CORUM IP Valuation Techniques







Agenda

- Introduction
- II. Market Perspective
- III. Intellectual Property in Context
- IV. IP Valuation Methods

World's Leading Seller of Technology Companies



- 30+ Years, 300+ transactions
- Technology Focus
- Sell-Side Only
- Comprehensive database
- Global presence
- Senior tech executives
- Optimal Outcome
- All campaigns global
- 60% close across borders

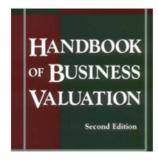
World Tech M&A Leaders...



Research

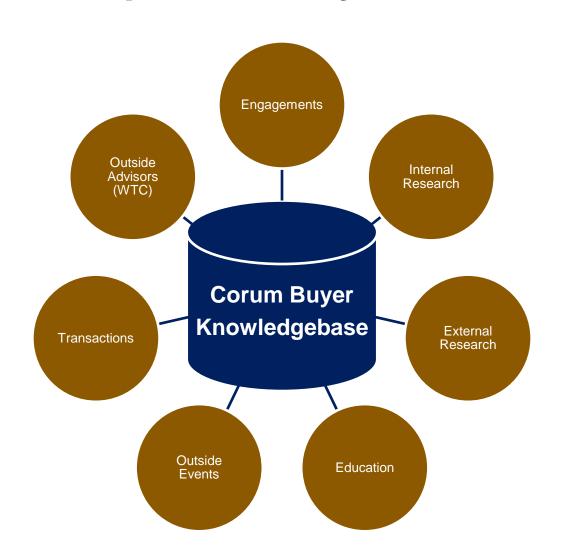
Education





Valuation

Unsurpassed Buyer Access





8 Stages for an **Optimal Outcome**



The Process Works! Recent Corum Transactions



























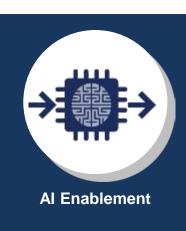






Market Perspective

