JEDE COMMITTEE MEMORANDUM

DATE: September 22, 2015

TO: Interested Parties

FROM: Assembly Committee on Jobs, Economic Development and the Economy

RE: Briefing for the Silicon Valley Tour – September 29, 2015

On Tuesday, September 29, 2015, Assemblymember Eduardo Garcia, Chair of the Assembly Committee on Jobs, Economic Development, and the Economy (JEDE) is hosting the first in a series of study tours focused on the business development needs of technology firms. The purpose of this line of inquiry is to determine what actions the state can reasonably take to address the economic and workforce challenges faced by one of California's most significant industry sectors. *Appendix A includes a list of Study Tour participants.*

Among other issues, the Chair and other participants will be engaging with information technology executives and advisors on matters related to the JEDE Committee's areas of policy oversight, including business development, international trade, permit assistance, infrastructure development, innovation-based manufacturing, and business attraction and retention.

The Study Tour begins with a visit to The Intel Corporation, followed by a meeting at Apple Inc. The final stop on the Study Tour is at TiE LaunchPad, a business accelerator operated by an important Silicon Valley network organization that supports new tech start-ups, among other mentoring and education activities. At TiE LaunchPad, Study Tour participants will meet with representatives from Apakau and Exofense, two start-ups who have benefited from the work of TiE LaunchPad and the Tech Futures Group. A Policy Framework document has been developed by the JEDE Committee to outline the scope of the issues being examined during the Study Tour and future Committee activities. *Appendix B includes a complete copy the Policy Framework.* The four primary lines of inquiry are described below.

1. What actions can the state take to better support business start-ups, expansions, and California companies' domestic and global competitiveness?
2. How can the state promote greater integration of information technology products in K-12 systems serving historically underserved communities?
3. How can the state support local and national efforts to provide a workforce better prepared to excel in STEM-based careers?
4. What actions can the state take to facilitate cross-border commerce and reduce de facto barriers to trade?

The Policy Framework has also been provided to Apple, Intel, TiE LaunchPad, and the Tech Futures Group to assist them in preparing for the September 29, 2015 meetings.

California's Information Technology Sector

California’s $2.3 trillion economy naturally functions as an independent economic power within the global economy. In fact, compared to other nations, California has one of the 10 largest economies in the world,

due to it being a top-tier trade partner, a best-in-class investment location, a high quality producer of goods and services, and the home and key access point for a massive consumer-base. One significant contributor to the state's GDP is the manufacturing sector, which includes the design and production of computer and electronic products. The bullet list below provides specific data on California's technology economy, including information on industries, jobs, wages, and tech industry comparisons to other states.

- California's **$2.3 trillion economy** ranks eighth relative to national economies the world – larger than both Russia, and Canada.[i]

- California's largest private industry sectors: Finance, insurance, real estate, rental, and leasing (20.2% of state GDP); trade, transportation, and utilities (12.7% of total GDP); professional and business services (12.0% of state GDP); and **manufacturing, which includes computer and electronic products** (12.0% of state GDP).[ii]

- There were 701,899 firms in California in 2012: 62% had less than 5 employees, **89% had less than 20 employees**, 98% had less than 100 employees, and 99% had less than 500 employees (federal small business definition). Only 5,660 firms in California had 500 employees or more.[iii]

- There were **19 million workers** in the California labor force in **August 2015** with **17.8 million individuals employed**. This represents an increase of 425,000 (2.4%) jobs over the prior year. Seven industry sectors gained jobs in August 2015 and four sectors lost jobs, including **7,100 less jobs in the manufacturing sector**. In **July 2015**, however, the Economic Development Department reported **3,600 jobs were added in the manufacturing sector and 6,000 jobs were added in the information sector.**[iv]

- California exported $174.1billion in products in 2014 to 229 foreign countries. Mexico ($25.4 billion) and Canada ($18.2 billion) are the state's largest export markets.[v] Computer and electronics comprised 24.5% ($42.7 billion) of total product exports.[vi]

- Global supply chains have made the import of component parts and partially assembled products increasingly important to the California economy, with the state's top 10 imports including parts, accessories, and components.[vii] China ($137.7 billion) and Mexico ($41.2 billion) are the state's largest import markets.[viii]

California's Electronic and Information Technology Industry

- California is the nation's **number one tech state**.[ix] The tech industry covered in this subsection includes tech manufacturing; telecommunications and Internet services; software publishing; IT services; and R&D, testing, and engineering services.

