OCR, and cautioned not to consider RFID to be an "either, or" option. With each adoption, they look at benefits to their business partners and how costs might be allocated between themselves and the partner.

With regards to the future, Keith felt that standards in the transportation industry are uncertain and sees integration between different solutions to be a problem. He cautioned that he believes the need for standards is overblown if an ROI is already in evidence, and recommends vendors seek and take advantage of both short- and long-term ROI opportunities offered by RFID.

**Home Depot, Greg Hoyle, Home Depot, Logistics Manager.** Greg is a Logistics Manager for Home Depot. During his twelve years with the retailer he has held positions in retail management, transportation management, and currently logistics. Greg oversees the operation of five Canadian distribution centers, which house lumber and products from abroad. He is responsible for managing the flow of all products in and out of these distribution centers, as well as the flow of goods into the retail locations.

Unlike retailers like WalMart, Home Depot doesn't have centralized distribution centers for their commodity products. Each store is effectively a 100,000 sq. ft. inventory space and Home Depot expects their vendors to ship direct to each store. Home Depot doesn't expect to use RFID to track products through the supply chain, but rather is looking at ways that the technology could be used to enhance the customer retail experience.

### ***Global Supply Chain RFID/GTIN Standards Conference (contd.).***

For example, Home Depot is interested in improving the check out experience and delivering value to customers once they get their products home.

As they did with web based shopping, Home Depot is proceeding with caution and watching other vendors to learn from their successes, or failures, with RFID before proceeding with full-scale adoption.

**Monika Siple, Project Manager SpeedPass, Imperial Oil.** Monika Siple was the project manager responsible for implementing Imperial Oil's SpeedPass system in Canada, and is now the technology manager for fuel retail at Imperial Oil.

SpeedPass uses RFID tags to allow customers to quickly and easily pay for fuel at the gas pump, and has been deployed at every Esso station in Canada. Originally a Mobil Oil product, Imperial Oil 'inherited' SpeedPass after their company's merger with Mobil.

In answer to questions about fraud, Monika described how they use a special Texas Instruments' RFID tag that cannot be reproduced, and also indemnifies their customers should the SpeedPass tags fall into the wrong hands. They have found that fraud risk to customers is relatively low, and have not as yet felt the need to adopt a PIN strategy for a further level of protection.

#### **Company Web Connections**

##### **BEA:**

[www.bea.com](http://www.bea.com)

##### **Blue Vector Systems:**

[www.bluevectorsystems.com](http://www.bluevectorsystems.com)

##### **ConnectTerra:**

[www.connectterra.com](http://www.connectterra.com)

##### **Embarcadero Systems:**

[www.esystem.com](http://www.esystem.com)

##### **GlobeRanger:**

[www.globeranger.com](http://www.globeranger.com)

##### **Home Depot:**

[www.homedepot.com](http://www.homedepot.com)

##### **Imperial Oil:**

[www.imperialoil.ca](http://www.imperialoil.ca)

##### **OAT Systems:**

[www.oatsystems.com](http://www.oatsystems.com)

##### **Star Map:**

[www.star-map.net](http://www.star-map.net)

##### **Sun Microsystems:**

[www.sun.com](http://www.sun.com)

##### **Wave Trend:**

[www.wavetrend.net](http://www.wavetrend.net)

##### **webMethods:**

[www.webmethods.com](http://www.webmethods.com)

#### **Event Web Connections**

##### **RFID Developer's Conference, San Mateo:**

[www.rfid-world.com](http://www.rfid-world.com)

##### **Global Supply Chain Conference, Toronto:**

[www.softmatch.com/rfid\\_gtin.htm](http://www.softmatch.com/rfid_gtin.htm)

##### **Frontline RFID Conference:**

[www.frontlineexpo.com](http://www.frontlineexpo.com)

## **About Big Chief Partners**

Big Chief Partners offers strategic advice, research and software development for organizations that want to capitalize on identification technologies, mobile payments, infrastructure, security and RFID.

Starting early 2001, Big Chief Partners first involvement with RFID was developing the WebLink system for Philips Semiconductors.

Clients include technology vendors, customers pursuing RFID deployment, conference organizations and venture investors in the U.S. and Europe.

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