

Mobile & Wireless Newsletter March 2016

Monthly Commentary:

Mobile World Congress Recap

MWC Recap... Mobile Is Everything

In its 10-year anniversary in Barcelona, Mobile World Congress (MWC) once again broke records. The show attracted almost 101,000 attendees, up over 7% from 94,000 attendees in 2015, and featured over 2,200 exhibiting companies. We believe the ongoing growth can be attributed to the ubiquitous role that mobile is taking in our everyday lives. MWC continues its strong run since the shows we attended in the late 90s in Cannes that were attended by fewer than 10,000 people. During the show, the four partners from Ridgecrest attended over 80 meetings and met with countless additional companies at networking events throughout the week. These companies ranged across sizes and offerings, providing us updated insights into industry trends. Some of the key long term trends continue, including device adoption, faster networks and the trends from an operator controlled environment to a broader ecosystem of partnering from carriers to device manufacturers to traditional Internet players to many others. Some of the notable areas of focus included 5G, IoT, security/identity, connecting the unconnected, SDN/NFV, RCS revival, Wi-Fi, mobile applications and AdTech, and VR, among others.



5G

While only 13% of global connections (excluding M2M) are 4G-LTE according to GSMA Intelligence, and only expected to be >30% by 2020, the enthusiasm around 5G continues to grow. We first highlighted 5G in our 2014 MWC highlights to be faster with lower latency and more user centric. 5G is expected to offer up to 50x capacity, which will be key to address the massive growth in mobile traffic. According to Cisco's VNI report, mobile data traffic is expected to increase at a 57% CAGR from 2014-2019 to 24.3 exabytes per month. This proves our long held adage "build it and they will come." Applications such as VR will be key beneficiaries of this increased throughput. 5G is also expected to deliver more than a 5x improvement in latency over 4G, which will be key in IoT applications. While some carriers such as Verizon are talking about 2017 deployments, the consensus is that 5G will start to really emerge in 2020.

IoT Continues to Thrive

The Internet of Things is receiving a tremendous amount of hype and is turning into another overused and broad reaching phrase. We have seen IoT emerge from the MRM and M2M roots over a decade ago, which are now a subset of IoT. When we are asked about IoT, our question back is, what part of IoT? We see both horizontal and vertical solutions gaining traction. On the horizontal front, there has been a lot of excitement on the heels of Cisco's \$1.4 billion acquisition of Jasper Wireless, which we believe was at a 10x+ revenue multiple. We met with several other interesting companies on the horizontal front, which provide global connectivity, sync, location, security, and other key components for any connected strategy. On the vertical front, we continue to see momentum in the connected logistics market such as fleet and asset tracking. We are also seeing considerable attention in the areas of the connected vehicle, the connected building/home, healthcare and other markets. Essentially, given most things will be connected to the Internet, it is our opinion that IoT is turning into a broad market and that opportunities will abound but depend upon the maturity of the vertical. In almost every one of our meetings with acquirers in the market, IoT was identified as a key focus.

Security – Increased Focus on Identity

Security has always been a key area of focus at MWC, and in any tech conference. Two years ago it was about MDM and securing enterprise devices, and last year was cyber security. While both remain important, we heard an increasingly level of interest in identity, both securing identity and related data but also using better and quicker identity recognition. Highlighting this is the GSMA Mobile Connect initiative, which allows users to create and manage a universal digital identity via a single log-in by using their phone number along with a PIN. Mobile Connect is supported by 34 network operators in 21 countries representing ~2 billion subscribers with more launches on the way.

Facebook and Google: Connecting the World

Both Facebook and Google continue to exert their influence on the mobile world. With their ad-centric business models, both of these companies and others have and will continue to shake up traditional network operator business models. Facebook in particular, as highlighted in Mark Zuckerberg's keynote, continued to push the Internet.org initiative to connect the ~4 billion people that do not have access to the web, which is in contrast to the focus of most major players on faster speeds to those who already have access. In our opinion, this is both an admirable but also self-serving initiative as connecting the world will bring in billions of eyeballs for advertising supported business models.

Focusing on SDN/NFV

We continue to see operators focus on Software Defined Networks (SDN) and Network Functions Virtualization (NFV) in order to take advantage of cloud technologies and create more flexible, cost effective, and nimble networks for the future. As networks speeds increase and end users consume more content and applications, operators need to create more flexible and scalable networks. Of note, end users expect more without increasing costs, while OTT and other providers of applications want to increase the use of their services. This is in contrast to the ongoing burden increased use of data is putting on networks. In order to address this, MNOs need to adopt technologies such as SDN/NFV. SDN/NFV allows network services to be deployed on shared standard hardware, allowing the cost-effective and optimized deployment of services. Based upon our discussions with key network and control layer solutions, SDN/NFV is top of mind with network operators in 2016.

Google and Telcos Revive RCS

We have continued to highlight the threat of OTT messaging providers to traditional SMS. WhatsApp has now surpassed 1 billion subscribers while other messaging services such as iMessage, Skype, Viber, TextMe and others continue to see strong usage. We continue to argue that operators possess key assets such as identity, location, presence, etc. that would enable a cooperative Telco-OTT business model. While RCS (Rich Communications Services) has not taken off as operators had hoped, RCS has found new life from Google. With its acquisition of Jibe, Google will be providing a RCS Android client that will interoperate with key RCS services such as messaging and group chat. Operators supporting the Google initiative include the likes of DT, Orange, Sprint, VimpelCom, and Vodafone. Currently, 47 operators in 34 countries have launched RCS.

Carrier Wi-Fi

An increasing number of communication service providers are adding Wi-Fi offerings or supporting Wi-Fi capabilities, whether it's cable operators expanding their Wi-Fi networks to increase customer lifetime value and reduce churn, carriers adopting VoWiFi for better in-building coverage and continuity, or carriers looking to support low-cost data access through Wi-Fi offload to meet subscriber needs. The ubiquity and indoor availability of Wi-Fi, growth in accessible public Wi-Fi, and ever rising data consumption growth are key drivers for Wi-Fi solutions. According to Cisco's VNI report, 45% of mobile traffic was transported on Wi-Fi networks in 2014 and this is expected to increase to 55% in 2020.