Corum Top Ten Technology Trends 2017





loT Software



Visual Intelligence Systems



Digital Currency Flow



Data Science Monetization



Online Exchanges



Omni-channel Sales



Connected Health



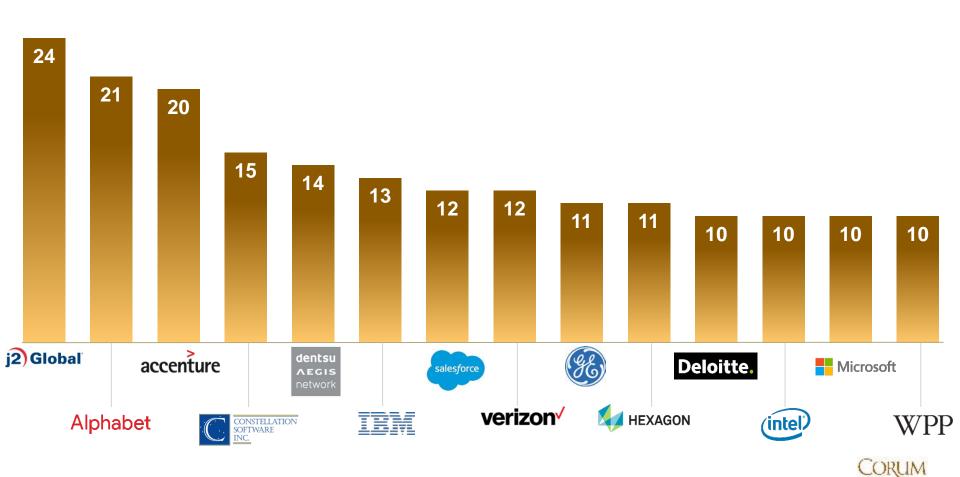
Focused IT Services



Data Security

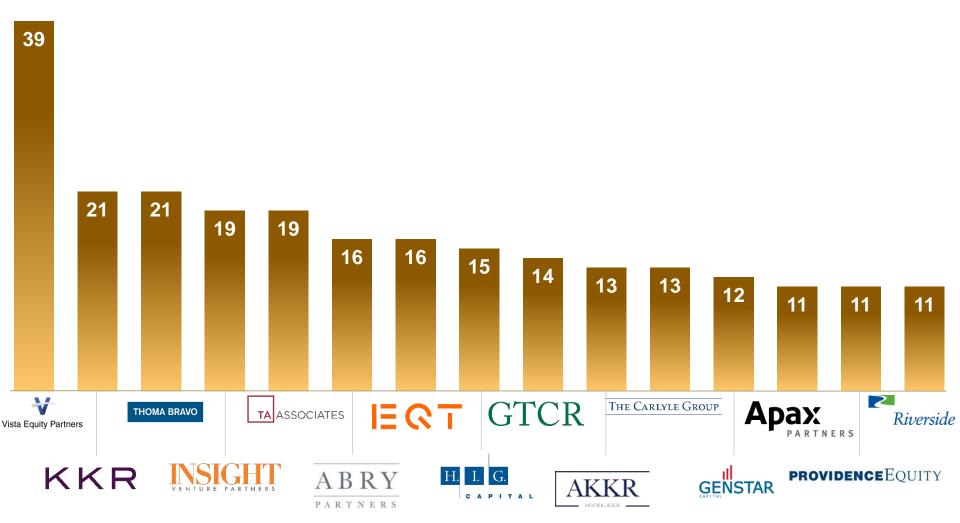


Top Strategic Acquirers – 2016





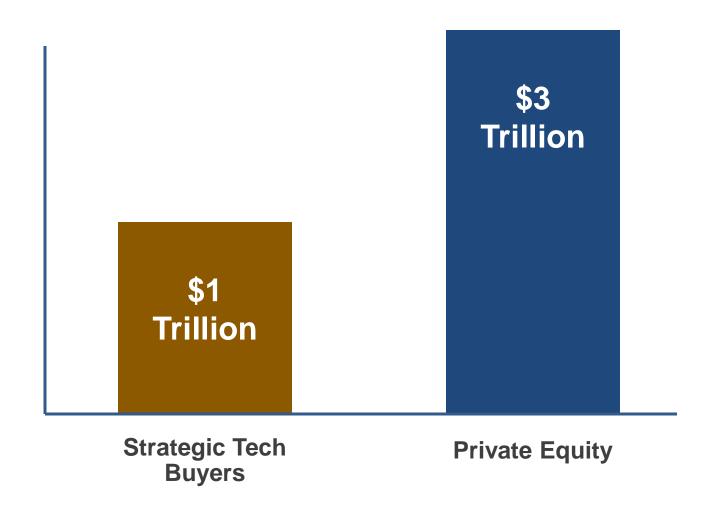
Top Private Equity Acquirers – 2016





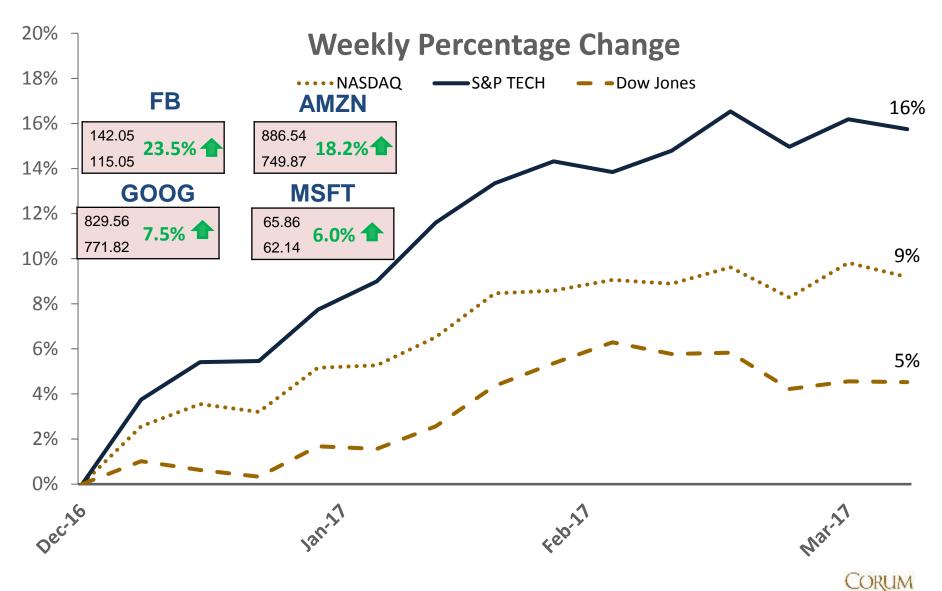


Cash Available for Acquisitions



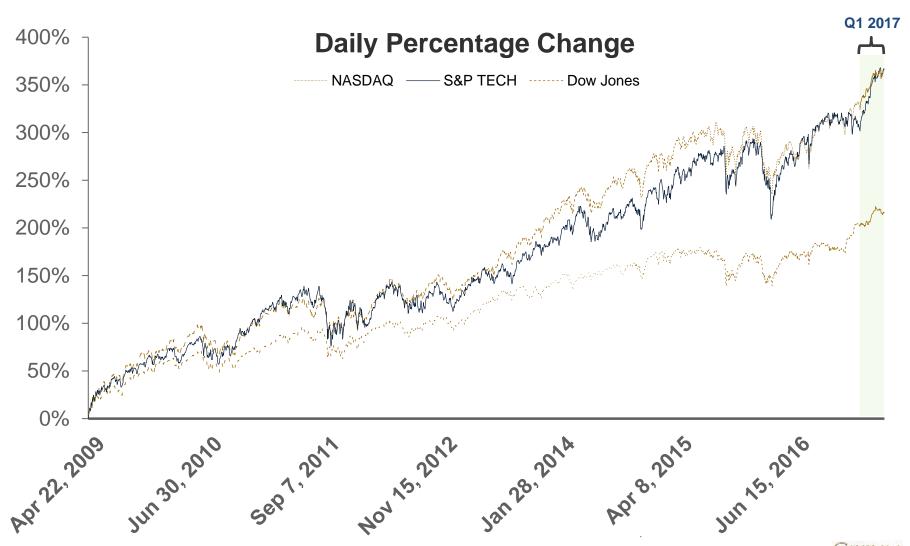


Public Markets





The Bull Market, 2009-Present





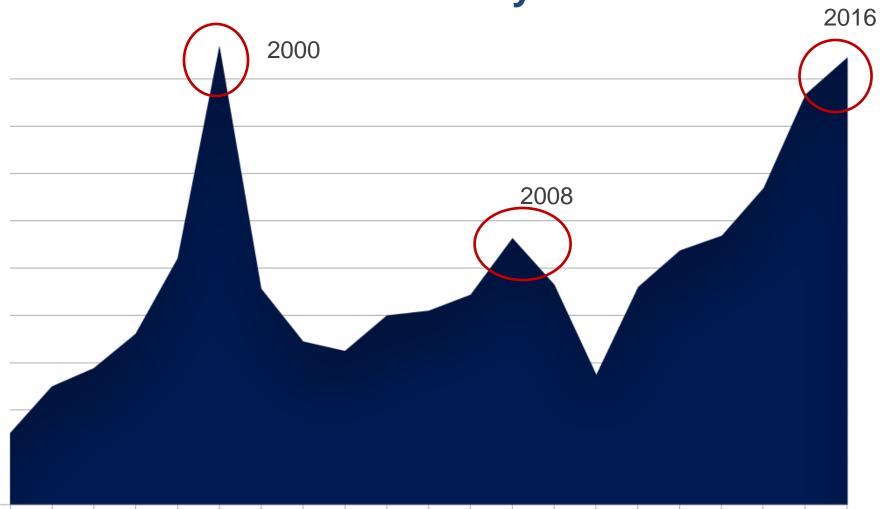
Corum Index



of Target



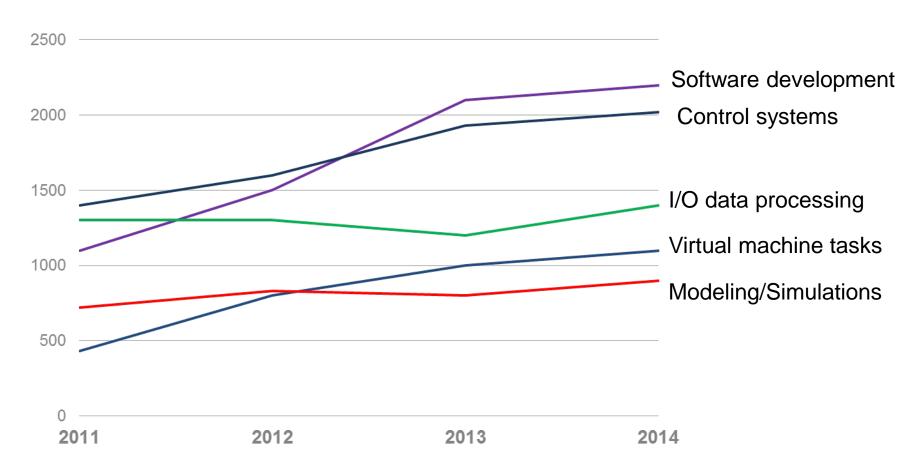
M&A Follows Cycles