- California led the nation in **tech industry establishments** in 2013 with 46,300, considerably more than second ranked, Texas, at 32,600.[x]

- California led all states with **1.1 million workers being employed in the tech industry** in 2014, nearly twice as many as second ranked Texas and more than three times as many as third ranked New York.[xi] Over 8% of private sector workers in California are employed by the tech industry.[xii]

- Nationally, the **largest year over (2013-2014) net gain in tech jobs was in California**, which added 32,900 jobs, followed by Texas, which added 20,100 jobs and Florida, which added 12,500 jobs.[xiii]

- California continued to lead the nation with the **highest average wage** for tech industry workers at $139,500 in 2014. Massachusetts ranked second ($121,000) followed by Washington ($119,300).[xiv]

- The average tech wage was more than double the private sector wage in eight states, including California, Idaho, Washington, Oregon, Virginia, North Carolina, Arizona, and New Mexico.[xv]

- California **led the nation in the total value of its tech payroll ($152 billion)**, accounting for more than 23% of the entire nation's total tech payroll for 2014, and nearly three times as much as second ranked Texas, which had $56 billion in tech payroll.[xvi] Nearly 20% of the private sector payroll was directly attributable to the tech industry.[xvii]

Quirky Tech Industry Facts

- Grand Theft Auto made over $1 billion in the first three-days of sales.[xviii]

- One million Xbox One consoles sold in the first 24 hours of its release.[xix]

- Over 80 million Play Station 3 consoles sold since its launch.[xx]

- The first YouTube video was uploaded April 23, 2005. It's called "Me at the zoo," and features Jawed Karim, one of the founders, at the San Diego Zoo.[xxi]

- Mark Zuckerberg's original Facebook profile number ID is 4.[xxii]

- The first mobile phone call was over 42 years ago. [xxiii]

Summary of Appendices

The Appendices include a number of short summary pieces that are designed to be helpful in preparing for the Silicon Valley Study Tour, including:

Appendix A
Silicon Valley Study Tour Participants

Name	Title	Organization
Assembly Members		
Eduardo Garcia	Assembly Member (D- Coachella) and Chair of the Assembly Committee on Jobs, Economic Development, and the Economy	California State Assembly District 56
Evan Low	Assembly Member (D- Campbell) and Chair of the Assembly Select Committee on Career Technical Education and Building a 21st Century Workforce	California State Assembly District 28
Legislative and Policy Professionals *(alphabetical order)*		
Patrick Ahrens	Senior District Representative	District Office of Assembly Member Evan Low
Cesar Anda	Principal Consultant	California Latino Legislative Caucus
Melina Duarte	STEM Education Consultant	Former STEM education advisor, University of California Office of the President
Mary Kaems	Principal Consultant	Office of California State Assembly Toni Atkins
Nicole Rice	Policy Director	California Manufacturing and Technology Association
Michael Shaw	Vice President of Government Relations	California Manufacturing and Technology Association
Toni Symonds	Chief Consultant	Assembly Committee on Jobs, Economic Development, and the Economy
Matthew Hurley	Committee Secretary	Assembly Committee on Jobs, Economic Development, and the Economy
Natalee Vicencia	Legislative Aide with responsibility for education-related issues	Capitol Office of Assembly Member Eduardo Garcia

Appendix B
Silicon Valley Study Tour - Policy Framework

On Tuesday, September 29, 2015, Assemblymember Eduardo Garcia, Chair of the Assembly Committee on Jobs, Economic Development, and the Economy (JEDE) is hosting the first in a series of study tours focused on business development needs of information technology (IT) firms. The purpose of this line of inquiry is to determine what actions the state can reasonably take to address the economic and workforce challenges faced by IT companies in California.

Among other issues, the Chair and other participants will be engaging with information technology executives on matters related to JEDE's areas of policy oversight, including business development, international trade, permit assistance, infrastructure development, innovation-based manufacturing, and business attraction and retention. General public policy questions the JEDE Committee is interested in addressing include:

1. What actions can the state take to better support IT business start-ups, expansions, and competitiveness?
    a. As mature and successful company, what have been some of the key factors for expanding facilities in California?
    b. Have there been challenges in starting or expanding the business? Who or what helped to resolve those issues?
    c. What actions is the firm taking to address environmental, social, and corporate governance issues including conflict minerals?
    d. Does the firm use small business vendors for direct services or as part of its supply chain? Have you seen any difference since the recession in the ability of these businesses to meet your firm's needs?
    e. Do you see a role for the state in strengthening small businesses through technical assistance or capital access programs?

2. How can the state promote greater integration of information technology products in K-12 systems serving historically underserved communities?
    a. What impediments do you see in expanding access of IT in K-12 schools?
    b. What initiatives have your company implemented or participated in that expand or enhance information technologies in K-12 school systems?
    c. Do you have recommendations on how to improve public education in California, as it relates to your company's current and future workforce and small business vendor needs?

