John Tinsman

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Education & Professional

- **MS Physics, UC Santa Barbara**, Medical and Scientific Instrumentation
- **MBA, San Jose State**
- **BA Physics, UC Santa Barbara**, College of Creative Studies
- **US PTO reg. no.** 73,427
- **Senior Member, IEEE**
- **Member ACM**
- **Languages:** English and French

Technology experience

- Cryptography, content protection & DRM
- Video compression & image processing
- Agile development
- Real time targeted advertising
- Source code and web page analysis
- Mobile & wireless communications
- High speed signal processing
- Speech processing and coding
- FPGA & semi-custom chip development
- C, C++, JavaScript, Python, Objective-C, Java, R, Scala, and assembly, and others
- Platform security, including secure enclaves
- Web & cloud-based services
- Digital broadcast and streaming media
- Data Analytics & Modeling
- Embedded systems
- Network & broadcast stream analysis
- Digital printing & color science
- Scientific & medical instrumentation
- Algorithm analysis
- SPICE and Verilog
- Databases including both relational and NoSQL
- Machine learning

Professional Experience

Founder & CEO, GadgetJazz: Engineering design, innovation and IP consulting (2017-present)

- Design and architecture consulting for hardware and software development
- Innovation services in support of intellectual property development
- Technical consulting on patent development and licensing
- IP Litigation support and expert witness services

Areas of consultancy at GadgetJazz

- Technical
  - Modelling lift for a wind generation system
  - Targeted advertising algorithms
  - Document database development
- IP related consulting areas
  - Machine learning algorithms for concept extraction from patent documents
  - Statistical analysis of human vs. machine scored patents
  - Market and product analysis related to cloud computing
  - Market and product analysis related to networking
  - Streaming video delivery techniques
  - Evaluation of technologies and patents related to social media networks
  - Patent application analysis in the areas of video delivery, cloud computing, machine learning, data center management, document management and processing
  - Video codec analysis
  - Secure communications techniques, including trusted platforms and software security.
  - Secure techniques for authentication and authorization, watermarking, and content protection.
  - Digital rights management
  - Interactive television content and application delivery for mobile and desktop clients

Chief IP Technologist, *Kudelski:* *Intellectual Property and Innovation Group (2014-2017)*

- Supported inventors and the innovation process, including participating in the patent committee.
- Developed technical aspects of patents for use in case development, including market, technology and product analysis
- Developed and presented documentation for licensing discussions
- Assessed numerous patent portfolios as part of acquisitions and divestitures, including target market analysis and patent strength evaluation
- Applied big data and analytics to patent analysis, including custom data mining

VP, Engineering, OpenTV: *Advanced Advertising Group (2009-2014)*

- Responsible for architectures, technologies, and product development for OpenTV's advanced advertising, and engagement solutions across multiple platforms
- Drove new product requirements using a direct customer facing approach
- Managed the shift to Agile (Scrum) methodologies, behavior driven development, and implementation of high coverage (>95%) automated testing
- Led the design and development of a new real-time advertising analytics platform
- Played a key role in the successful sale of the advanced advertising business

Director, Qualcomm: MediaFLO Europe *(2007-2009)*

- Provided technology strategy, requirements analysis, and supported customer-facing discussions around the core technology, platform feature sets, roadmap requirements, and regulatory considerations
- Supported technical activities to validate the MediaFLO technology and regulatory compliance in field trials in Europe and South Africa
- Product manager for the interactive capabilities of the platform, leading architectural discussions around the UI, the content model and security issues

Director, OpenTV: *Office of the CTO in Europe (2001-2007)*

- Senior Architect for OpenTV interactive TV middleware in Europe, the Middle East and Africa, including cable and satellite, VOD, and IPTV
- Led EU regulatory and standardization activities, with regular meetings and public presentations at the European Commission
- Co-authored an EU-sponsored ETSI task force report to assess interoperability in interactive television, which included public hearings and a final report
- Provided technical support for IP licensing discussions

