Safe Harbour Statement

This presentation and the subsequent question and answer session may contain forward-looking statements that are based on current expectations or beliefs, as well as assumptions about future events. There are risk factors that could cause our actual results to differ materially from those expressed in or implied by such statements.

Spirent disclaims any intention or obligation to revise or update any forward-looking statements that may be made during this presentation or the subsequent question and answer session regardless of whether those statements are affected as a result of new information, future events or otherwise.
# Capital Markets Day Agenda

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<th>Presenter</th>
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<td>James Armstrong</td>
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<td>Paula Bell</td>
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<td>Key Growth Initiatives</td>
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<tr>
<td>Lifecycle Service Assurance</td>
<td>Dave Stehlin</td>
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<tr>
<td>High-Speed Ethernet/IP, Cloud &amp; Virtualization</td>
<td>Neil Holmquist</td>
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<tr>
<td>Security for the Connected Future</td>
<td>John Weinschenk</td>
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<td>Summary &amp; Conclusion</td>
<td>Eric Hutchinson</td>
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<td>Final Q&amp;A</td>
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<tr>
<td>Lunch &amp; Product Demonstrations</td>
<td></td>
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</tbody>
</table>

## Today’s Presenters

- **Eric Hutchinson**, CEO
- **Paula Bell**, CFO
- **James Armstrong**, COO & EVP, Products
- **Dave Stehlin**, GM, LSA
- **Neil Holmquist**, VP, Marketing
- **John Weinschenk**, GM, AppSec
Connecting a Smarter Future

Eric Hutchinson
Chief Executive Officer
Connecting a Smarter Future

Innovative products and services to help the world communicate and collaborate faster, better and securely.

Develop

We help our customers develop devices, networks and applications.

Operate

We help our customers assure network performance and customer experience.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Customers</th>
<th>Employees</th>
<th>Revenue 2016</th>
<th>R&amp;D Investment 2016</th>
<th>Operating Margin 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>1,500</td>
<td>1,564</td>
<td>$458M</td>
<td>$112M</td>
<td>10.2%</td>
</tr>
</tbody>
</table>

(1) Before exceptional and other items
Our Customers

A diversified customer base with blue chip client relationships

Develop

Wireless & Positioning Device Manufacturers

Network Equipment Manufacturers

Network Operators

Enterprises & Governments

Operate

Reliable & secure networks & applications

Reliable & secure networks meeting service level agreements

Network Operators

Network Operators

Enterprises & Governments

Reliable, high-performance & secure products

Reliable, high-performance & secure products

Reliable & secure networks meeting service level agreements

Reliable & secure networks & applications

Innovative, quality & secure products

Innovative, quality & secure products

Innovative, quality & secure products
Spirent Differentiation

Competencies that provide our competitive differentiation

Test Methodologies
Active Test
Analytics
Automation

Network Functions Virtualization (NFV);
Pre-deployment Testing;
Report on Validation of NFV Environments and Services
The Smarter Future

Smart Industry (4.0) - $195 billion market (2022)
Smart Home - $121 billion market (2022)
Smart Enterprise - $255 billion market (2019)
Smart Cities - $156 trillion market (2020)

Autonomous Vehicles

- Intelligent Transportation Systems
  - Connected Cars - $152 billion market (2020)
  - Fleet Management - $27.9 billion market (2021)

- Unmanned Aerial Vehicles
  - Drones - $28.2 billion market (2022)

- $9.7 billion connected things (2020)
- 380 million Connected Cars on the road (2021)
- 380 million Connected Cars on the road (2021)
Dominant Market Trends
Relentless Traffic Growth