3. How can the state support local and national efforts to provide a workforce better prepared to excel in STEM-based careers?
    a. Has the form ever engaged with its local workforce investment board? Has the firm reviewed the federal Workforce Innovation and Opportunity Act of 2014 and thought about how the business engagement mandate may positively impact you?
    b. How effective is the state's K-12 and higher education systems in helping you access skilled workers?
    c. Does your firm offer internships or sponsor other workforce preparation activities? How do you advertise these opportunities?
    d. How is your company addressing workforce diversity?

4. What actions can the state take to facilitate cross-border commerce and reduce de facto barriers to trade?
    a. Do you export products by air or sea?
    b. Do you import parts or components?
    c. Do you use foreign trade zones?
    d. Are their steps California should take to help the IT industry be more globally competitive?
    e. Is California's goods movement infrastructure sufficient to meet your company's needs?

Appendix C
Biographies of Intel Directors at Study Tour Meeting

Anna Ballard; California Government Affairs Manager for Intel

As California Government Affairs Manager, Anna leads the development, implementation, and management of public policy strategies for local, regional and state government. Anna also manages civic memberships for the company's Folsom site community, ultimately protecting and enhancing the Intel brand and corporate reputation. Anna joined Intel in 2013 and prior to her current position, she served as Intel Folsom Community Engagement Manager.

Anna has a decade of communication and partnership experience in the Sacramento Region, which includes serving as Partnership Manager for the Sacramento Convention & Visitors Bureau and Account Manager for communications firm Runyon Saltzman & Einhorn. Anna currently serves on the Board of Directors for the Sacramento Metropolitan Chamber of Commerce.

David Slater; Intel Senior Director for U.S. Federal, State and Local Tax

David Slater is the Senior Director for US Federal, State and Local Tax for Intel Corporation, headquartered in Santa Clara, California. He has been with Intel for 19 years where he has also held the roles of State Income Tax Manager and Expatriate Tax Manager. Prior to working for Intel, Dave served in private practice for 8 years in the areas of corporate, individual and partnership taxation. Dave is a California licensed CPA and has an undergraduate degree in Economics from UC Berkeley. Dave serves on the Tax Committees for CMTA and SVLG and he is a member on the Board and Executive Committee for the California Taxpayers Association.

Jonathan Williams; Intel Regional Director of Public Affairs and Director of State and Local Government Affairs

Jonathan Williams is the Regional Director of Public Affairs and Director of State and Local Government Affairs for Intel Corporation. Based in Folsom, California, Williams is responsible for Intel's Public Affairs portfolio in California, Texas and Massachusetts. This includes state and local government affairs, site-based media, community and education philanthropy and employee volunteer programs. Williams is also responsible for developing, implementing and managing public policy strategies for local, regional and state government officials and develops Intel's legislative priorities and positions on key public policy issues.

Williams joined Intel's Washington DC office in 1997, where he managed Intel's Political Action Committee (IPAC) and lobbied trade policy before Congress. Subsequent to that role, Williams moved to Oregon in 1999 to join Intel Online Services, where he worked in a variety of roles, including international and domestic business development and marketing until 2002. Williams later served on the corporate marketing team responsible for the launch of the Centrino® mobile technology processor prior to becoming Intel's Government Affairs Manager in Oregon, a position he held from December, 2002 until August 2009.

Originally from the Boston, Massachusetts area, Williams is a graduate of Tulane University in New Orleans, Louisiana and American University in Washington DC, where he received a joint MBA and MA in International Affairs. Williams has served on the board of a number of business associations in both California and Oregon. He currently serves on the executive committee of the California Manufacturers and Technology Association (CMTA) and on the board of the Civil Justice Association of California (CJAC). While in Oregon, Williams served as the Chair of the Pacific Northwest International Trade Association, on the Executive Committee of the Hillsboro Chamber of Commerce, on the board of the Portland Business Alliance, on the board of the Westside Economic Alliance and on the board of the Portland State University Institute for Metropolitan Studies. From 2006-2007, Williams was also a member of the Oregon Governor's International Trade Commission.

Appendix D
Profile on the Intel Corporation

Intel was founded in 1968 by two ex-Fairchild Semiconductor employees, Gordon E. Moore and Robert N. Noyce. Among the company's many technology advancements is the development of the 8080 microprocessor in 1974, which soon became an industry standard. It featured 4,500 transistors and had about 10 times the performance of earlier processors. In addition to being designed into a range of new products, the 8080 was used in one of the first personal computers, which was available through a hobbyists kit for $439 in 1975. In 1987, the CERGA Observatory named a Caussols main belt asteroid "8080 Intel" in honor of the invention. Intel's main Santa Clara phone number is (408) 765-8080, likely reflecting the company's recognition as to the significance of one of its earliest products. More background on the early days of Intel can be found at: http://www.intel.com/content/www/us/en/history/historic-timeline.html

Intel incorporated in 1989 and is currently engaged in the design and manufacture of digital technology platforms. The company sells these platforms to original equipment manufacturers, original design manufacturers, and industrial and communications equipment manufacturers in the computing and communications industries.