Intellectual Property in Context



Patents granted for selected software-based technology classes



Source: U.S. Patent and Trademark Office, Patent Technology Monitoring Team (2015). Patenting in Technology Classes, Breakout by Geographic Origin (State and Country).

Retrieved from http\//www.uspto.gov/web/offices/ac/ido/oeip/taf/other_sites.htm



Patents in the Spotlight

"IP is an increasingly valuable asset class in business..."

Kevin Rhodes, VP & Chief Intellectual Property Counsel for 3M.

Google launches PAX Licensing Network – Google seeking Patent Peace

- "Google, Samsung, LG, Foxconn, HTC, others: 230,000 combined patents for cross licensing" - April 3, 2017













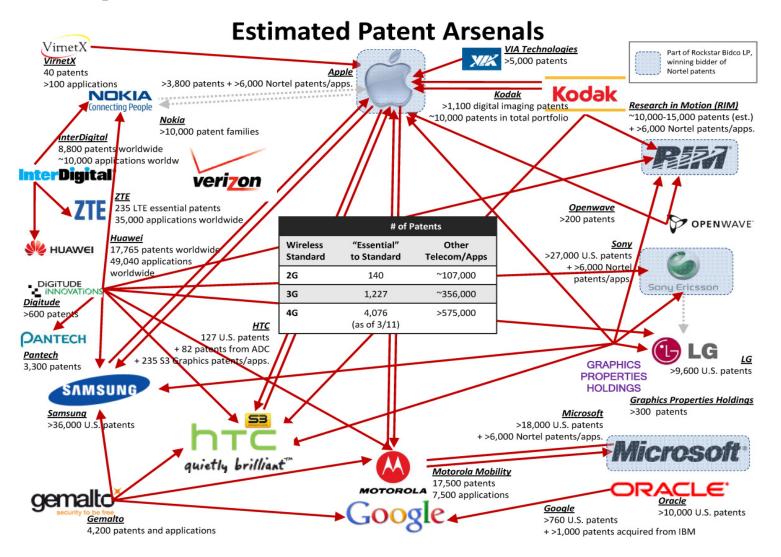


Seminal patent key to GM-Sidecar deal?