Global IP Traffic

3x increase 2015 - 2020
CAGR 22%

Service Adoption Drivers

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>More internet users</td>
<td>3.0 billion</td>
<td>4.1 billion</td>
</tr>
<tr>
<td>More devices and connections</td>
<td>16.3 billion</td>
<td>26.3 billion</td>
</tr>
<tr>
<td>Faster broadband speeds</td>
<td>24.7 Mbps</td>
<td>47.4 Mbps</td>
</tr>
<tr>
<td>More video viewing</td>
<td>70% of traffic</td>
<td>82% of traffic</td>
</tr>
</tbody>
</table>

Source: Cisco VNI Global IP Traffic Forecast 2015-2020 (June 7, 2016)
Dominant Market Trends

Business imperative to reduce operating costs and capital expenditures

Source: IHS. Market Insights “RESEARCH NOTE. Telecom Capex Languishes in Flatland” (November 21, 2016)
Market Dynamics

Market Challenges

- Relentless traffic growth (video)
- Business imperative to radically reduce expenses

Market Disruptions

Cybersecurity  Virtualization  Internet of Things  5G
# Spirent Strategic Direction

## Vision

Experts in methodologies and solutions for the development and management of communication networks, connected devices and applications

## Strategy

- Innovate easy-to-use test products & services
- Provide specialized and consultative sales & support

## Strategic Objectives

- Lead in high-speed Ethernet/IP and positioning
- Accelerate growth in cybersecurity and network virtualization
- Grow lifecycle service assurance business
- Explore new areas for future growth: 5G, autonomous vehicles
- Expand in large enterprise customers
Business Focus

James Armstrong
Chief Operating Officer & EVP, Products
The Smarter Future – Our Focus


- Connected Devices
- Networks & Security
- Lifecycle Service Assurance

- Develop
- Operate
Re-segmenting for Focus - Rationale

- **Accelerate Product Development.** Group business units that collaborate on developments or leverage expertise and technology to develop new products and services.

- **Streamline Go To Market.** Business units in the same segment target similar customers, job function and phase of the technology lifecycle.

- **Cost Savings.** Rationalise organisational structure.

---

**Develop**

- Virtualization
- IoT
- 5G
- Security

**Operate**

- Connected Devices
- Networks & Security

**Lifecycle**

- Service Assurance
Organised for Sharp Focus on Target Market Opportunities

**Networks & Security**

Driven by virtualization and security

Automated performance and security test systems to accelerate development & deployment of networks and applications.

**Lifecycle Service Assurance**

Driven by virtualization, mobile networks and the Internet of Things

Active test and analytics solutions for service turn-up, network performance improvement & customer experience management.

**Connected Devices**

Driven by the Internet of Things and 5G

Automated test systems to accelerate the development & deployment of connected devices.
Networks & Security

**High-Speed Ethernet/IP**

- **Data Center Ethernet Switch**
  - 2015: $15B
  - 2020: $18B
  - CAGR 3.2%

- **Wireless LAN**
  - 2015: $9B
  - 2020: $14B
  - CAGR 6%

Source: Technavio (March 2016)

**Cybersecurity**

- **Cybersecurity Testing Market**
  - 2015: $3B
  - 2022: $10B
  - CAGR 20%

Computers vulnerable to attack: 99%
Cost of cyber-crime (global): $100 billion per year
Increase in number of cyber-attacks to organizations (USA): +176%

Source: STRATISTICS MRC (January 2017)

Networks & Security

- **Market**: $1170M
- **Market Growth**: 10%
- **Revenue**: $262M
- **Market Share**: 22%
- **Operating Profit\(^1\)**: $47.2M
- **Operating Margin\(^1\)**: 18%

For 2016. Growth is CAGR 2016-2019

\(^1\) Before exceptional items
Lifecycle Service Assurance

Service Assurance

Global Service Assurance Systems

- CAGR 3.5% to $7.9B
- Market $805M, Market Growth 7%
- Revenue $99M, Market Share 12%
- Operating Profit $11.2M, Operating Margin 11%

Virtualization

Network Functions Virtualization Market

- CAGR 42% to $16B
- Moving from hardware to software
- Deliver exponentially more data cost effectively
- Adapt rapidly to changing network conditions

