

17th Annual

TFI

Technology Conference

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17th Annual TFI Technology Conference

Thursday & Friday, January 20-21, 2022, 1:00-5:00 pm CST

Networking 1/2 hour before (12:30-1pm) and after (5-5:30pm)

Conference Papers, Videos, and Bios:

tfi-ctfg.com/2022-tfi-technology-conference-slides-videos-photos-bios/

Papers will be uploaded as we receive them

Conference will be recorded via Zoom and videos posted after the conference

Facebook & **YouTube**: TFI Technology Conference

Twitter: [@AssetValConf](https://twitter.com/AssetValConf)

**TECHNOLOGY
FUTURES INC.**

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17th Annual TFI Technology Conference

January 20-21, 2022



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17th Annual TFI Technology Conference

January 20-21, 2022 – Online Conference

Schedule and Speakers

Thursday January 20, 2022 (Central Time)

12:30 - 1:00 **Zoom opens for Networking**

1:00 - 2:00 **Broadband Keynote** – HFC and FTTH Advancements:
What and what for?

Alan Breznick, Practice Leader, Cable/Video, *Light Reading*

Broadband Moderator: Jeff Binkley, Principal, Ryan

2:00 - 2:30 **Discussion Session**

2:30 - 3:30 **Policy Update**

Mike Wilson, Vice President Business Development,
CostQuest Associates

3:30 - 4:30 **Economic Update**

Michael A. Sadler, Ph.D., Department of Economics, Department of Finance, McCombs School
of Business, University of Texas at Austin

4:30 - 5:00 **Discussion Session**

5:00 - 5:30 **Virtual Reception & Networking**



Friday, January 21, 2022 (Central Time)

12:30 - 1:00 **Zoom Opens for Networking**

1:00 - 2:00 **TFI Forecasts Update**

Lawrence K. Vanston, Ph.D., Conference Director, President, TFI

Ray Hodges, Senior Consultant, Technology Futures, Inc.

2:00 - 3:00 **Wireless Keynote**

Iain Gillott, President, iGR

Wireless Moderator: Ruben Miranda, Managing Director, Kroll

3:00 - 3:30 **Discussion Session**

3:30 - 4:30 **Communications Technology Update**

August (Augie) Grant, Ph.D., Professor, School of Journalism and Mass Communications,
University of South Carolina; Co-Editor, Communications Technology Update and Fundamentals

4:30 - 5:00 **Discussion Session**

5:00 - 5:30 **Virtual Reception & Networking**

17th Annual TFI Technology Conference

January 20-21, 2022 – Keynote & Guest Speakers – Day One



Alan Breznick

Practice Leader, Cable & Video, Light reading

Alan covers the cable TV, broadband and IP video infrastructure markets for both Light Reading and Heavy Reading. In particular, he tracks the markets for such new cable, broadband and video technologies and standards as DOCSIS 4.0, FTTP, DAA, XGS-PON, streaming video, network virtualization, business services, Wi-Fi 6, 5G and ATSC 3.0.

With a background in both business journalism and technology research, Alan has covered the cable, telecom, broadband, media and consumer electronics markets as an editor and/or analyst for more than 30 years, including the past 15 years for Light Reading. He previously worked for Kinetic Strategies, One Touch Intelligence, Cable Digital News, Communications Daily, Multichannel News, Cable World and Crain's New York Business. A New York City native, he is now based outside Toronto, Ontario.



Jeff Binkley

Principal, Ryan, Atlanta Office

Mr. Binkley specializes in providing advisory services related to assessment value review and appeal, ad valorem tax policy, compliance best practices, and transaction analysis to clients with properties in the broadband, healthcare, technology, and telecommunication sectors. He is a frequent speaker and writer on ad valorem tax matters and taxation policy at professional conferences and forums, including the Broadband Tax Institute, Technology Futures, and Wichita Conference on Valuation and Assessment for Complex Industries.