Mobile Applications/AdTech

As we made the long walk to Halls 8.0 and 8.1, we noticed the dress code change from business attire to business casual/casual attire. This is the influx of the App Economy, which is showing an increasing presence at MWC. While picking the right app to be the next winner (e.g. Angry Birds) can be difficult, we continue to like the providers of the picks and shovels to the App Economy. Solutions that enhance mobile engagement and providers of back end services continue to see interest. There also continues to be an increased focus on mobile advertising given the industry is under-indexed relative to traditional print and TV advertising. According to Mary Meeker's 2015 Internet Trends report, mobile sees 8% of total ad spend despite representing 24% of time spent on digital media. This compares to 18% ad spend on print versus 4% of time spent, and 41% ad spend on TV versus 37% of time spent. While we continue to see a huge opportunity for Mobile AdTech, the industry may be challenged by ad blocking tech and finding the right market fit. We continue to like in-app marketing and other technologies that hit the end user at the relevant moment. We also remain intrigued by those that provide app analytics that can help marketers and application providers better engage with end users.

Virtual/Augmented Reality (VR/AR)

With increased network speeds, the interest in VR/AR continues to increase and the holodeck vision of Star Trek may becoming closer to reality. This was highlighted by the long lines for the VR exhibits at Samsung and other stands, and it felt like VR was a key part of various exhibits. At this point, we still see VR as an emerging opportunity that will take several years to mature along with the necessary network speeds. However, given the investments from the likes of Facebook, Google, Sony, HTC, Apple and others, and the significantly greater accessibility to VR with readily available and affordable hardware – smartphones are powerful enough for simple VR experiences with a low-priced (\$5-100) companion headset – we expect this market to become robust over time.

2/25	10,944 steps	* >	2/25	5.09 miles	* >
2/24	14,709 steps	* >	2/24	6.86 miles	* >
2/23	18,329 steps	* >	2/23	8.52 miles	* >
2/22	46,020 steps	* >	2/22	21.89 miles	* >
2/21	25,387 steps	* >	2/21	12.3 miles	* >

Other Tidbits from MWC

- Wearables Take a Back Seat After hype the last two years, we saw a lot less activity on this front. While the fitness side has been dominated by the likes of Fitbit, Jawbone, and lower end manufacturers from China, we are seeing some interesting use cases in healthcare and other verticals.
- **Device Launches** During the show, we saw several device announcements including the Samsung Galaxy S7, LG G5, Huawei MateBook, Alcatel Idol 4, Sony Xperia X, ZTE Blade V7, and others. However, missing once again was the direct presence of Apple though the company's influence continues to be felt throughout the mobile industry.
- Mobile Finance Mobile finance continues to be a key opportunity, especially in developing markets where the majority of populations do not have bank accounts. According to GSMA Intelligence, mobile money accounts grew 31% last year to 411 million. The mobile finance opportunity was also highlighted via announcements by PayPal, Visa, Stripe and others. Carrier-billing is also an area getting renewed attention driven by support from the major app stores and declining carrier fees which is expanding the market opportunity.
- A Lot of Walking One of our partners calculated that they walked ~115K steps and ~55 miles, according to their fitbit activity tracker, in the process of attending over 40 meetings, several networking events, and getting lost in the winding streets of Barcelona.

Ridgecrest's M&A Take on MWC

Overall, the tone at MWC was positive from an industry perspective though there was some trepidation on some of the recent economic turmoil. From an industry perspective, we see several takeaways including (1) IoT and connected everything, (2) 5G along with SDN/NFV investments, (3) the continued rise of OTT, (4) identity – the new security focus, and (5) opportunities in the mobile app/AdTech economy. However, from an economic standpoint, we are seeing pressure on private company financing with a rough consensus feel that financings will take longer, fewer companies will be financed, and valuations will be depressed 30% or more. From an M&A perspective, we believe the market will remain robust. While valuations in M&A will also likely see pressure, large companies remain flush with cash and may see depressed valuation expectations as an opportunity to go on a "blue light special" shopping spree. Furthermore, we continue to see many of the smaller companies coming up with exciting new technologies that the larger vendors will need and prefer to buy versus build in order to accelerate growth.

Recent M&A and Financing Activity Public Company Analysis

Summary Market Data – February 29, 2016

	Price Per	formance		Valuation	
Segment	February	2016 YTD	EV/LTM Rev	EV/LTM EBITDA	LTM P/E
S&P 500	-0.4%	-5.5%	2.0x	10.5x	22.9x
NASDAQ	-1.2%	-9.0%	2.5x	12.3x	29.8x
Communications Solutions Providers					
Mid/Large Cap	4.1%	-1.0%	2.2x	10.6x	21.2x
Small Cap (<\$1.0 billion mcap)	36.2%	22.1%	1.1x	9.7x	18.7x
Vireless Equipment and Devices					
Mid/Large Cap	1.0%	-7.0%	1.6x	8.5x	18.9x
Small Cap (<\$1.0 billion mcap)	-2.6%	-3.8%	0.6x	13.1x	17.2x
ocation Related Technologies	10.6%	1.4%	1.8x	12.9x	27.4x
Mobile Content	7.6%	-7.7%	1.6x	27.2x	nm
Mobile Resource Management/M2M	10.9%	0.2%	1.5x	12.7x	36.9x

Price Performance market cap weighted. Valuation multiples for major market indices market cap weighted. Valuation for wireless companies based on median for each sector. See pages 16-20 for details.