The Company's platforms are used to deliver a range of computing experiences in notebooks (including Ultrabook devices), 2 in 1 systems, desktops, servers, tablets, smartphones, and the Internet of Things (including wearables, transportation systems and retail devices). Intel also develops and sells software and services focused on security and technology integration.

The Company's operating segments include the PC Client Group; the Data Center Group; the Internet of Things Group; the Mobile and Communications Group; the Software and Services Group, which includes **McAfee;** and the All Other segment. The All Other segment includes Non-Volatile Memory Solutions Group, the Netbook Group, and the New Devices Group.

Intel Leadership

Brian M. Krzanich is the Chief Executive Officer and Director of Intel Corporation. Krzanich joined Intel in 1982 serving in a variety of positions including Executive Vice President and Chief Operating Officer in 2012, responsible for Intel's global manufacturing, supply chain, human resources, and information technology operations. According to Reuters, Krzanich's basic compensation package was $11.1 million. He also serves as the chairman of the board of directors of the Semiconductor Industry Association.

Renee J. James is President of Intel Corporation. During her 25 plus year career at Intel, James has led the company's strategic expansion into providing proprietary and open source software and services for applications in enterprise, security and cloud-based computing. James is Vice Chair of the President's National Security Telecommunications Advisory Committee. She also serves as a non-executive director on the Vodafone Group Plc Board of Directors. She served 7 years as independent director on the VMware Inc. Board of Directors.

Link to other Intel executive biographies: http://newsroom.intel.com/community/intel_newsroom/bios

Intel Board of Directors

- Andy D. Bryant, Chairman of the Board

- Ambassador Charlene Barshefsky, Senior International Partner
- Wilmer Cutler Pickering Hale and Dorr LLP, A multinational law firm
- Aneel Bhusri, Co-Founder and Chief Executive Officer Workday, Inc. An enterprise cloud applications provider for human resources and finance
- Susan L. Decker, Principal at Deck3 Ventures LLC, a consulting and advisory firm
- John J. Donahoe, President and Chief Executive Officer at eBay Inc.,
- Reed E. Hundt, Principal, REH Advisors LLC, A strategic advice firm
- James D. Plummer, John M. Fluke Professor of Electrical Engineering, Former Dean School of Engineering at Stanford University
- David S. Pottruck, Chairman and Chief Executive Officer at Red Eagle Ventures, Inc. , A private equity firm
- Frank D. Yeary, Principal at Darwin Capital Advisors LLC, A private investment and advisory firm
- David B. Yoffie, the Max and Doris Starr Professor of International Business Administration at the Harvard Business School

Other Company Background

Social Responsibility: Currently, Intel's processors use no conflict minerals and their goal in 2016 is to expand the use of conflict-free minerals to all their products. Background – Conflict minerals are found in everything from laptops, phones, and tablets to light bulbs, eyeglasses, and blow dryers. In many cases, these minerals are mined in parts of the world plagued by war and civil unrest. Most significantly, these minerals are found in remote areas of the Democratic Republic of the Congo and have been directly linked with corruption, violence, and killing, as warlords, rebels, and militia groups vie to control the mines and force others into slave labor. This illegal trade has enabled these groups to buy weapons, continue the civil conflict, and terrorize the region.

Government Incentives: Communities in Oregon offer Intel 30 years of property tax breaks in order to secure up to $100 billion in investments. (August 2014) Though Intel's headquarters is located in the Silicon Valley, its Oregon facility in Washington County is the company's largest and "most technologically advanced." Intel's economic impact on Oregon is extensive employing over 17,500 workers with a $2.8 billion payroll including benefits.

According to Pew Charitable Trusts, Intel has received six different government incentive packages over $75 million. New Mexico, as an example, provided $2 billion to Intel.

September 2015 Issues in the News:

- European Union regulators announce they will make a determination whether Intel's $16.7 billion bid of the purchase of Altera Corp would violate European Union antitrust regulations by October 14 – *Reuters, September 10, 2015*.
- A U.S. District Judge approved a $415 million settlement to a 2011 anti-poaching lawsuit brought against Apple, Google, Intel, and Adobe for conspiring to hold down salaries. The case is based largely on emails in which Apple co-founder Steve Jobs, former Google Chief Executive Officer Eric Schmidt and some of their rivals detailed plans to avoid poaching each other's prized engineers, thus limiting job mobility and ultimately keeping salaries down - *Reuters, September 2, 2015*.

