

TechPortal Talks: Helping Build the Foundation of High Value Patent Rights

November 2017

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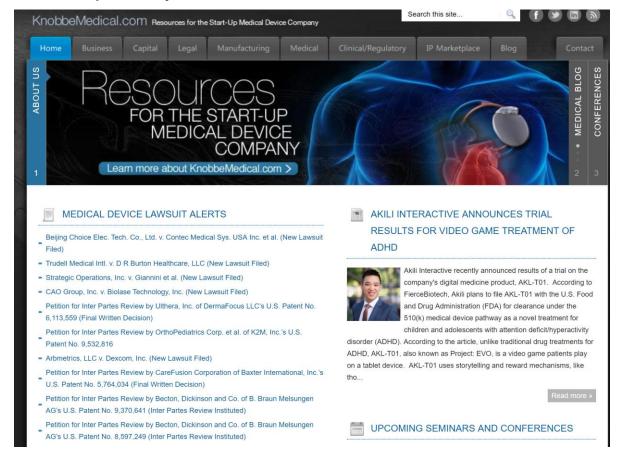
knobbe.com

#### Who We Are

- 54 Years Specializing in Intellectual Property
- Eight offices nationwide
  - California
    - Los Angeles, Orange County, San Diego, San Francisco, Silicon Valley
  - Washington, D.C.
  - Seattle, WA
  - New York
- Over 275 lawyers and scientists
- Highest number of registered patent attorneys in the United States more than 200
- Practice across a vast array of industries
- Over 95% of attorneys hold technical degrees
- Global practice through large network of Foreign Associates

## Biotechnology/Medical Devices

- IP Portfolio Development, Litigation, All Areas of Technology
- Medical Device Specialty KnobbeMedical.com



## University/Non-Profit Clients

- Regents of the University of California
- EO Lawrence Berkeley National Laboratory
- UCSF Office of Innovation, Technology & Alliances
- University of Hawaii
- IMEC
- Stanford University
- University of Southern California
- Loma Linda University
- Australia National University

- Georgetown University
- Queensland University of Technology
- Caltech
- Sanford Burnham Presbys Medical Discovery Institute
- Statens Serum Institut, Denmark
- National University of Singapore
- The Walter and Eliza Hall Institute of Medical Research Australia

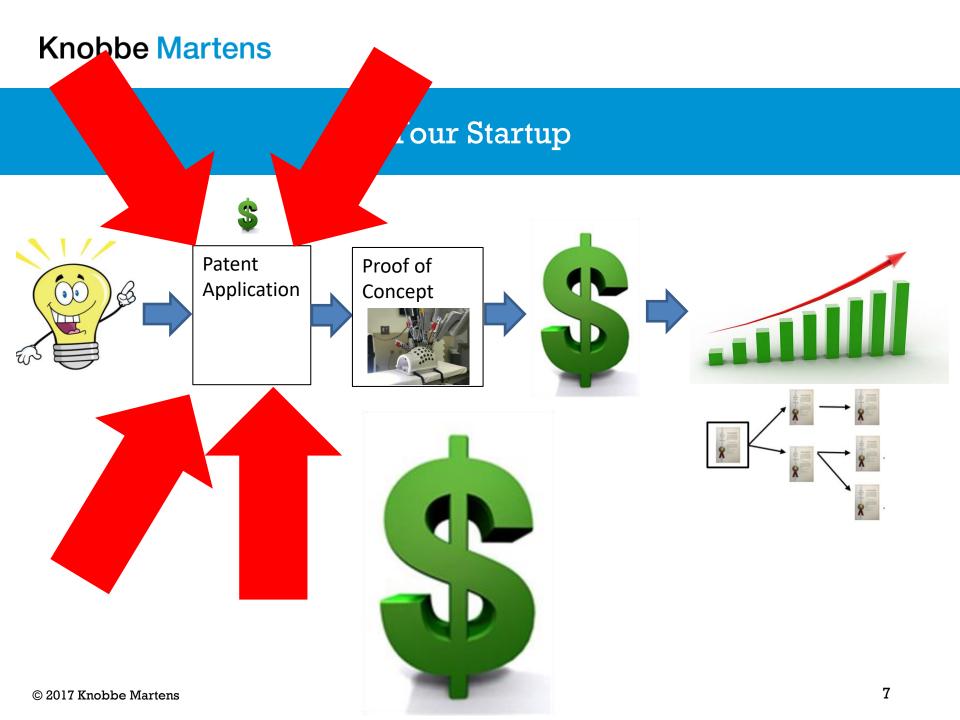
# 104 Med Device/Biotechnology Deals in 4 years Avg 1 every 2 weeks.

