



*Presentation of Qualifications*

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# *About Us*

For nearly twenty years, Willis Consulting Group has served the international television broadcast, cable and production community, as well as others that produce and distribute high quality video and audio. Our clients include local TV broadcasters, broadcast groups, TV networks, direct broadcast satellite operators, production companies, universities, scientific research organizations, broadcast / production equipment manufacturers, systems integrators and others associated with the media production and distribution industry.

We differentiate our services by combining several disciplines that are rarely available from a single source. Our clients recognize this advantage, and appreciate the broad range of skills and unique perspective we bring to all projects. Services we provide include: management consulting, strategic planning, business modeling, requirements analyses, operations workflow planning, personnel organization design, technology systems design, project administration and product marketing / research and development.

Our consulting team is a cooperative of several of the most highly regarded professionals in the industry. Together, the consultants in the group offer a broad range of skills and a depth of knowledge and experience that is highly valued by our clients.

Because the group is comprised exclusively of independent contractors, we have ultimate flexibility to schedule their involvement in a project at precisely the time when they can offer the most productivity. This organizational structure allows Willis Group to offer the highest quality consulting resources without unnecessarily high overhead costs.

# Services

## Overview

Willis Consulting Group provides a wide range of consulting services to television broadcasters, cable TV programmers / distributors, universities, scientific research organizations and others that produce and/or distribute high quality video/audio. We also assist businesses that provide goods and services to the industry, including television equipment manufacturers and systems integrators.

Our clients have told us they choose us over the competition for several key reasons:

- Objective, independent analyses and opinions: Unlike most of our competitors, we are completely independent. We do not sell any products other than our consulting services. We also refuse offers of commissions from manufacturers who ask us to promote their products and solutions. Our clients are our only focus when we provide services.
- Industry knowledge and contacts: We are constantly staying abreast of new developments in the business; strategic, technological and operational. We also have easy access to the top levels of most major television networks, cable operations, equipment manufacturers and service providers.
- Multidisciplinary perspective: We pride ourselves on our multidisciplinary approach we bring to all projects. While others typically focus myopically on one facet of a project, Willis Group considers your overall strategic business goals, operational workflow requirements, personnel organization, technology designs and financial planning/budgeting when we perform analyses and make recommendations.
- We translate techno-babble into English: Our consultants are well versed in technology, and we will help decipher this often confusing landscape for you. We know the technology, and we are eager to help you learn about it so you can make more informed decisions.
- Value: Our fees are more than competitive, and clients tell us that our services are above par. We achieve this by maintaining low overhead and by being exceptionally efficient. Because our consultants are all independent contractors, we know how to keep expenses low. We also know that in addition to maintaining competitive pricing, we have to consistently perform at a high standard to keep your business.

Given our broad perspective of television production, broadcasting and cable businesses, as well as scientific research, we are frequently called upon to advise senior management and/or boards of directors regarding existing and/or new businesses. Leveraging our consultants' multidisciplinary skills, we will work with you to establish overall business strategies and goals.

Having established a clear vision of overall business strategies and goals, we perform requirements analyses to identify how best to achieve those business goals. We then develop operations workflow plans, personnel organization plans and technology designs based upon those requirements we identify.

With our intimate understanding of technology operations we evaluate/modify existing workflows, design new workflows and create organizational plans, all intended to achieve high quality while maximizing productivity in your operations. With a thorough understanding of operational requirements, along with our reputation for practical, economical solutions, we employ solid engineering skills to redesign existing facilities and/or design new technical facilities. We will also guide you through the often confusing technology choices to help you make more informed decisions.

# Services

## Overview (continued)

We prepare cost, revenue and overall business models as well as cost/benefit analyses to help you evaluate your operations and technology investment choices. We are experienced with managing large and small projects. At your request, we will write requests for proposals and assist you with evaluating responses. We will also interface with software and hardware vendors, architects, systems integrators, wiring technicians and other professional tradespeople to ensure your project is completed according to your specifications.

Because we are actively involved in state-of-the-art facility design and television operations, manufacturers tap our knowledge for trends in technology to meet evolving industry demands. We also assist manufacturers with evaluating the marketplace for their proposed and/or existing products.

We offer many services focused on analyzing and designing better television production and distribution operations and technology systems. You are invited to contact us to see how we might assist you with one or more of these services.

# Services

## Management Consulting

Senior management and boards of directors frequently call upon us to advise them. We help evaluate existing businesses as well as assist with planning new ventures. With our solid background in business, finance, television operations, telecommunications technology and project management, we bring a comprehensive perspective to our projects.

Formulating a vision for one's business can be a difficult task without a comprehensive understanding of all elements of that business. Senior management and boards of directors recognize the value of our multidisciplinary perspective, and often seek our assistance in helping to guide their decisions.

Our team recognizes the importance of establishing a clear set of business goals and objectives before embarking on strategic planning, workflow planning, personnel organization design and/or engineering system designs. We also appreciate that to formulate those goals and objectives, it helps to have a global perspective of all aspects of an operation as well as trends in the industry.

In addition to providing consulting services to senior management and boards of directors, Willis Peligian, owner and principal consultant, formerly served as a director on the board of Video Communications Incorporated (VCI), QPMedia Incorporated and Wolf Coach Corporation. VCI is a software company providing traffic and business solutions for broadcasters. QPMedia is a publishing and technical services company that serves the motion picture and TV industries. Wolf Coach Corporation is a manufacturer of mobile communications systems for TV broadcasting, homeland security and military applications.

## Strategic Planning

Successful strategic planning requires a complete understanding of all aspects of a business. Our team's multidisciplinary skill sets include corporate management, finance, operations workflow, software technology, hardware technology, personnel organization, marketing, and product research & development.

When considering options for a new venture, it is essential to have a global perspective of how choices you are considering will combine together in an overall business strategy. The same is true when considering modifications to an existing enterprise, as one should be cognizant of how changes being considered for one part of your operations might require modifications to other areas of your enterprise.

Strategic planning also applies to projects, as the first step for any project, whether big or small, is to outline a strategy. Our team has many years of practical, hands-on experience working in broadcast television stations, broadcast television networks, cable television networks, TV production companies, broadcast and production equipment manufacturers, scientific research organizations and universities.