Independent Consultant: *(1998-2001)*

- ***OpenTV***: Set top box middleware specification and standardization
- ***Visual Edge Technology***: Color calibration techniques and algorithms for large format printing
- ***Pinnacle Systems***: Image processing algorithms for custom broadcast television graphics integrated circuits and cards, with an emphasis on noise reduction to improve image quality and compressibility
- ***Albert Inc***: Analog and digital audio processing and speech recognition in automotive environments to enable voice search in cars. This work also included characterization of microphones and microphone arrays

Principal Researcher, EPFL: *Signal Processing Lab (1998-2001)*

- The École Polytechnique Fédérale de Lausanne (EPFL) is one of Switzerland's premier technical universities.
- Supervised a team of researchers and doctoral students with regard to industrial research performed for Hewlett Packard Laboratories
- The emphasis of the work was on image and video processing as implemented on high performance computing architectures, including audio, video and still image compression, and the characterization of high-performance rendering systems for CAD and computer graphics
- Developed algorithms for high performance printing systems, including HP's laser printers

Vice President Engineering, Visual Edge Technology: *(1995-1998)*

- Managed a team of engineers, technicians and technical writers in the development of imaging software for large format digital color printers
- Technical contributions included work on color calibration, and Postscript optimization, image processing and enhanced halftoning algorithms

Engineering Manager, Radius Inc: *(1993-1995)*

- Led a small team which developed software-only codecs and video pre-processing for Apple Computer's QuickTime architecture
- Specifically contributed to the development of MPEG-1 and MPEG-2 audio and video codecs, the Cinepak codec, and signal processing algorithms

Engineer & Physicist, Radius Inc: *(1989-1993)*

- Designed and developed high resolution, high accuracy monochrome and color displays
- Worked with technology vendors in US, Japan and Korea to develop and implement custom components and systems
- Led the development of other products, such as a high-speed networking interface, a compact standalone graphics device, and related software drivers and custom gate arrays.
- Supported Radius' technical efforts to develop desktop digital video editing systems

Engineering Physicist, Stanford Linear Accelerator (SLAC): *(1985-1989)*

- Created custom electronics, instrumentation, and software for the high-speed data acquisition system supporting the Mark II experiment at the Stanford Linear Collider
- Development work included very low noise, high speed amplifiers, analog and digital signal processing, high power pulsed drive systems, and high-performance networking and computing architectures
- Also contributed to the real-time control systems for both the Mark II experiment and the accelerator itself

Senior Software Engineer, Arrays Inc: *(1983-1985)*

- Worked as a seed developer on consumer software for both the Macintosh and Windows platforms
- Lead architect on the development of a consumer finance program
- Contributor to Arrays' products on Apple II and DOS products, specifically in the area of custom graphics and data rendering engines

Patents & Published Applications

- US 11,200,716: Overlay contrast control in augmented reality displays
- US 11,182,824: System and method for providing advertising consistency
- US 10,681,097: Method and systems for data transmission
- US 10,609,028: Securing digital data transmission in a communication network
- US 10,387,920: System and method for offering and billing advertisement opportunities
- US 10,235,788: Overlay contrast control in augmented reality displays
- US 10,152,815: Overlay emphasis modification in augmented reality displays
- US 10,044,873: Mute Alert
- US 10,038,859: Same screen, multiple content viewing method and apparatus
- US 10,032,192: Automatic localization of advertisements
- US 9,877 054: Dynamic Scheduling for Advanced Advertising in Linear Television
- US 9,799,048: Intelligent Tool to Support Manual Scheduling of Ads
- US 9,712,581: Method and systems for data transmission
- US 9,711,128: Combined audio for multiple content presentation
- US 9,344,470: Method and systems for data transmission
- US 8,782,305: Method and systems for data transmission
- US 8,335,873: Method and systems for data transmission
- US 7,930,449: Method and systems for data transmission
- US D759,684: Display screen with a graphical user interface
- EP 2,700,200: Methods and systems for data transmission
- EP 2,602,996: Dynamic generation, delivery, and execution of interactive applications over a mobile broadcast network
- EP 1,912,441: Buffering and transmitting video data upon request