Lifecycle Service Assurance

- Market $805M
- Market Growth 7%
- Revenue $99M
- Market Share 12%
- Operating Profit $11.2M
- Operating Margin 11%

For 2016. Growth is CAGR 2016-2019

(1) Before exceptional items
Connected Devices

5G

- Enable new applications requiring ultra-low latency or extreme bandwidth: virtual reality and augmented reality
- Early adoption: Korean Olympics (2018)
- Standards: 2018-2020

Internet of Things (IoT)

- IoT connections (2015):
  - Connected Business: 29%
  - Connected Home: 26%
  - Consumer Electronics: 21%
- Cellular IoT connections:
  - 334 million in 2015 to 2.2 billion in 2025; Connected cars will be 45%.
- IoT Application Revenue (2025): $1.3 Trillion

Source: Technavio (October 2016)

Source: Machina Research (August 2016)

(1) Before exceptional items
Market Opportunity

<table>
<thead>
<tr>
<th>2016</th>
<th>Networks &amp; Security</th>
<th>Lifecycle Service Assurance</th>
<th>Connected Devices</th>
<th>Spirent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>$1170M</td>
<td>$805M</td>
<td>$550M</td>
<td>$2525M</td>
</tr>
<tr>
<td>Market Growth</td>
<td>10%</td>
<td>7%</td>
<td>(3%)</td>
<td>6%</td>
</tr>
<tr>
<td>CAGR 2016-2019</td>
<td></td>
<td></td>
<td></td>
<td>$458M</td>
</tr>
<tr>
<td>Revenue</td>
<td>$262M</td>
<td>$99M</td>
<td>$97M</td>
<td></td>
</tr>
<tr>
<td>Market Share</td>
<td>22%</td>
<td>12%</td>
<td>18%</td>
<td>18%</td>
</tr>
</tbody>
</table>
Driving Improved Returns

Paula Bell
Chief Financial Officer
Re-segmenting for Focus on Target Business Opportunities

2016

- Networks & Applications
  - Cloud/IP, Application Security, Mobile Infrastructure, Automation

- Wireless & Positioning
  - Wireless, Developers Tools, Positioning

- Service Assurance
  - Service Assurance, Service Experience, Customer Experience Management, Device Intelligence

2017

- Networks & Security
  - Cloud/IP, Application Security, Positioning

- Lifecycle Service Assurance
  - Mobile Infrastructure, Customer Experience Management, Service Assurance, Automation

- Connected Devices
  - Wireless, Service Experience, Device Intelligence, Developer Tools
Financial Summary Recap

<table>
<thead>
<tr>
<th>$ million</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>457.9</td>
<td>477.1</td>
</tr>
<tr>
<td>Gross profit</td>
<td>324.3</td>
<td>331.8</td>
</tr>
<tr>
<td>Gross margin (%)</td>
<td>70.8</td>
<td>69.5</td>
</tr>
<tr>
<td>Operating profit(^1)</td>
<td>46.5</td>
<td>42.1</td>
</tr>
<tr>
<td>Operating margin(^1) (%)</td>
<td>10.2</td>
<td>8.8</td>
</tr>
<tr>
<td>Cash</td>
<td>96.1</td>
<td>102.0</td>
</tr>
<tr>
<td>Basic EPS(^{1,2}) (cents)</td>
<td>5.29</td>
<td>5.00</td>
</tr>
</tbody>
</table>

2016 Segments

<table>
<thead>
<tr>
<th></th>
<th>Revenue</th>
<th>Gross margin (%)</th>
<th>Operating profit/(loss)(^1)</th>
<th>Operating margin(^1) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networks &amp; Security</td>
<td>262.2</td>
<td>71</td>
<td>47.2</td>
<td>18</td>
</tr>
<tr>
<td>Lifecycle Service Assurance</td>
<td>99.2</td>
<td>78</td>
<td>11.2</td>
<td>11</td>
</tr>
<tr>
<td>Connected Devices</td>
<td>96.5</td>
<td>64</td>
<td>(4.4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Corporate</td>
<td>(7.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Group</td>
<td>457.9</td>
<td>71</td>
<td>46.5</td>
<td>10</td>
</tr>
</tbody>
</table>