We are uniquely qualified to assist you with overall business strategies, marketing plans, restructuring plans, technology roadmaps, operations procedures, as well as project planning and implementation. Our team will apply their critical thinking skills, supported by extensive industry experience, to help you develop a clear strategy to ensure success for your business.

# Services

## Business Modeling

Clients often request our assistance with evaluating new business opportunities, or with evaluating options for modifying existing businesses. We create financial models designed so that you may easily fine-tune significant business variables and quickly evaluate the overall business impact.

Business modeling is typically preceded by strategic planning, which many clients request our assistance with also. Whether or not you engage our team to assist with strategic planning, we will work with you to create revenue, expense, capital investment, personnel hiring, cash flow and other models needed for you to properly evaluate your business options.

Our modeling is detailed, yet easy to understand. All variables, along with a brief description, will be listed at the top of your "live" spreadsheet models. This allows you to easily change an assumption and quickly see its impact on the bottom line. We will also provide a detailed written explanation of your models in a separate text document.

Most of our clients appreciate the detail as well as the intuitive design of our models, and will choose to perform their business analyses with no additional assistance from us. Others value our assistance in helping to not only "run the numbers", but to also take a more wholistic view of their business. We would be pleased to provide whatever level of services you desire.

In addition to creating interactive business models, we prepare budgets as well as reliable cost/benefit analyses to help you accurately evaluate your investment choices. At your request, our financial analyses will be designed to conform with your internal reporting formats.

## Requirements Analyses

Businesses considering changes to existing operations or beginning new operations frequently seek our assistance. Our team will work with you to understand your overall business goals and strategies, and then convert those business goals into practical operational requirements. A requirements analysis is typically a prerequisite to planning new workflow processes, personnel organizational structures and/or engineering systems designs.

Performing a requirements analysis, also often referred to as a needs analysis, can be highly targeted to a small part of your business, such as post-production editing, on-air operations or field gathering. Alternatively, requirements analyses can be extremely broad in nature, potentially impacting all aspects of your business. In either case, our consultants will work with you and your team to define your requirements, while maintaining a perspective of your overall business goals.

Even when we are focusing on a small subset of your total operations, we believe it is important to keep your overall business objectives in focus. For this reason, we typically begin our requirements analyses by first understanding your business objectives and strategies.

For clients looking to make changes to their existing operations, we will typically interview key personnel, observe current operations, review engineering system documentation and generally immerse ourselves into your existing operations in an effort to understand how your business functions today. To ensure that we glean a global perspective of your operations, key personnel we are interested in interviewing extend beyond those associated with the operational area we are focusing on.

We approach existing businesses with respect for the fact that they are currently performing with a certain level of success. In our requirements analyses, we first work with you to understand and carefully document how current processes are succeeding. Only then can we begin to make recommendations for modifying your operations.

For new ventures and for businesses looking to add new services to their existing operations, our consultants offer a wealth of experience for you to draw upon. We will begin our analysis by interviewing key personnel, typically those who can express the strategic business goals of the new operations. We would then look to understand how the new operation fits into existing operations and/or how it interfaces with external third-party businesses.

Some of our clients are satisfied with their existing operations, but want to take advantage of new technologies that have come to market. In these cases, we will work with you to identify how these technologies would integrate with your existing systems, and how these changes might impact existing operations. We can also perform cost-benefit analyses to help you ascertain the financial advantages or disadvantages of making an investment in these technologies.

A requirements analysis is not an end to a process, but it is typically used as the foundation for workflow planning, personnel organization design and/or engineering systems design. We offer all of these additional services, and would be pleased to prepare a proposal for a package of services tailored to you specific interests.

## Workflow Planning

We help people interface with technology more effectively. Our intimate understanding of production and distribution operations allows us to evaluate existing workflows or design systems for new operations that are consistent with your business goals.

For clients with existing operations looking to analyze and possibly redesign workflow, we will work with you and your team to ensure that your goals are achieved with minimum disruption to your operations. We approach your existing operations with great respect, following the equivalent of the Hippocratic Oath; first do no harm.

In many cases, we are able to achieve significant improvements in quality or efficiency with minor adjustments to existing operations. In other cases, more radical changes are appropriate. In either case, we can also assist with the change management process by offering strategies for implementing any operational modifications we recommend.

A prerequisite for successful workflow planning is a clearly defined set of business goals and objectives. These are typically defined through a requirements analysis or needs analysis. Many of our clients ask us for help in performing a requirements or needs analysis. Other clients already have a clear set of goals and objectives that we can use to form the foundation of our workflow analyses and planning.

While we understand and are well informed about the latest technologies, we focus on workflow requirements first, and then recommend technology tools and system designs that enable people to perform the tasks we identify. We pride ourselves on solutions that are based on sound business process and workflow analyses. We are unimpressed with "cool" technologies unless they fulfill a legitimate business goal.

Our techniques for performing workflow analyses vary according to the operation being examined. Often, for existing businesses, we start with interviews and observations of current operations. For new businesses, we work with those who have a vision of their goals, and help bring that vision into clear focus for media production and distribution operations.

In either case, we will take into account business goals, strategic plans, budget limitations and other variables while working with you and your team to identify workflow plans and designs tailored to your unique operation. Tools we use include process maps, petri nets, mesh and node analyses, among other techniques.

In the end, you will receive a detailed written description along with flow charts of our recommended workflows for each operational area. In addition, you will receive an overall workflow chart that shows how each operational area relates to the others in your organization.

Often, our workflow designs engender recommendations for changes in personnel organization plans, technology and/or system designs. Many clients ask for our assistance with these issues. At your request, we will work with you and your team to propose personnel organization structural modifications, recommend specific technologies and/or develop conceptual designs for how these technologies will integrate into your facilities.

We are accustomed to working in both union and nonunion environments. Our consultants demonstrate respect towards all employees we encounter in the course of our work on-site. We are equally comfortable in the board room, the edit room, the office cubicle, the master control room, a data center or any other venue in your operation.

## Personnel Organization

Our personnel organization planning and design builds upon, and will integrate with your workflow plan. From our perspective, workflow planning and personnel organization planning go hand-in-glove. This is especially true when workflow plans indicate a change in operational processes. Implementing any change in workflow will be much more effective if accompanied by organizational changes that reflect the new operational processes.