Relievant Medsystems, Inc.  Ablative Solutions  \$11.9 million  Apama Medical Series C Financing  OptiScan Biomedical Series E \$40 million  Financing Series E \$2.1 million  Med Device: ICU Blood Chemistry Monitoring Med Device: Heart Med Devices; Heart Med Devices Faramancing Med Device: Heart Med Devices, Technology  Intact Vascular, Inc. Series B financing round  Solace Therapeutics  AcuFocus Inc.  Apama Medical Series C Financing  Action Potential Venture Capital investment in Saluda Medical  Kit Check Series C Funding  Kit Check Series C Funding  Biopharmaceuticals, Inc.  \$46 Million  Software  Software  Biopharmaceuticals: Series B Funding  Pulse Therapeutics  \$10 Million  Med Device: Stress Omedical Services			
Ablative Solutions  Apama Medical Series C Financing OptiScan Biomedical Series E Direct Flow Medical  Apama Medical Series E Direct Flow Medical  Apama Medical Series E  Apama Medical Series E  Apama Medical Series E  Apama Medical Series E  Apama Medical Series B Financing round  Solace Therapeutics  AcuFocus Inc.  Apama Medical Series C Financing Action Potential Venture Capital investment in Saluda Medical Kit Check Series C Funding Sienna Biopharmaceuticals, Inc.  NightBalance BV Series B Funding  Saluda Medice: Stress B Funding  S11.9 million  Med Device: AF Catheter  Med Device: ICU Blood Chemistry Monitoring Med Device: Heart Med Device: Cardiovascular Implants Med Device: Stress Urinary Incontinence Med Device: Vision Tech Med Device: Ablation catheter  Med Device: Ablation Catheter  Med Device: Ablation Software Biopharmaceuticals: Software Biopharmaceuticals: Software Biopharmaceuticals: Skin Med Device: Sleep Million  Ned Device: Skin Med Device: Skin	Relievant Medsystems,	\$36 million	Neurological
Apama Medical Series C Financing OptiScan Biomedical Series E Direct Flow Medical  Apama Medical Series E Direct Flow Medical  Apama Medical Series E  Direct Flow Medical  Apama Medical  Series E  Direct Flow Medical  Apama Medical  Series B Financing round  Solace Therapeutics  AcuFocus Inc.  Apama Medical Series C Financing Action Potential Venture Capital investment in Saluda Medical  Kit Check Series C Funding  Sienna Biopharmaceuticals, Inc.  Series B Funding  Sinna  Solace Therapeutics  Sinna  Solace Therapeutics  Sinna Biopharmaceuticals, Inc.  Series C Funding  Sienna Biopharmaceuticals  Funding  Sienna Biopharmaceuticals  Funding  Sienna Biopharmaceuticals  Funding  Med Device: Ablation Catheter  Medical Services, Software Biopharmaceuticals: Skin  Med Device: Sleep Apnea	Inc.	\$30 IIIIIIIOII	9.
Apama Medical Series C Financing OptiScan Biomedical Series E Standard Medical Series C Financing Standard Medical Series C Funding Standard Medical Series S Standard Medical Series S Standard Medical Series S Funding Med Device: Sleep Funding Med Device: Sleep Funding Med Device: Sleep Million Med Device: Sleep Million Med Device: Sleep Med Device: Sleep Million Med Device: Sleep Med Device: Sleep Million Med Device: Sleep	Ablative Solutions	\$11.9 million	Medical Device: Drug
Pinancing	Abiative bolutions		Resistence
OptiScan Biomedical Series E  Direct Flow Medical  Apama Medical  Saluate Therapeutics  AcuFocus Inc.  Apama Medical Series C Financing  Action Potential Venture Capital investment in Saluda Medical  Kit Check Series C Funding  Sienna  Biopharmaceuticals, Inc.  NightBalance BV Series B Funding  Part Med Device: ICU Blood Chemistry Monitoring Med Device: Heart Med Device: Heart Med Device: Heart Med Device: Cardiovascular Implants  Med Device: Cardiovascular Implants  Med Device: Stress Urinary Incontinence Med Device: Vision Tech  Med Device: Vision Tech  Med Device: Ablation catheter  Med Device: Ablation Series C Funding  Sienna  Biopharmaceuticals, Inc.  NightBalance BV Series B Funding  Med Device: Sleep	Apama Medical Series C	\$10 5 million	Med Device: AF