(1) Before exceptional and other items
(2) Before impairment of investment in associate, prior year tax and tax on items in note (1)
## Cash Generation

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free cash flow</td>
<td>25.9</td>
<td>35.3</td>
</tr>
<tr>
<td>Dividend paid</td>
<td>24.2</td>
<td>23.5</td>
</tr>
<tr>
<td>Dividend (cents)</td>
<td>3.89</td>
<td>3.89</td>
</tr>
<tr>
<td>Dividend (pence)</td>
<td>3.07</td>
<td>2.67</td>
</tr>
<tr>
<td>Cash</td>
<td>96.1</td>
<td>102.0</td>
</tr>
<tr>
<td>Cash conversion ratio(^1)</td>
<td>0.8</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Strong balance sheet focus:
- Most of free cash flow distributed in dividends
- Strong Q1 2017, $115.8 million cash balance at 31 March

\(^1\) Free cash flow divided by adjusted earnings
Strong Diversification

Revenue by Segment

- Networks & Security: 57%
- Connected Devices: 21%
- Lifecycle Service Ass: 22%

Revenue by Geography

- Americas: 55%
- Asia Pacific: 33%
- EMEA: 12%

Revenue by Customer

- Other: 60%
- 8%
- 7%
- 5%

(1) 2016 data
Managing an Effective Cost Base

- Deploy external benchmarking
- Sales reorganisation underway, complete during 2017
- Focus on driving effectivity… more for less

<table>
<thead>
<tr>
<th></th>
<th>$ million</th>
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<tbody>
<tr>
<td></td>
<td>2016</td>
</tr>
<tr>
<td>Product development</td>
<td>111.7</td>
</tr>
<tr>
<td>Selling and distribution</td>
<td>125.4</td>
</tr>
<tr>
<td>Administration</td>
<td>40.7</td>
</tr>
<tr>
<td><strong>Total overhead costs</strong></td>
<td><strong>277.8</strong></td>
</tr>
</tbody>
</table>

(1) Before exceptional and other items
Investing for Sustainable Earnings

- Sales reorganisation underway
- New customer approach evolving
- Developing key account management
- Engaging with key customer - insights
- Further developing ROI metrics
- Synergies from new organisation
How We Decide Where to Invest

Invest in areas where the following criteria are met... to drive improving margins

Market
Scale and growth prospects

Capability
Spirent has or can establish leading position and competitive differentiation

Sustainability
Long term potential for growth and profit

Returns will be delivered by:

- Focused strategy
- Plans built on market growth drivers and disruption
- Maintaining leading technology
- Transition to more software sales will drive improved margins
- Being efficient - cost management focus: sales re-organisation, combining of business units
- Strong cash conversion
Focused Investments

Driving Growth

- Strong demand for Ethernet testing
  - Leading edge technology
- Recent investments driving new product launches
  - High-speed Ethernet portfolio additions
  - Application Security – Cyberflood, SecurityLabs
  - Positioning – multi constellation simulators, new interference detectors
  - VisionWorks assurance products and services

<table>
<thead>
<tr>
<th>Networks &amp; Security</th>
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<tr>
<td>Market growth</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Gross margin</td>
</tr>
<tr>
<td>Operating margin¹</td>
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<table>
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<th>Lifecycle Service Assurance</th>
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<tr>
<td>Market growth</td>
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<td>Revenue</td>
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<tr>
<td>Gross margin</td>
</tr>
<tr>
<td>Operating margin¹</td>
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Managing Technology Change

- Legacy to growth
  - Device testing decline
  - New 5G channel emulator investment