At your request, we will provide a comprehensive personnel plan to support your operations workflow. We typically divide personnel organization planning and design into three components; Organizational Designs, Job Descriptions and Hiring Plans.

Our organizational plans carefully consider interactions among personnel, both within their own department as well as across all departments. We also consider potential interactions with personnel outside of your organization; such as with business partners or clients. The goal is to create a wholistic plan that weaves together the various functions of all personnel into a common team effort.

We will provide organizational charts as well as text to clearly explain all personnel interrelationships. We will also write individual job descriptions for all personnel identified in the organizational plan. Job descriptions define responsibilities, all relevant job functions, relationships with other personnel, supervisory relationships, performance criteria, minimum required qualifications, among other details.

Some of our clients, especially those that are either starting a new venture or that are significantly modifying an existing business, ask us to provide hiring plans based upon our organizational recommendations. These plans include phased hiring strategies, where appropriate. We also typically provide financial analysis of the hiring plan we recommend. This is especially helpful for strategic planning, where long-term hiring plans allow one to better plan cash flow and capital requirements.

Personnel recruiting is a logical next step after completing the organization design and the individual job descriptions. Apart from a few rare exceptions, we do not typically provide recruiting services, but would be pleased to assist you in working with one of our partners that does.

## Engineering Systems Design

With a thorough understanding of your operational requirements, along with our reputation for economical solutions, we employ solid engineering skills to redesign existing facilities and/or design new technical facilities.

Many clients seek our assistance with workflow planning and personnel organization designs prior to beginning engineering system designs. We advise all clients that technology and system designs should be considered only when operational requirements are well defined, and workflow planning as well as personnel organization designs are optimized.

Based upon your unique operational requirements, we will recommend specific technologies and develop conceptual designs for how these technologies will integrate into your facilities. Our system designs are detailed block diagrams that are typically used by a systems integrator as a blueprint from which they develop detailed engineering drawings. Our conceptual designs are also used in requests for proposals to systems integrators.

Often during this conceptual design phase, clients ask us to provide information to architects, electrical engineers, mechanical engineers or others that are involved in designing and constructing a new building or renovating an existing building. We are skilled at interfacing with these professional trades, and welcome the opportunity to guide them as they design and build the infrastructure of your new or renovated facility.

Following on the systems design process, our clients often seek assistance in selecting a systems integrator to implement the conceptual designs. Whether or not we assist in the selection process, clients typically ask us to work with the systems integrator to ensure that our conceptual designs are successfully implemented through the detailed engineering design process.

Upon request, we will provide detailed engineering designs, however it is our experience that systems integrators provide detailed engineering in a cost-effective package with their service offerings. In addition to being cost effective, this packaging of services is also synergistic, as the systems integrator will develop wiring diagrams and equipment layouts along with detailed engineering designs. For those clients that will be utilizing a systems integrator, we typically recommend that detailed engineering design be included in the integrator's package.

It should be noted, however, that while there is wisdom in an integrator packaging detailed engineering with their service offerings, one must exercise caution to ensure that there is no conflict of interest, and that the integrator is truly working in your best interest. Systems integrators are often resellers of equipment that they recommend in their designs. They also often receive sales commissions from equipment manufacturers.

We believe this arrangement sets up a situation that is potentially not in your best interest. For this reason, many clients ask us to review equipment choices and other details to ensure there is an objective audit of the integrator's work.

We do not sell any products other than our consulting services. We also refuse offers of commissions from manufacturers who ask us to promote their products and solutions. Your needs are our only focus.

# Services

## Project Administration

We have extensive experience managing large and small projects. At your request, we will interface with equipment providers, architects, mechanical engineers, wiring technicians, electricians, carpenters and other professional tradespeople to ensure your project is completed according to your specifications.

Our clients frequently ask us to provide project administration services as a follow-on from requirements analyses, operations workflow planning, personnel organization design and/or conceptual engineering system design. In these cases, we have a comprehensive understanding of the project scope of work.

We also provide project administration services where we have not been involved in the strategic planning and design work leading up to the project. In these cases, we will first work with you to gain a thorough understanding of your project's scope of work.

With a firm understanding of the scope of work, we would begin our project administration effort with a critical review of the scope of work for each service provider involved in the project. We would identify potential gaps in responsibilities that we will help resolve at this early stage.

We would monitor your project from start to finish, ensuring that each subcontractor provides the deliverables they have committed to within the timelines specified in the scope of work. You can think of us as your eyes and ears that are focused exclusively on your project. We will alert you to any deviations from the scope of work, including design changes, schedule delays, budget overruns and other similar details.

It is our experience that as implementation progresses, all projects are modified from the original scope of work. We will monitor change order proposals from subcontractors and advise you about their potential impact on schedules and budgets.

At your request, we will manage interface control documentation (ICD) among/between service providers. Despite promises from equipment and software vendors about standards and protocols that make interfacing among different systems seamless, our experience is that integration can often be troublesome. Carefully defining each vendor's interfacing responsibilities makes it easier to resolve integration challenges that may present themselves.

Document coordination and distribution is another role we fulfill as part of project administration. We will maintain a complete record of all documents created and distributed in support of your project. In addition to maintaining this complete set of documentation, we will distribute documents to those who require them for review or meeting preparation.

Meetings are often a necessary means of coordinating among the various subcontractors as well as for communications between you and the subcontractors. We will act as the single point of contact to coordinate these project meetings. It is often difficult to track scheduling interdependencies among various subcontractors. At your request, we will maintain a master project schedule that lists deliverables from all subcontractors, and tracks the dependencies and relationships among them.

In any project, it is important to keep track of action items that have been assigned. We maintain a cumulative action item list that tracks all items, both resolved and unresolved. This provides an audit trail of action items that is often useful as a project progresses.

Ultimately, you will be asked by various subcontractors to sign-off on accepting their work as completed. We will assist you with performance evaluations and advise you about the status of a given subcontractor's fulfillment of their scope of work.