- Filed in 2000 by Sidecar founder; granted in 2002
- Sample claim: A computer-implemented method for providing transportation services comprising:
 - receiving a transportation request from a passenger;
 - tracking said passenger's position following said request using positional detection logic; and
 - transmitting positional data identifying said passenger's position to a pickup vehicle.
- Potential Uber-killer (or Alice roadkill?)



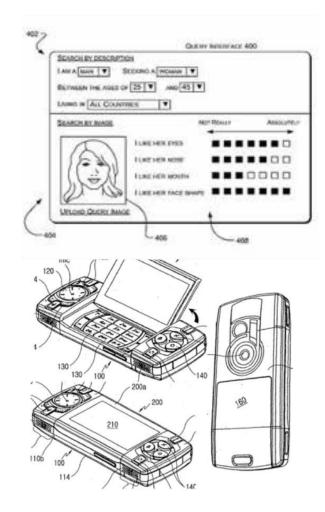
Just part of the wireless-related arms race...





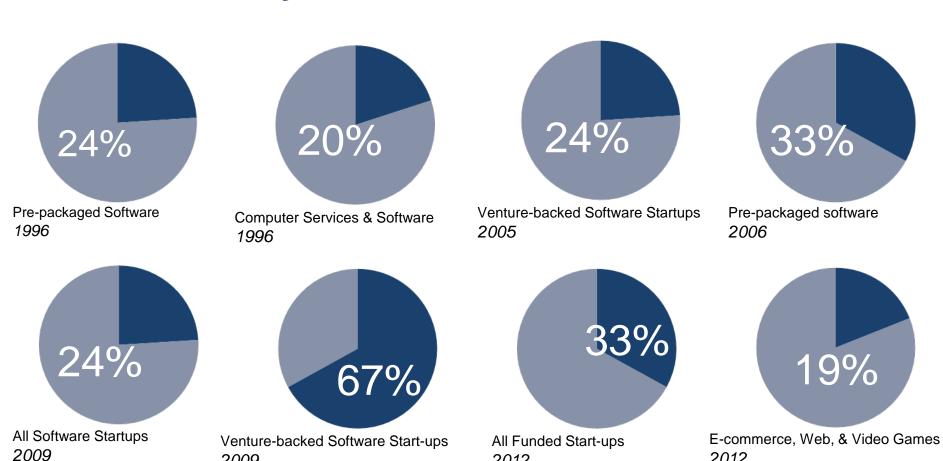
Patents as an Asset in M&A

- Patents now a business asset
- Major drivers in M&A activity
- Affecting all phases:
 - Valuation
 - Negotiation
 - Due Diligence
- International increasingly important
- Costs





Early Years: Limited numbers



Sources: James Bessen (Boston University), Stuart Graham et al, NBER Patent Data Project, Crunchbase

2009

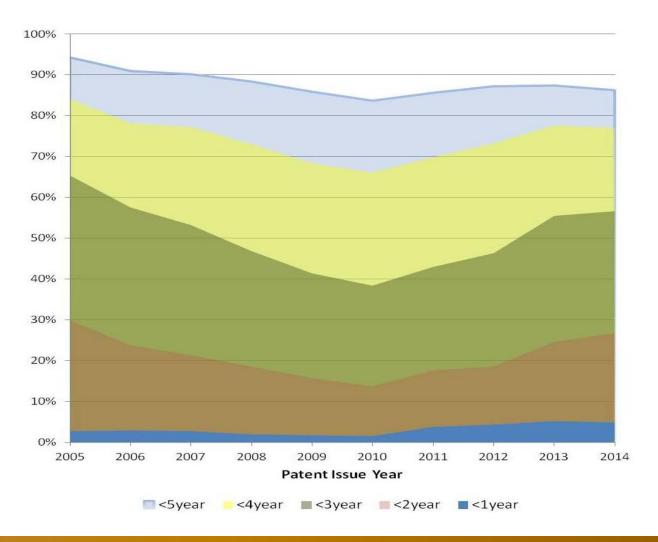


2012

2012



Patent Application Pendency: Years in Prosecution from Filing to Issuance

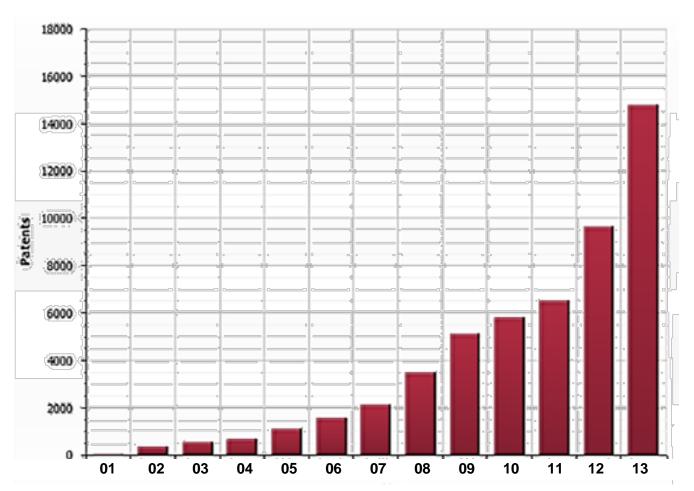


Source: Patentlyo





Software patents on the increase*



*US Patent apps claiming "Computer-readable medium"