- Intel Corporation announces that it will invest $5 million over the next five years to deepen its engineering pipeline partnership with the Georgia Institute of Technology. The initiative is designed to inspire and retain women and underrepresented minorities to start and complete computer science and engineering degrees – AJC.com, *August 7, 2015*.

Appendix E
Biographies of Apple Advisors at Study Tour Meeting

Marlene l. Garcia, Apple Education, Strategic Initiatives Group

Marlene Garcia has 25 years of experience working on higher education policy issues for a variety of institutions, including the California Legislature, the California State University, and the California Community Colleges.

She joined Apple Education as a member of the Strategic Initiatives Group (SIG) in the fall 2012. Marlene is the first SIG hired to focus entirely on driving new opportunities for Apple to work with higher education institutions to leverage technology to offer a world-class education that prepares students for success in the 21st Century. She has expertise in both higher education policy and fiscal issues and understands how to develop solution-oriented strategies.

Previous to her work at Apple, Marlene was appointed by Governor Arnold Schwarzenegger to serve as Vice Chancellor for Government Relations at the California Community College Chancellor's Office. She was the chief legislative advocate working with the state legislature, Congress, state and federal Administrations. She also served as Deputy Director for State Policy for the California State University System where she advised the Chancellor and his cabinet on key state policy issues affecting the CSU system.

Marlene also worked many years in the Legislature as a senior advisor to then Assembly Speaker Willie L. Brown, Jr., as a consultant to the Senate Education Committee and a consultant with the Senate Office of Research. Marlene was a key driving force behind several successful pieces of landmark legislation, including the Cal Grant Entitlement Program in 2001, the College Transfer Guarantee Program in 2010 and the California Community College Student Success Reform Initiative in 2012.

Marlene received distinguished recognition for her higher education policy work. She was featured in the Chronicle of Higher Education in 2005 as one of eleven Higher Education's New Generation of Thinkers. She was also served as a Fellow with the National Center for Public Policy and Higher Education in 2004.

Ms. Garcia earned a Bachelor's degree in Spanish Literature from UCLA and a Master's Degree in Public Policy from Claremont Graduate School. Ms. Garcia lives in Sacramento with her husband Phil Garcia. They have three sons.

Jason Lundgaard, Manager, State & Local Government Affairs

Jason Lundgaard manages Apple's State and Local Government Affairs efforts for the western United States. Covering all the states west of the Mississippi River, Jason works extensively on privacy, energy efficiency, retail, and technology issues in addition to local issues related to corporate expansion.

Jason joined Apple from eBay Inc in May 2010. At eBay, he was responsible for coordinating global policy positions amongst his Government Affairs colleagues around the globe. He joined eBay working on the State Government Affairs team before moving to Europe to manage eBay's Government Affairs efforts in multiple countries.

Prior to eBay, Jason worked for the Silicon Valley Leadership Group on housing and transportation issues. Jason also worked as a staffer for Graham Allen, a Labour Member of Parliament representing Nottingham (UK).Jason received his Bachelors degree from Loyola Marymount in 2002 and his Masters of Business Administration from San Jose State in 2010.

Appendix F
Profile on Apple Inc.

Apple Computer Inc, was established in 1976 by Steve Jobs, Steve Wozniak, and Ronald Wayne. Twelve days into the partnership, Wayne sold his 10% position for $500. Initially, Wozniak built each computer by hand at a suggested retail price of $666.66. The first deal was with Byte Shop in Mountain View for 50 computers.

Apple was incorporated in 1977 and currently designs, manufactures, and markets mobile communication and media devices, personal computers, portable digital music players. The company also sells a variety of related software, services, networking solutions and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, iPod, Apple TV, a portfolio of consumer and professional software applications, the iOS and OS X operating systems, iCloud, and a variety of accessory, service and support packages. *[Reuters Profile]*

Extended history of Apple including video (August 19, 2015)
http://www.macworld.co.uk/feature/apple/history-of-apple-steve-jobs-mac-computer-1984-3606104/

Leadership

Tim Cook was named CEO of Apple in 2011 and also holds a seat on its Board of Directors. According to Reuters, his basic compensation was $9.2 million for the prior fiscal year. He served as Apple's Chief Operating Officer from 2005 to 2011. He joined apple in 1998 and since that time has been responsible for the company's worldwide sales and operations, including end-to-end management of Apple's supply chain, sales activities, and service and support in all markets and countries. Cook also headed Apple's Macintosh division and played a key role in the continued development of strategic reseller and supplier relationships. Prior to joining Apple, Cook served as vice president of Corporate Materials for Compaq, chief operating officer of the Reseller Division at Intelligent Electronics, and spent 12 years at IBM under a number of positions including director of North American Fulfillment. Cook is 54 years old.