# Services

## Product Marketing / R&D

Equipment manufacturers often ask us to evaluate the marketplace for their proposed or existing products. We can provide market forecasts, economic analyses and competitive product comparisons to assist manufacturers. Because we are actively involved in state-of-the-art facility design and operations, manufacturers tap our knowledge for trends in technology to meet evolving industry demands.

Our cross-disciplinary services offer us a unique perspective on features and functions being demanded by customers. Our perspective is valued by vendors who look to develop products and services with a marketable value proposition.

We have assisted software developers and equipment manufacturers with designing new products as well as enhancing existing products. We have also assisted service providers with developing new service offerings to fulfill customer demands.

We have also assisted vendors looking to enter the broadcast marketplace to sell their goods and/or services to the broadcast industry. For those vendors that are entering the broadcast marketplace for the first time, we have developed primers designed to demystify the broadcast industry.

In these primers, we outline the various business entities that comprise the broadcast industry, and we detail how they relate to each other. We also detail sales channels and marketing strategies to penetrate those channels.

Our consultants also recognize that to be a credible vendor in this marketplace, one needs to understand the perspective of the customer; the broadcaster, production company, TV cable operator, university, etcetera. To address this requirement, we have provided primers on TV production and distribution business operations. This approach has given our clients a competitive edge as they vie for their share of this unique market.

# *Principal Consultant*

## Willis Peligian

Willis Peligian is owner and principal consultant of the Willis Group. His television career spans nearly 35 years, and includes work in commercial and public broadcasting, a cable television network, manufacturing and education. During his professional career, he has held positions as varied as: Director of Engineering and Operations, Vice President of Finance, University Professor, Maintenance Engineer, Documentary Videographer, among others.

Mr. Peligian's television broadcasting career began as a technician, performing tasks in the studio, master control, videotape operations and field operations. He also designed and fabricated custom electronic circuits for broadcast applications. During the early years of his career, Mr. Peligian also chose to pursue a business degree from Boston University. With a heightened awareness of workflow planning and organizational structures that was nurtured by business school, Mr. Peligian redesigned TV workflow and technical systems for several TV production, distribution and broadcasting organizations.

Career opportunities led Mr. Peligian along a journey through engineering, operations and senior management positions in major market commercial television stations. His career also includes senior management positions with a cable television network and a television broadcast equipment manufacturer. After several years of independent contractor consulting, Mr. Peligian formed the Willis Consulting Group.

Clients look to Mr. Peligian and his team of consultants to assist with evaluating operations workflow, design technical facilities, perform cost/benefit analyses, evaluate new products or new workflow concepts, advise general managers about industry trends, conduct marketing research and other assignments that exploit Mr. Peligian's unique combination and broad range of skills.

It is this unique combination and broad range of skills that prompted Boston University's request for Mr. Peligian to develop a graduate studies program in Broadcast Administration. The five-semester program confers a dual degree; a Master in Business Administration and a Master of Science in Communications. Mr. Peligian was considered uniquely qualified for this project, not only because of his education, but also because of his professional broadcasting business experience.

Mr. Peligian formerly served as a director on the boards of Video Communications Incorporated (VCI), QPMedia Incorporated and Wolf Coach Corporation. VCI is a software company providing traffic and business solutions for broadcasters. QPMedia is a publishing and technical services company that serves the motion picture and TV industries. Wolf Coach Corporation is a manufacturer of mobile communications systems for TV broadcasting and military applications.

During 1991 and 1992, Mr. Peligian served as manager of the New England chapter of the Society of Motion Picture and Television Engineers (SMPTE). Mr. Peligian is a summa cum laude graduate from Boston University's School of Management.

# Consultant

## Jim Bostrom

After operating a successful electronic repair business, Jim Bostrom began his 21 year television career as Chief Engineer with a New Mexico cable television company. There he participated in many aspects of television production and post-production, including remote broadcasting of live sporting events. He also designed and built a commercial ad insertion system.

Mr. Bostrom left the cable television company to join a new independent VHF television station. As a Studio and Remote Engineer, he was instrumental in the engineering and installation of this brand new television facility. His responsibilities included engineering all remote operations, maintaining the studio and remote production equipment, and overseeing master control operations.

In 1986, he accepted a Chief Engineer position at a Multi-Format post production facility. He had responsibilities to oversee the technical operations as well as engineer the expansion and installation of new systems and technologies; including linear and nonlinear editing and computer graphics systems.

Mr. Bostrom started his own business, Systems Design & Service, in 1989. Systems Design & Service started out offering engineering and installation services in the Chicago area, and has since expanded to include clients across the USA.

Since starting on his own business, Mr. Bostrom has designed, engineered, installed, serviced and maintained all types of television systems. He is an expert troubleshooter for large and complex systems. His understanding of broadcast operations, as well as his command of new encoding, computer, network and multimedia technologies has served his clients well. This is especially true for those clients transitioning to digital broadcasting. He is particularly well versed in implementing systems for delivering ATSC compliant transport streams, including: PSIP, datacasting, closed captioning and multichannel audio.

Mr. Bostrom's services have been in high demand by many organizations. Recently, he has worked as senior systems engineer and consultant on numerous projects, including systems for: multichannel terrestrial broadcast, direct broadcast satellite, centralized master control, web-casting and server-based automated broadcast facilities.

# Consultant

## Roland Boucher

Roland Boucher has had a 40 year career in Broadcasting and Communications. His experience runs from news gathering in the age of film, to the transition from Film to portable tape systems to planning the first non-linear tape replacements in news. Mr. Boucher is one of those named in the Avid patent for the first integrated news production system.

Most recently as Director of Marketing, Digital News Production Products, for Grass Valley Group and Thomson Multimedia, Roland Boucher was responsible for the overall operations, product planning and product development of the company's Digital News Production products. This product line includes Grass Valley FeedClip™, an interactive feed capture system; Grass Valley NewsEdit™, a nonlinear, hard news editing system; and Grass Valley NewsQ™ and NewsQ-Pro™, a low-cost news playback and playback control system, and integration with NewsBrowse, a proxy editing and asset management system, Profile for feed capture and on-air playback and the Media Area Network, shared storage system.

Prior to the Grass Valley Group acquisition in March 2000, Boucher was Vice President of Sales and Marketing for Vibrint Technologies, a developer of innovative solutions for digital news production. Boucher was instrumental in initiating the discussions that led to the acquisition.