Mobile & Wireless Transaction Summary

			Monthly				2016	
	February	Vs. Prior 3	Month Avg	Vs. LT	M Avg	2016 YTD	Vs. Pri	or Year
Transaction Type	Amount	Amount	% Change	Amount	% Change	Amount	Amount	% Change
Announced M&A								
Number of Transactions	52	59.7	(12.8%)	59.0	(11.9%)	116	119	(2.5%)
Disclosed Value	\$695	\$3,090	(77.5%)	\$3,361	(79.3%)	\$1,935	\$4,742	(59.2%)
Private Financings								
Number of Transactions	69	82.7	(16.5%)	77.5	(11.0%)	168	128	31.3%
Disclosed Value	\$1,396	\$1,560	(10.5%)	\$1,497	(6.8%)	\$3,246	\$2,725	19.1%
Initial Public Offerings								
Number of Transactions	-	1.0	(100.0%)	1.1	(100%)	1	0	nm
Disclosed Value	-	\$120	(100.0%)	\$133	(100%)	\$27	\$0	nm
in millions)								

Selected Key Transactions

Mergers and Acquisitions

Date				Enterprise	
Announced	Acquirer	Target	Business Description	Value	EV/Rev
2/24/16	Microsoft Corporation	Xamarin	Enterprise mobile app development SaaS, add-on tools	\$400.0	10.7x
2/1/16	CalAmp	LoJack Corporation	On-board GPS vehicle tracking, recovery and telematic systems	\$134.0	1.0x
2/12/16	ASICS	FitnessKeeper	Runners' fitness tracking, planning and goals monitoring app	\$85.0	NA
2/29/16	Moista	NativeX	Mobile and games app marketing and advertising SaaS	\$25.0	NA
2/18/16	Micronet Enertec Tech	Novatel (assets)	Vehicle-mounted telematics hardware business of Novatel	\$24.0	1.1x

Private Financings

Date				Amount	Raised
Announced	Target	Business Description	Lead Investors	Raised	To Date
2/4/16	Tatwah Smartech	Produces radio frequency identification (RFID) hardware products	NA	\$662.0	NA
2/12/16	Uber Technologies	Smartphone app that connects drivers with people who need a ride	LetterOne Holdings	\$200.0	\$7,302.4
2/17/16	Qihoo 360 Software	Provides a mobile security software application	360 Capital; Shanghai Ziyou Mgmt	\$100.0	\$180.0
2/10/16	Jana Mobile	Android app enabling users to download and try apps for free	Publicis; Spark Cap.; Verizon	\$57.0	\$92.9

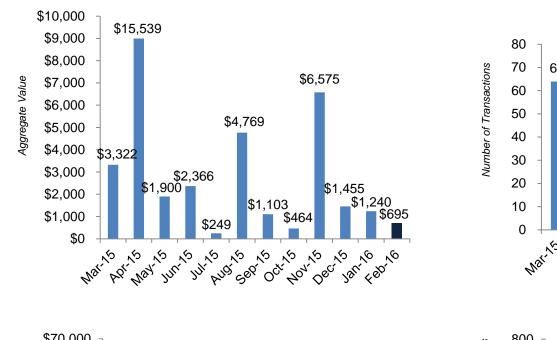
Public Offerings

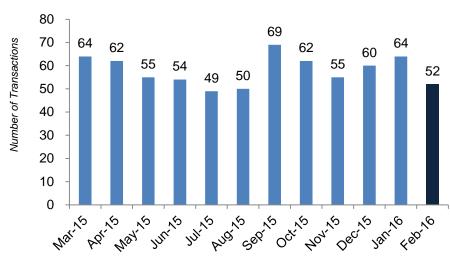
Offer			Amount	Price Change	
Date	Issuer	Business Description	Raised	Issue To 2/29	Туре

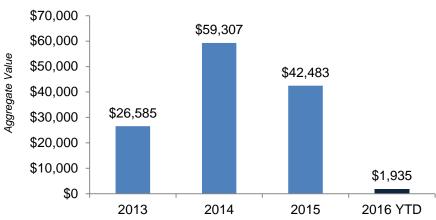
(No mobile/wireless IPOs or follow-ons in February)

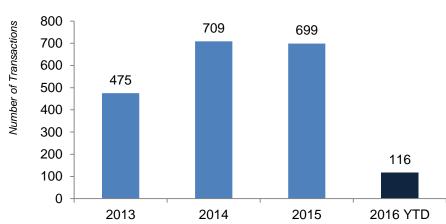
Source: CapitalIQ, The 451 Group and Ridgecrest Capital. (\$ in millions)

Mobile & Wireless M&A Transaction Summary







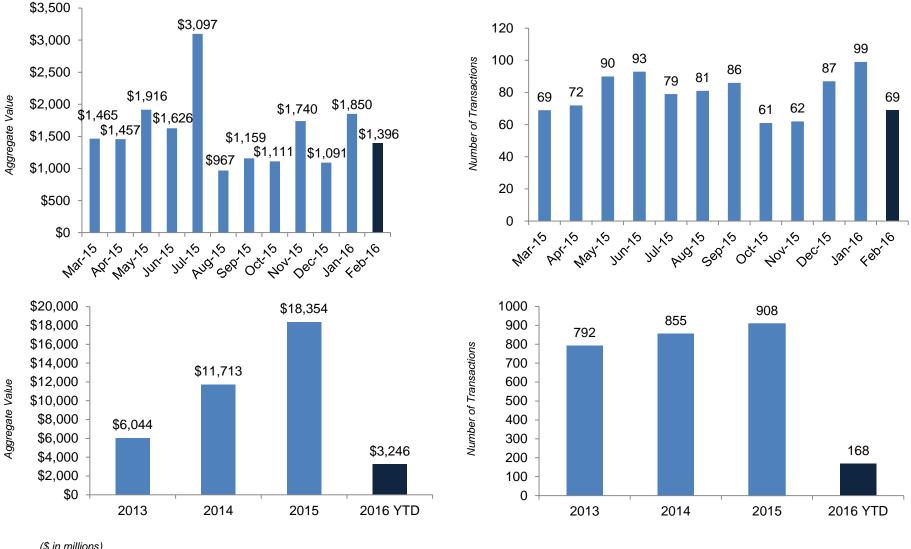


(\$ in millions)

Notes: Figures based on announced transactions. 2013 includes Microsoft's \$5 billion acquisition of Nokia's Devices and Services Business. 2014 includes Facebook's \$19 billion acquisition of WhatsApp. 2015 includes Nokia's \$14.7 billion acquisition of Alcatel-Lucent.

