

THE M&A ADVISOR SYMPOSIUM REPORT

Featuring



Hany A. Fam

President

MasterCard Enterprise Partnerships



Danil Kerimi

Director

Head of ICT Government Community
World Economic Forum USA



Carlos Moreira

Chief Executive Officer

WISeKey



Jeffrey Wells

Executive Director of Cyber
Development and Cyber
Maryland Department of Business
and Economic Development

> STALWARTS ROUNDTABLE CYBER SECURITY AND THE INTERNET OF THINGS

Executive Summary

The Internet of Things (IoT) is here, which means that the world of physical objects is now integrated with and is inseparable from the digital world.

While the integration of the two worlds means we can lock our front door from anywhere in the world or employ a growing array of other time-saving, productivity-enhancing and “gee-whiz” applications, IoT poses enormous safety and security challenges for businesses and the public alike.

This expert panel examined those challenges, touching on the following issues:

- How the Internet has changed from a connection mechanism to a utility, and why this poses security problems
- Why standards are so critical to cyber security
- The difference between authentication and identification and why it's important
- The surprising national leaders in cyber security
- How M&A could help create a safer, more secure Internet

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From The M&A Advisor

For most technology users, the biggest cyber security issue involves having to remember dozens of PIN and passwords — annoying, to be sure. But in an interconnected age when a computer hacker may cause more mayhem than a gun-toting terrorist, cyber security is serious business, carrying a \$3 trillion annual price tag, according to one expert.

The business implications of cyber security and the deal-making activity that ensues are so significant that we felt compelled to include a session on the subject at our recent 2015 International Financial Forum in New York.

Presented by Merrill DataSite, our Stalwarts Roundtable on the subject was led by moderator Danil Kerimi, Director and Head of ICT Government Community at the World Economic Forum USA. Our distinguished panelists were Hany A. Fam, President of MasterCard Enterprise Partnerships, Carlos Moreira, Chief Executive Officer of WISEKey, and Jeffrey Wells, Executive Director of Cyber Development and CyberMaryland at the Maryland Department of Business and Economic Development.

The M&A Advisor invites you to share the insights of these uniquely qualified experts in the pages of this report, as well as in their one-on-one video interviews and the complete session video, links to which are provided on page 4.

And, as always, I welcome your comments and suggestions.

David Fergusson
President and Co-Chief Executive Officer
The M&A Advisor

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Implications of the “Internet of Things”

Carlos Moreira began the discussion by saying that the cost of cyber security is now \$3 trillion a year and mounting — and that figure does not include the costs associated with the nascent Internet of Things (IoT).

“The reason for these costs is simple: The World Wide Web, which sits atop the Internet, was designed as a way to interconnect users, not for transactions,” Moreira said. “But now the Internet is becoming a utility — not just a network. It’s no longer a connection; it has become something disruptive that has implications for health, education, government and finance.”

Moreira noted that IoT is adding another dimension of complexity to the system.

“We already have 6 billion devices connected to the Internet — not just mobile phones, but alarm systems, watches and all the elements used to collect information — and by 2020, more than 50 billion devices will be connected. In fact, General Electric just announced that all GE products are going to be connected to the Internet,” he said.

But all these additions are connecting to an “unsecure facility,” Moreira warned.

“We are helping banks to get secure. We are helping governments to get secure, but the underlying structure is not secure,” he said, pointing out that no one country regulates the Internet, making the imposition of security practices or standards difficult.

“Hacking is now a well-organized industry,” Moreira said, “and there are countries that are developing hacking codes. So complexity is there and will only increase.”

The Need for Standards

Hany Fam continued the discussion by noting that standards and standard-setting, which play a critical role in cyber security, “are an area we don’t speak enough about.”

“At MasterCard, we’re one of probably two standard-setting organizations in the world that are able to enact, in effect, global standards,” Fam said. “We’ve done it in the past for financial services, but we’re also able to do it, and are increasingly doing it, for lots of other things, including security. But doing so requires heavy-handed dialogue among policymakers, regulators and private corporations like ourselves.”

Once standards for security are established, he said, “We can really start talking about opening up markets and capacity in a very meaningful way.”

Fam noted that “there is an opportunity for at least a 50 percent improvement in the efficiency ratio” in most businesses, by which he meant the time between when a service or product is

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— Hany A. Fam

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provided and payment is received. He pointed to industries where efficiency could be improved, including mass transit, maritime shipping and commercial aviation — where, he noted, it takes between 18 and 35 days for an airline to get paid because of “poor standards and a lack of innovation.”