Before Vibrint, Boucher was Senior Product Marketing Manager for Broadcast Products at Avid Technology and Vice President of Marketing at BASYS Automation Systems, LaKart Corporation and Lake Systems. Prior to working in sales and marketing Boucher held the position of Director of Corporate Communications for Millipore Corporation. At Millipore, Boucher coordinated staging of national and local press coverage of the visit of the President of the United States with the White House Communications Office in 1981.

Roland began his career in various technical and production capacities for Boston broadcast stations, including WBZ-TV and radio, WHDH-TV (Now WCVB-TV) and WNAC-TV (Now WHDH-TV). Roland was a news photographer and film editor. He was Production Coordinator for a successful children's television program. He has designed production facilities, handled air operations, tape editing, camera assignments, transmitter maintenance, etc. Boucher brings with him extensive technology and marketing management experience as well as a track record for delivering customer-focused, world-class solutions.

Boucher attended Boston University School of Communications

# Consultant

## Gerry Field

Gerry Field has more than 20 years of production and engineering project management experience in broadcast, cable television, broadband and distance learning. He is a regular contributor to industry standards activities in digital television, radio, cinema and consumer electronics, and advises national and local market clients on system design and technology integration.

Mr. Field is a recognized expert on accessibility issues, including closed captioning, video description and regulatory compliance. As a staff member of the Media Access Group at WGBH, Mr. Field served as Operations Manager for the Descriptive Video Service and as Project Director and Principal Investigator with the National Center for Accessible Media (NCAM). He has managed federally-funded research and development projects, and has provided briefings and testimony for corporate clients and local, state and federal agencies including the FCC.

His clients have included public broadcasting and commercial television stations, broadcast, cable and satellite distribution networks, universities, professional and consumer equipment manufacturers, major Hollywood studios, large-format film distributors, theme parks and consumer advocacy organizations.

Mr. Field is an active member of the Society of Motion Picture and Television Engineers (SMPTE), the Society of Cable Telecommunications Engineers (SCTE) and the Institute of Electrical and Electronic Engineers (IEEE). He has served as a working group chair for the Advanced Television Systems Committee (ATSC) and the Consumer Electronics Association (CEA), and as a member of the Technical Steering Committee for the DTV Station Project in Washington, DC.

Gerry Field attended the University of Chicago, and holds a Masters in Education from Antioch University. He was named a Laureate in the 2000 Computerworld-Smithsonian Awards program.

# *Consultant*

## **Lisa Campbell Friedman**

Lisa Campbell Friedman has been in the television broadcast industry for over 20 years. She has worked in commercial broadcasting, cable television network management, an educational/interactive telecommunications network, and worldwide corporate teleconferencing.

For most of her career, Ms. Friedman was at the heart of the television production process as a director of news, specials, and special events at WHDH-TV in Boston. She brings a unique understanding of the many production "pieces" that create the whole. In that role, she was the interface among the engineering, graphic design, programming, and news departments. Ms. Friedman has a distinguished career in Boston, winning numerous Emmy awards, and directing international special events.

As an Operations Manager, Ms. Friedman designed and built the workflow plans for a high quality national cable television network. She supervised the hiring, training, and budgets for a department of 120 employees and five studios. The operation included a cutting edge graphics department and post production facility, a 24-hour international news operation, a business planning unit, traffic department, archive department, directors and associate directors, technical personnel, and field personnel.

Over the past four years, Ms. Friedman has also taken her expertise to the Massachusetts Corporation for Educational Telecommunications. She has been very active in national programs for distance learning and international interactive live broadcasting.

Ms. Friedman is a member of the Directors Guild of America, Inc., and has degrees in Communications and Management from Simmons College in Boston.

# Consultant

## Matt Hood

Matt Hood is a program manager with over 24 years of technical and managerial experience in developing, integrating, operating and maintaining large systems. In his television related work, he has contributed technical expertise, or directed projects ranging from multichannel satellite broadcast through digital asset management. His practical experience ranges from the planning room to “ground zero”.

Mr. Hood has extensive experience in the software and operational aspects of multi-channel satellite broadcast operations. During his tenure with Sony, he was software system architect for DIRECTV CRBC, Galaxy Latin America and DIRECTV Japan. For the DIRECTV Japan project, he was involved from the conceptual design stage of the software platforms through on-line commissioning of the system, with most of this time spent on-site in Japan. His technical knowledge of the work and data flows within these large systems, as well as his system troubleshooting skills, allowed him to overcome many of the cultural, as well as technical aspects of this project. He was the Software Project Manager responsible for bringing the ASkyB multi-channel satellite broadcast system to operational readiness.

He directed the installation and verification of the joint Sony project with IBM of a newly designed and engineered digital asset management system at CNN in Atlanta. This digital archive, the largest of its kind, was built to digitize catalog CNN's vast videotape library, making video news clips easier to find, retrieve and distribute.

In addition to professional broadcast related work, Mr. Hood was recently a consultant and technical manager for the installation of data backups systems in Wal-Mart retail outlets throughout the U.S., Puerto Rico and Japan. He designed, developed documented and managed processes for integrating these systems across 1700 retail outlets.

Mr. Hood served for several years as a consultant and Senior Systems Architect for the Sony Professional Services Division, and for Concadia Solutions, a joint venture consultancy of Sony and Accenture. He has provided consulting services to major television and sports networks in the areas of workflow and risk analysis, content management, vendor qualification, and interface design.

Prior to his work in the broadcast industry, Mr. Hood worked as a software support contractor at NASA for seventeen years. During his tenure at NASA, he developed LAN applications to interface to the space agency's supercomputers and established the first customer support call center for network users. He later managed the engineering and operations component of the NASA international Wide Area Network for five years.

Known for his ability to work productively with difficult customers, and his enthusiasm for problem solving, as a consultant Mr. Hood brings a comprehensive perspective and skill set to any consulting project.

Mr. Hood graduated from the University of Arizona with a degree in Business Administration.