Previous Experience

Private Sector: Managing Director, multinational transactions and business analytics firm; Managing Director, multinational property tax services firm; Managing Director, multinational tax firm; Vice President, national real estate tax services firm

Public Sector: Revenue Economist, Florida Department of Revenue, Division of Ad Valorem Tax

Education: Master of Science Degree, Florida State University;
Bachelor of Arts Degree, University of Kentucky



Michael A. Sadler, Ph.D.

Department of Economics, Department of Finance, McCombs School of Business, University of Texas at Austin

Dr. Michael Sadler is a Senior lecturer in the Department of Finance at the McCombs School of Business as well as the Department of Economics at UT-Austin. Dr. Sadler's career as an economist began as a research economist at the Centre for Economic Performance at the London School of Economics, where his research focused on European and U.S. labor markets. After receiving his

Ph.D. at the University of Texas at Austin, Dr. Sadler was an assistant professor in economics at Kansas State University.

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In 2000, Dr. Sadler returned to Texas and transitioned to the private sector as an economic and financial consultant. Throughout his consulting career, he has continued to teach on a part time basis in the Department of Economic at UT – Austin, specializing in macroeconomics and monetary economics. As an academic, Dr. Sadler is a published author in the area of macroeconomics and growth theory. As a consultant, Dr. Sadler has provided expertise in the areas of economic and financial analysis, valuation, forecasting and statistical analysis to clients in a wide range of industries, including financial services and banking, energy, pharmaceuticals, computer hardware and software and transportation. Dr. Sadler is also a frequent speaker at professional conferences and seminars in the area of the current status of the United States and global economy, financial markets analysis, and macroeconomic policy.

Keynote & Guest Speakers – Day Two



Iain Gillott

President, iGR

Iain Gillott, the founder and president of *iGR*, is an acknowledged wireless and mobile industry authority and an accomplished presenter. Mr. Gillott has been involved in the wireless industry, as both a vendor and analyst, for over 20 years. *iGR* was founded in 2000 as *iGillottResearch, Inc.* in order to provide in-depth market analysis and data focused exclusively on the wireless and mobile industry.

Before founding *iGR*, Mr. Gillott was a Group Vice President in IDC's Telecommunications practice, managing IDC's worldwide research on wireless and mobile communications and Internet access, telecom brands, residential and small business telecommunications and telecom billing services. Prior to joining IDC, Mr. Gillott was in various technical roles and a proposal manager at EDS (now HP), responsible for preparing new business proposals to wireless and mobile operators.

Mr. Gillott is a frequent speaker on industry issues and trends and has addressed audiences around the world over the past twenty years. In the past few years, he has spoken at many of the leading industry trade shows, including PCIA 'The Wireless Infrastructure Show', the DAS Forum, Southern Wireless Summit, CES, 4G World, CTIA, Small Cells Global Congress, and DAS Congress. He has also been a guest lecturer on the wireless industry at the University of Texas and at Thunderbird. In addition, he is frequently quoted in various publications, including *Wireless Week*, *FierceWireless*, the *Wall Street Journal*, *Newsweek International*, and *Business Week* and has appeared on CNN, CNBC, and TechTV.



Ruben Miranda

Managing Director, Kroll

Ruben Miranda is a managing director in the Austin office of Duff & Phelps - a Kroll Business. He has been a member of the [Property Tax Services](#) practice since 2008.

Ruben primarily focuses on the valuation of complex personal property for ad valorem tax purposes, specializing in the telecommunications, transportation and energy industries, with significant experience in greenfield Replacement Cost New studies. His efforts include development of depreciation and obsolescence studies focused on technology adoption and substitution, cost of capital and return on asset studies, and tangible/intangible valuation analysis.

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Over the last several years, Ruben has lent his experience for speaking engagements at industry conferences, including the Institute for Professionals in Taxation (IPT), Technology Futures Inc. (TFI), and Wichita's Appraisal Conference for Ad Valorem Taxation. Notably, his knowledge of property tax issues has been cited in the publication "Cost of Capital for Litigation" by Shannon Pratt and Roger Grabowski. Outside property tax, Ruben was responsible for developing the demand forecast analysis used by the Federal Communications Commission as part of the National Broadband Plan study released by the commission in 2010.