Source: CapitallQ, The 451 Group and Ridgecrest Capital

Mobile & Wireless Private Financings Transaction Summary



(\$ in millions)
Source: CapitallQ, The 451 Group and Ridgecrest Capital
Note: 2013 excludes Microsoft's \$2.0 billion investment in Nokia, November 2013 excludes \$1.0 billion investment in Blackberry. December 2014 excludes investments in Uber (\$1.8B), Xiaomi (\$1.1B), and Hangzhou Kuaizhi (\$600M). June 2015 excludes investments in Hangzhou Kuaizhi (\$2B), AirBNB funding (\$1.5B), and Koubei (\$966M).

Merger & Acquisition Transactions

Date				Enterprise	
Announced	Acquirer	Target	Business Description	Value	EV/Rev
2/29/16	ADTZ Group	Glow Digital Media	Provides social media and mobile application advertising management SaaS	NA	NA
2/29/16	GoPro	Vemory	Mobile app that auto creates videos on iOS devices from a user's camera roll	NA	NA
2/29/16	Moista	NativeX	Mobile and games app marketing and advertising SaaS and related ad network	\$25.0	NA
2/25/16	AppSw arm	Turtles Huh?	Provides a mobile game called "Turtles Huh? Learn to Fly"	NA	NA
2/25/16	Mobile Action	AppMind.Co	iOS mobile app store optimization SaaS for developers	NA	NA
2/24/16	Microsoft Corporation	Xamarin	Enterprise mobile app development SaaS, add-on tools and extensions	\$400.0	10.7x
2/24/16	One Sixty	Service2Media	Development, maintenance, and monetization of mobile solutions for enterprises	NA	NA
2/24/16	Smart Software Testing Sol.	pCloudy.com	Mobile app softw are testing & QA SaaS for softw are developers & businesses	NA	NA
2/23/16	Ackroo	OnTab	Payment processing softw are enabling merchants to accept mobile payments	NA	NA
2/23/16	Deem	Whisk	Ride reservations, car dispatching, fleet management and route mapping SaaS	NA	NA
2/23/16	RallyBound	Chorus	Develops and operates a peer-to-peer fundraising platform for mobile users	NA	NA
2/22/16	Advantix Solutions Group	BlueKloud	Provides Bluetooth-enabled mobile M2M communications SaaS	NA	NA
2/22/16	Grant Olsen	Applr	App discovery web app enabling consumers to send/receive recommendations	NA	NA
2/22/16	Resco SRO	CWR Mobility (assets)	Assets which provide Microsoft Dynamics CRM-based enterprise mobile apps	NA	NA
2/18/16	Innovative Architects	Bizmosis	Provides mobile application development, with an emphasis on mobile ad apps	NA	NA
2/18/16	Micronet Enertec	Novatel Wireless (assets)	Vehicle-mounted telematics hardware business of Novatel Wireless	\$24.0	1.1x
2/17/16	Ardian	GANTNER	Provides contactless RFID and NFC-based electronic systems	NA	NA
2/17/16	CartoDB	Nutiteq	Mobile location mapping and related GIS data analytics SDK and APIs	NA	NA
2/17/16	CensorNet	SMS PASSCODE	SMS-based multi-factor authentication software for enterprises and teleco	NA	NA
2/17/16	Digital Liquor Delivery	Drink Fly	Mobile application that helps consumers order alcohol from stores nearby	NA	NA
2/17/16	Hotel Quickly	Tonight	Develops a mobile application to book hotel rooms	NA	NA
2/17/16	Thirstie	Drink Fly	On-demand ordering and delivery of beer, wine and spirits in 60 minutes or less	NA	NA
2/17/16	Vidooly Media Tech	iCouchApp	Mobile application development SaaS to build OTT applications	NA	NA
2/17/16	Vizzuality	Nutiteq OU	Mobile mapping solutions for mobile service providers, operators, & developers	NA	NA
2/16/16	ClickTale	FlightRecorder	SaaS based user interaction screen recording, crash reporting and analytics	NA	NA
2/16/16	Housejoy	Orobind Fitness Tech	Mobile app enabling users in Bangalore, India to find and book personal trainers	NA	NA
2/16/16	Hulu	Vhoto (assets)	Assets providing a video-based Graphics Interchange Format creation mobile	NA	NA
2/16/16	SAP	MeLLmo	Provides enterprise mobile data analytics, data visualization and reporting SaaS	NA	NA
2/15/16	Votem	Konnech Mobile Voting	Assets providing online and mobile voter registration solutions	NA	NA
2/12/16	ASICS	FitnessKeeper	Provides a runners' fitness tracking, run planning and goals monitoring mobile	\$85.0	NA
2/12/16	Mayflow er Acme Tours	GoCar Mobility	Self-service car rental app enabling consumers to reserve, pay for rentals	\$0.1	NA
2/11/16	Britehouse Mobility	AdvanceMobility	Mobile w orkforce management solution w ith mobile Salesforce automation	NA	NA
2/11/16	Chartboost	Roostr	Mobile game developer and online video creator advertising enablement service	NA	NA
2/11/16	Garmin	DeLorme (assets)	Assets providing satellite-based GPS tracking devices & related SMS	NA	NA
2/11/16	Stirista	Point Shout	GPS-enabled qualitative customer feedback and sales mapping mobile app	NA	NA
2/11/16	Weber-Stephen Products	iDevices (iGrill product line)	Provides a connected home grilling thermometer and related iOS mobile app	NA	NA
Source: C	CapitalIQ, The 451 Group and F	Ridgecrest Capital. (\$ in millions	5)		