<table>
<thead>
<tr>
<th>Connected Devices</th>
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<tbody>
<tr>
<td>Market decline</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Gross margin</td>
</tr>
<tr>
<td>Operating margin¹</td>
</tr>
</tbody>
</table>
Actions are clear

**DRIVE REVENUE GROWTH**
- Positive Market Trends
- Leading Edge Technology
- Customer Management
- Device Testing Decline

**COST EFFECTIVENESS**
- Portfolio Review
- Sales and Distribution
- ROI

Improving Margins
Sustainable Earnings
Coffee Break and Product Demonstrations

<table>
<thead>
<tr>
<th>Product Demonstrations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifecycle Service Assurance</td>
<td>Dave Stehlin</td>
</tr>
<tr>
<td>Cloud &amp; Virtualization Testing</td>
<td>Neil Holmquist</td>
</tr>
<tr>
<td>Cyber Security</td>
<td>John Weinschenk</td>
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Key Growth Initiatives
Spirent Strategic Direction

<table>
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<th>Vision</th>
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<tr>
<td>Experts in methodologies and solutions for the development and management of communication networks, connected devices and applications</td>
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</table>

<table>
<thead>
<tr>
<th>Strategy</th>
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<tbody>
<tr>
<td>• Innovate easy-to-use test products &amp; services</td>
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<tr>
<td>• Provide specialized and consultative sales &amp; support</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Strategic Objectives</th>
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<tbody>
<tr>
<td>• Lead in high-speed Ethernet/IP and positioning</td>
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<td>• Grow lifecycle service assurance business</td>
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<td>• Explore new areas for future growth: 5G, autonomous vehicles</td>
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<tr>
<td>• Expand in large enterprise customers</td>
</tr>
</tbody>
</table>
The Service Provider Material Economic Problem

SP’s need to bring services to market faster and lower operating expense

Traditional Network

Hybrid Network

Lifecycle Service Assurance

Automated
Integrated
Proactive

Virtual Network

Dynamic & Flexible

Carrier Grade Hardware

Predictable & Rigid

Carrier Grade Software

Spirent LSA solutions deliver these benefits by automating lab & production testing and integrating proactive service quality assurance in physical, virtual & hybrid networks
Our Differentiation/Competitive Advantage

Design  On-Board  Deploy  Operate  Maintain

Network Validation  Service Testing  Operational Assurance

Development  Pre-Production  Production

 iTes t / Velocity  Landslide  Lumos  Analytics
Combining Products to Win in the Virtual Era

To create a platform uniquely positioned for the high-growth production NFV assurance market

We’re combining lab & production solutions

Rapid On-Boarding

Reduced OPEX & CAPEX

Differentiated Experience

Source: Analysys Mason (Jan 2016)
Case Study: Large Improvements in Speed and Cost

**The Challenge**

- Roll out 50k+ small cells
- Use existing team to activate
- Activate >100 small cells / day
- Legacy process: <10 cells / day

**Spirent’s Solution**

- Automate activation workflow
- Back-office system integration
- Integrated backhaul testing
- Auto-detect & test new links

**Benefits Achieved**

- Reduced small cell operational deployment costs by millions
  - No additional staff
  - Vendor agnostic improves efficiency
  - Reduces manual testing by 95%

- Onboarded services faster, accelerating time to revenue
  - Activate >1,000 small cells per week due to automated process
  - More than 10x faster time to revenue vs. traditional process

- Deployed network faster, improving service experience
  - Small cells provide coverage in critical unserved areas
  - Ability to deploy faster significantly improves service experience
Providing Significant Value for our Customers

Actual benefits experienced by Communication Service Providers, Network Equipment Providers and Enterprises in lab & production environments