Direct Flow Medical \$27.1 million Medical Device: Heart  Med Devices, Med Devices, Med Devices, Med Device: B financing round Medical Medical Device: B financing round Med Device: Cardiovascular Implants  Solace Therapeutics \$13 million Med Device: Stress Urinary Incontinence Med Device: Vision Tech Med Device: Vision Tech Med Device: Vision Tech Med Device: Ablation Catheter  Saluda Medical Kit Check Series C Funding Sienna Biopharmaceuticals, Inc. NightBalance BV Series B Funding Med Device: Ablation Skin Med Device: Ablation Catheter  Med Device: Ab	Financing	\$19.5 million	Catheter
Series E   Chemistry Monitoring	OptiScan Biomedical	¢40:11:	Med Device: ICU Blood
Apama Medical  Intact Vascular, Inc. Series B financing round  Solace Therapeutics  AcuFocus Inc.  Apama Medical Series C Financing  Action Potential Venture Capital investment in Saluda Medical  Kit Check Series C Funding  Sienna  Biopharmaceuticals, Inc.  Ned Device: Stress Urinary Incontinence Med Device: Vision Tech Med Device: Ablation catheter  Med Device: Ablation catheter  Med Device: Ablation Software Biopharmaceuticals: Software Biopharmaceuticals: Skin NightBalance BV Series B Funding  Med Device: Stress Urinary Incontinence Med Device: Vision Tech Med Device: Ablation Saluda Services Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Funding  Med Device: Sleep Million  Med Device: Sleep Med Device: Sleep Million	Series E	\$40 IIIIIIIIII	Chemistry Monitoring
Apama Medical   \$20 Million   Technology   Med Device:   Cardiovascular   Implants   Med Device: Stress   Urinary Incontinence   Med Device: Vision   Technology   Med Device: Stress   Urinary Incontinence   Med Device: Stress   Urinary Incontinence   Med Device: Vision   Technology   Med Device: Stress   Urinary Incontinence   Med Device: Vision   Technology   Med Device: Vision   Med Device: Ablation   Catheter   Med Device: Ablation   Catheter   Med Device   Medical Services   Saluda Medical   Kit Check Series C   Medical Services   Funding   Sienna   Biopharmaceuticals: Skin   Skin   NightBalance BV Series B   EUR 12.5   Med Device: Sleep   Funding   Million   Apnea   Medical Services   Funding   Med Device: Sleep   Million   Apnea   Medical Services   Me	Direct Flow Medical	\$27.1 million	Medical Device: Heart
Intact Vascular, Inc. Series B financing round\$46 millionMed Device: Cardiovascular ImplantsSolace Therapeutics\$13 millionMed Device: Stress Urinary IncontinenceAcuFocus Inc.\$66 millionMed Device: Vision TechApama Medical Series C Financing\$19.5 millionMed Device: Ablation catheterAction Potential Venture Capital investment in Saluda Medical\$40 millionMed DeviceKit Check Series C Funding\$15 MillionMedical Services, SoftwareSienna Biopharmaceuticals, Inc.\$46 MillionSkinNightBalance BV Series B FundingEUR 12.5 MillionMed Device: Sleep Med Device: Sleep Apnea			Med Devices,
Intact Vascular, Inc. Series B financing round  Solace Therapeutics  AcuFocus Inc.  Apama Medical Series C Financing Action Potential Venture Capital investment in Saluda Medical Kit Check Series C Funding  Sienna Biopharmaceuticals, Inc.  NightBalance BV Series B Funding  \$46 million  Cardiovascular Implants  Med Device: Stress Urinary Incontinence Med Device: Vision Tech Med Device: Ablation catheter  Med Device: Ablation Med Device  Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Medical Services, Skin Med Device: Sleep Med Device: Sleep Med Device: Sleep Medical Services Ablation Med Device  Medical Services, Med Device: Sleep Million Apnea	Apama Medical	\$20 Million	Technology
B financing round  Solace Therapeutics  \$13 million  Med Device: Stress Urinary Incontinence  Med Device: Vision Tech  Med Device: Ablation  Tech  Med Device: Ablation catheter  Med Device: Ablation  Tech  Med Device: Ablation  Tech  Med Device: Ablation  Med Device: Ablation  Saluda Medical Venture  Capital investment in  Saluda Medical  Kit Check Series C  Funding  Sienna  Biopharmaceuticals, Inc.  Sylon  Med Device  Medical Services,  Medical Services,  Software  Biopharmaceuticals:  Skin  NightBalance BV Series B  Funding  Med Device: Medical Services,	Intert Versular Ing Sovies		Med Device:
Solace Therapeutics  \$13 million  Med Device: Stress Urinary Incontinence  Med Device: Vision Tech  Med Device: Ablation  Tech  Med Device: Ablation Catheter  Action Potential Venture Capital investment in Saluda Medical  Kit Check Series C Funding  \$15 Million  Med Device: Ablation Catheter  Med Device: Ablation Software  Sienna Biopharmaceuticals Biopharmaceuticals, Inc.  \$46 Million  Skin  NightBalance BV Series B Funding  Med Device: Ablation Saluda Medical  Med Device: Ablation Software	· ·	\$46 million	Cardiovascular
Solace Therapeutics   \$13 million   Urinary Incontinence	B imancing found		Implants
AcuFocus Inc.  Apama Medical Series C Financing Action Potential Venture Capital investment in Saluda Medical Kit Check Series C Funding Sienna Biopharmaceuticals, Inc. NightBalance BV Series B Funding  Wed Device: Ablation catheter  Med Device: Ablation Med Device: Ablation Med Device  Medical Services, Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Medical Services, Med Device: Sleep	Sologo Thoronouties	612	Med Device: Stress
AcuFocus Inc.  Apama Medical Series C Financing  Action Potential Venture Capital investment in Saluda Medical  Kit Check Series C Funding  Sienna Biopharmaceuticals, Inc. NightBalance BV Series B Funding  \$66 million Tech Med Device: Ablation catheter  Med Device  Medical Services, Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Million Apnea	solace Therapeutics	\$13 IIIIIIIIII	Urinary Incontinence
Apama Medical Series C Financing  Action Potential Venture Capital investment in Saluda Medical  Kit Check Series C Funding Sienna Biopharmaceuticals, Inc. NightBalance BV Series B Funding  Tech Med Device: Ablation Catheter  Med Device Medical Services, Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Med Device: Sleep Million Apnea	Tour Forms Inc.	\$66 million	Med Device: Vision
Financing Action Potential Venture Capital investment in Saluda Medical Kit Check Series C Funding Sienna Biopharmaceuticals, Inc. NightBalance BV Series B Funding \$19.5 million Med Device Medical Services, Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Million Apnea	Acurocus inc.		Tech
Financing Action Potential Venture Capital investment in Saluda Medical Kit Check Series C Funding Sienna Biopharmaceuticals, Inc. NightBalance BV Series B Funding Catheter  Ado million Med Device Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Funding Million Apnea	Apama Medical Series C	¢10 E million	Med Device: Ablation
Capital investment in Saluda Medical  Kit Check Series C Funding Sienna Biopharmaceuticals, Inc. NightBalance BV Series B Funding S40 million Med Device Medical Services, Software Biopharmaceuticals: Skin Med Device: Sleep Million Apnea	Financing	\$19.5 million	catheter
Saluda Medical  Kit Check Series C  Funding  Sienna  Biopharmaceuticals, Inc.  NightBalance BV Series B Funding  Medical Services, Software Biopharmaceuticals: Skin  Medical Services, Software Biopharmaceuticals: Skin  Med Device: Sleep Million  Apnea	Action Potential Venture		
Kit Check Series C Funding \$15 Million Software Sienna Biopharmaceuticals, Inc. \$46 Million Skin NightBalance BV Series B Funding Million Apnea	Capital investment in	\$40 million	Med Device
Funding \$15 Million Software  Sienna Biopharmaceuticals, Inc. \$46 Million Skin  NightBalance BV Series B Funding Million Apnea	Saluda Medical		
Sienna Biopharmaceuticals: Biopharmaceuticals, Inc. \$46 Million Skin NightBalance BV Series B EUR 12.5 Med Device: Sleep Funding Million Apnea	Kit Check Series C		Medical Services,
Biopharmaceuticals, Inc. \$46 Million Skin  NightBalance BV Series B Funding Million Apnea	Funding	\$15 Million	Software
NightBalance BV Series B EUR 12.5 Med Device: Sleep Funding Million Apnea	Sienna		Biopharmaceuticals:
Funding Million Apnea	Biopharmaceuticals, Inc.	\$46 Million	Skin
	NightBalance BV Series B	EUR 12.5	Med Device: Sleep
Pulse Therapeutics \$10 Million Med Device: Stroke	Funding	Million	Apnea
	Pulse Therapeutics	\$10 Million	Med Device: Stroke