Another key issue, Fam said, is the difference between authentication and identification.

“The need to authenticate — to verify that I am who I say I am in real time — is critical,” he said. “It is no longer okay for us to have a collection of passwords that we jot down on paper or put in our phones because we can’t remember them. Much of what will emerge from the conversation about the Internet of Things relies on and is depending on the notion of persistent authentication. Now, that takes us into a realm that will make some people quite uncomfortable — human biometrics, heart rate signatures and things like that. That doesn’t mean there will be a Big Brother entity recording your heart rate signature. The importance of this is that it has to be in your control.”

Identification is “the second part of the story,” Fam said, adding that “this is where it gets interesting. Authentication linked to identification that anonymizes you is really important.”

He explained how the technology now exists to create an “avatar,” or token, for an individual so that the person’s identity is not breached or stolen.

“These tokens can be verified across a common standard worldwide and, if they are adopted, they could empower consumers and increase business efficiency,” Fam said.

When asked by Moreira for his perspective on cyber security, Jeffrey Wells noted “that everyone is confused.”

“There isn’t such a thing as a broad expert, just specialists in certain areas,” Wells said. “What we’re starting to see is that cyber security start-ups are not getting money from VCs, because the VCs just don’t have the expertise to identify what’s happening or what is of value. So we’re starting to see many acquisitions. I have one company that acquired six companies in the last eight weeks.”

Wells warned that unless “we figure out” cyber security, “We will probably lose control of the Internet in the next five years. I’m not trying to scare everyone, but we’ve really got to start paying attention.”

“I have one company that acquired six companies in the last eight weeks.”

– Jeffrey Wells

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Becoming More Secure

Kerimi then asked the panelists how the interconnected world, which keeps adding new participants and functions, could start becoming more secure.

“The world is divided into companies that know they’ve been hacked and those that don’t know they’ve have been hacked. Everybody has been hacked.”
– Carlos Moreira

Fam said that MasterCard is working globally consistent standards that will help with security.

“Let me bring that to life,” Fam continued. “The South African Government benefits agency, SASA, worked with us a couple of years ago to completely take cash out of their benefit payments. Back then we weren’t using phones; we were using cards, but with biometric data in the card because of literacy issues and security. In one fell swoop, they banked the entire population of people receiving welfare payments. Developing countries are not going to walk in the footsteps of the Western world; they are going to jump an entire generation of issues and mistakes.”

Moreira then noted that Estonia has shown “amazing performance” in the uses of secure Internet.

“Estonians are doing something like 90% of government transactions electronically, from e-voting to paying their taxes and so on,” he said. “There are very good practices around the world that could be combined into a mass market deployment, which is why we need bigger cyber security companies. They are not yet big enough to be able to reach out on a global basis.”

Moreira also said there are good cyber security companies in Spain, France, England and Germany, but they are islands: “There is a huge M&A opportunity to consolidate the market. You need to have a very big cyber security company that can bring those best practices around the world and industrialize them on a global scale.”

“The opportunity is there,” he continued. “The world is divided into companies that know they’ve been hacked and those that don’t know they’ve have been hacked. Everybody has been hacked. We need a global solution.”

Ironically, noted Wells, some of the best examples of excellent cyber security are taking place in countries that one might least expect.

“I worked on a project in Afghanistan, and I would say they currently have the most advanced payment system. They pay everyone electronically, which reduces fraud and rip-offs,” he said. “In Africa we are seeing incredible use of payment systems, electronic currencies and adoption of security. In the U.S. we’re slow to adopt security because we’re worried about the rules. In other places, they don’t care about the rules.”

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Video Interviews

To watch exclusive M&A Advisor interviews with these cyber security experts, click on the following images:



Hany A. Fam

President
MasterCard Enterprise Partnerships



Danil Kerimi

Director
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World Economic Forum USA



Carlos Moreira

Chief Executive Officer
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Jeffrey Wells

Executive Director of
Cyber Development and
Cyber Maryland
Department of Business and
Economic Development

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Symposium Session Video

To watch the Stalwarts Roundtable – “Cyber Security and the Internet of Things,” – click on the following image:



**Cyber Security and
the Internet of Things**

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Symposium Participant Profiles