Ruben holds a B.S. in Chemical Engineering from MIT and an M.B.A. from the McCombs School of Business at the University of Texas at Austin. He received his Accredited Senior Appraiser (ASA) designation in 2016.



August (Augie) Grant, Ph.D.

**J. Rion McKissick Professor of Journalism
University of South Carolina**

Co-Editor, Communications Technology Update and Fundamentals

Dr. August E. ("Augie") Grant is a technology futurist who specializes in research on new media technologies and consumer behavior. His teaching and research combine the study of traditional and emerging media, with emphases on media management, organizational structure, integrated communication and consumer behavior. He specializes in integrating both quantitative and qualitative research to provide a rich understanding of consumer behavior. In the past twenty years, he has conducted or supervised more than 120 survey research projects. On the qualitative side, he has conducted more than 60 focus groups since 1998. He has written numerous journal articles and conference papers dealing with adoption and use of emerging communication technologies, broadband services, audience behavior, and theories of new media.

Grant is also one of the most prominent academics working in the field of convergent journalism. He is coeditor of *Understanding Media Convergence: The State of the Field* and co-author of *Principles of Convergent Journalism*, both published by Oxford University Press. His work in media convergence includes founding and serving for five years as Executive Editor of *The Convergence Newsletter*, chairing nine national conferences on convergent journalism since 2002, and directing the Newsplex Summer Seminar program to train academics in convergent journalism.

Dr. Grant is best known as Editor of *Communication Technology Update and Fundamentals*, a biennial review of the latest developments in consumer electronics, telephony, electronic mass media, and satellite technology. The Update, as of 2014, in its 14th edition, is produced in cooperation with Austin-based Technology Futures, Inc. It is used extensively in industry and has become one of the top-selling textbooks in the field of Communication Technology.

His first teaching job was at Sam Houston State University in 1983. After completing his doctorate at the University of Southern California, he joined the faculty of the University of Texas at Austin. He was the UT representative to the Texas Association of Broadcast Educators from 1989 through 1997. During that time, he served as President, Secretary, and Treasurer of TABE, as well as representing TABE on the Texas Association of Broadcasters Board of Directors. He also served on the board of the Texas Broadcast Education Foundation, spearheading fund-raising events to fund new scholarships for prospective Texas broadcasters. Since 1994, Grant has been a consultant to the Texas Association of Broadcasters, conducting a variety of research projects including TAB's annual Public Service Study. Grant currently serves on the Board of Directors of the Broadcast Education Association.

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Dr. Grant has also been published in virtually every major academic journal in the communication field, including *Journal of Communication*, *Journal of Broadcasting and Electronic Media*, *Journal of Media Economics*, and *Communication Research*. The major theme of his research studies is the application of theory to understand practical problems and emerging phenomena in the communication industries. Dr. Grant is also a frequent speaker on consumer behavior and market opportunities for emerging technologies.

Dr. Grant began a career in local broadcasting while earning his undergraduate degree in Telecommunications from the University of Florida. His subsequent work in radio, television, and corporate communications inspired him to return to the University of Florida to earn a Master's degree in Journalism and Mass Communication. He subsequently joined the faculty of the Radio-Television-Film Department at Sam Houston State University. The appeal of a career in research led to doctoral studies at the Annenberg School for Communications at the University of Southern California. After completing his doctorate, he began a new dual career as an academic and industry consultant, with clients including the Fox Broadcasting Network, the Academy of Television Arts and Sciences, Group W Productions, and Nielsen Media Research. After spending nine years with the Department of Radio-Television-Film at the University of Texas at Austin, he became the founding Director of the Center for Mass Communication Research in the College of Journalism and Mass Communications at the University of South Carolina. From 1998 through 2000, he was Director of Market Research for a 2Wire, Inc., a telecommunications start-up located in San Jose, California. He rejoined the USC faculty in 2002.

17th Annual TFI Technology Conference

January 20-21, 2022 – TFI Staff Bios



Lawrence K. Vanston, Ph.D.