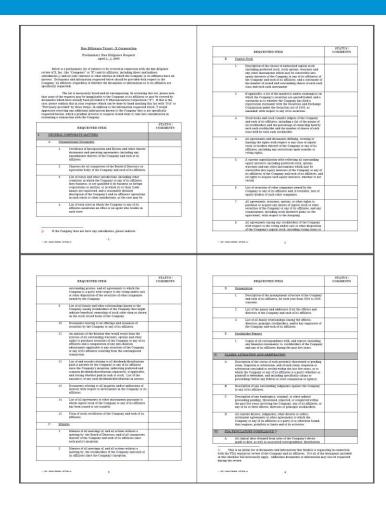
Cala Health, Inc.	\$18 million	Med Device: Tremor Wearable
CVRx, Inc. Series G Funding	\$113 Million	Med Device: Heart Failure
Alios BioPharma, Inc. acquired by Johnson & Johnson	\$1.75 billion	Biotech: Therapeutics for viral diseases
Sienna Biopharmaceuticals, Inc.	\$150 Million	Biotech
Hittite Microwave Corporation acquired by Analog Devices, Inc.	\$2 billion	Semiconductors
EKOS Corporation acquired by BTG PLC	\$220 million	Med Device: treatment of vascular thrombosis
IDEV Technologies acquired by Abbott Labs	\$310 million	Med Device: endovascular and interventional
Trius Therapeutics acquired by Cubist Pharmaceuticals	\$707 million	Pharma: Antibiotic Drugs
Anokion	\$45 million	Biotech: Autoimmune
Ellipse Technologies acquired by NuVasive, Inc.	\$380 Million + \$30 Million (2017)	Med Device
Rempex Pharmaceuticals acquired by The Medicines Company	\$470 million	Pharma
Obalon Therapeutics	\$75 million	Medical Device: Weight Loss
iRhythm, Inc. IPO	\$107 million	Med Device: Digital Healthcare for Cardiac
Ignyta, Inc. private placement and IPO	\$107 million	Pharma
Sienna Biopharmaceuticals, Inc.	\$65 million	Biotech