$30M+
Annual savings due to faster MTTR

$20M+
Annual savings due to reduced SLA violations

50%+
Increase in Trouble Ticket Resolutions

15%+
Increase in first call resolutions

10x
Faster releases, upgrades & turn-up

80%+
Increase in testing workflow efficiency

The Cloud

Mobile Services
Macrocell Wi-Fi / Small Cell

Business Services

Residential Services
Summary: Well Positioned for the Shift to Virtualization

Accelerate & automate the entire service lifecycle

- Build on strong installed base with leading customers
- Create valuable synergy by integrating our broad set of network test elements
- Enable successful transformation to virtualized services with our holistic testing capabilities
Target Market Segments

Technology Providers
- BROADCOM
- CISCO
- JUNIPER NETWORKS
- NOKIA
- Ericsson
- Extreme Networks
- HUAWEI
- ZTE 中兴
- H3C

NEMs
- Openstack
- VMware
- NSS Labs
- EANTC
- Iometrix
- Network Test
- INCTRE
- Bii
- Cloudburst
- Open Source Cloud Computing

Cloud/NFV Platform
- Hewlett Packard Enterprise
- Blue Planet
- China Mobile
- T-Mobile
- Google
- Alibaba
- McAfee

3rd Party Test Labs
- AT&T
- BT
- Alcatel-Lucent
- NTT
- Alcatel
- Equinix
- Equinix
- T-MOBILE

Service Providers
- Amazon Web Services
- Rackspace
- HSBC
- eBay
- Goldman Sachs
- Bank of America

Enterprise & Government
- EE
- France Telecom
- China Mobile
- China Unicom
- China Telecom
- BCE
Our Insatiable Appetite for Content is Requiring Networks to be Upgraded…Constantly.

<table>
<thead>
<tr>
<th>Quality</th>
<th>Recommended Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD</td>
<td>3.0 Mbps</td>
</tr>
<tr>
<td>HD</td>
<td>5.0 Mbps</td>
</tr>
<tr>
<td>Ultra-HD</td>
<td>25 Mbps</td>
</tr>
</tbody>
</table>
North America Service Provider Data Traffic Growth Projections

480% increase in projected data traffic on national wireless network

100,000% increase Jan. 2007 – Dec. 2014

1,300% growth in Ethernet ports
The Problem for Carriers: Traffic Growth vs. Cost Savings

- Cost evolution of deployed technology
- Limitations of deployed hardware
- Impact of technology on unit cost
- Moore's Law (servers, memory)
The Solution: Move from Hardware to Software

Eliminate (or minimize) dependence on custom built hardware
When there is Innovation there is Change…

Where there is Change, there is a need to make sure it works
High-Speed Ethernet Product Portfolio

Industry-Leading Layer 2-7 Traffic Generation

- DX
- Data Density
- FX
- Flexible Functionality
- MX
- Multiprotocol Performance

Developing Technology for Tomorrow

Seven Speed Test Module with Fiber Channel
FX3 and MX3 (100/50/40/25/10GbE) with 16G & 32G FC

Twelve ports of DX3 100/50/40/25/10GbE

To Meet Your Testing Needs

Industry's highest density test systems including 400G since April 2016

Releasing 200G test modules in 2017

Evolution of Ethernet

- Ethernet speed supported with Spirent solutions
- Speed in development

- 400GbE
- 100GbE
- 200GbE
- 50GbE
- 25GbE
- 5GbE
- 2.5GbE

- 10GbE
- 40GbE

- 100M Ethernet
- 10GbE

- Standard Completed

Helping our Customers build the Networks of Tomorrow

Networks will be Hybrid as not all services can be Virtualized – 99.999% reliability is required

Yet, Virtualization poses a complex new challenge
Virtual and Cloud Product Portfolio

**All new speeds – 25G and 40G**

- Industry's first 25G and 40G Virtual testing solution!
- Unparalleled throughput for ESXi and OpenStack based clouds

**First to market advantage**

- Cloud Native Ready

**Help build a better Cloud**

1. Score your Cloud (baseline and benchmark)
2. Deploy virtualized apps on the Cloud
3. Define the right Cloud Infrastructure

Continuous Cloud Services and Delivery

**Spirent Virtual** on Amazon Marketplace

**Spirent Virtual** on Azure Marketplace
Customer Situation/Use Case for Cloud Infrastructure

WHAT’S YOUR CLOUD HEALTH SCORE?

