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| <p><b>Robert Noth</b><br/> Chairman of the Board of<br/> Directors, American National<br/> Standards Institute</p> | <p align="center"><b>Global RFID Interoperability Forum for<br/> Standards (GRIFS) Conference</b><br/> Brussels, Belgium – June 18, 2008<br/> Opening remarks<br/> Current word count: 2485 – approximately 20<br/> minutes</p> |
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- It is an honor and a privilege to be with you today here in Brussels to discuss the U.S. perspective on interoperability standardization...specifically related to the application of RFID technologies... and I'm grateful to Henri Barthel, whom I met at the Interoperability Workshop in Warsaw in February of this year for the invitation.
- As was true in Warsaw – and everywhere else I speak these days - I'm here today in dual role: one as Manager of Engineering Standards for Deere and Company – the job I've had since 1992; the other as Chairman of the ANSI Board of Directors where I'm in the middle of my third and final year in that role. These two roles are well aligned and synergistic from my perspective.
- John Deere and many companies around the world have the same long-term objectives . . . we all want to see technically robust and responsive standards that provide turn-key access to the global market, no matter the product. It's no surprise, then, that when it comes to codes, standards and related compliance programs, we want to "do it once, do it right, and do it globally."
- One of the areas in which my company and my industry's views align with ANSI is as a staunch advocate of the concept "one standard – one test – accepted everywhere." To make this vision a reality, companies, nations, and regions must work together to expand awareness and utilization of international standardization. And likewise, we must make every effort to minimize conflict and duplication in our standards development activities.
- At Deere, my job is to try to ensure homogenous market access for our products around the world. Our products, whether tractor, combine, loader or excavator, are capital-intensive, expensive to build and buy and they're relatively low volume compared to consumer products. So the technical regulations and the standards that we are either mandated to comply with by governments or that we choose to comply with voluntarily have impacts on our bills-of-materials and the variety of products we have to offer in various markets. My job is to try and influence the decision makers in those areas to try to keep those requirements as common and as standardized across the globe as possible. That likewise goes for the tools and processes we utilize to procure materials, manufacture and distribute our products across the global market. The more homogeneous around the world the better.

- To that end, I join with many others as strong supporter of voluntary consensus standards, established by subject matter experts and serious “stakeholders” – individuals and organizations that have a “stake” or measureable interest in the outcome of the process.
- In the process of developing interoperability standards or deciding on how much or how little regulation is necessary, we must take pains to ensure that no views are disregarded or dismissed without examination and consideration.

The principles of openness, transparency and a balance of stakeholder interests must be maintained as we go forward.

- In the process of developing interoperability standards or deciding on how much or how little regulation is necessary, we must take pains to ensure that no views are disregarded or dismissed without thorough examination.
- But in the pursuit of our goal, we also have to be aware that there are many factors at play in the marketplace that force us to be realistic. We must recognize there are constraints that must be dealt with to make real progress. Differences in industry sector, regional practice, and economic maturity will always arise, and may prevent the “one standard – one test – accepted everywhere” concept from being fully implemented.
- Conferences and forums such as this can be valuable tools from that perspective as well.
- I believe my presence here today is to add some US perspective to the GRIFS objective of developing a suite of RFID standards that are both global in definition and in application. Some of that perspective will emanate from my experience with ANSI and the U.S. Standards system and some will reflect the particular perspective of my employer – Deere & Company - in regard to RFID use and application.
- As most of you know, ANSI serves as the coordinator of the U.S. private-sector led and public sector-supported voluntary consensus standards and conformity assessment system. As such, we are privileged to have the opportunity to speak as the U.S. voice in standards and compliance forums around the globe.
- Through our network of members, ANSI represents the interests of more than 125,000 companies and 3.5 million professionals. This means we work with professionals in a lot of different industries... with an obviously significant global reach.

- As I shared in Warsaw, Companies in the ICT community represent about 13% of ANSI's membership. This includes company names most of you would recognize such as IBM, Intel, Microsoft, Sony and Sun – plus a longer list of small and medium sized companies as well – most whose names you would not recognize. It also includes many ICT industry trade associations and standards developing organizations (SDOs) like ATIS, AIM Global, GS1, and IEEE. This is an important constituency since RFID resides in the ICT space. They and others like them in the ICT sector have a significant stake in RFID technologies and of course, the standards and regulatory decisions that may result from this conference and the entire GRIFS initiative.
  
- One such SDO is the InterNational Committee for Information Technology Standards (INCITS), which maintains ANSI/INCITS 256-2007, an American National Standard that establishes a technical standard for a family of compatible RFID devices. First published in 2001, the standard is intended to allow for compatibility and to encourage interoperability of products for the growing RFID market in the United States.
  
- The U.S. has also played a leading role in the work of the world's largest IT-focused standards-setting committee . . . . ISO/IEC Joint Technical Committee 1 (JTC 1). We have held the chairmanship and secretariat of this committee since it was created as a partnership of ISO and IEC in 1987. We also led the work of one of its predecessor committees, ISO TC 97.
  
- Within the international standardization community, JTC 1 sub-committee 31, Automatic identification and data capture techniques, has been responsible for a large body of technical work in RFID standardization... at last count, nearly thirty individual standards. The U.S. holds the secretariat and the chairmanship of this sub-committee, which works in liaison with many organizations including GS1 and ETSI... who of course are here today as coordinators of the GRIFS initiative.
  
- I can also bring some perspective to this conference from projects similar to GRIFS currently underway in the U.S. At the behest of government, ANSI has formed several Standards Panels as coordination bodies to address standardization issues and technologies that cross industry sectors with the objective of achieving some higher level objectives in the market.
  