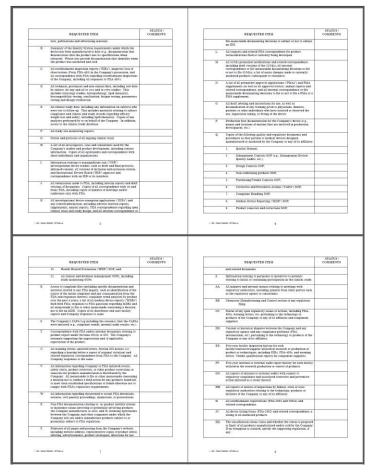
What Will Your Technology be Worth in 2-4 Years?

## **JUST YELL IT OUT!**

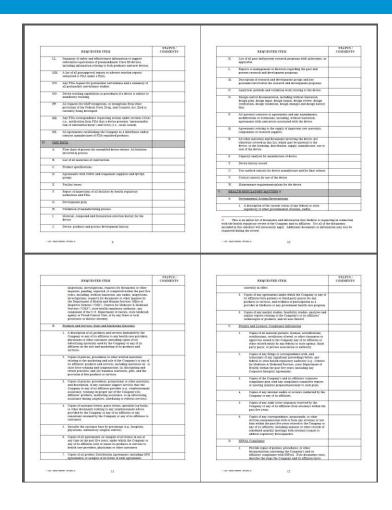


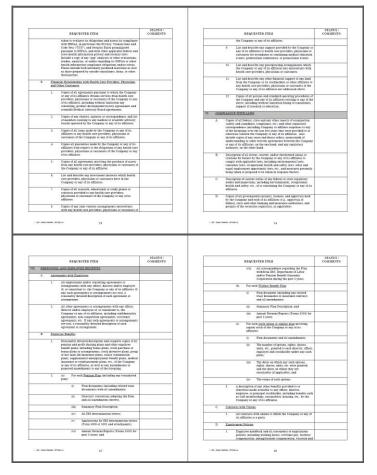
## Closing the Deal - "Due Diligence" - More \$, More Scrutiny



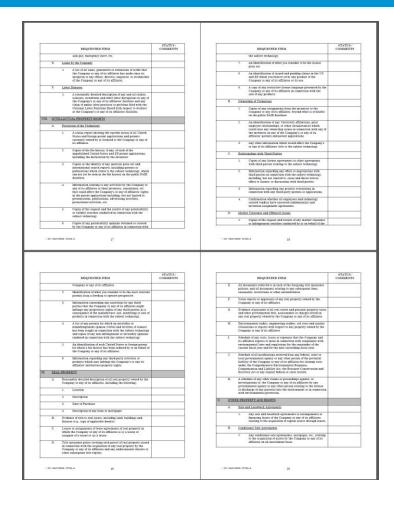


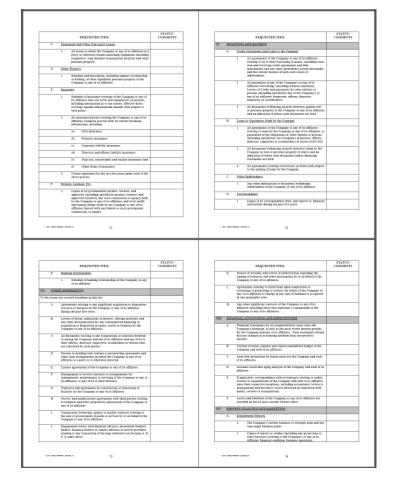
## Closing the Deal - "Due Diligence" - More \$, More Scrutiny