Merger & Acquisition Transactions

Date Announced	Acquirer	Target	Business Description	Enterprise Value	EV/Rev
2/10/16	Zynga	Zindagi Games	Free-to-play mobile and social network-based video games and development	\$15.0	NA
2/9/16	Badoo Trading	Lulu	Mobile app that enables female smartphone users to rate and evaluate males	NA	NA
2/9/16	Moseda Technologies	CareKit Health Corporation	Provides home healthcare monitoring and tracking SaaS and mobile apps	\$0.1	NA
2/8/16	Anova Technologies	AOptix Tech (assets)	Laser-based, ultra-low latency wireless transport assets of AOptix	NA	NA
2/8/16	Lycos	TriTelA	SMS-based mobile & desktop applications & social media monitoring softw are	\$11.5	NA
2/8/16	Navman Wireless Australia	Transtech Driven	Integrated mobile & compliance solutions for transport and logistics companies	NA	NA
2/8/16	Panasonic Canada	Quickservice Technologies	Restaurant POS systems, as well as drive-thru wireless ordering systems	NA	NA
2/8/16	Virtual Hold Technology	Zoove [Mblox]	Mobile marketing SaaS for telco carriers and corporate advertisers	NA	NA
2/5/16	One Medical Group	Rise Labs	Mobile service that connects people with their own personal nutrition expert	NA	NA
2/3/16	Amdocs	cVidya Networks	Provides data analytics solutions to communications and digital service	NA	NA
2/3/16	Microsoft Corporation	TouchType [dba SwiftKey]	Predictive keyboard application for iPhones, iPads and Android users	NA	NA
2/3/16	M-Mode	Next Dynasty	Designs and develops mobile games publishing platform	NA	NA
2/2/16	CIVIQ Smartscapes	smartDIGITAL	Designs, develops, and delivers interactive apps & connective advertising	NA	NA
2/2/16	Mosaik Solutions	Sensorly	App enabling smartphone users to measure wireless access & network	NA	NA
2/1/16	CalAmp	LoJack Corporation	Provides on-board GPS vehicle tracking, recovery and telematic systems	\$134.0	1.0x
2/1/16	InnoWave Technologies	Thought Creator	Offers FemtoM2M a communication device for M2M networking	NA	NA

Total Transactions	52	
Total with Disclosed Value	9	
Aggregate Disclosed Value	\$694.7	
Median	\$24.0	1.1x
Mean	\$77.2	4.3x

Source: Capitall Q, The 451 Group and Ridgecrest Capital. (\$ in millions)

Private Financings

Date				Amount
Announced	Target	Business Description	Investors	Raised
2/26/16	Kika Tech	Develops Kika Emoji keyboard, a keyboard app for mobiles	NA	\$30.6
2/25/16	AppCard	Offers a cloud-based customer loyalty platform that provides real-time reports	Founders Fund; Innovation Endeavors; PLDT Cap	\$20.0
2/25/16	CrashPad	Develops a mobile app to book last-minute stays with local hosts	Crosscut Ventures; Accomplice	\$2.5
2/25/16	Juspay Technologies	Provides mobile payment solutions	Accel Partners	\$5.8
2/25/16	WigWag	Delivers an IoT platform to manage connected devices	CSC Venture Capital	\$3.2
2/24/16	TodayTix	Develops mobile applications for iOS and Android that sell theatre tickets	Walden V.C.; SF Capital; TYLT Lab; Rubicon V.C.	\$9.0
2/24/16	UberChina	Operates a cab hailing mobile application	NA	NA
2/23/16	DUFL	Develops and markets a mobile app for business travelers for baggage packing	NA	\$5.0
2/23/16	JetSmarter	Mobile app that provides travelers with access to the private jet marketplace	NA	\$30.0
2/23/16	Magic Fuel Games	Designs and develops games for mobile platform	Seasun Games Corporation	\$2.4
2/22/16	Mobilous	Platform that allows businesses to build enterprise-ready mobile apps	OKWave	NA
2/22/16	Route 1 International	Develops mobile-based recruitment platform	Ashfords LLP	NA
2/22/16	Styledotme Fashion	Develops a mobile fashion applicaton 'Styledotme'	Indian Angel Network Services	NA
2/19/16	Endless Mobile	Develops platforms and solutions for smart phones	NA	NA
2/19/16	Onoff Telecom SAS	Develops mobile phone and social media technologies	NA	NA
2/18/16	Athentek	Tracking devices & related apps and services for indoor/outdoor marketing	MediaTek; Foxconn; Test-Rite International	\$7.0
2/18/16	Modacom	Develops and merchandises high-speed mobile data communication devices	YB Partners; Sejong Mutual Savings Bank	\$9.8
2/18/16	ModoPayments	Mobile payment platform enabling in-store purchases at store locations	NA	\$2.0
2/17/16	GetVee Technologies	Designs and develops mobile dating application	Lightspeed Venture Partners	NA
2/17/16	IMMFLY	Mobile app that provides air passengers with personalized digital entertainment	Caixa Capital Risc, SGEIC	\$2.7
2/17/16	Inagora	Develops an e-commerce platform for mobiles	Ventech China	\$10.5
2/17/16	Private	Operates a mobile based aggregator for local service providers	NA	NA
2/17/16	Qihoo 360 Software	Provides a mobile security software application	360 Capital; Shanghai Ziyou Investment Mgmt	\$100.0
2/17/16	Youappi	Ad serving technology for the acquisition & conversion of mobile customers	Altair Cap.; Global Brain Corp; Glilot Cap.	\$13.1
2/16/16	baimos technologies	Mobile softw are solution enabling the use of smartphones in identification	Bayern Kapital; High-Tech Gründerfonds Mgmt	NA
2/16/16	Kontakt Micro-Location	Beacon hardware & software enabling users to build proximity-based solutions	Credo Ventures	\$5.0
2/15/16	H2H	Develops an Online to Offline time saving mobile application	BC Holdings	NA
2/15/16	Mobify Research & Dev.	Mobile commerce and engagement platform to manage various content, apps	Acton Capital Partners	\$10.0
2/12/16	DataMi	Develops and operates network-aware mobile marketing platform	Orange Capital	\$10.0
2/12/16	Uber Technologies	Smartphone application that connects drivers with people who need a ride	LetterOne Holdings	\$200.0
2/12/16	Vivify Health	Offers a home-based remote monitoring solution	NA	\$10.0
2/11/16	OnePark SAS	Offers a mobile app to find and book parking spaces	Keolis SA	\$2.8
2/11/16	Payleven Holding	Develops and manufactures a device that attaches to smart phones or tablets	NEA; HV Holtzbrinck Vent.; Seventure Part.; ru-Net II	\$10.0
2/10/16	GOQii	Operates a coach marketplace to connect fitness enthusiasts with the coaches	Edelw eiss Financial Services	NA
2/10/16	Jana Mobile	Provides Android app enabling users to download and try applications for free	Publicis Groupe; Spark Capital; Verizon Ventures	\$57.0
2/10/16	OyBob	Develops a discovery app on Android for for local services and products	NA	NA
	•	nd Ridgecrest Capital. (\$ in millions)		