# Consultant

## Mike Krim

With over 25 years of television broadcast engineering, production, and consulting experience, Mike Krim provides system solutions across the full spectrum of broadcast requirements. Whether your facility is a network, call-letter station, corporate/industrial installation or post production facility, Mr. Krim provides the knowledge and expertise to fulfill your design, planning, data acquisition, training, operational analysis and system engineering needs — in a cost-effective and efficient manner.

### Broadcast Clients

CBS Stations Group: Management Consultant provided engineering and operations analysis of entire facility. Eleven week, \$2 million project management included: Redesign of control room, graphics department, Master Control servers and video/robotics suite design. Develop training programs for engineering and operations staff.

Recent production control room design: CBS NY & LA, WCVB TV Boston, WFXT Fox Boston, (NECN) New England Cable News, WNDU South Bend, Indiana, CNNFN New York. Researched custom solutions for client's unique operations.

### Technical Producer

Provide services to translate complex production requirements and operational issues to find the best engineering solutions for clients. Recent projects include ESPN's "Around The Horn" and "Pardon The Interruption".

### Broadcast Industry Training

In demand worldwide for operational and system engineering training. The ability to communicate to a varying diverse group whether senior engineering staff, technical operations staff or non technical management.

### Broadcast Manufacture Consultant

Consultant to engineering and marketing departments, market research, competitive analysis, software testing, worldwide training (both engineering and operations), worldwide trade show support.

With over fifteen years of Grass Valley experience, highly skilled at pinpoint sales and advanced product demonstrations. Whether the audience's focus is engineering, production, or management — each demo is tailor-made for the target application. Superb ability to talk the customer's language in a concise and realistic manner — with financial impact, and a quantifiable sales impact.

Awarded two patents in conjunction with the development of Next generation television broadcast production equipment. Two additional patents still pending.

# Consultant

## Chris Lee

Chris Lee's 30-year career in communications spans the technical, production, and management aspects of the business. He has deep experience in broadcast news operations and management, web news applications, and video-oriented product and system development, marketing, and management. Lee is adept at market analysis, strategic planning, business development, product development and external marketing; and is application and systems-oriented.

In March 2006, Lee completed a stint as News Director of KRON-TV in San Francisco. There, he planned and executed the re-engineering of the news production process by training and deploying "VJs" with lightweight HD-ready cameras and PC-based editing software in the field and utilizing the internet for backhaul to the station. Lee also managed the transition to a resolution and format independent production server to replace videotape at headquarters. He maintained editorial responsibility for 8\_ hours daily television news in nation's 6th largest TV market.

Prior to KRON, Lee served as Director of Marketing for Terayon Communication Systems in 2000-2001. Lee formulated corporate strategy for new platform development and led a small project team to define requirements and positioning for a format-independent media storage network, capable of delivering voice, data and video applications to homes via telco or cable.

At his obligatory late 1990s internet start-up job, Lee was Director of Interactive Television & News Personalization for Zatsco Inc. (Formerly React TV). He specified an extensive rule-based system for acquiring customer profile data and using it, story metadata and natural language processing to generate personalized, relevant, on-demand video newscasts. Lee also formulated strategy for distributing personalized news service via interactive TV.

From 1994-99, Lee served as US General Manager, Newsroom Systems for Sony Electronics. There, he was responsible for a \$12 M product line consisting of integrated broadcast and "browse" video servers, application software, and peripheral equipment. Lee's definition of digital newsroom workflow made Sony's NewsBase application software arguably the industry's best. His responsibility included all outbound marketing for the US market. During this period, Lee also investigated, recommended and specified potential Sony system offerings in (then) emerging applications, e.g. ATM media networks, multi-channel systems, data broadcasting, media asset management, "centralcasting," webcasting, video-on-demand. With a small project team, he defined the operational workflow and wrote operational specifications for Direct TV, the world's first 100+ channel television transmission facility.

In what must now be relegated to a brief discussion of "the early years," Lee managed the Christian Science Monitor TV's London Bureau, and held numerous local news producing and reporting positions in San Francisco, Providence, and Monterey. He is educated in business (London School of Economics) and Political Science (University of California, Santa Barbara). Lee lives in Northern California.

# Consultant

## Darrell G. Lew

Mr. Lew's résumé includes management of many large and significant broadcast integration projects over the past decade. Leveraging a rich operations and engineering career history that stretches back nearly three decades, Mr. Lew brings a wealth of experience and knowledge to all projects he is associated with. Mr. Lew's long-standing reputation for bringing projects in on-time and on-budget is a track record that clients appreciate.

Examples of broadcast systems project management include some of the most recognized names in the industry. Domestic clients include; National Broadcasting Company, DirecTV, American Broadcasting Company, VidFilm, Disney Channel, General Electric, Associated Press TV, Tribune Broadcasting and Fox Broadcasting.

International projects include DirecTV Japan, Galaxy Latin America, Walt Disney Television Singapore and Crown Media International. Of particular note is Mr. Lew's experience with multi-channel television operations center design and implementation. His ability to manage projects professionally, on-time and on-budget while respecting unique cultural customs of clients, is his key to success in international projects.

Mr. Lew managed the system design phase of AOL / Time Warner's CNN New York Broadcast Center. The scope of this project is larger than one might imagine; seventeen non-linear edit suites, four production control rooms, five production studios, radio production facilities, graphics design facilities, digital media archive and a central equipment room accommodating more than two hundred twenty five equipment racks.

In addition to large-scale integration projects, both foreign and domestic, Mr. Lew has applied his expertise to smaller projects in local television stations, corporate television production facilities, post-production edit facilities, newsroom production, tape duplication, satellite transmission facilities, among others.

From his experiences as an audio engineer for NBC and for a production company earlier in his career, Mr. Lew brings an operator's perspective to the projects he is associated with. From his experiences in fibre-optic engineering, Mr. Lew also brings an engineer's discipline to his projects. Add to all this his film credits for audio, and it is obvious that Mr. Lew presents a well-rounded and valuable skill set.

Mr. Lew attended the Sloan School of Management at the Massachusetts Institute of Technology where he completed the Finance for the Technical Executive Program. He also pursued his Bachelor of Arts in the Broadcast Communications Arts and Film program at San Francisco State University. Mr. Lew studied Electronics and Telecommunications at the School of Communications Electronics. He also studied in the Apprentice Computer Animation Program at the Computer Arts Institute.