Conference Director, President, Technology Futures, Inc.,

512-415-5965, lvanson@tfi.com

Dr. Lawrence Vanston is an internationally recognized authority on technology forecasting for the communications industry. As president of Technology Futures, Inc., he has conducted and managed future-looking studies for the communications and other high-tech industries for over thirty years. His current research interests include broadband, wireless, video, and emerging technologies. An expert on the impact of technology change on equipment depreciation and valuation, Dr. Vanston has served as an expert witness in regulatory, tax, and other proceedings.

Dr. Vanston has been the director and principal author of numerous reports and papers commissioned by government agencies, industry organizations, and individual companies, including all of the major U.S. broadband and wireless providers. The Communications Technology Forecasting Group (CTFG), currently comprised of AT&T, Charter, Comcast, and Cox, has been actively supporting TFI research since 1985. Dr. Vanston is Editor of the CTFG blog and resource website.

Dr. Vanston is a popular speaker on the future of communications and on forecasting methods. Programs he has spoken at include the *Broadband Tax Institute Conference*, the *International Institute of Forecasters International Symposium*, the *Society of Depreciation Professionals Conference*, and the *Wichita Program for Appraisal for Ad Valorem Taxation*. Dr. Vanston also directs the annual *TFI Technology Conference* which he launched in 2006.

Before joining Technology Futures in 1984, Dr. Vanston was with Bell Labs and Bellcore in network planning where he proposed and evaluated potential new long distance, billing, access, and data services. His academic achievements include a B.A. in government (1975) and an M.S. (1977) and Ph.D. (1979) in operations research and industrial engineering, all from the University of Texas at Austin.



Ray L. Hodges

Senior Consultant, Technology Futures, Inc.

727-641-3589, rhodges@tfi.com

Mr. Hodges brings 40 plus years of telecommunications expertise and experience to TFI's clients. As Senior Consultant at Technology Futures, Inc., Mr. Hodges' research has been focused on both emerging wireless and wireline technologies, their markets, and their impacts on the public telecommunications network.

Since joining TFI in 1994, he has managed and worked on numerous projects related to his expertise for leading companies and organizations such as ALLTEL, AT&T, Bell Canada, Boeing, Bosch, Citizens, Cincinnati Bell, Coca-Cola, Deloitte & Touche, Evergreen School District, GAO, Hughes, Motorola, NIMA, NSA, Qwest, Raytheon/TI, Rice University, Samsung, Qwest, Southern Company, Embarq, Taiwan Semiconductor Manufacturing Company, Teleglobe, Telus, and Verizon.

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Mr. Hodges has been the author or co-author of a number of ongoing reports commissioned by Communications Technology Forecasting Group (CTFG), currently comprised of AT&T, Charter, Comcast, and Cox. Topics have included Internet access requirements, xDSL technologies, ATM switching, fiber optics, video services, and wireless communications. Mr. Hodges is co-author of TFI's signature publication *Transforming the Local Exchange Network*.

Mr. Hodges' views and the results of his research are regularly cited by general business and industry publications including *America's Network*, *Inter@ctive Week*, *ISDN News*, *Lightwave*, *Research Alert*, *Telecom Insider*, *Telephony*, *Wireless Systems Design*, and *Wireless Today*.

Prior to joining TFI, Mr. Hodges spent 25 years with GTE Telephone Operations (now Verizon) under the titles of Manager of Separations & Access Costs, Revenue Manager of Revenue Planning, Manager of Capital Recovery, Revenue & Earnings Coordinator, Business Relations Administrator, Senior Planning Analyst, Engineer and Assistant Engineer. His activities included successful strategy development, expert testimony and defense of capital recovery, and network-related issues in numerous rate cases and depreciation filings.

As a member of the Institute of Electrical and Electronic Engineers (IEEE), Mr. Hodges has served as vice chairman of IEEE's Technology Forecasting and Assessment Committee and as chairman of IEEE Communications Society Florida West Coast Section. He is also a senior member of the Society of Depreciation Professionals. He holds a B.S. from Georgia Southern University in industrial management and technology.



John Vanston, Ph.D.