- Just like GRIFS, these Panels are an important part of our effort to get ahead of the curve and become better at anticipating and embracing new opportunities to coordinate and harmonize U.S. standards and compliance activities.

Three of our current panels are heavily focused on interoperability and ICT concerns:

- The ANSI Homeland Security Standards Panel is identifying standards that improve security by assessing risks and defining measurement methods and test levels to detect threats. Many of these standards establish equipment performance, interoperability, and design requirements for devices, systems and infrastructure.
  - The Healthcare Information Technology Standards Panel is helping to coordinate the widespread interoperability, privacy and security of a National Health Information Network for the United States. In this case, harmonization is not just a goal – it is a necessity.
  - And most recently, the Identity Theft Prevention and Identity Management Standards Panel identified several interoperability specifications that are critical to the secure exchange of personal and financial information between the government and commercial sectors.
- In all of these efforts, we've learned the interoperability is not just a hardware issue, and it's not just a software issue. The true test of an interoperable system lies in its application across the global supply chain. One weak link puts the integrity of the whole at risk.
  - We've also learned that there is significant power in bringing as many interested parties to the table as possible. Once the market players start to understand the requirements - generally best expressed in the form of performance based standards - they can be very responsive in bringing products to the market that address those requirements.

Creativity and innovation flourish within the private sector when an unfulfilled need is identified and the performance based requirements specified.

- RFID technologies are of critical importance to Governments as well as private sector commerce. One specific example is the U.S. Dept. of Defense. The DoD implemented "active" RFID in 1997 and by 2004 was operating the largest RFID system in world with over 850 interrogators and 300,000 tags worldwide. Both the Canadian Defense Forces and the UK Ministry of Defense have utilized the DoD active system in joint operations in the Balkans, Afghanistan and Iraq and the success of the network helped the DoD decide that the benefits of RFID outweighed the costs. In 2004 the Under Secretary of Defense issued a policy requiring all cases and pallets of material received by the DoD beginning in January 2005 to be marked with "passive" RFID. Their experiences in implementing RFID over 8 years identified many of the same issues that are on the agenda here at the GRIFS conference today – interoperability; operating characteristics of readers, tags and sensors; infrastructure; data exchange; band and spectrum issues, and

privacy and security. To help solve these issues the DoD began working with “EPCglobal”, the joint venture between EAN International and the Uniform Code Council Inc. (UCC) to join with and take advantage of the retail industry in the private sector in their standards development process.

- In 2007, President Bush established the Interagency Working Group on Import Safety, a committee charged with identifying actions to improve the safety of products imported into the U.S. market. Late last year, the committee delivered its Action Plan for Import Safety, outlining a roadmap for continual improvement, detailing the organizing principles, recommendations, and short- and long-term actions needed to ensure the safety of American consumers.
- Overall, the plan identifies the need for the U.S. to shift from its current import safety system to a risk-based approach that focuses on prevention. The plan specifically identifies RFID technologies for product tracking, which would expedite consumer notification of emerging or existing product hazards while adequately protecting consumer privacy.
- While there are already a broad spectrum of RFID applications already in the market place – like the one I just described and others that some of us heard about in Warsaw in February - an ever growing variety of hardware and software products available in the market to enable those applications and several portfolios of standards already developed covering different aspects of the applications, in many ways RFID is still an “emerging” technology yet to fill its ultimate potential in the marketplace.
- Many companies around the world are just beginning to consider investing in RFID to solve their problems. As RFID technology matures, costs of implementation become more affordable and there is a growing recognition that the benefits outweigh the risks and costs of implementation. My employer – John Deere – is one of those companies.
- For the last two years, I’ve been on a management appointed task force overseeing a variety of RFID pilot projects within the John Deere organization. I was added to the task force because it became obvious early in our research that standards would be important to any successful implementation. Our projects covered a wide variety of applications that included inbound tracking in the Supply Chain, outbound tracking for Products and Components and shop floor routing and tracking in our internal manufacturing operations. Based on the success of these pilots, we have now put in place a full time organization – Tracking Technologies - to oversee broad based implementation.

- From that perspective, I'm pleased to be here on John Deere's behalf to learn from today's discussions and take back new knowledge and actionable information to our internal project team.
- The good news is that much of what has already been done in terms of application deployment is already based on standards – many with global application. The bad news is that to get to where we envision we need to be is that many of those standards need to be harmonized and merged into a coherent portfolio accepted and deployed around the world.
- It is therefore appropriate and timely that the heavy lifting to make this happen get underway before the installed base grows much larger. We all know that the larger and more diverse the installed base, the more entrenched positions can become, making it more difficult to get agreement on a harmonized portfolio.
- So as customers and users of RFID products and technology, our participation and input is critical to the success of the effort. Our growing expectations for better connectivity and integration – especially when our experiences with the existing suite of offerings leave us unsatisfied and wanting more from our investments. It is incumbent upon “us” as “stakeholders” to make our expectations known and satisfied throughout the standards development process.

## **Conclusion**

- Interoperability in the RFID world is a complex issue. To help understand what we are trying to accomplish – without delving into some of the details – will surely be discussed throughout today's agenda and in future forums as well.
- .This conference affords all of us an opportunity to learn from each others' experiences and strengthen the interoperability of our networks, systems, devices, applications and components.
- We're all reliant upon ICT to keep our businesses connected, efficient, and profitable. In today's wired – and increasingly wireless – world, almost every company and industry is engaged in the global supply chain.
- I am pleased to see both government and industry represented at this conference. By coming together here in Brussels, we are taking an active interest in being a part of the international and transatlantic standards-setting process, and demonstrating the importance of participation to our colleagues and competitors.

I look forward to hearing everyone's views on how interoperability affects your business and how international standardization activities can play a major role in supporting your initiatives and goals.

- Thank you for your attention. I look forward to your questions.