Source: TAEUS Corporation





Proactive Protection of Intellectual Property

- Owning a patentable technology
 - Provisional application serves to define trade secrets
 - Trademark registration to protect commercial products
- Owning a patent application in process
 - 3 levels of claims strategies
 - Broadest possible claim "tree"
 - Mid-level claims "tree"
 - "Picture" claim
 - File an RCE/CIP
- Owning an issued patent
 - Follow on with improvements, other embodiments, additional uses etc. to build a patent portfolio

IP Valuation Methods

What Buyers Value



MARKET

Growth Potential

Market Position

Competitiveness

Barriers to Entry

Stickiness



ORGANIZATION

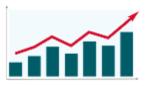
Technology/IP

Team

Sales Channel

Customer Base

Strategic Partnerships



FINANCIAL

Recurring Revenue

Earnings/Profitability

Growth Rates

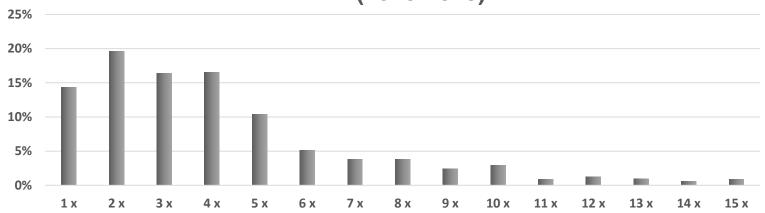
Balance Sheet

INTANGIBLE ASSETS

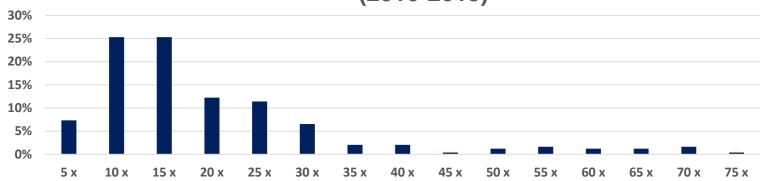


Tech M&A Valuations

EV/S Multiples for All Technology Acquisitions (2010-2015)



EV/EBITDA Multiples for All Technology Acquisitions (2010-2015)







10 Ways to Value a Company

- Sales multiple Public peer group
- Earnings multiple Public peer group
- Comparable M&A transaction analysis
- Discounted cash flow (DCF)
- Replacement cost analysis
- Dollars per R&D Developer
- Internal rate of return (IRR)
- Liquidation value
- Book value
- Internal Transaction Price



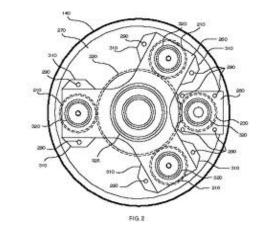
Examples of factors of valuation

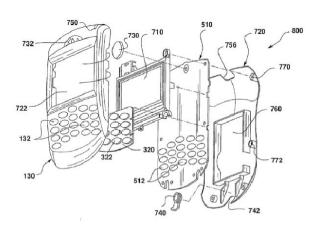
- Purpose and Suitability
 - Defensive or offensive
 - Setting out a trail to a marketing objective
 - Inhibit competitive funding
- Extent of licensing
- Evidence of validity
- Synergy with rest of portfolio
- Structure of transaction



7 Methods to Value Patents in M&A

- 1. Study: having a patent assigned to the target increases the deal value by \$250,000 on average
- 2. Study: the quantity of patents in a portfolio is secondary to the quality of those patents
- 3. Net present value of established royalty stream
- 4. Book value of patent (cost to date)
- 5. Assign 25% of operating profits to the patents
- 6. Compare to similar patents
- 7. Patent Citation Index







FINAL COMMENTS



Strategic Advantage: Manage IP Assets

- Due diligence absolutely required
- Corralling Intellectual Property Asset:
 - trade secrets, trademarks, copyrights
- Protection for valuable IP asset
 - Provisional filings
 - Patent issued
- Contribution Agreements:
 - Prevent pilferage by exiting employees

Bottom Line: A patent is worth what someone is willing to pay

Contact Information



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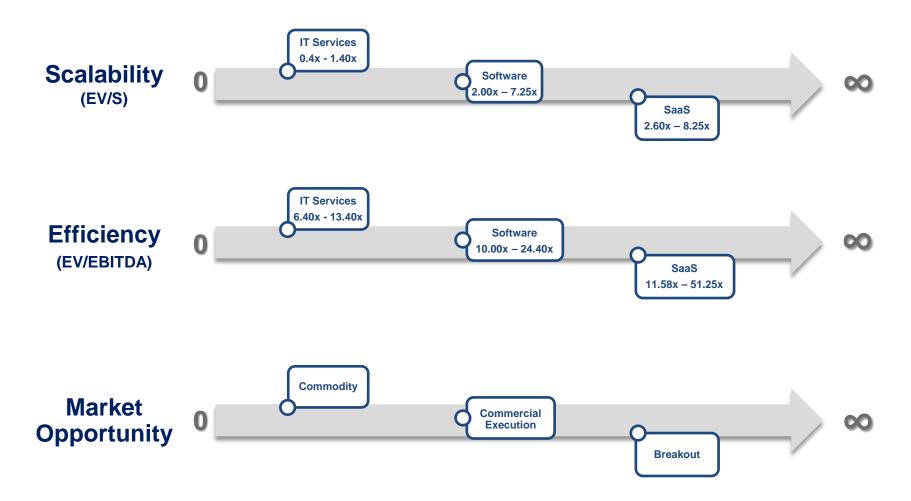