Chairman, Technology Futures, Inc.

512-258-8898, jvanston@tfi.com

Dr. John Vanston is an internationally-renowned consultant, educator, and award-winning author in the fields of technology forecasting, technology/market integration, trend analysis, and technology management in uncertain environments. His book *MINITRENDS: How Entrepreneurs & Innovators Discover & Profit From Business & Technology Trends*, is an Eric Hoffer Business Book Award Winner, a ForeWord Review's Book of Year

Finalist, and has received many excellent reviews and endorsements from prestigious publications and distinguished individuals.

He founded Technology Futures, Inc. (TFI) in 1978, and served as its president for 14 years, building the Austin, Texas-based company into a leader in the technology forecasting, trend analyses, planning, and management fields.

During his career, Dr. Vanston has managed multimillion-dollar high-tech R&D projects, fashioned a computer-based program for planning and managing complex research activities, and developed a formal system for promoting and targeting innovation activities. He is the primary architect of TFI's popular forecasting concepts *Five Views of the Future™* and *Technology Advantage Management*.

Dr. Vanston has provided services for a wide range of commercial, government, and academic organizations, including, among many others, 3M, Chevron, Kodak, Hughes Space and Communications, the National Security Agency, the National Imagery and Mapping Agency, and Rice University. He is a popular speaker on the subjects of forecasting, trend analysis, and minitrends.



Carrie Vanston

CEO, Leadership Mindset Success

Conference Associate, Technology Futures, Inc. tfi.com

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www.leadership-mindset-success.com

www.carrievanston.com

Carrie Vanston works closely with entrepreneurs and executives who are feeling stuck and stressed and are anxious to move forward in their business and life. With her proven **Leadership Mindset Success System**, she supports them in connecting to what they really want and increasing their mindset and leadership levels so they can achieve their goals quicker and with more joy and fulfillment.

Carrie has a long history of helping individuals and organizations be more innovative, successful, and sustainable. During her years at Technology Futures, Inc. (TFI), she co-authored the award-winning book, *MiniTrends*. The book, as well as workshops and conference she directed, focused on the importance of a growth-oriented mindset for an organization.

Carrie's articles have appeared in the *Austin Business Journal*, *Texas CEO Magazine*, and the Austin's National Speakers Association anthology. She is a popular speaker on being a more self-aware, connected, and visionary leader. She has presented at the IEEE, University of Texas SAGE Program, Business Success Center, Morgan Stanley, Laurea University, Finland, BiGAUSTIN, Launch Pad, Product Camp, Texas Women's Chamber, Product Management Institute, and many others.

In addition, she is a Professional Speaker at the National Speaker Association and was a nominee for the 2021 *Austin Business Journal's* Profiles in Power. She is Ambassadors Officer at the Association of Corporate Growth and directed its C-Suite Roundtable and Mastermind for two years. She is a Board Member of TFI and was formerly a National Adviser and Board Member of the Academy of Culture Ambassadors.

Carrie is an Energy Leadership Index Master Practitioner (ELI-MP), iPEC Certified Professional Executive Coach (CPC), and Accredited ICF Coach (ACC). She received her Geography degree from The University of Texas at Austin.

On the personal side, Carrie loves to dance, travel, and spend time with her teenage sons.



Helen Mary Marek

**Conference Liaison, VP Operations/Creative Director,
Technology Futures, Inc. tfi.com**

Director, Art 84, art84.org

Founder, VanMarek Design, vanmarek.com

512-914-8038, hvmarek@tfi.com

Helen Mary is intricately involved with all aspects of TFI's traditional and electronic media, and website design. Her expertise includes computer graphics, presentation visuals, design and layout, corporate identity, photography and photo editing, and displays.

Activities at TFI range from layout and logos for several TFI publications to the cover and graphics of the award-winning book *MiniTrends* by Dr. John H. Vanston and Carrie Vanston. She plays an important role in the design and production of the bi-annual publication *Communication Technology Update and Fundamentals*, now in production for its 18th edition. She also designs TFI's annual holiday card.