Private Financings

Date				Amount
Announced	Target	Business Description	Investors	Raised
2/10/16	Slyce	Provides imaging tech visual search software facilitating consumers purchases	NA	\$5.0
2/9/16	Hansel Software Private	Develops crash analytics for mobile applications	Tracxn Labs; Endiya Partners	NA
2/9/16	MassRoots	Operates as a mobile network for the cannabis community in the United States	NA	\$2.0
2/9/16	Toast Labs	Develops a mobile app that searches for food dishes at specific restaurants	Bendheim Enterprises; Chaotic Investments; BAM	NA
2/8/16	ComfortWay	Develops a roaming device for business/corporate and private/leisure travelers	NA	\$6.7
2/8/16	Healthsense	Provides tech solutions to assist care providers in caring for at-risk populations	Radius Ventures; .406 Vent.; Merck Global Health	\$2.5
2/8/16	NuuED	Develops a mobile educational application for learners	DuKlaw	\$3.0
2/8/16	VIMOC Technologies	Develops a wireless vehicle parking detection and management system	Morado V.P.; Flextronics Lab IX; ET Capital	NA
2/4/16	BrainCheck	Offers a mobile interactive test for cognitive health	NA	\$3.0
2/4/16	Hortau	Provides wireless and Web-based irrigation management solutions	Advantage Cap.; Desjardins Business Capital	\$10.0
2/4/16	Inner Circle Technologies	Develops traffic data tracking application for mobile phones	Thomvest Vent.; First Round; Fontinalis Part.; BMW	\$13.5
2/4/16	My Hobnob	Mobile app that provides event invite and communication services	Bessemer; Norw est; Greycroft; Aspect Ventures	\$2.3
2/4/16	Roomi	Develops a mobile application that connects people looking for a roommate	NA	\$4.0
2/4/16	Tatw ah Smartech	Produces and markets radio frequency identification (RFID) hardware products	NA	\$662.0
2/4/16	Tractive	Develops a GPS pet tracking device that helps users to locate their pets	NA	\$2.2
2/3/16	DPSG - Delegation Payment	Mobile app enabling users to pay for friends' and family's in-app purchases	Sierra Wasatch Capital	\$3.0
2/3/16	Geofeedia	Develops a location-based intelligence platform	Silversmith Capital Partners	\$17.1
2/3/16	InCrow d Sports	Offers real time content, match analysis, and gamification tools for fans, clubs	Sky plc; Albion Ventures	\$2.4
2/3/16	StayNTouch	Provides cloud-based guest engagement and hotel management solutions	Stanford Mgmt; Shiji (Hong Kong) Limited	\$9.5
2/2/16	Life In Hi-Fi	Mobile app allowing users to create, search, and follow hashtagged content	NA	\$3.0
2/2/16	Oust Labs	Mobile app that helps students prepare for academic examinations	Aarin Capital	NA
2/2/16	PayQR	Develops software that enables mobile payment via quick response (QR) code	NA	\$3.8
2/2/16	Shanghai Aniu Info Tech	Develops and operates a financial news mobile application and website	China Media Capital	\$15.2
2/2/16	SuitePad	Develops tablet-based communication solutions for hotels	IBB Beteiligungsgesellschaft; Target Partners	\$3.3
2/2/16	Widespace	Widespace AB provides mobile advertising services for brands in Europe	Kreos Capital; Industrifonden; Northzone Ventures	\$17.2
2/2/16	Wireless Seismic	Develops scalable wireless seismic recording systems	NA	\$5.1
2/1/16	com2m	M2M SaaS solution that allows users to build up their M2M scenarios	adesso AG	NA
2/1/16	Federated Wireless	Develops wireless broadband network management platforms	Allied Minds; Woodford Investment Management	\$22.0
2/1/16	Kaymera Technologies	Provides mobile defense system solutions for various mobile security threats	Go Capital Ventures	\$10.0
2/1/16	Linough	Manufactures a smart lock that enables users to open and close doors remotely	Mitsubishi Estate; Mitsui Sumitomo Insurance V.C.	NA
2/1/16	MaaS Finland	Mobility-as-a-service company, serves transport services providers	NA	NA

Source: CapitalIQ, The 451 Group and Ridgecrest Capital. (\$ in millions)

Private Financings

Date				Amount
Announced	Target	Business Description	Investors	Raised
2/1/16	Shanghai Kangkanghui Tec	Develops healthcare mobile applications	GSR Ventures Mgmt; DT Capital Partners	\$10.0
2/1/16	Storyo	Storyo develops mobile application that converts video from phones	Portugal Capital Ventures - Sociedade de Capital	NA

Total Transactions
Total with Disclosed Value
Aggregate Disclosed Value
Median
Mean
\$28.5

Source: Capitall Q, The 451 Group and Ridgecrest Capital. (\$ in millions)