Thank You – Q&A



Appendix

Drivers of Valuations for Software





Core Valuation Methods

- Sales Multiple (EV/S) Public Peer Group
 Revenue multiple of similar publicly traded companies
- Earnings Multiple (EV/EBITDA) Public Peer Group Earnings multiple of similar publicly traded companies
- Comparable M&A Transactions
 Sales multiple of companies like yours that have sold
- Discounted Cash Flow
 The present value of all future cash flows
- Replacement Cost Analysis
 How much it would take to replace your product offering



Sales & Earnings Multiples Public Peer Group Analysis

- Determine your public peer-group
 - Operates in the same or similar industry
 - Has the same products
 - Has the same target markets
 - Possesses an analogous financial profile



Sales & Earnings Multiples Public Peer Group Analysis

- 2
- Calculate the Enterprise Value ("EV") for each peer-group company
- EV is the Total Value of a Company, it includes the value shareholders (equity) have placed on the company AND the value debt holders have put on the company
- EV = Market Cap + Debt Cash
- Enterprise value measures what it would actually cost to purchase the entire company



Sales & Earnings Multiples

Public Peer Group Analysis



Apply appropriate multiple

- Last Year
- Current Year (Jan-Dec)
- Current Fiscal Year
- Annualized Quarterly

- Next 12 Months
- Next Year
- Trailing 12 Months (TTM)

→ Trailing 12 months is the standard benchmark for valuation because it is the most recent historical performance of the company.



Comparable M&A Transactions

- A deal multiple is the purchase price divided by the target's revenues or other benchmarks, such as net income or invested capital
- Look to recent transactions to find appropriate deal multiples
- The best sources for periodicals that discuss software/internet industry transactions are:
 - SEC.gov
 - Portal Financial Sites
 - 451 Research

- Corum Group
- Capital IQ
- Hoovers

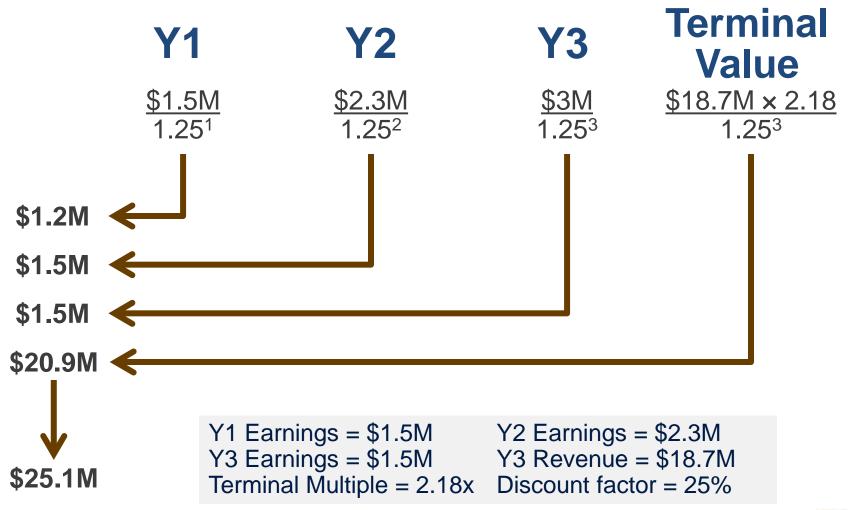


Discounted Cash Flow (DCF)

- DCF is the present value of future earnings
 - Y1, Y2, Y3, Y4 Infinity
- Calculated directly for years 1-3
- Years 4+ captured using a terminal value
 - A sales multiple of Y3
- To calculate DCF, you need
 - 3 year projections
 - Discount factors for future earnings
 - Terminal Multiple



Calculating Discounted Cash Flow (DCF)





Replacement Cost

- The classic build vs. buy analysis
- Considers the time and cost to:
 - Reproduce the technology
 - Gain market traction
 - Build a comparable customer base
- Earliest development costs likely to be heavily discounted



Replacement Value Analysis

Valuation Based on Replacement Value	\$12,735,000
Time to Market Factor	1.50x
Fully burdened cost to develop software	\$8,490,000
	\$990,000
Number of Years in Development	3
Number of contractors per year	5
Fully burdened cost per contractor	\$ 66,000
	\$7,500,000
Number of Years in Development	3
Number of people per year	25
Fully burdened cost per person	\$100,000



Valuation - Present as Late as Possible

- The marketplace may spotlight your most valuable attributes
- Buyers may disclose preferred valuation methods, comparables, structures & reasons
- Use the most current growth in revenue & profits in the analysis
- Time for the auction environment to develop