Link to other Apple Executive bios: http://www.apple.com/pr/bios/

Apple Board of Directors

- Arthur D. Levinson, (Chair) Former Chairman and CEO Genentech
- Tim Cook, CEO Apple
- Albert Gore Jr., Former Vice President of the United States
- Robert A. Iger, Chairman and CEO The Walt Disney Company
- Andrea Jung, President and CEO Grameen America, Inc.
- Ronald D. Sugar, Former Chairman and CEO Northrop Grumman
- Susan L. Wagner, Co-founder and Director BlackRock

Other Company Background

Apple and Climate Change: Apple currently runs all of its U.S. operations on 100% renewable energy. Most recently, Apple was one of 13 large U.S. companies that helped to launch the White House's "American Business Act on Climate Pledge" by committing to reduce carbon emissions and invest in clean

energy. According to the White House, the pledge also voices support for a strong outcome in the Paris climate negotiations this December 2015.

In meeting the new carbon emission pledge, Apple is reported to be bringing an estimated 280 megawatts of clean power generation online by the end of 2016 through investments in Arizona, California, Nevada, North Carolina, Oregon and Sichuan Province, China. Since 2011, Apple has reduced carbon emissions from its global corporate facilities, data centers and retail stores by 48%. Further reading on corporate responsibility including supply chain environmental and labor issues can be found at: http://www.apple.com/supplier-responsibility/

September Issues in the News

- A U.S. District Judge approved a $415 million settlement to a 2011 anti-poaching lawsuit brought against Apple, Google, Intel, and Adobe for conspiring to hold down salaries. The case is based largely on emails in which Apple co-founder Steve Jobs, former Google Chief Executive Officer Eric Schmidt and some of their rivals detailed plans to avoid poaching each other's prized engineers, thus limiting job mobility and ultimately keeping salaries down. – *Reuters, September 2, 2015*.

- **Cybersecurity:** Apple Inc. announced it was removing malicious iPhone and iPad programs from its Apple Stores. This was the first identified large-scale attack on the firm. According to Reuters, the company disclosed the effort after several cyber security firms reported finding a malicious program dubbed **XcodeGhost,** which was embedded in hundreds of legitimate apps.

  Prior to this attack, only five malicious apps had ever been found in the App Store, according to cyber security firm Palo Alto Networks Inc. The hackers embedded the malicious code in the apps by convincing developers of legitimate software to use a tainted, counterfeit version of Apple's software for creating iOS and Mac apps, which is known as Xcode, Apple said. - *September 21, 2015*

- **New Products**: Apple announced on September 9, 2015 the release of new generation of cell phones, television, and tablet, including:
  - **Cell Phone**: The iPhone 6s and iPhone 6s Plus include 3D Touch, a new feature that uses force to access features and interact with content. The new product line also features Retina® HD displays made from the strongest glass on any smartphone and 7000 series aluminum, the same alloy used in the aerospace industry. Finally, the new product line introduces "a transformative new approach to photography" called Live Photos, bringing still images to life by capturing a moment in motion. These advancements are powered by the Apple-designed A9 chip, which is Apple's third-generation 64-bit chip with 70% faster CPU and 90% faster GPU performance than the A8.

  - **Television**: The new Apple TV is designed to bring "a revolutionary experience to the living room." Apps on Apple TV let you choose what to watch and when you watch it. The Apple TV remote features Siri®, which will allow the viewer to use voice control to search for TV shows and movies.

  - **Tablet**: The iPad Pro features a 12.9-inch Retina display with 5.6 million pixels, the most ever in an iOS device. The tablet is powered by a new 64-bit A9X chip, which Apple believes will rival most portable PCs. The new larger iPad Pro is designed to be thin, light, and have an all-day battery life.

- Apple targets shipping date for **electric car for 2019**. – *New York Post, September 24, 2015*.

Appendix G
Biographies of Participants at TiE LaunchPad and Tech Futures Group Study Tour Meeting

Gerry Barañano, Principal, RevLaunch Company LLC and Director/Entrepreneur in Residence, Tech Futures Group

As principal of The RevLaunch Company, and Entrepreneur in Residence for the Tech Futures Group, Gerry Barañano consults for high technology companies and the R&D divisions of the world's largest corporations in the area of business development, technology commercialization strategy, product positioning, and go-to-market strategies. Clients include FujiFilm, Fujitsu, NTT-AT, and smaller companies offering embedded software products, open-source software, and hardware products.