Hypervisor

Compute  Networking  Storage
3.7
Compute: 3.4
Network: 3.6
Storage: 4.0

3.5
Compute: 3.4
Network: 3.2
Storage: 4.0

3.8
Compute: 3.6
Network: 3.8
Storage: 4.0

(Kilo)

(Mitaka)

(Mitaka)
Customer Situation/Use Case for Network Test

*Cisco positioning their products over bare-metal switches*

![Chart showing throughput comparison](image_url)

*Figure 2: Comparing Cisco Cloudscale and merchant silicon throughput*
Summary

- Spirent innovating with new technology for testing tomorrow’s networks
- Established leadership in High-Speed Ethernet testing platforms
- Extensive existing customer base continuing to invest
- Expanding our customer base with cloud solutions
- Excited with opportunities of growth in our core and new markets
Security for the Connected Future

John Weinschenk
General Manager
About Spirent Security

*Spirent reduces risk from hackers with Security solutions*

- Helps customers proactively understand their security risk
  - Validating security arsenal can defend global threats while maintaining performance and reliability

- Provide consolidated intelligence needed to balance performance with security

- Addresses unique needs for core markets
  - equipment manufacturers, service providers, government entities and enterprises in regulated markets
Importance of Application Security

The connected world communicates through applications

- Security demand outpaces budget growth
- Ever changing threat landscape
- Deploying too many point solutions create information overload

Consolidated Security and Performance Intelligence – The Next Frontier
Hacking is like playing Chess

Single corporate email account password compromised
- Weak corporate policies make passwords easier to compromise

Compromised credentials used to gain access to GAL
- Should restrict access on computers able to connect to corporate GAL

Hacker tests all email addresses in GAL for weak passwords
- Should restrict who can export of GAL

Hacker able to leverage 100s of compromised credentials to access confidential systems
Evolving Our Value to our Customers

Security a natural progression

- Validate network systems effectiveness
- Test application authentication and authorization
- Device hardware testing for unauthorized access
- Mobile application & infrastructure security validation
- Address unique security vulnerabilities presented in virtual and cloud environments

Security Solutions

Spirent Performance and Service Assurance Testing

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<th>Wireless &amp; Positioning Device Manufacturers</th>
<th>Network Equipment Manufacturers</th>
<th>Network Operators</th>
<th>Enterprises &amp; Governments</th>
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PROPRIETARY AND CONFIDENTIAL
Strengthen security for the connected future

• validate security arsenal and mitigate risk
• intelligence to stay ahead of global threats
• maintain performance and reliability

Security and Performance Testing for App-Aware Solutions

Extending Your Cyber Security Team to Identify and Mitigate Risk
CyberFlood: Extending Our Core Expertise

- Advanced L4-7 Testing
  - Security Focused
  - Network Load/Performance
- Fast Growing Industry Verticals
  - Enterprise Security
  - IoT / Automotive
  - Virtual / Cloud
  - Critical Infrastructure
- Ease of use
  - Team testing
  - Intuitive user interface
SecurityLabs Overview

- Managed Vulnerability Scanning & Penetration Testing
  - **Network** and Wireless
  - Web and Mobile **Applications**
  - **Devices** (SmartHome, Network Devices, Banking, Automotive)
Case Study: Automotive Infotainment System Manufacturer

- **Unmet business need:**
  - Test infotainment system for potential security vulnerabilities.

- **Spirent solution:**
  - Holistic penetration test to identify potential areas of compromise.
  - Ability to test for vulnerabilities within current technologies leveraged in connected cars to provide over the air updates (3G and 4G networks).