In millions except per share data	02/29/16	52 w	eek	% of 52	Market \	/alue (\$)	E,	V / Reven	nue		EV / EBITE	DA		P/E	
Company	Price (\$)	High (\$)	Low (\$)	Week High	Equity	Enterprise	LTM	CY15	CY16E	LTM	CY15	CY16E	LTM	CY15	CY16E
Communications Solution Mid/Large Cap	s Provider	s													
Amdocs Limited	\$56.76	\$61.46	\$50.06	92.4%	\$8,534	\$7,349	2.0x	2.0x	1.9x	10.6x	9.7x	20.5x	21.2x	na	15.5x
Nuance Communications, Inc.	19.51	21.83	13.59	89.4%	5,940	7,493	3.9x	3.8x	3.7x	25.2x	12.0x	10.5x	nm	14.4x	13.0x
NeuStar, Inc.	24.87	32.66	20.00	76.1%	1,337	2,344	2.2x	2.2x	1.9x	5.9x	4.9x	4.1x	7.9x	5.2x	4.8x
Synchronoss Technologies, Inc.	28.01	52.45	20.33	53.4%	1,244	1,335	2.3x	2.3x	2.0x	8.5x	6.7x	6.1x	31.4x	12.8x	11.9x
Opera Software ASA	7.75	8.97	4.67	86.4%	1,126	1,189	1.9x	na	na	12.0x	na	na	nm	na	na
			Median Mean	86.4% 79.5%	\$1,337 \$3,636	\$2,344 \$3,942	2.2x 2.5x	2.3x 2.3x	2.0x 2.4x	10.6x 12.4x	8.2x 6.7x	8.3x 10.3x	21.2x 20.2x	12.8x 10.8x	12.4x 11.3x
Small Cap (<\$1bn mcap)															
CSG Systems International Inc.	\$37.96	\$39.43	\$28.69	96.3%	\$1,236	\$1,279	1.7x	1.7x	1.7x	8.8x	7.3x	7.1x	20.3x	na	14.4x
BroadSoft, Inc.	36.89	40.90	26.99	90.2%	1,064	1,003	3.6x	3.7x	3.0x	33.1x	17.2x	13.4x	nm	na	18.2x
NQ Mobile Inc.	3.77	6.54	2.72	57.6%	357	413	1.1x	1.1x	1.8x	nm	na	na	nm	31.4x	8.2x
Boingo Wireless, Inc.	7.17	10.42	5.40	68.8%	268	275	2.0x	2.0x	1.7x	14.3x	9.8x	6.9x	nm	na	nn
Redknee Solutions Inc.	1.48	3.86	0.98	38.2%	161	174	0.8x	0.8x	0.8x	8.9x	5.7x	5.9x	nm	35.9x	11.4x
Allot Communications Ltd.	4.52	9.61	4.24	47.0%	152	28	0.3x	0.3x	0.3x	6.1x	5.9x	3.6x	nm	na	34.8x
RealNetworks Inc.	3.90	7.24	3.04	53.9%	143	44	0.4x	0.4x	0.3x	nm	nm	nm	nm	nm	nn
Evolving Systems Inc.	5.50	10.25	4.95	53.7%	64	65	2.5x	2.5x	2.0x	10.4x	11.8x	8.0x	17.2x	24.6x	15.3x
iPass Inc.	0.97	1.32	0.81	73.5%	63	42	0.7x	0.7x	0.6x	nm	nm	nm	nm	nm	nn
Voltari Corporation	4.26	21.75	0.71	19.6%	38	76	6.2x	na	na	nm	na	na	nm	na	na
Smith Micro Software Inc.	0.67	1.63	0.45	41.0%	31	18	0.5x	0.5x	0.4x	nm	nm	7.3x	nm	nm	na
			Median	53.9%	\$152	\$76	1.1x	0.9x	1.3x	9.7x	8.5x	7.1x	18.7x	31.4x	14.8x
			Mean	58.2%	\$325	\$311	1.8x	0.9x	1.3x	13.6x	8.5x	7.4x	18.7x	30.6x	17.0x



In millions except per share data	02/29/16	52 w	eek	% of 52	Market \	Value (\$)	E,	V / Rever	nue		EV / EBITDA			P/E	
Company	Price (\$)	High (\$)	Low (\$)	Week High	Equity	Enterprise	LTM	CY15	CY16E	LTM	CY15	CY16E	LTM	CY15	CY16E
Vireless Equipment & Devid	ces														
Apple Inc.	\$96.69	\$134.54	\$92.00	71.9%	\$536,106	\$560,712	2.4x	2.4x	2.4x	6.8x	6.8x	7.4x	10.3x	na	10.5x
Nokia Corporation	6.09	7.59	5.50	80.2%	34,805	26,268	1.9x	1.9x	0.9x	11.0x	11.8x	7.7x	18.0x	17.0x	17.1>
Telefonaktiebolaget LM Ericsson (p	9.22	13.98	8.23	66.0%	30,031	25,256	0.9x	0.9x	0.9x	5.8x	6.2x	5.7x	18.9x	13.3x	12.5x
Alcatel-Lucent	3.40	4.97	2.88	68.5%	11,864	11,413	0.7x	0.8x	0.7x	7.3x	6.9x	5.6x	32.7x	na	12.8x
Harris Corporation	78.02	89.78	69.84	86.9%	9,726	14,242	2.2x	2.3x	1.9x	9.8x	9.7x	9.4x	nm	14.7x	13.4
BlackBerry Limited	7.80	10.52	5.90	74.2%	4,097	3,116	1.3x	1.4x	1.5x	6.8x	6.6x	8.5x	nm	nm	nr
Ubiquiti Networks, Inc.	32.67	37.10	25.50	88.1%	2,710	2,339	3.9x	3.9x	3.5x	11.6x	11.5x	10.3x	19.4x	16.4x	14.4
Sierra Wireless Inc.	13.23	36.33	10.03	36.4%	428	334	0.5x	0.5x	0.5x	10.0x	7.1x	7.8x	nm	16.2x	18.7>
			Median Mean	73.0% 71.5%	\$10,795 \$78,721	\$12,827 \$80,460	1.6x 1.7x	1.6x 1.8x	1.2x 1.5x	8.5x 8.6x	7.0x 8.3x	7.8x 7.8x	18.9x 19.9x	16.2x 15.5x	13.4x 14.2x
Small Cap (<\$1bn mcap)															
Comtech Telecommunications	\$20.55	\$36.19	\$17.27	56.8%	\$332	\$181	0.6x	0.6x	0.5x	4.3x	4.3x	3.0x	17.2x	na	11.3
PCTEL, Inc.	5.60	8.94	4.37	62.6%	99	67	0.6x	0.6x	0.6x	21.9x	13.1x	7.3x	nm	48.7x	18.7
Novatel Wireless Inc.	1.64	6.89	0.84	23.8%	86	158	0.7x	0.7x	0.6x	nm	nm	13.8x	nm	nm	nr
Aviat Networks, Inc.	0.65	1.53	0.52	42.3%	41	11	0.0x	na	na	nm	4.1x	na	nm	na	n
DragonWave Inc.	2.08	20.69	1.48	10.0%	6	27	0.2x	0.2x	0.3x	nm	nm	nm	nm	na	nr
			Median	42.3%	\$86	\$67	0.6x	0.6x	0.6x	13.1x	4.3x	7.3x	17.2x	48.7x	15.0
			Mean	39.1%	\$113	\$89	0.4x	0.5x	0.5x	13.1x	4.3x	8.0x	17.2x	48.7x	15.0