Gerry was Vice President of Marketing and Sales for companies ranging in size from Fortune 100 to startups and was instrumental in positioning and closing the sale of Xros, a telecommunications startup for $2.2 billion. Prior, Gerry was Vice President of Sales at Nortel Networks. Earlier in this career, Gerry held positions in a variety of disciplines including sales, finance, and operations in companies that included AT&T, U.S. WEST, and Univision.

Gerry brings a comprehensive understanding of all the elements necessary to start a successful technology company from his experience as founder and CEO of several startup companies. He has hands-on experience in launching products and services in the telecommunications, computer manufacturing, software, hardware, and green/clean tech industries. Gerry earned a B.A. from Yale University and an MBA from the Stanford Graduate School of Business. [*Compiled from Tech Futures Group Website; LinkedIn Profile*]

Fadel Darwish, Cofounder of Apakau, Inc. and Tech Futures Group Client

Fadel Darwish is the cofounder of Apakau Inc., a member TiE LaunchPad portfolio. With over nine years of experience managing multi-million dollar engineering projects and business ventures, Fadel brings a robust background in business development, business modeling, and go-to market strategies to the table for Apakau, Inc. Apakau Data Delivery Network provides 10x lower latency for enterprise web and mobile applications, all through a simple change to DNS settings. Apakau complements existing services like CDN and ADC to cache dynamic data and APIs in the same city of a user, without the need to modify the application.

Winner of the TiE50 award in 2015, Fadel received his degree in Mechanical Engineering from the American University of Beirut and studied Enterprise Development & Investment Promotion Program for Innovators, with the United Nations Industrial Development Organization. [*Compiled from TiE LaunchPad Website; LinkedIn Profile]*

Venktesh Shukla, General Partner at Monta Vista Capital and President of TiE LaunchPad

Venktesh Shukla is president of the largest chapter of TiE LaunchPad (60 chapters worldwide) and responsible for its strategy and operations. The aim of this group is to provide a platform for interaction of its charter members and to promote wealth creation through entrepreneurship. Its annual flagship conference, TiEcon, was rated by Worth magazine among the top 10 conferences worldwide for ideas and entrepreneurship along with World Economic Forum, TED, and Demo. TiE organizes programs that inspire, educate, fund and mentor aspiring entrepreneurs.

A General Partner of Monta Vista Capital, a micro VC fund, Shukla has had a long and varied career that includes sales, marketing, and general management, and a proven track record of leading companies through rapid growth. He has worked as senior marketing executive in large technology companies in the Silicon Valley and involved with numerous start ups as an executive, investor, board member, or adviser. He was an officer in the Civil Service of India before coming to US in 1983. [*LinkedIn Profile]*

Dan Tuchler, Vice President of Products at Exofense and Tech Futures Group Client

Dan Tuchler is the Vice President of Products for Exofense Inc., a firm currently applying for membership with the Tech Futures Group. He is a cofounder for the Stealth Container Startup, prides himself on a strong sense of what's coming and and ability to sniff out important trends - to create leading products. Educated at Boston University, Dan is passionate about meeting customers to understand their requirements, believers in impactful messaging and an ability to connect with press and analysts, towards a strong position for a company and its products. "Creating a winning strategy means both envisioning the right products and knowing how to tell the story - I like to do both."

Dan's areas of expertise include: networking and network security, virtualization expertise, product / portfolio management, business plan creation, messaging and positioning, delivering the company and product story.

Most recently he has taken a great interest in emerging trends towards Internet of Things, Robotics, music production, and the Maker movement. [*LinkedIn Profile*]

Hon Wong, Entrepreneur in Residence with the Tech Futures Group and Charter Member of TiE LaunchPad

Hon Wong presently serves on the Board of Directors for both Apakau Inc. and Scansite and is an Entrepreneur in Residence with the Tech Futures Group. Hon is also a Charter Member of the Silicon Valley TiE LaunchPad. He has led multiple start-ups as a founder, executive, angel investor, and active board member of technology start-ups, through their entire life-cycle from conception and growth to exits through IPOs and M&As.

Hon has extensive hands-on experience with all aspects of the start-up process. He has worked with and guided many management teams through the challenges faced by all technology start-ups. These include fund raising, team building, competitive positioning, market and partnership development, pivoting, and go to market strategy formation and execution. Hon has worked with enterprise software, SaaS, cloud infrastructure and manufacturing service companies.

Prior, Hon was EVP of marketing and business development at Coradiant. He also co-founded Ecosystems, NetIQ, Digital Market, Centrify, and sat on the board of many companies, including Relevant Technologies (Flextronics). Early in his career, he was a product manager at Intel and 3Com.