In addition to her creative responsibilities at TFI, Helen Mary serves as VP of Operations of Technology Futures where she helps with day-to-day corporate operations and general management. She is the event liaison of the popular *TFI Technology Conference*, now in its 17th year.

She is the Director of Art 84, a non-profit that presents impactful original art, music, and dance through technology, media, and events. She's also involved with TFI-Projects a non-profit promoting technology & the arts to foster better decisions and more insightful people.

As a visual and graphic artist, Helen Mary creates decorative art and jewelry utilizing a range of new and repurposed materials, photography, and traditional media. Her art has been displayed at a number of local galleries and businesses. (vanmarek.com).

Helen Mary holds a Bachelor of Fine Arts in Graphic Design from Texas State University, San Marcos and, prior to that, studied Architecture at the University of Texas at Austin.



Madeleine Wood

TFI Conference Video Editor

Madeleine is a freelance videographer and real estate photographer. She is a student from the Moody College of Communication of the University of Texas at Austin, majoring in Radio/Television/Film. Current projects include working on a television show for TSTV at UT and cloud craft productions. For the 2021 virtual *TFI Technology Conference*, she is helping capture and edit the zoom presentations.

17th Annual TFI Technology Conference

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CostQuest Associates serves as the frontrunner in designing, developing and implementing economic models for the telecommunications industry. And rightfully so; our company holds a “jack of all trades” persona, as it provides the modeling, input, training, maintenance, testimony and witnessing that is required of any model used in advocacy or public hearings.

Global knowledge of costs, business functions, network modeling, telecommunications, economics, regulation, and applying the right data to make accurate business decisions: this is what CostQuest brings to the table to solve your business issues.

CostQuest information systems and services deliver comprehensive solutions to complicated business challenges. Our strength lies in our ability to understand complex business issues, systems, networks and policies, and then provide a solution that focuses on the bottom line.

www.costquest.com



Kroll was acquired by Duff & Phelps in 2018 and began transitioning to the Kroll brand in 2021. We begin this new chapter with a fresh look and a clear and confident vision for the future. United under the Kroll brand, we deliver a seamless experience across our full suite of services, with a cohesive approach to bringing tech-forward solutions to the market. Our goal is to produce greater value for our clients and partners along with compelling career opportunities for our people.

Kroll is the world’s premier provider of services and digital products related to valuation, governance, risk and transparency. Built on the strength and equity of our legacy brands, we are an independent advisory firm with nearly 5,000 professionals in 30 countries and territories around the world.

Our sharp analytical skills, paired with the latest technology, allow us to give our clients clarity—not just answers—in all areas of business.

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Ryan is an award-winning global tax services firm achieving international recognition and market leadership through client service excellence, workplace innovation, and employee development.

With global headquarters in Dallas, Texas, Ryan provides an integrated suite of federal, state, local, and international tax services on a multijurisdictional basis. Our multidisciplinary team of more than 3,000 professionals and associates serves over 18,000 clients in more than 60 countries, including many of the world's most prominent Global 5000 companies.

Driven by Our Purpose: We liberate our clients from the burden of being overtaxed, freeing their capital to invest, grow, and thrive.

Guided by Our Values: Our five values guide us in our purpose. We believe we're not just in the “tax” business. We are also creating a better tomorrow. For all of us.

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17th Annual TFI Technology Conference

TFI Universe



Your Bridge to the Future

Founded 1978, Technology Futures, Inc. provides custom research and consulting in technological forecasting, mostly in communications and high-tech. Applications for TFI forecasts include strategic planning, finance, and asset valuation. Beyond its core mission, TFI is active in leadership coaching, technology innovation, and the arts with non-profits TFI Projects and Art 84. We are always looking for new ways to make the world better.

  : TFI Technology Conference

Communications Technology Forecasting Group (CTFG)

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Leadership Mindset Success supports professionals and entrepreneurs who are feeling stuck and stressed to shift their mindset from the core so they can experience more joy, peak performance, and impact in their businesses and lives.



TFI Projects

Technology & the arts to foster better decisions and more insightful people



Impactful original art, music, and dance through technology, media, and events