- US20200366673: Securing digital data transmission in a communication network
- US20200336524: Method and systems for data transmission
- US20200329039: Securing digital data transmission in a communication network

Publications & Presentations

- *"Content Metadata for Addressable Advertising – Beyond Asset Identification",* Digital Media Analysis, Search and Management (DMASM 2013), UC San Diego
- *"Content-aware Services for Interactive TV",* Digital Media Analysis, Search and Management (DMASM 2012), UC San Diego
- *OpenTV's Response to the Commission Staff Working Paper on the Interoperability Of Digital Interactive Television Services SEC(2004) 346*
- *ETSI TR 102 282 V1.1.1 (2004-02): Standardization Work Programme in support of digital interactive television and the effective implementation of article 18 of Directive 2002/21/EC*
- *"A precision synchrotron radiation detector using phosphorescent screens",* Aug. 1990, IEEE Transactions on Nuclear Science
- *"Improving the reliability in the SLC control system",* Aug 1990, Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment
- *"Initial performance of the Wire Imaging Synchrotron Radiation Detector",* Apr 1, 1990, Nuclear Science, IEEE Transactions on
- *"A calorimeter software trigger for the mark II detector at SLC",* Dec 1989, Computer Physics Communications
- "*Precision Synchrotron Radiation Detectors"*, SLAC-PUB-4921, presented at the IEEE Particle Accelerator Conference, Mar 20-23, 1989
- "*A CDU-based data acquisition system for the energy spectrometer at the Standard Linear Collider*", Feb 1, 1989 IEEE Nuclear Science Transactions
- *"Use of digital cross-correlation for on-line determination of single-vessel blood flow in the mammalian kidney",* Jul 30, 1985 Microvascular Research

Expert Witness Experience

- PTAB: Comcast v. Promptu, expert declarations in four IPRs and one deposition on behalf of the patent owner: IPR2018-00340, IPR2018-00341, IPR2018-00344, and IPR2018-00345.

- PTAB: Lectrosonics v. Zaxcom, expert declarations in three IPRs and one deposition on behalf of the petitioner: IPR2018-0972, IPR2018-01129, and IPR2018-01120.

- PTAB: Comcast v. Rovi, expert declarations and a deposition related to four IPRs on behalf of the patent owner: IPR2019-00555, IPR2019-00556, IPR2019-00557 and IPR2019-00558.

- PTAB: Comcast v. Rovi, expert declaration and deposition on behalf of the patent owner for IPR2019-00224.

- PTAB: Comcast v. Rovi, expert declaration and deposition on behalf of the patent owner for IPR2019-01375.

- PTAB: Comcast v. Rovi, expert declaration and deposition on behalf of the patent owner for IPR2019-01413.

- PTAB: Comcast v. Rovi, expert declaration and deposition on behalf of the patent owner for IPR2019-01416.

- PTAB: Quibi v. JBF Interlude 2009 Ltd., expert declaration on behalf of the patent owner for IPR2020-01547, IPR2020-01459

- PTAB: Quibi v. JBF Interlude 2009 Ltd., expert declaration on behalf of the patent owner for IPR2020-01662, IPR2020-01663

- PTAB: Roku v. Universal Electronics Inc., expert declaration and deposition on behalf of the petitioner for IPR2021-00261

- PTAB: Roku v. Universal Electronics Inc., expert declaration on behalf of the petitioner for IPR2021-00262, IPR2021-00263, IPR2021-00264.

- US District Court: HLFIP Holding, Inc. v. York County, Pennsylvania, expert declaration and deposition on behalf of the defendant for a claim construction hearing, civil action 1:20-CV-00186.