Hany A. Fam
President
MasterCard Enterprise
Partnerships

Hany A. Fam is President of MasterCard Enterprise Partnerships, a new venture within MasterCard that leverages the company's technology, network and solutions to deliver transformational new businesses in partnership with leading public and private organizations in a broad range of global industries. These partnerships are unconventional, strategic and often involve several partners. Prior to his current role, Mr. Fam held a number of key positions at MasterCard including President UK & Ireland Markets, as well as President, Global Key Accounts. Prior to joining MasterCard in 1994, he launched the consulting business of Edgar Dunn & Company in Asia/Pacific, a high-end global strategic consultancy. He also held the position of Deputy CEO of Cashcard Australia Limited and Chief Technology Officer for Toshiba International's Industrial Division in Australia. Mr. Fam has a Master of Business Administration degree, a Master's degree in Banking and Finance, and a Graduate Diploma in Accounting and Finance from the University of Technology, Sydney. He has a Bachelor of Science degree from Macquarie University, Sydney, and a diploma in Nuclear Medicine Technology from the Sydney College of Technical Education.



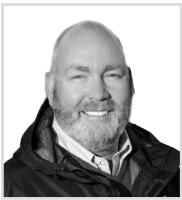
Danil Kerimi
Director
Head of ICT Government
Community
World Economic Forum USA

Danil Kerimi is a Director and Head of ICT Government Community at World Economic Forum USA. Prior to joining the World Economic Forum in 2008, Mr. Kerimi worked with the United Nations Office on Drugs and Crime/Terrorism Prevention Branch, the Organization for Security and Cooperation in Europe, the International Organization for Migration and other international and regional organizations. From 2008 to 2011, he led WEF's engagement with governments and business leaders in Europe and Central Asia. Since 2011, he has been in charge of developing the Forum's global public sector outreach strategy on various projects in the field of cyberspace, including cyber resilience, data, digital ecosystem, ICT and competitiveness and hyperconnectivity, among others. After finishing high school in Turkmenistan, Mr. Kerimi earned a Bachelor of Laws degree from Shandong University in China. He studied international business, diplomacy, and democracy in Prague, Budapest and Vienna, graduating with a Master's degree in advanced international studies from the Diplomatic Academy of Vienna. In 2011, Mr. Kerimi finished the Forum's Global Leadership Fellowship and was awarded an Executive Master's degree in global leadership. He is passionate about technology, history, international relations, development and basketball.



Carlos Moreira
Chief Executive Officer
WISeKey

Carlos Moreira is the Chairman, Chief Executive Officer and Founder of WISeKey, based in Geneva, Switzerland. From 1983 to 1998, Mr. Moreira was a United Nations expert on information technology, e-security and trust models, and worked for several UN agencies, including ILO, UNCTAD, ITC/WTO, the World Bank, UNDP, and ESCAP. He was an early stage pioneer in the field of digital identity and in 1999 founded WISeKey. Mr. Moreira is a member of UN Global Compact and Global Clinton Initiative. At the World Economic Forum, he has been a Founding Member of Global Growth Companies, a New Champion (2007–2013), the Vice Chair of the Global Agenda Council on Illicit Trade (2012–2013), and a member of the Partnering Against Corruption Initiative. Mr. Moreira is a founder of the Geneva Security Forum and the Geneva Philanthropy Forum, and was named one of the 300 most influential people in Switzerland in 2013.



Jeffrey Wells
Executive Director of Cyber
Development and Cyber
Maryland
Department of Business and
Economic Development

Jeffrey Wells is Executive Director of Cyber Development in the Maryland Department of Business & Economic Development (DBED). In that role, to which he was appointed in September 2013, his responsibilities include using his knowledge of the commercial and federal/military aspects of the state's rapidly evolving cyber security industry to support growth, as well as to drive the business development and strategic marketing of Maryland's many cyber assets. In addition to providing guidance to Maryland's emerging cyber companies and those contemplating moves to the state, Mr. Wells directs general cyber outreach and education, particularly to the business community. He advises individual companies in incubators, universities, federal labs and other start-up environments, connecting them with potential investors, buyers and contractors. He has more than 25 years of experience in providing analysis, strategy, insight and leadership to companies in international markets, and has devised and facilitated profitable and sustainable business initiatives that contribute social value across diverse cultures and organizations throughout North America, Europe, Africa, the Middle East and Asia. In 2007, Mr. Wells established the social business and anti-poverty enterprise Khalakom, which used access to mobile technology as a conduit for community, empowerment and social change. Earlier, he was Chief of Operations and Lead Analyst for Innovent, the innovation arm of Nokia.

About the Sponsor

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Merrill DataSite

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International Financial Forum - New York, NY - March 2016

For additional information about The M&A Advisor's leadership services, please contact Liuda Pisareva at lpisareva@maadvisor.com.