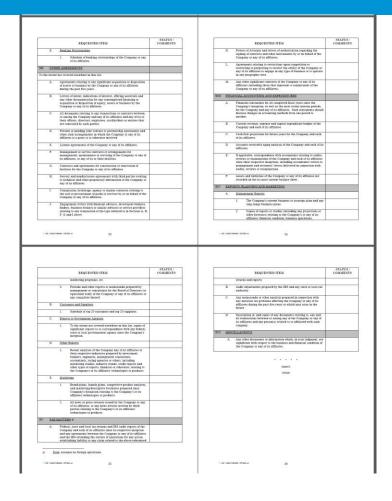


## Closing the Deal - "Due Diligence" - More \$, More Scrutiny

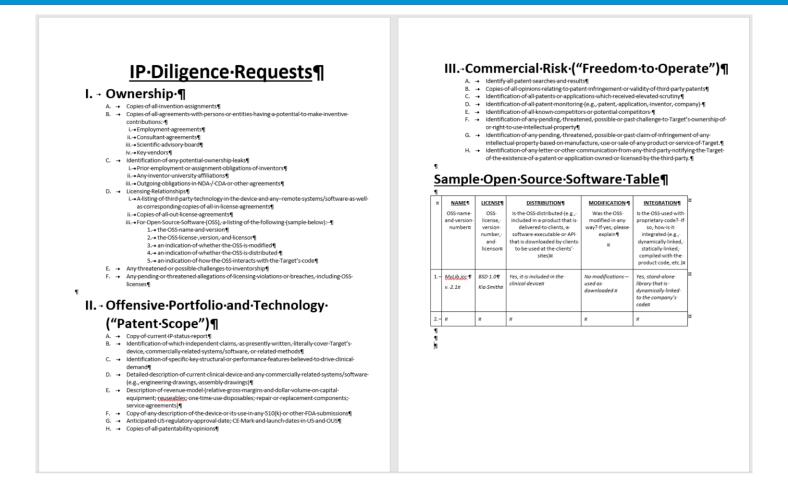




## Closing the Deal - "Due Diligence" – More \$, More Scrutiny



## Closing the Deal - "Due Diligence" - More \$, More Scrutiny

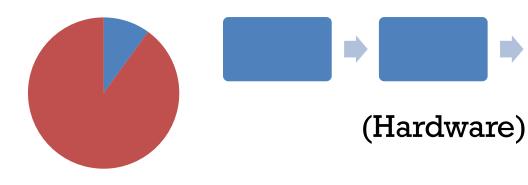


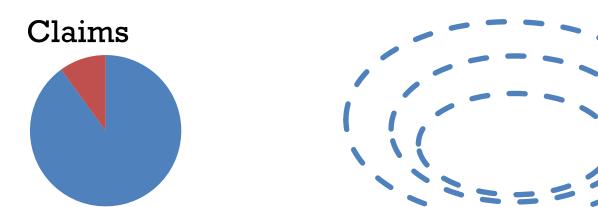
## The Opportunity

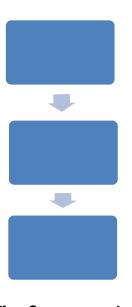
- Assisting with your FIRST PATENT APPLICATION
  - Add value to the most vulnerable part of the portfolio
  - ANY Engineer (UCI Engineering Student) can write more than HALF of a patent application

## Parts of a Patent

## Description



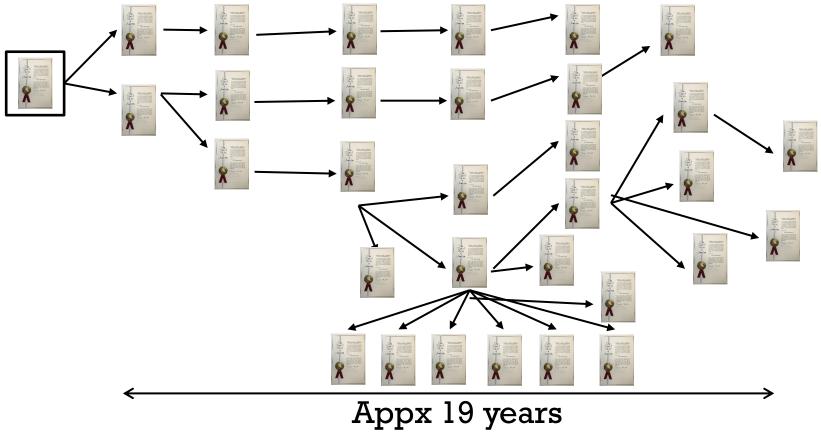




(Software)

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## Extreme Value Portfolio – 31 "Continuations"



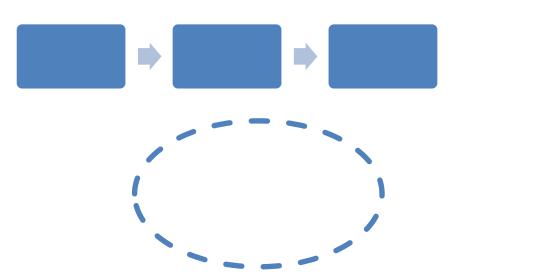
One of Masimo's Patent families, 31 "Continuations" of one patent application. Value = \$1B jury verdicts.

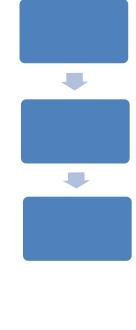
### Recommendations to Universities

- Add Invention Disclosures/Patent Application Drafting to Writing Curriculum
  - ENGR 190W. Communications in the Professional World. 4 Units. Upper-division technical writing course including the development of presentation skills. Effective communication with a range of audiences, including invention disclosures and patent applications. Recognition of ethical and professional responsibilities for engineers.
  - (Note "Invention" does not appear in the UCI engineering course catalogs)
  - Ask Local Patent Attorneys for Free Lectures/Lesson Plan

## Recommendations to Student Entrepreneurs

- Read Sample Patents!
- Ask Attorney for (free) Lunch and Lesson
- Help Draft First Patent Application as Much as Possible





Result: Excellent Patent Application on Budget!



## Michael Guiliana

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