- **Why we won:**
  - The reputation of our SecurityLabs consultants as thought leaders in the Connected Car Security space.
Case Study: Large Regional US Hospital

- **Unmet business need:**
  - Security testing of NextGen operational surgical device used by hospital.

- **Spirent solution:**
  - Identification & impact of threats, and vulnerabilities, and map findings to HIPAA requirements.

- **Why we won:**
  - Real world understanding of complexities within hospital environment from mission critical components and secure network integrations with University partners.
Summary & Conclusion

Eric Hutchinson
Chief Executive Officer
Summary & Conclusion

Sharp focus on target market opportunities that matter most to our customers

- We have developed new products and services to meet the key market disruptions
- Shifted investments to selected priorities:
  - High-speed Ethernet
  - Cyber Security
  - Virtualization
  - Automated active test and analytics for service assurance
  - 5G wireless

Positioned to serve the needs to develop the smarter future
Lunch & Product Demonstrations

<table>
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<td>Lifecycle Service Assurance</td>
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Thank you
Sources

(1) Markets & Markets (M&M)
M&M forecast that "the Industrial IoT (IIoT) market was valued at USD 113.71 Billion in 2015 and is estimated to reach USD 195.47 Billion by 2022, at a CAGR of 7.89% during the forecast period." "The market for camera systems is expected to grow at the highest rate during the forecast period."

(2) Markets & Markets
M&M forecast that "the Global smart home market is expected to grow from USD 46.97 Billion in 2015 to USD 121.73 Billion by 2022, at a CAGR of 14.07% between 2016 and 2022." "Lighting control, security & access control, HVAC control, entertainment & other controls, home healthcare, and smart kitchen are the different hardware products used in the smart home market."

(3) BI Intelligence
BI Intelligence forecast that “spending on enterprise IoT products and services will reach $255 billion globally by 2019, up from $46.2 billion this year, according to our estimates. This represents a 5-year CAGR of 40%.

(4) Gartner
Press Release: Gartner Says Smart Cities Will Use 1.1 Billion Connected Things in 2015 - March 2015
Gartner, Inc. estimates that “1.1 billion connected things will be used by smart cities in 2015 (see Table 1), rising to 9.7 billion by 2020.
Smart homes and smart commercial buildings will represent 45 percent of total connected things in use in 2015, due to investment and service opportunity, and Gartner estimates that this will rise to 81 percent by 2020.”

(5) Frost & Sullivan (F&S)
Conference: Connectivity and the Emergence of Smart Cities at Growth, Innovation & Leadership Congress (GIL) - November 2014, Australia
F&S forecast that “the global smart city market will be valued at US$1.565 trillion in 2020. Over 26 Global Cities are expected to be Smart Cities in 2025, with more than 50% of these smart cities from Europe and North America.”

(6) BI Intelligence
BI Intelligence forecast that “over 380 million connected cars will be on the road by 2021”

(7) BI Intelligence
BI Intelligence forecast that “Connected Car hardware and software will bring in $152 billion by 2020”

(8) Markets & Markets (M&M)
M&M forecast that “the fleet management market size is expected to grow from USD 9.54 Billion in 2016 to USD 27.90 Billion by 2021, at a Compound Annual Growth Rate (CAGR) of 23.9% during the forecast period. The major growth drivers of the market include the regular scheduled maintenance of fleet and the need to meet compliance requirements.”

(9) Markets & Markets (M&M)
M&M forecast that “the UAV (Unmanned Aerial Vehicle) market is estimated to be USD 13.22 Billion in 2016 and is projected to reach USD 28.27 Billion by 2022, at a CAGR of 13.51% during the forecast period.” “Based on application, the civil & commercial application segment of the UAV market is projected to grow at the highest CAGR, as UAVs offer attractive platforms for a broad range of potential applications, such as aerial remote sensing, greenhouse emission monitoring, and precision agriculture, among others.”