You may never present a valuation





VALUATION CASE STUDY IT End-Point Automation

Founded: 2000

Employees:16

Funding: \$4.0 million

TTM Revenue: \$4.3 million

Growth: 60% Y/Y Growth

EBITDA: \$0.9 million

Revenue Model: License + SaaS

Forecast	Revenue	EBITDA
Year 1	\$7.5	\$2.6
Year 2	\$11.7	\$4.8
Year 3	\$15.1	\$6.3



VALUATION CASE STUDY IT End-Point Automation



- Unique technology that brought immediate savings to users
- Superior product offering recently reengineered for SaaS
- Attractive financial profile growing and profitable
- Domain expertise in new field of Self Healing Tech
- Strong management and development teams
- Replacing legacy vendors, forcing them to act



VALUATION CASE STUDY IT End-Point Automation



- Decrease time to market
- Adds three tier-1 OEM relationships
- Cross-selling opportunities with mutual customers
- Simple integration into existing low tech solutions
- Significant cost savings for buyer



VALUATION CASE STUDYComparables – Public Peer Group

			Market	Enterprise	Trailing Twelve Months			For	vard
Ticker	Company	Price	Value	Value	Sales	EBITDA	EPS	Sales	EPS
ВМС	вмс	47.71	8,477	7,300	1,960	643	2.47	2,140	3.19
CA	CA Technologies	25.06	12,821	11,570	4,440	1,626	1.54	4,710	2.08
CVG	Convergys	13.21	1,609	1,740	2,630	143	1.08	2,240	1.14
EGAN	eGain Communications	1.35	30	33	35	6	0.18	N/A	N/A
ININ	Interactive Intelligence	35.95	640	438	152	23	0.55	191	1.23
NICE	NICE Systems	35.40	2,220	1,850	662	99	0.69	761	2.02
PEGA	Pegasystems	36.01	1,334	1,270	320	31	0.14	426	1.27
RNOW	RightNow Technologies	26.86	869	717	176	17	0.23	215	0.64
SPRT	Support.com	6.76	319	236	38	(18)	(0.38)	66	(0.07)
SYMC	Symantec	17.39	13,499	13,900	5,990	1,743	0.97	6,440	1.54
VRNT	Verint Systems Inc	35.18	1,290	1,710	713	84	(0.61)	772	2.62

(in USD Millions)

VALUATION CASE STUDY Multiples – Public Peer Group

			Trail	ing 12-M	onth Multi _l	oles		Fo	rward	Multiples	
Ticker	Company		Sa	ales	Earnings			Sales		Earnings	
ВМС	ВМС	MC		2 x 11.36 x		Х		3.41	x 14.96		
CA	CA Technologies		2.61 x 7.12		7.12	<			Х	12.05	
CVG	Convergys		0.66 x 12.18		12.18	Х	0.7		78 x 11.		
EGAN	eGain Communications	Trailing	12-Mc	onth Mul	tiples			Forward	es		
ININ	Interactive Intelligence	Sale	s	Earn	ings		Sa	iles	Ea	arnings ³	
After 2	After 25% Liquidity Discount 2.10 Applied Financial Metric \$4,300		х	11.5	59 x		1.8	83 x	11	.22 x	
Aŗ			\$4,300,000 \$		\$900,000		\$7,500,000		\$1,742,000		
	Implied Value	\$9,000,		• •	00,000	\$^	13,7	25,000		550,000	
SYMC	Symantec			32 x	7.97	<		2.16		11.29	
VRNT	Verint Systems Inc		2.	10 x 20.38 x		х		2.21	Х	13.43	
	Median	Multiple	2.7	79 x	15.45	X		2.44	X	14.96 x	
	After 25% Liquidity Discount		2.10 x		11.59	Х		1.83 x		11.22 x	
	Applied Financial Metric		\$4,30	\$4,300,000 \$900,00		00	\$7,50		,000	\$1,742,000	
Implied Value		ed Value	\$9,000,000 \$10,400,0		,000	\$13,725,0		5,000			

(in \$millions)



VALUATION CASE STUDY Comparable Transactions

(in USD Millions)