Mr. Lew is a member in good standing with many industry trade organizations, including; Audio Engineering Society, Society of Broadcast Engineers, Society of Motion Picture and Television Engineers, and the Project Management Institute.

# Consultant

## George Maier

A thirty plus year veteran of the broadcast and telecommunications businesses, George Maier has operated Orion Broadcast Solutions since 1997 with a brief hiatus to focus on telecom issues in 2000-2001. Prior to starting Orion, he was vice president of marketing and business development at Artel Video Systems, a manufacturer of digital transport, switching, and routing products for the broadcast video market.

Mr. Maier, who has an electronic engineering background and worked in R&D early in his career, has also held various technical, sales and marketing positions at well recognized major manufacturers of broadcast and telecomm equipment, and has extensive experience in designing and implementing television broadcast systems for SNG, ENG, terrestrial microwave, VHF and UHF transmitters, studio routing and terminal equipment, and has a thorough understanding of studio requirements.

His work history includes:

- Orion Broadcast Solutions, President & Founder
- Telco Systems, Vice President of Marketing & Product Management
- Television Broadcast Magazine – contributing editor, technology
- Artel Video Systems, Vice President, Product Marketing & Business Development
- Telco Systems, Inc. Senior Product Manager, ATM Fiber Access Systems
- ADC Telecom, Product Manager, Fiber optic video transmission systems
- NORTEL, District Sales Manager, Carrier Networks Division
- Harris Corporation, District Sales Manager – Broadcast Division
- M/A-COM INC (now MRC), Applications Engineering Manager, Sales Engineer
- Western Electric (Lucent Technologies), QA Engineering Group

### Skill Sets

Systems Engineering, Applications Engineering, Project Management, Product Management, Sales, Marketing, Business Development, Corporate Communications, Published Author

### Marketplace Expertise

Radio & Television RF systems, terminal gear, switching equipment, and studio gear for HDTV, SDTV, NTSC, SNG, ENG, COFDM, 8VSB, AM & FM Broadcast, Microwave and wireless transmission, Fiber Optic Transmission, DWDM, CWDM, xDSL, ISDN, ATM, SONET, DS1/3, Metro access networks, IP switching and routing systems, Video compression & Streaming.

### Education

Northeastern University Massachusetts Radio School AMA Seminar, Basic and Advance Management Principles Brandeis University seminar, Financial Management for the Non-Financial Manager, Xerox Seminar, Professional Selling Skills (PSS III) NTI Seminars, Market Strategies for Growth & Marketing Building Blocks NTI Seminar, Power Based Selling

### Professional Organizations and Certifications

SBE, SMPTE, ARRL, National Convergence Alliance (board of advisors)

MISC - SBE Certified Senior Television Engineer (CSTE), FCC General Class Radiotelephone License, FCC Amateur Extra Class License

# Consultant

## Kellie McKeown

Kellie McKeown has been a consultant to the television broadcast industry since April 1998. Her clients include AT&T Broadband, NDS, and Sony.

Ms. McKeown is currently involved in the development of a video router management software system for AT&T Broadband (now Comcast). Her responsibilities include participation in defining the operational features and functions of the software application, user interface definition and design, ensuring that the software application can be used to its fullest capability by system operators, critiquing the application as it is developed to verify that all requirements are met and that the system architecture is robust enough to support stable system operations, as well as oversight/evaluation of the management of the software development effort.

Ms. McKeown has conducted market research for clients of Multimedia Research Group (MRG), including an assessment of television set-top box middleware vendors for Microsoft and definition of the worldwide market for digital television signal demodulator chips for Oren Semiconductor. Also for MRG, Ms. McKeown coordinated and moderated a panel discussion on Digital Rights Management at the Storage Visions conference in Las Vegas in January 2003, just prior to the Consumer Electronics Show (CES).

In the summer/fall of 2002, Ms. McKeown assisted Sony with the development of a proposal and presentation to the NFL (National Football League) for analog to digital conversion of their game analysis video acquisition, distribution and storage systems and processes. In this capacity, Ms. McKeown initiated and coordinated the Sony interaction with the NFL, documented the video requirements for the League, and participated in the development and presentation of a proposal to the NFL for a near term and long term video strategy for the League. The presentation was very successful resulting in the NFL contracting with Sony for their new digital video format.

From September 1999 through July 2001, Ms. McKeown was a representative to the TV-Anytime Forum for NDS. The TV-Anytime Forum ([www.tv-anytime.org](http://www.tv-anytime.org)) is an international ad hoc standards organization of over 100 corporations, which is developing open specifications for Personal Video Recorders and related A/V and data services. Ms. McKeown was the editor for the Business Models Group which defines benchmark applications and features to be enabled by the TV-Anytime specifications. She was responsible for all of the operations management of the TV Anytime Forum from September 1999 through March 2001, and was responsible for the TV-Anytime Forum exhibits at NAB and IBC in 2000, 2001 and 2003.

NDS also engaged Ms. McKeown to assist with the NTSC to ATSC conversion of terrestrial broadcast stations and cable broadcast operations. Her role was to define operational requirements and facilitate the implementation of key software interfaces involving traffic/scheduling systems as well as transmission systems. She surveyed many television stations and cable operators throughout the US, meeting with engineering, programming, traffic, and operations managers to ensure that software systems meet their requirements. She also worked with traffic, automation, and compression system vendors as part of this effort.

In addition to the TV-Anytime Forum, Ms. McKeown has participated in other committees within the broadcast industry, including ATSC T3/S8 (Specialist Group on Transport Systems) which defines the ATSC transport stream standards. From May 1999 to July 2001, she was a member of the SMPTE/ATSC Content Identification Ad Hoc Committee which is defining an identifier (called the V-ISAN) to uniquely identify all broadcast content. She also participated in all ATSC WHD Model Station meetings and activities during 1999.

## Kellie McKeown (continued)

Prior to her consulting work, Ms. McKeown was a software project manager in the broadcast industry. Her past responsibilities include Software Program Manager for Sony for American Sky Broadcasting (ASkyB), Rupert Murdoch's News Corporation entry into the US direct-to-home satellite television market, and for DIRECTV Latin America, a Hughes Communications direct-to-home satellite television service for Latin America. Ms. McKeown has a proven track record for developing, installing, and integrating systems for large multi-channel broadcast facilities. She had full responsibility for forming the project teams; managing budget and schedule; defining customer requirements; defining interfaces with other vendors; and installing, integrating, and testing Sony-supplied system software.