Hon received dual B.Sc. in electrical and industrial engineering from Northwestern University, and earned his MBA from the Wharton School of the University of Pennsylvania. [*Tech Futures Group*]

Appendix H
Profile on the Tech Futures Group and TiE LaunchPad

The Tech Futures Group

The Tech Futures Group offers a business development advisory service to technology companies within the Northern California/Bay Area region. Their free-of-charge assistance is provided by a group of experienced advisors who help start-ups and small, established technology companies "grow, thrive and reach the next level."

Established in 2012, the Tech Futures Group is a program of the Small Business Development Centers and is funded primarily the U.S. Small Business Administration and the State of California. This funding allows the Tech Futures Groups to retain a core set of experienced advisors who specialize in a range of tech business development issues including, but not limited to, pitching to venture capitalist and angel investors, intellectual property issues, financial modeling, and Small Business Innovation Research Grant and the Small Business Technology Transfer Grant (SBIR/STTR grants) applications.

Due to budgetary constraints, the number of businesses that may be served at any one time is limited. The selection is based on a written application and personal interview. Once selected, clients are assigned an Entrepreneur-in-Residence (EIR), who works with the client to address their priority needs. Typical services may include the evaluation of the client's work team, commercialization plans, manufacturing issues, and the introduction of clients to a Tech Futures Group Specialty Advisor. The EIR and the Specialty Advisor invest 20 to 100 hours on each client.

The success of the program is measured by client outcomes relative to capital infusion, jobs created, and revenue. Since its inception through the end of 2014, The Tech Futures Group has helped companies raise $49 million in capital and create over 270 jobs.

TiE LaunchPad

TiE is a global non-profit that began in the Silicon Valley in 1992 with a mission to nurture entrepreneurship. The Silicon Valley Chapter of TiE is the largest of the 60 chapters and currently has over 300 Charter Members. Charter membership is by invitation only and is based on an individual's professional accomplishments and commitment to mentoring others. TiE Charter Members include venture capitalists, industry executives, angel investors, as well as serial entrepreneurs.

TiE LaunchPad is a business accelerator operated by TiE for enterprise-focused startups. Up to 8 client companies are accepted each cycle. Those selected participate in a five-month program that is individually designed to help the startup validate their business and prepare for their first round of funding. Participants have an opportunity to select a mentor from the pool of Charter Members, who works with the client company on a weekly basis. This one-to-one relationship may be augmented by access to other Charter Members and TiE resources.

Charter Member mentors come from various tech industry segments including Mobile, Cloud, Networking, Big Data and bring in functional expertise in the areas of fundraising, sales, marketing, management, engineering and finance.

Each client company receives $50,000 in convertible notes and TiE LaunchPad investors may also request investing up to 10% in the companies next funding round. The fee for joining the accelerator is 4% of the client company's common equity. Optional desk space can also be made available at TiE in Santa Clara for $375/month per desk. To solidify the alignment of interest between the Charter Member mentor and the client company, 0.25% of the 4% equity position goes to the mentor, plus many mentors choose to become investors in the company. Further, part of the TiE funds return on the remaining 3.75% is retained in the fund to help support future client companies.

Apakau and Tech Futures Group

With the explosion of mobile and the Internet of Things (IoT) devices, the market has shifted to a mobile- and IoT-centric application program interface world where usage spikes and high latency mean lost opportunity and revenues. Apakau is reported to deliver mobile applications 10 times faster and be able to prevent distributed denial-of-service (DDoS) and other attacks to enhance mobile revenues, retention and reputation.

Apakau is a Tech Futures Group client and Hon Wong is their primary EIR. The Tech Futures Group introduced the company to potential investors and assisted Apakau in preparing for investor presentations. Apakau raised an additional $100,000 in venture funds in late August 2015 bringing its total cash raise to $750,000. In addition, Apakau received an in-kind contribution of $120,000 from IBM. Apakau will be using these funds to complete its product and for initial commercialization.

- **Estimated number of jobs**: Apakau expects to hire a minimum of 5 additional people to help with these efforts.
- **Owner investment**: Apakau founders have invested over $100,000 in their own funds.

[*Information for this summary was compiled from a GO-Biz case study*]

Exofense Inc. and Tech Futures Group

Exofense was established in February 2015 and is a client of the Tech Futures Group. Hon Wong is the EIR assigned to Exofense and is also a Charter Member of TiE LaunchPad.

According to information provided by the Tech Futures Group, the company was formed to address the costly and increasingly frequent occurrence of security breaches. Their unique "decoy" approach is intended to provide an active defense of threats from the inside and malware which have already passed the normal security devices.

Examples of assistance Exofense is seeking from the Tech Futures Group includes help with its overall business strategy, enhancing its funding strategy, help with product placement and marketing, and the SBIR/STTR grant applications.

End Notes
Fast Facts of the California Tech Industry

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