Buyer	Seller	Date Announced	Purchase Price	Seller Revenue TTM	EV/S Multiple
Consona Corp. [fka Made2Manage Systems] SupportSoft's enterprise business, which provides enterp providers, corporate IT departments and managed service	SupportSoft Inc. (Enterprise business) rise technical support software and services to digital service e providers globally.	Apr-09	\$20.0	\$42.1	0.48 x
	Motive Communications, Inc. nanagement software to telecommunications service providers.	Jun-08	\$67.8	\$64.4	1.05 x
	Art Technology Group, Inc. ware as a service (SaaS) for businesses globally. Software nail marketing, business analytics, content management and	Nov-10	\$1,000.0	\$193.9	5.16 x
Pitney Bowes Inc. Provides customer interaction management, analytics an	Portrait Software d optimization software for businesses globally.	Jun-10	\$64.1	\$23.3	2.75 x
Pegasystems Inc. Provides customer experience management (CEM) softw	Chordiant Software, Inc. vare for the telecom, healthcare, insurance and financial services	Mar-10	\$161.5	\$76.3	2.12 x
acotoro					
ides customer interaction management, analytics and		Jun-10	\$64.1	\$23.3	2.
ides customer interaction management, analytics and management software as a service (SaaS) for businesse systems. Support.com [fka SupportSoft Inc.] Provides technology support and repair services to custo	optimization software for businesses globally. s globally. Software is compatible with Cisco, Nortel and Avaya	Jun-10 May-08	\$64.1 \$2.7	\$23.3 \$2.3	1.17 x
ides customer interaction management, analytics and management software as a service (SaaS) for businesse systems. Support.com [fka SupportSoft Inc.]	pptimization software for businesses globally. s globally. Software is compatible with Cisco, Nortel and Avaya Median Sales Multiple 2.10x				
management software as a service (SaaS) for businesse systems. Support.com [fka SupportSoft Inc.] Provides technology support and repair services to custo Internet. Convergys Corporation Provides interactive voice response and call center auton salesforce.com Provides contact center and sales content management services.	pptimization software for businesses globally. s globally. Software is compatible with Cisco, Nortel and Avaya Median Sales Multiple 2.10x	May-08	\$2.7	\$2.3	1.17 x
des customer interaction management, analytics and management software as a service (SaaS) for businesse systems. Support.com [fka SupportSoft Inc.] Provides technology support and repair services to custo Internet. Convergys Corporation Provides interactive voice response and call center auton salesforce.com Provides contact center and sales content management customer service-focused information. Customers include Wanadoo and Zurich North Art Technology Group, Inc.	potimization software for businesses globally. s globally. Software is compatible with Cisco, Nortel and Avaya Median Sales Multiple Implied Value \$9,000,000 Instranet software to businesses. Applications automate the dispersal of 3M, AXA, BNP Paribas, France Telecom, Orange, SFR Cegetel, InstantService, Inc.	May-08 Jul-08	\$2.7 \$335.0	\$2.3 \$206.2	1.17 x 1.62 x
management software as a service (SaaS) for businesse systems. Support.com [fka SupportSoft Inc.] Provides technology support and repair services to custo Internet. Convergys Corporation Provides interactive voice response and call center auton salesforce.com Provides contact center and sales content management customer service-focused information.Customers include Wanadoo and Zurich North Art Technology Group, Inc. Provides chat and email-based customer service automa	Implied Value \$9,000,000 Instranet software to businesses. Applications automate the dispersal of 3M, AXA, BNP Paribas, France Telecom, Orange, SFR Cegetel, tion and analytics software as a service (SaaS) for businesses.	May-08 Jul-08 Aug-08 Jan-10	\$2.7 \$335.0 \$31.5 \$17.0	\$2.3 \$206.2 \$15.0 \$5.5	1.17 x 1.62 x 2.10 x
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VALUATION CASE STUDY DCF Analysis

	Year 1	Year 2	Year 3
Revenues	7,500,000	11,700,000	15,100,000
EBITDA	2,600,000	4,800,000	6,300,000
After Tax Cash Flow	1,700,000	3,200,000	4,200,000
Present Value	1,400,000	2,000,000	2,150,000
Terminal Value			16,200,000
	Val	uation Based on DCF	21,750,000



VALUATION CASE STUDY Valuation Summary

Comparable Public Company Analysis	Financial Metric	Applied Multiple	Implied Value	Weight	Weighted Value
Trailing Multiples					
Enterprise Value/TTM Revenue	4,300,000	2.10 x	9,000,000	8.3%	750,000
Trailing P/E	900,000	11.59 x	10,400,000	8.3%	870,000
Forward Multiples					
Enterprise Value/FY Revenue	7,500,000	1.83 x	13,725,000	8.3%	1,100,000
Forward P/E - FY Earnings	1,742,000	11.22 x	19,550,000	8.3%	1,600,000
			Total Weighting of Method	33.3%	4,320,000

Total Weighted Fair Market Value \$14,500,000

Assumptions/Definitions:

EV = Enterprise Value (Market Capitalization + Debt - Cash)

CORUM



Valuation – 6 Most Common Mistakes

- Using improper revenue recognition methods
- Not providing clean financial data
- Using irrelevant and/or outdated comparables
- Comparing public to private companies without applying a liquidity discount
- Using forecasts that do not require additional funding
- Not using the appropriate time period (TTM, FYE, etc.)



Closing Thoughts On Valuation

- A formal valuation will produce a range of values, not one magic number
- Employ several valuation methods to deliver a range of values
- Similar values derived using different calculations support each other
- Use transactions and comparables as similar to your company as possible



Closing Thoughts On Valuation

- A formal valuation will not capture the strategic value to a given buyer
- Be sure you fully understand the unique value enhancers relevant to software companies
- A company is worth what a knowledgeable buyer is willing to pay for it
- You will never get maximum value without discussions with multiple buyers

Tech M&A Guideline Percentages



Buyer solicitations that result in transaction



Average improvement from first offer with an auction process



 How often another firm is willing to pay more than the initial bidder



Failure rate in "self-managed" tech M&A



 Deals involving only one bidder that are suboptimal