Prior to distinguishing herself in television-related endeavors, Ms. McKeown was a NASA project manager for 14 years. At NASA, Ms. McKeown had full responsibility for all aspects of the \$120M Space Station Gravitational Biology Facility space flight hardware development project, which she grew from inception to an annual budget of \$18M and a staff of 90. Ms. McKeown was also Deputy Manager for the Space Station Biological Research Facility Project where she participated in all aspects of this 10 year, \$600M project. While at NASA, Ms. McKeown was a primary interface with the European and Japanese space agencies.

Ms. McKeown brings her skills and experience developed over 21 years of managing small (\$1-5M), medium (\$120M), and large (\$600M) projects in advanced-technology applications, working with customers and vendors both domestically and internationally. One of her primary strengths is her unique ability to determine what needs to be done, and do it. She is focused, organized, and dedicated to achieving success. She possesses outstanding interpersonal skills, and excels at pinpointing and resolving issues. Ms. McKeown is a graduate of Virginia Polytechnic Institute & State University with a Bachelor of Science in Computer Science.

# Consultant

## Mark Vitt

With a multidisciplinary background that includes television operations, engineering and business analysis, Mark Vitt is a valuable asset on the Willis Consulting Group strategic planning team. He evaluates television operations, plans workflow, develops cost-benefit analyses, among many other strategic planning tasks. While strategic planning is currently his forte, it is Mr. Vitt's wealth of practical hands-on experience that enables him to truly understand a client's needs.

Mr. Vitt began his career in television broadcast 15 years ago as an audio engineer for studio and remote productions. His experience in studio operations and post production includes work at CBS Hollywood, Disney, Paramount, Warner Brothers, and Universal.

In addition to studio and post-production, Mr. Vitt has extensive experience with on-location productions. His sports production credentials include such prestigious sporting events as the Olympics, Super Bowl, World Series, and U.S. Open. In addition to sports, he worked the entertainment circuit on such events as the Academy, Grammy, and Emmy Awards.

Projects that Mr. Vitt has worked on include new business start-ups, television networks, and production companies. Working with an Israeli based tech start-up he wrote the business plan for this company's entrance into the U.S. market. Mr. Vitt initiated partnerships with leading OEMs, established market penetration through pilot programs, and negotiated financing for the company.

To stay abreast of state-of-the-art developments in the industry, Mr. Vitt also maintains an active involvement in television operations and engineering. His most recent television production operations and engineering experiences have been with the NBC Olympics engineering group in a technical capacity, and The Christian Science Monitor as a consultant for their broadcast operations.

Mark holds a Bachelor in Audio Engineering from Berklee College of Music and a Masters in Business Administration from Boston University.

# Consultant

## Murray Wilson

Murray Wilson has worked in the professional broadcast television industry for over 20 years and has been closely involved in the industry's ongoing transition from analog to digital. He has played an integral role in the development and deployment of some of the largest multi-channel television broadcast facilities in the world and has worked in North America, Europe and Asia.

Mr. Wilson has consulted at an engineering level in all aspects of broadcast television; including content production, content management, distribution and transmission. He has established an excellent reputation in the start-up of several large-scale facilities in particular those employed in the Direct to Home broadcasting business. This is based on his extensive knowledge of workflow design, operational procedural development, and resource optimization. He has also designed and implemented a number of extensive training programs to support the industry's adoption of burgeoning technologies.

He has worked on several high-profile projects, including key broadcast related projects for Hughes and Rupert Murdoch's News Corporation. Projects for Hughes have included DIRECTV US, DIRECTV Galaxy Latin America and DIRECTV Japan, as well as their new broadband satellite project SPACEWAY.

Mr. Wilson is an active member of the Society of Motion Picture and Television Engineers and the founder and president of Technical Production Services, Inc. TPS was established in 1988 and has provided consultative services to various aspects of the industry.

Beyond the areas of production and broadcast, TPS has provided support in the form of product specifications as well as design and development in both hardware and software-related environments.

TPS fulfills a unique roll in the careful integration of a broadcast client's business needs and the development of engineering-based systems to achieve them. TPS is accustomed to working as a member of a highly integrated team on time and cost-critical projects and provides a high level of professionalism, project integrity and client confidence.

# *Partial Client List*

American Public Television, Boston, MA  
Avid Technology Incorporated, Tewksbury, MA  
Boston University, Boston, MA  
Briggs-Knowles Architects, New York, NY  
CBS Television Network, New York, NY  
China Central Television (CCTV), Beijing, People's Republic of China  
Communications Service for the Deaf (CSD), Sioux Falls, SD  
Connecticut Public Broadcasting, Inc., Hartford, CT  
Dalet Digital Media, Paris, France  
EMC Corporation, Hopkinton, MA  
General Electric Corporation, Princeton, NJ  
Hispanic Information and Telecommunications Network, New York, NY  
International Data Group (IDG), Boston, MA  
INSTEC Incorporated, Beijing, People's Republic of China  
MGE UPS Systems, Costa Mesa, CA  
Mirror Group Ltd., London, United Kingdom  
NBC Television Network, New York, NY  
Omneon Video Networks, Campbell, CA  
Paradigm Media Incorporated, San Antonio, TX  
Philips Digital Video Systems, Salt Lake City, UT  
Public Broadcasting Service (PBS), Alexandria, VA  
Radio Television Luxembourg, Luxembourg  
Sea Research Foundation / Institute for Exploration, Mystic, CT  
SeaChange International, Maynard, MA  
Sony Broadcast and Professional Products Group, San Jose, CA  
Tektronix Incorporated, Beaverton, OR  
Tribune Broadcasting Incorporated, Burbank, CA  
TV Azteca, Mexico City, Mexico  
Wolf Coach Corporation, Auburn, MA  
various local television stations, too numerous to list

# Contact Us

- for additional information about the firm
- to discuss how we might be of assistance to you
- to request a proposal
- or if you need to communicate with us for any other reason

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