In millions except per share data	02/29/16	52 w	eek	_ % of 52 Week High	Market \	√alue (\$)	EV / Revenue			EV / EBITDA			P/E		
Company	Price (\$)	High (\$)	Low (\$)		Equity	Enterprise	LTM	CY15	CY16E	LTM	CY15	CY16E	LTM	CY15	CY16E
ocation Related Technol	ogies														
Garmin Ltd.	\$40.51	\$50.79	\$30.93	79.8%	\$7,686	\$6,637	2.4x	2.4x	2.4x	10.6x	11.2x	11.2x	16.9x	18.0x	17.9
Trimble Navigation Limited	23.26	26.58	15.90	87.5%	5,836	6,451	2.8x	2.8x	2.7x	17.1x	14.2x	13.0x	49.5x	21.1x	18.5
TomTom NV	9.01	13.51	7.61	66.7%	2,076	1,970	1.8x	na	na	17.2x	na	na	nm	na	n
Ituran Location & Control Ltd.	17.01	25.74	16.17	66.1%	357	332	1.9x	1.9x	1.7x	6.3x	6.4x	6.3x	14.3x	14.8x	12.5
Telenav, Inc.	5.96	9.83	5.07	60.6%	247	136	0.8x	0.8x	0.8x	nm	nm	nm	nm	nm	nr
LoJack Corporation	6.43	6.49	2.16	99.1%	122	108	0.8x	0.8x	0.8x	12.9x	na	na	37.8x	nm	18.9
			Median	73.2%	\$1,216	\$1,151	1.8x	1.9x	1.7x	12.9x	11.2x	11.2x	27.4x	18.0x	18.2
			Mean	76.6%	\$2,720	\$2,606	1.7x	1.9x	1.7x	12.8x	11.2x	10.2x	29.6x	17.9x	17.0
Mobile Content															
Pandora Media, Inc.	\$10.22	\$22.60	\$7.10	45.2%	\$2,327	\$2,191	1.9x	1.9x	1.6x	nm	40.7x	nm	nm	nm	nı
GameLoft S.E.	7.38	7.76	3.37	95.1%	627	589	2.2x	na	na	nm	na	na	nm	na	r
Glu Mobile, Inc.	3.71	7.03	1.98	52.8%	487	307	1.2x	1.3x	1.2x	49.2x	27.2x	nm	nm	nm	n
KongZhong Corporation	7.41	8.58	4.88	86.4%	349	270	1.4x	na	na	5.2x	na	na	nm	na	r
			Median	69.6%	\$557	\$448	1.6x	1.6x	1.4x	27.2x	33.9x	nm	nm	nm	n
			Mean	69.6%	\$948	\$839	1.0x 1.7x	1.6x	1.4x 1.4x	27.2x 27.2x	27.2x	nm	nm	nm	n



In millions except per share data	02/29/16	52 w	eek	% of 52	Market \	/alue (\$)	EV / Revenue			EV / EBITDA			P/E		
Company	Price (\$)	High (\$)	Low (\$)	Week High	Equity	Enterprise	LTM	CY15	CY16E	LTM	CY15	CY16E	LTM	CY15	CY16E
MRM/M2M															
QUALCOMM Incorporated	\$50.79	\$74.09	\$42.24	68.6%	\$75,925	\$70,339	2.9x	2.9x	3.1x	8.8x	7.9x	7.9x	16.9x	12.1x	11.7x
Garmin Ltd.	40.51	50.79	30.93	79.8%	7,686	6,637	2.4x	2.4x	2.4x	10.6x	11.2x	11.2x	16.9x	18.0x	17.9x
Trimble Navigation Limited	23.26	26.58	15.90	87.5%	5,836	6,451	2.8x	2.8x	2.7x	17.1x	14.2x	13.0x	49.5x	21.1x	18.5x
TomTom NV	9.01	13.51	7.61	66.7%	2,076	1,970	1.8x	na	na	17.2x	na	na	nm	na	na
Fleetmatics Group PLC	36.11	62.86	35.90	57.4%	1,397	1,248	4.4x	4.4x	3.6x	18.3x	13.6x	10.8x	36.5x	24.8x	20.5x
CalAmp Corp.	18.28	21.82	14.01	83.8%	668	583	2.1x	2.1x	1.9x	14.3x	11.8x	10.5x	37.3x	na	14.7x
Sierra Wireless Inc.	13.23	36.33	10.03	36.4%	428	334	0.5x	0.5x	0.5x	10.0x	7.1x	7.8x	nm	16.2x	18.7x
Ituran Location & Control Ltd.	17.01	25.74	16.17	66.1%	357	332	1.9x	1.9x	1.7x	6.3x	6.4x	6.3x	14.3x	14.8x	12.5x
Digi International Inc.	8.49	13.53	7.70	62.8%	219	117	0.5x	0.5x	0.5x	7.3x	7.2x	6.2x	25.0x	na	26.9x
LoJack Corporation	6.43	6.49	2.16	99.1%	122	108	0.8x	0.8x	0.8x	12.9x	na	na	37.8x	nm	18.9x
Numerex Corp.	5.87	12.31	5.17	47.7%	113	121	1.3x	1.3x	1.4x	19.4x	13.3x	12.5x	nm	nm	40.5x
ID Systems Inc.	4.34	7.25	3.01	59.9%	58	54	1.3x	1.3x	1.2x	nm	nm	nm	nm	nm	nm
Webtech Wireless Inc.	1.77	2.00	0.98	88.9%	36	17	0.7x	na	na	12.5x	na	na	37.6x	na	na
RF Industries, Ltd.	3.90	4.61	3.81	84.6%	34	26	0.8x	0.8x	na	12.7x	6.4x	na	39.0x	15.1x	na
			Median	67.6%	\$392	\$333	1.5x	1.6x	1.7x	12.7x	9.6x	10.5x	36.9x	16.2x	18.6x
			Mean	70.6%	\$6,782	\$6,310	1.7x	1.8x	1.8x	12.9x	9.9x	9.6x	31.1x	17.4x	20.1x



Ridgecrest Capital Partners

Selected Recent Transactions











































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